



WEISS ASSOCIATES

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Geologic and Environmental Services

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FAX TRANSMITTAL

DATE: 27 SEPT 90

TRANSMITTAL TIME:

PROJECT NO. 4-310

NUMBER OF PAGES: 4
(Including This Cover Page)

TO: LUGH MURPHY

COMPANY: CITY OF ~~Hayward~~
HAYWARD

FAX PHONE: 784-8691

CITY: HAYWARD

BUSINESS PHONE: 784-8693

FROM: BOB RIDDELL

~~STILL PENDING BIR~~

SUBJECT:

AS: ☒ We discussed on the telephone on 26 SEPT 90 @ 5:15
☐ You requested
☐ We believe you may be interested
☐ Is required

WE ARE SENDING:

- INFO re: UV Peroxidation, map of site
- Note use of H_2O_2 , 55 gal drum @ 50% H_2O_2 w/feed line.
- Equipment will be in treatment equipment area with barn and safety features as required by manufacturer and permits.
- Light bulbs are 65 watt bulbs.

FOR: ☐ Your information
☒ Your use
☐ Your review & comments
return to you

PLEASE: ☐ Keep this material
☐ Return by
☒ Acknowledge receipt

NOTES:

- Depot call about 1:30 pm today as we agreed

If you DO NOT RECEIVE all the pages please call us back as soon as possible for retransmission at (415) 547-5420 and ask for Margie.

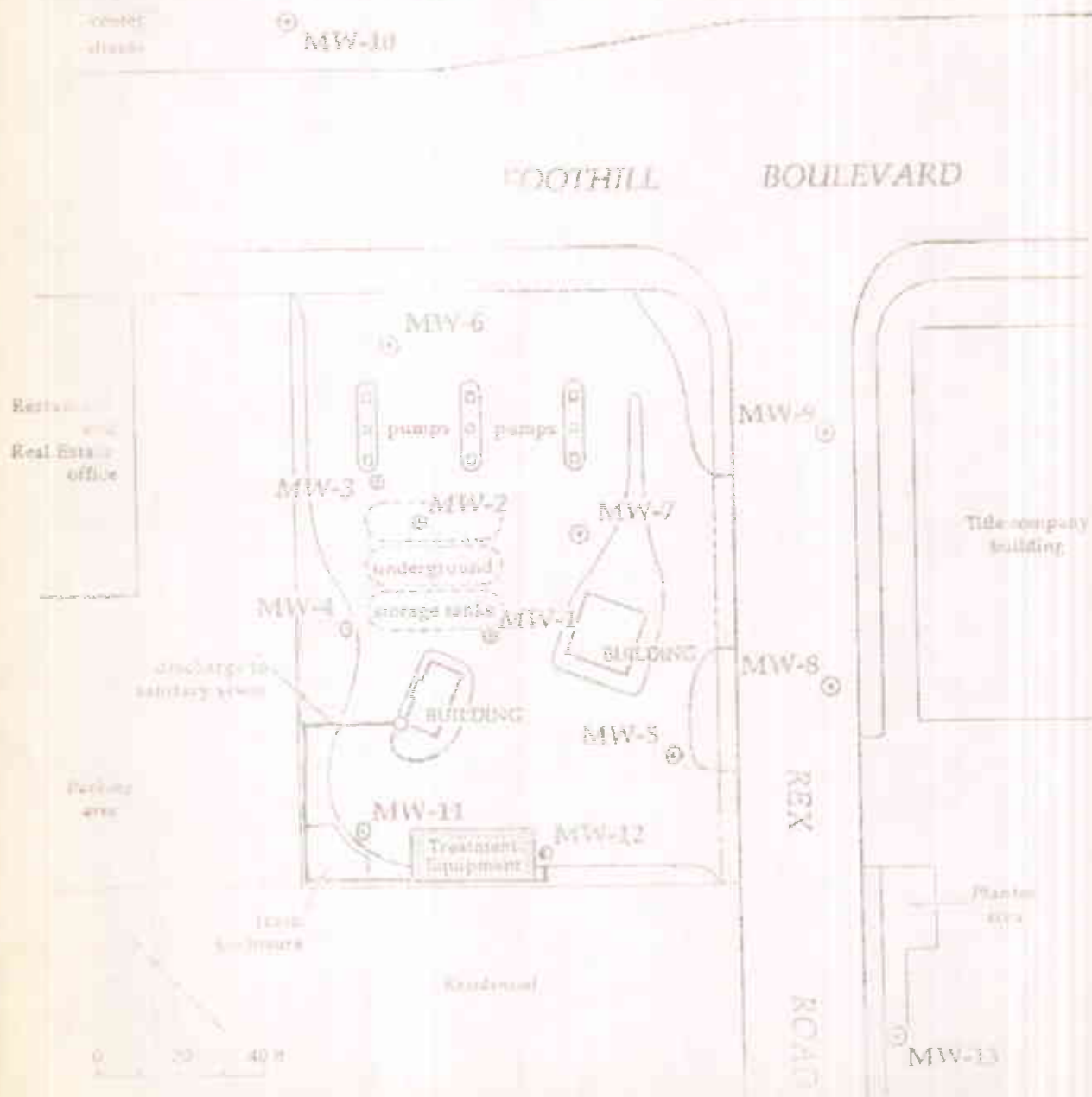
= 65w bulb 8 bulbs

= 120 ft

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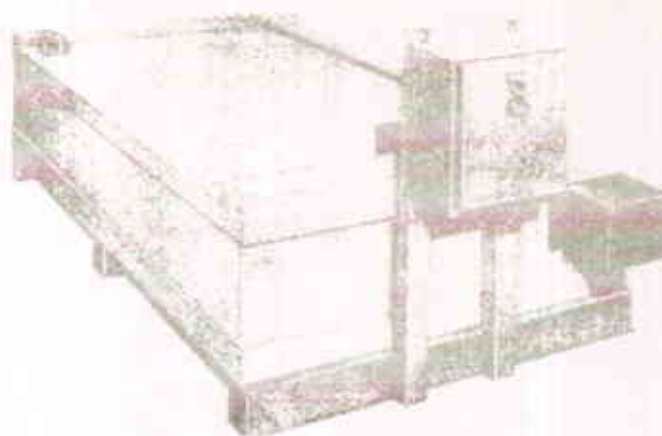
EXPLANATION

- MW-1 Monitoring well used for extraction
- MW-6 Monitoring well
- ⊗ MW-7 Tank backfill well
- SSC Sanitary sewer cleanout



Deep UV Reactor System

Single Module for Low Flow



Features

- Modular Construction
- Low Profile
- Compact, Skid Mounted for Portability
- Low Power Consumption
- Automatic Operation
- Low Maintenance
- Long Bulb Life

Benefits

- Low Capital Cost
- Low Operating Costs
- No Harmful By-Products
- Environmentally Safe
- Portable - Easily Moved

General

EPA and local regulatory authorities are expressing major concern about present methods of removing volatile organics from water. Air Stripping, the most common method of treatment simply transfers the solvent from the water to the atmosphere. With the increased concern over air quality, this practice is becoming unacceptable. Other methods of organic removal are extremely expensive in capital equipment and ongoing operating costs.

WTS introduces the WTS Deep UV Reactor. The single module unit is ideal for low flow applications such as BTX removal at gas station sites. The UV reactor is specifically designed to remove and destroy volatile organics in water. Using a combination of UV light and Hydrogen Peroxide, the Deep UV Reactor oxidizes the volatile organic into carbon dioxide and water and other oxides or halides whose precursors are found in the contaminant. The system provides cost-effective removal of most volatile organic contaminants including BTX, phenols, solvents - including chlorinated compounds. Equipment capital costs compare favorably with other methods of treatment and operating costs, including lamp replacement are very low. The system requires no operator intervention during operation. Only routine maintenance functions need be performed to keep the unit continuously operating.



Technical Data

Hydrogen Peroxide is added to the waste stream in measured quantities. The waste stream is exposed to UV radiation. The UV radiation is produced with a low pressure lamp. An electric arc vaporizes mercury as it strikes an inert gas. The mercury atoms drop back to a lower energy level radiating UV at 254 nanometers. The ultraviolet radiation breaks down the hydrogen peroxide to form hydroxy free radicals. The hydroxy free radicals are powerful oxidizers and react with most organic compounds, breaking them down to the basic elements. The reaction is taken to completion.

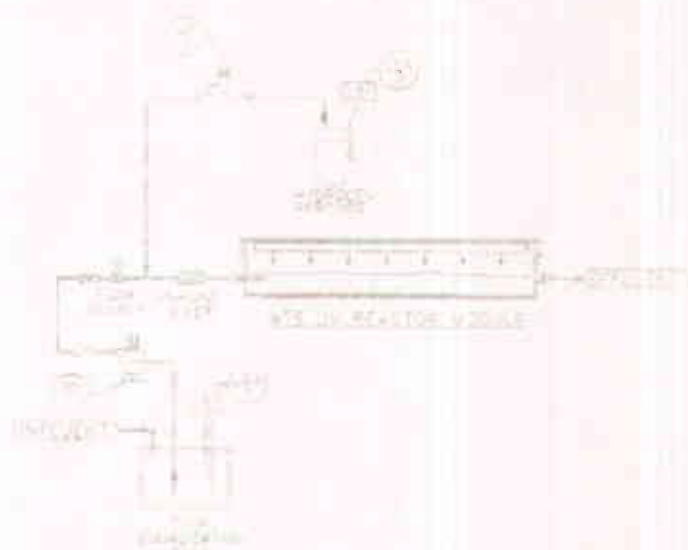
Service

WTS offers the following service with each order:

- Engineering Support
- Full Drawing Package
- Operation and Maintenance Manuals
- Installation and Start-up
- If the customer desires, WTS will furnish the following services at a reasonable cost:
 - Final Plumbing and Electrical Connections
 - Start-up and Testing
 - Operative Instructions

Options

- Stainless Steel Construction
- Coated mild carbon steel construction
- Flow equalization and pumping system
- Analysis and recording of effluent flow
 - Effluent pH
 - Presence of volatile hydrocarbons
 - Discharge volume
- Series flow for long UV exposure requirements
- Parallel flow for high volume discharges
- Alternate piping materials, depending on effluent characteristics
- Pre-treatment (aeration or precipitation systems) if required



Materials of Construction

The UV Reactor is made of polypropylene material for maximum chemical resistance. Each reactor is supported by a rugged, all steel framework, which is covered with a chemical resistant coating. The system piping is constructed of PVC, assuring a system of long life.

Equipment Maintenance

WTS offers continuous service and maintenance contracts. This is part of our assurance that the unit will perform effectively over its useful life.

WTS
WASTEWATER
TREATMENT
SYSTEMS

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