aqua science engineers inc.

August 11, 1995

Ms. Juliet Shin
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, CA 94502

SUBJECT: WORKPLAN ADDENDUM FOR WELL OIL SKIMMER
Former Alameda Max's Property
1357 High Street
Alameda, California

Dear Ms. Shin:

This letter presents an addendum to Aqua Science Engineers (ASE)'s August 9, 1995 workplan to install an oil skimmer in well MW-2 at the site. As per our telephone conversation, ASE will not separate the oil from the water with the system's decanter and will store all removed fluids (both oil and water) together rather than return the decanted water to the well. All fluids will be transported periodically to a licensed oil recycling facility under manifest by a licensed waste hauler. This will avoid need for a discharge permit from the Regional Water Quality Control Board (RWQCB) for water discharge back into the well. If a large quantity of water is produced during the skimming operation which would make it more cost effective to decant the water for discharge to the well, ASE will consider applying for the required RWQCB permit.

Should you have any questions or comments, please feel free call us at (510) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

REGISTERED ENVIRONMENTAL ASSESSOR
ROBERT E. KITAY
No. REA-05442
Expires: 6/96
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
DAVID M. SCHULTZ
No. 38738
Exp. 9-97
CIVIL
STATE OF CALIFORNIA

Robert E. Kitay, R.E.A.
Project Geologist

cc: Mr. James A. Phillipsen, 3111 Marina Drive, Alameda, CA 94501

WE'VE MOVED TO
2411 OLD CROW CANYON RD. #4
SAN RAMON, CA 94583
510-820-9391

Aqua Science Engineers Inc., P.O. Box • 415-820-9391 • FAX 415-837-4853

aqua science engineers inc.

August 9, 1995

WORKPLAN
for
MONITORING WELL OIL SKIMMER
at
Former Alameda Max's Property
1357 High Street
Alameda, California

Submitted by:
AQUA SCIENCE ENGINEERS, INC.
2411 Old Crow Canyon Road, #4
San Ramon, CA 94583
(510) 820-9391

REGISTERED PROFESSIONAL ENGINEER
DAVID M. SCHULTZ
No. 38738
Exp 4-97
CIVIL
STATE OF CALIFORNIA

INTRODUCTION

This submittal outlines Aqua Science Engineer's, Inc. (ASE) workplan to install an oil skimmer in monitoring well MW-2 at 1357 High Street in Alameda, California (Figures 1 and 2).

BACKGROUND

Monitoring well MW-2 at the site has consistently contained a free-floating oil on the surface of the groundwater. This oil is a thick, viscous, material that coats the outside of any bailer, interface probe, water level meter, etc. which is placed into the well. It appears golden to brown in color and is believed to be either unused motor oil or a hydraulic oil. This oil appears to be too viscous for conventional product skimmers or absorbent type skimming devices. This workplan will describe the skimmer ASE recommends using to remove this oil from the groundwater surface in monitoring well MW-2.

PROPOSED OIL SKIMMER

The proposed skimmer for the site is a model MW-2 monitoring well skimmer designed for 4-inch diameter groundwater monitoring wells manufactured by the Abanaki Corporation Oil Skimmer Division. The manufacture's specifications are attached.

The oil will attach to the poly skimmer belt, be pulled out of the well, scraped off with wiper blades and will be piped into storage containers. A decanter will separate the oil from any water that may have been removed with the oil. The water will be discharged back into the well through a water outlet hose. A float switch will be placed into the storage container for emergency shutoff should the container fill unexpectedly. The entire skimmer and storage container will be double contained and placed behind security fencing and under a canopy.

The system will be checked daily for the first three days of operation and weekly after the first week. All oil will be transported periodically to a licensed oil recycling facility under manifest by a licensed waste hauler.

Reporting for this system will be included in quarterly groundwater monitoring reports for this site.

SCHEDULE

We will begin work on this project immediately upon approval of this workplan by the Alameda County Health Care Services Agency.

Should you have any questions or comments, please feel free to call us at (510) 820-9391.

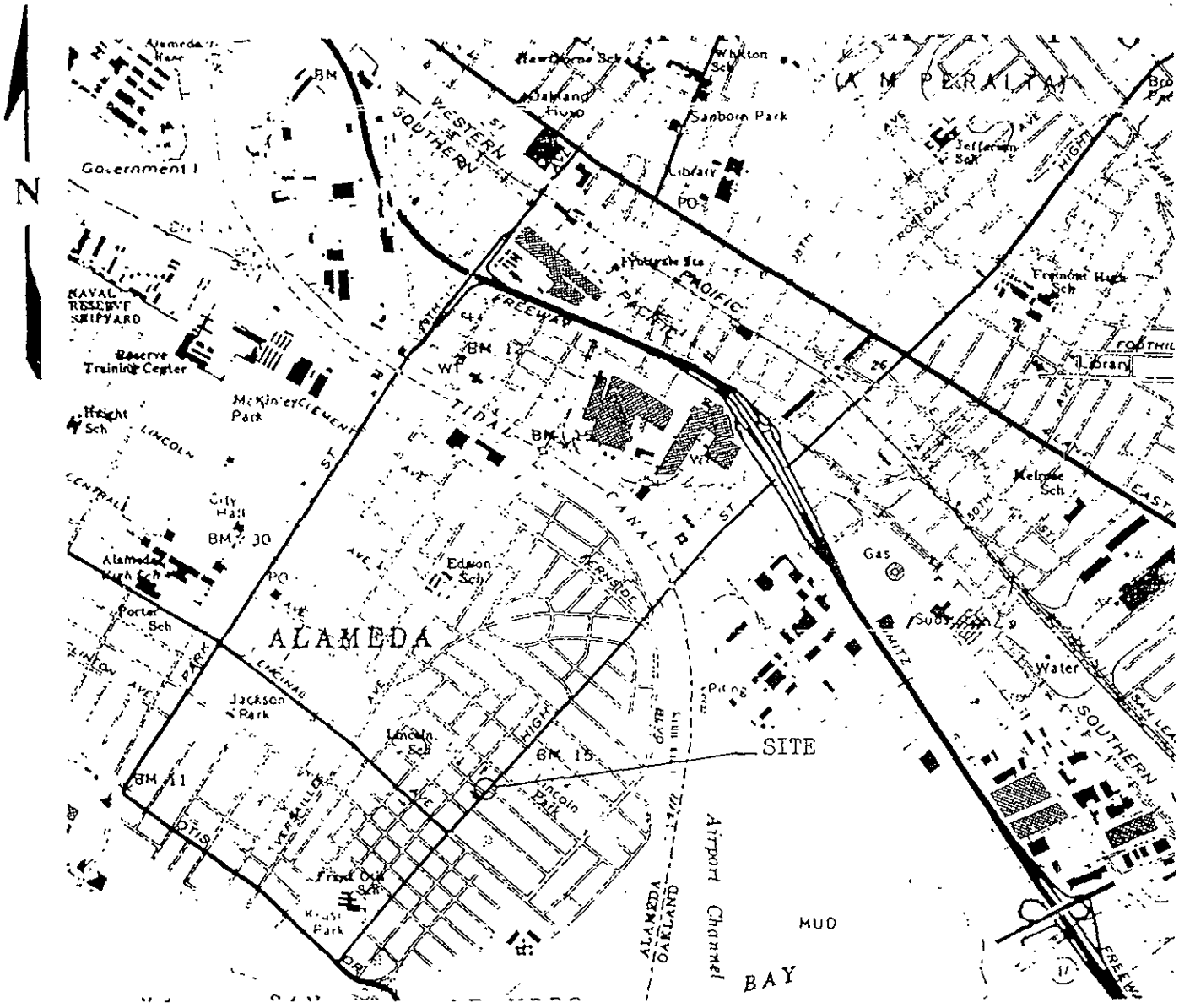
Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

Robert E. Kitay, R.E.A.
Project Geologist

cc: Mr. James A. Phillipsen, 3111 Marina Drive, Alameda, CA 94501

Ms. Juliet Shin, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Alameda, CA 94502

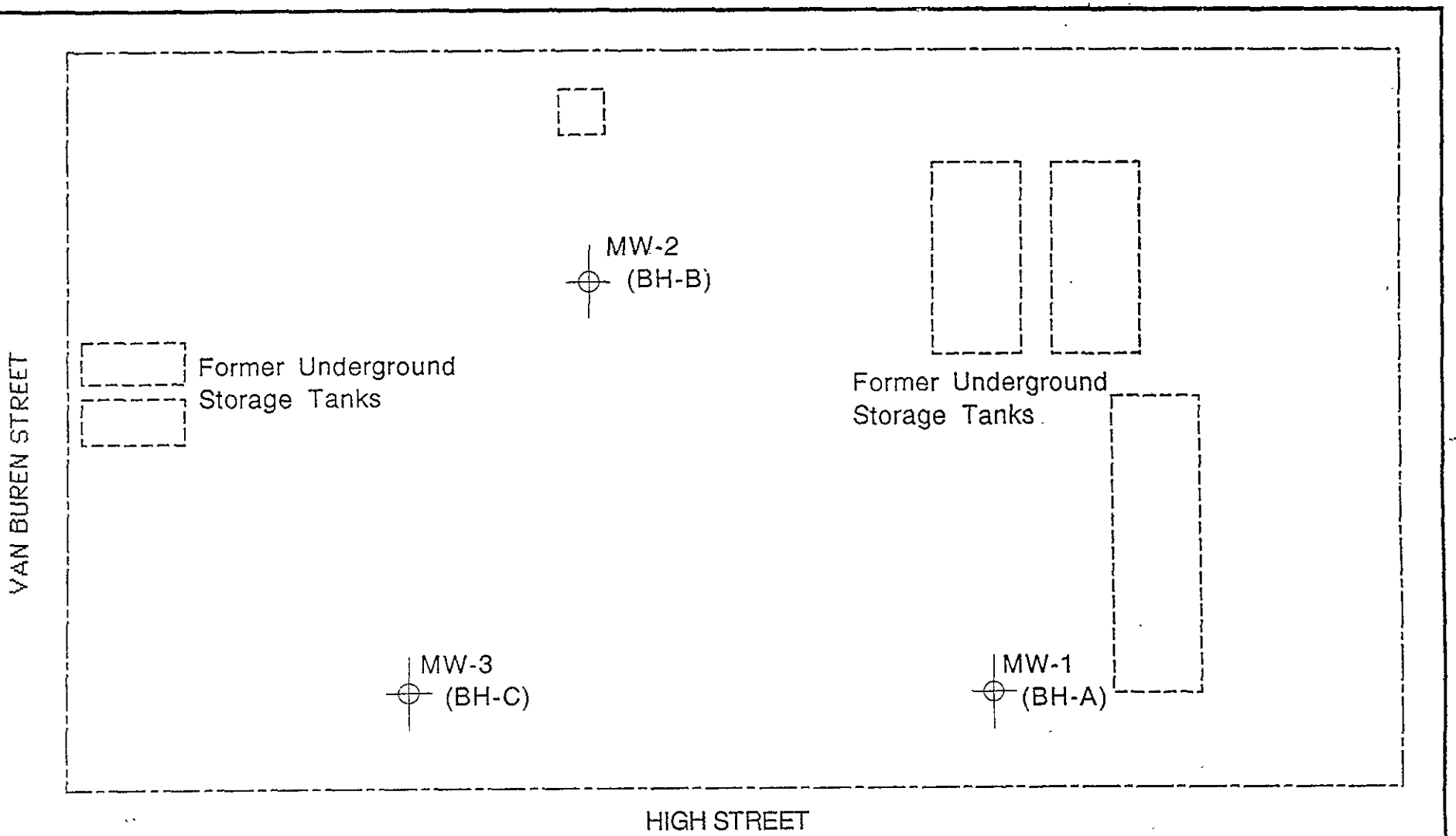


BASE Oakland East and Oakland West 7.5 minute quadrangle topographic map, dated 1980, scale 1:24,000

SITE LOCATION MAP

Alameda Max's
1357 High Street
Alameda, California

Aqua Science Engineers | Figure 1

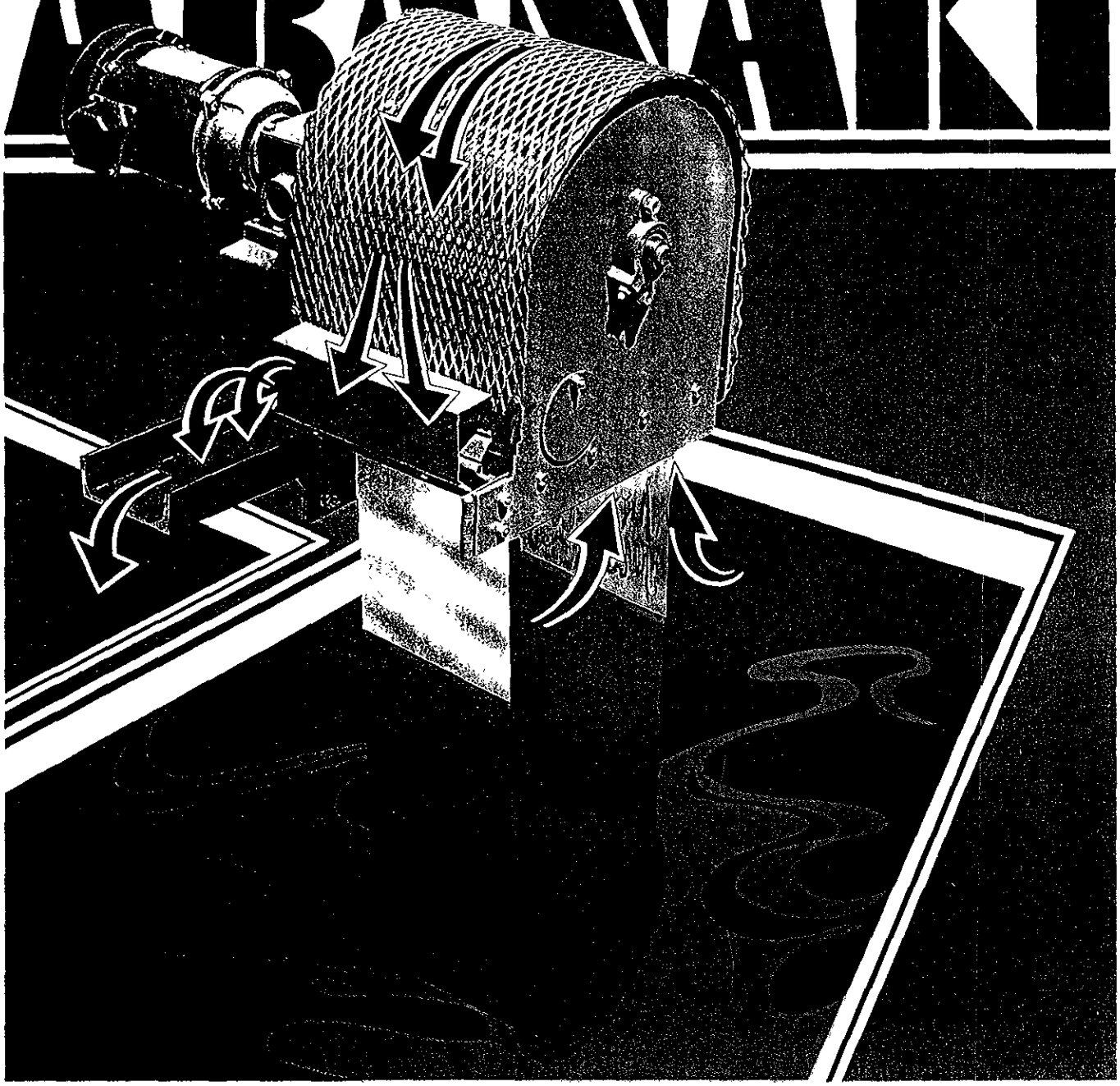


MONITORING WELL LOCATION MAP

Former Alameda Max's
1357 High Street
Alameda, California

AQUA SCIENCE ENGINEERS, INC. | Figure 2

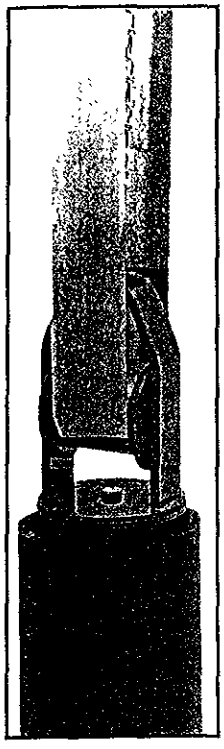
ABANAKI

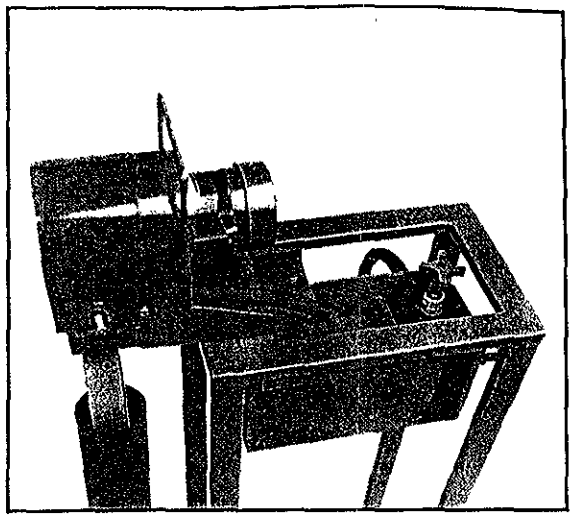


Oil Skimmers

ABANAKI
CORPORATION
OIL SKIMMER DIVISION

NEW MONITORING WELL SKIMMER





Fits 2 Inch or 4 Inch Well Casing — The new Monitoring Well Skimmers from Abanaki fit inside common well casing sizes — the Model MW-1 fits 2 inch I.D. casing and the Model MW-2 fits 4 inch I.D. casing. The belt and special tail pulley drops easily down the casing to lift oil from the water's surface, even if it is as much as 100 feet below ground level.

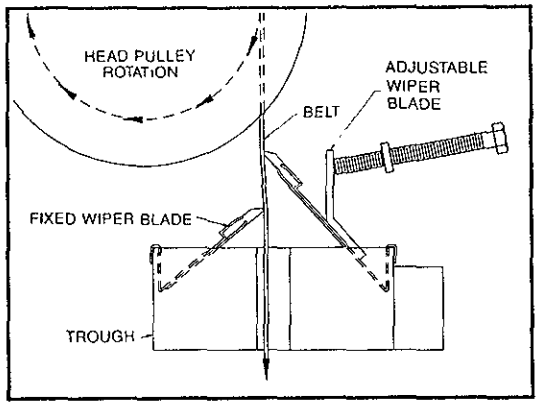
Simple to Install & Use — If floating oils or fuels are present, the skimmer can be used to remove oil from the ground water. To install, simply lower the tail pulley and belt into the well, put the skimmer on suitable support (such as the optional mounting stand shown), place the discharge hose in a collection container, and turn the unit on.

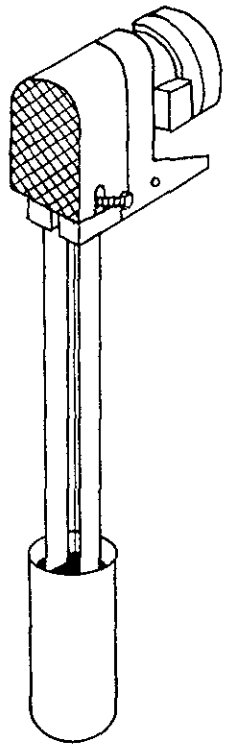
Special Tail Pulley — A special, weighted tail pulley has been developed for this application. Constructed to be non-sparking, it centers the belt in the casing and cannot be accidentally dislodged from the belt while in use. For easier handling and installation, the pulley is also tethered to the skimmer frame by a nylon covered stainless steel cable.

Easy to Maintain — Long-lasting engineered plastic belts and Viton wiper blades are unaffected by most oils and fuels. And when adjustment or replacement is required, the one piece cover lifts off to expose the entire mechanism for convenient service access. Optional stainless steel belts are available for special applications.

Guaranteed Satisfaction — We've built our reputation building products you can rely upon, and we back them with a strong warranty program. Every Monitoring Well Skimmer is backed by a 30-day, money-back guarantee, a 90-day warranty on the belt and wiper blades, and a one year warranty on the unit.

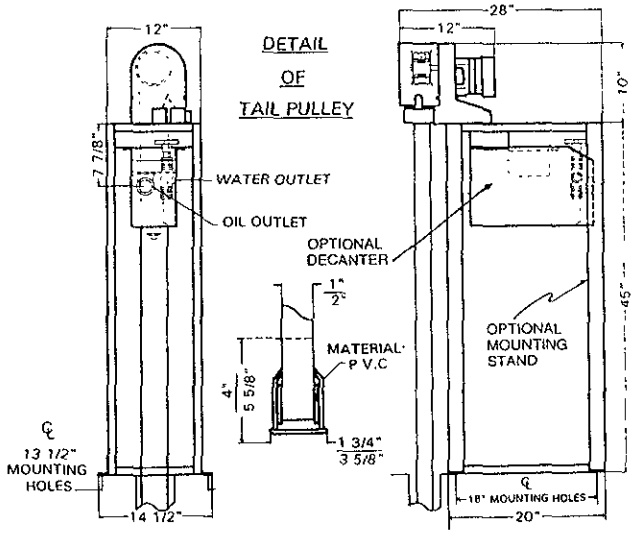
Special Applications — We manufacture a complete line of oil skimmers and related equipment, ranging from portable models with a capacity of 6 gph to multi-belt units and systems with capacities ranging up to 200 gph. In addition to standard models, Abanaki has in-depth experience developing units and complete systems for specialized and OEM applications. If your situation demands something our standard units can't offer, please call upon our experience





Monitoring Well Skimmer Specifications:

Motor Voltage: 110V/1Ph/ 60Hz standard (Other voltages & specs available)
Belt: Engineered plastic or stainless steel
Width – 1 inch (Model MW-1) or 2 inch (Model MW-2)
Length – As Specified
Options: Explosion proof motor, 3-phase motor, decanter, support stand, on-off float switch for discharge container
Capacity:
Model MW-1 – 3 gph (SAE 30 motor oil)
Model MW-2 – 6 gph (SAE 30 motor oil)
Lift Up to 100 feet



DIMENSIONS IN RED ARE FOR MODEL TW2 (2"WIDE BELT)

ABANAKI CORPORATION
OIL SKIMMER DIVISION

17387 Munn Road
Chagrin Falls, OH 44023
Telephone: 216-543-7400
Fax: 216-543-7404

MADE IN THE USA

164-1093-1M AP

WHY ABANAKI OIL SKIMMERS OFFER YOU MAXIMUM EFFICIENCY AND VERSATILITY — AT LESS COST!

RUGGED SIMPLICITY
Design simplicity and rugged construction — the craftsman's approach sets apart the Abanaki line of highly efficient, performance-proven oil skimmers from all others.

UNIQUE PROVEN DESIGN
Utilizing the principle of surface tension, an endless metal belt is suspended from a motor driven head pulley. Immersed in a contaminated liquid, the belt attracts surface oil and waste. When elevated, the oily waste is passed via the belt through tandem wiper blades for removal and subsequent discharge — for reuse or disposal.

MAXIMUM EFFICIENCY
Abanaki Oil Skimmer capacities range from 4 GPH with the TOTE-IT® portable through 200 GPH with Oil Grabber® Multi-belt models. In normal applications users can expect less than 5% water in the discharge residue.

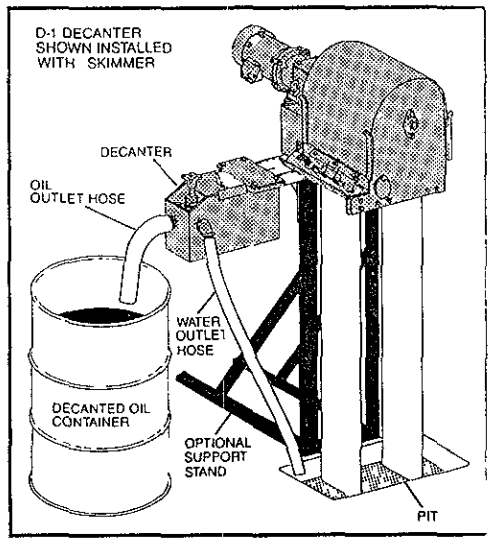
Compare These Features:

SIMPLE DESIGN

- Fast, easy mounting
- Simple belt installation
- Replaceable wiper blades
- Any belt length available
- Single material belts — no lamination separation
- Easy to clean
- Small space requirement
- Skims efficiently from fluctuating fluid levels
- Elevates liquids for easy discharge into drums, etc.
- Skims in harsh or hostile conditions
- Minimum maintenance

CONSTRUCTION

- All welded steel construction
- Corrosion-resistant belts
- Integral flange-mounted motor
- Integral mount gear reducer
- Positive traction head pulley
- Free riding tail pulley
- Adjustable spring-loaded wiper assemblies
- Nitrile or viton wiper blades
- Removable belt guards



OIL GRABBER MODEL 8 SHOWN ON OPTIONAL STAND

Comparison data of ABANAKI OIL SKIMMERS with other oil removal systems available upon request.

MAKE THIS TEST

A simple test can be made in your plant to determine if the oil or waste to be skimmed can be handled effectively with the Abanaki Oil Grabber® Since oil has a greater adherence to metal than water, dip a piece of steel, such as a steel rule, into the fluid to be cleaned. The oil adhering to the rule when pulled up from the liquid will show what the Abanaki Oil Grabber® can remove.

ABANAKI OIL GRABBERS® WILL:

- Conserve wash water by removing oily wastes.
- Remove tramp oils from costly coolants.
- Prevent plugging of pipes, sprays, filters or sewers.
- Permit discharge of oil-free water into lakes and streams.

TYPICAL OIL GRABBER® INSTALLATIONS INCLUDE:

- Coolant tanks
- Parts washers
- Filter systems
- Truck, railroad and large equipment washing facilities.
- Machine beds, sumps, drainage tanks, settling tanks.
- Pools, basins — any container collecting liquids.

ABANAKI CORPORATION
17387 Munn Road, Chagrin Falls, Ohio 44023 (216) 543-7400 FAX (216) 543-7404

STANDARD SPECIFICATIONS: ALL OIL GRABBER® SKIMMERS

Belts — Materials and Size

Corrosion-resistant steel. For special applications, see back page for types available.

Any length belt may be ordered. Measure from center of head pulley to center of tail pulley.

To specify a minimum length belt, measure from skimmer mounting elevation to water at lowest level and add 2 feet. (For TOTE-IT® portable, add 1 foot.) Abanaki recommends the tail pulley be at least 3" above tank bottom.

Motors — Size and Voltage

All units (except TOTE-IT®) are equipped with ¼ HP motors -- 115-230V/1Ph/60Hz or 230-460V/3Ph/60Hz.

Capacities

Rated capacities based on SAE 30 motor oil.

D-1 DECANTER GIVES COMPLETE WATER/OIL SEPARATION

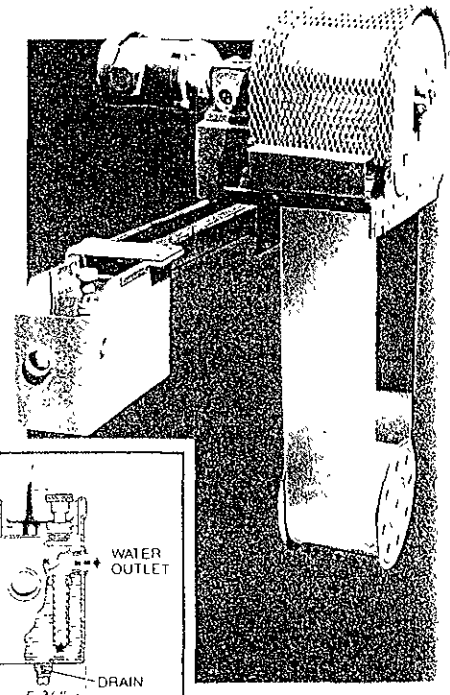
The Abanaki D-1 Decanter offers complete water/oil separation for reuse or disposal of either liquid.

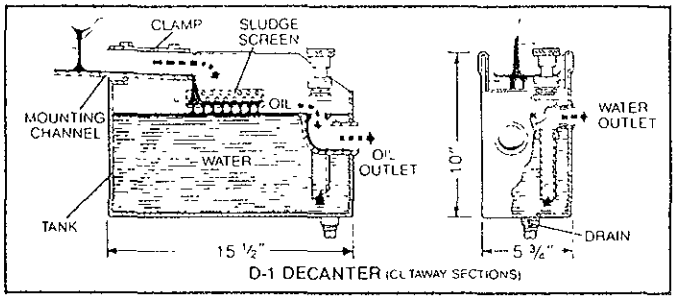
Under normal conditions the Abanaki Oil Grabber® will pick up virtually water-free oil. However, water content of the skimmed liquid will increase as the tank surface oil is reduced to low levels.

Mounted at the discharge end of the oil skimmer support channel, the decanter receives liquid directly from the skimmer. Based on the principle of gravity separation, water is decanted from the bottom, the lighter weight oil is removed from the top.

The D-1 Decanter is non-electrical and contains no moving parts. It comes complete with mounting bracket, removable sludge screen and drain plug for easy cleaning.

An optional heater, thermostatically controlled, is available for use with thick, slow-moving oils or when freezing water is a problem. (Use in non-explosive situations only.)





D-1 DECANTER (CUTAWAY SECTIONS)

ABANAKI CORPORATION
17387 Munn Road, Chagrin Falls, Ohio 44023 (216) 543-7400 FAX (216) 543-7404