



Thinking Inside the Box – An Alternative to Oil Water Separators

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For Presentation at:

9th Annual Joint Services Environmental Management Conference
August 16, 2004
San Antonio, Texas





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An Alternative to Oil Water
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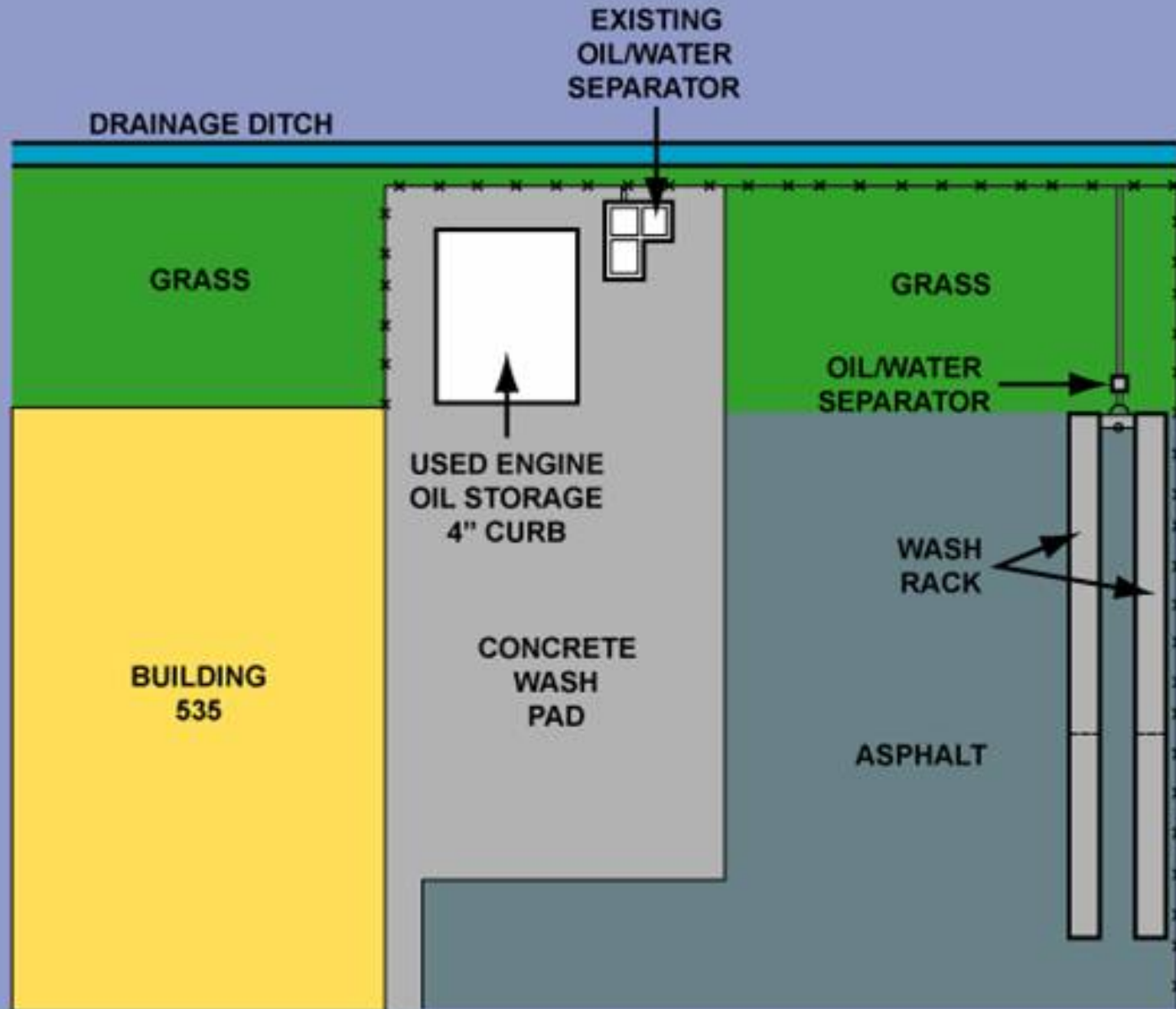
16 August 2004



Project Background

- Request to install Oil Water Separator (OWS) at vehicle wash rack in ROK
- Wash equipment prior to maintenance
- Interviews with facility personnel indicated soap used in pressure washer
- Base contract to O&M separator
- Washing not done every day
- Stormwater runoff processed through OWS

Site Layout



Site Layout



Existing OWS



OWS Effluent



Truck Wash Ramp



OWS Process

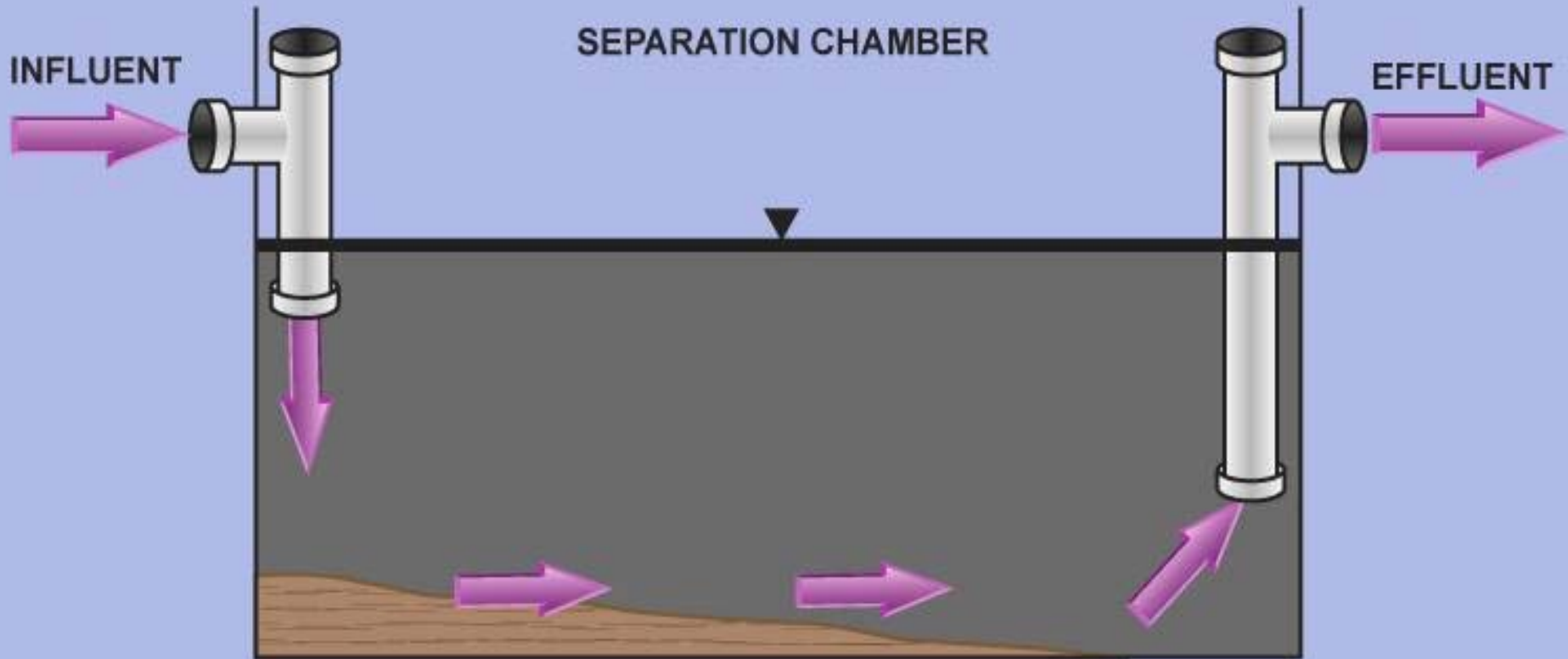
- Compliance measure separates oil from water prior to discharge to wastewater treatment plant
- Typically installed at aircraft and vehicle wash racks
- Wastewater contains gasoline, jet fuel, diesel fuel and lubricants (POL)
- Trap solids like grit and sand
- Three phases of oil – free, emulsified, dissolved
- Most of the OWS installed OCONUS are not designed to treat emulsified or dissolved phase oil

Types of Separator Units

- Gravity OWS
 - Different densities of oil, water and sludge
 - Designs include multi chambers, baffles and skimmers

- Coalescing OWS
 - Use plates or media to trap droplets
 - Best for wastewater with minimal solids
 - Higher level of operator attention and O&M

Gravity OWS



Typical Gravity OWS O&M



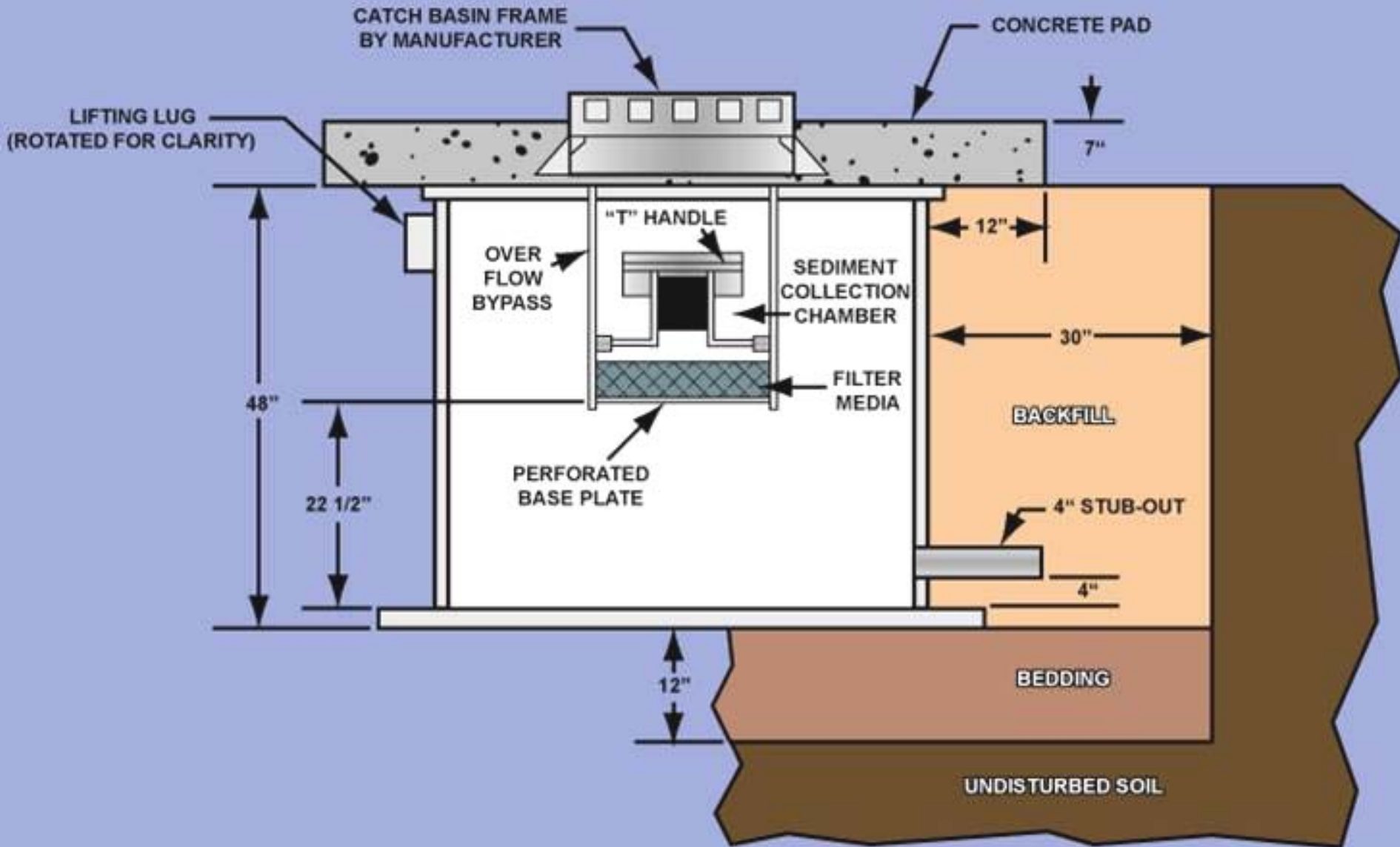
Typical Gravity OWS O&M



Alternative to OWS

- Stormwater Catch Basin Insert
 - Designed to reduce petroleum hydrocarbons entering stormwater sewer system
 - Runoff from parking lots
 - Consists of collection chamber and filter insert
 - California EPA – 90-98% removal of dissolved petroleum and oil
 - Filter has storage capacity equal to 3 gallons of oil

Catch Basin Insert



Catch Basin Insert



Catch Basin Insert



Advantages of Filter Insert

- Treats separate as well as dissolved phase hydrocarbons
- Manufacturer recommends wet/dry vacuum to remove sediment/sludge
- Design accommodates surges due to rainwater runoff
- Trapped hydrocarbon is removed when filter replaced

Are Filter Inserts Silver Bullets?

- Best use when P2 measures already in place
 - Dry absorbent used for spills
- No solvents or dissolved metals

Further Information

www.aquashield.com

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