

## MEETING OBJECTIVES

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8/10/91  
Meeting  
Jane/Steve

*Dave*

- **Review Site Conditions**
- **Review Remediation Alternatives Considered**
- **Present Recommended Approach to Remediation**
- **Solicit NMED Input Early in Conceptual Design**

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ENGINEERING-SCIENCE, INC.

# SITE CONDITIONS

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○ **Site Fate and Transport Model**

⊗ **Predominantly Sandy Soils**

*Clays about  
WT primarily*

○ **Soils Source Area**

*Concentrate on remaining soils contaminant*

○ **DNAPLS Unlikely**

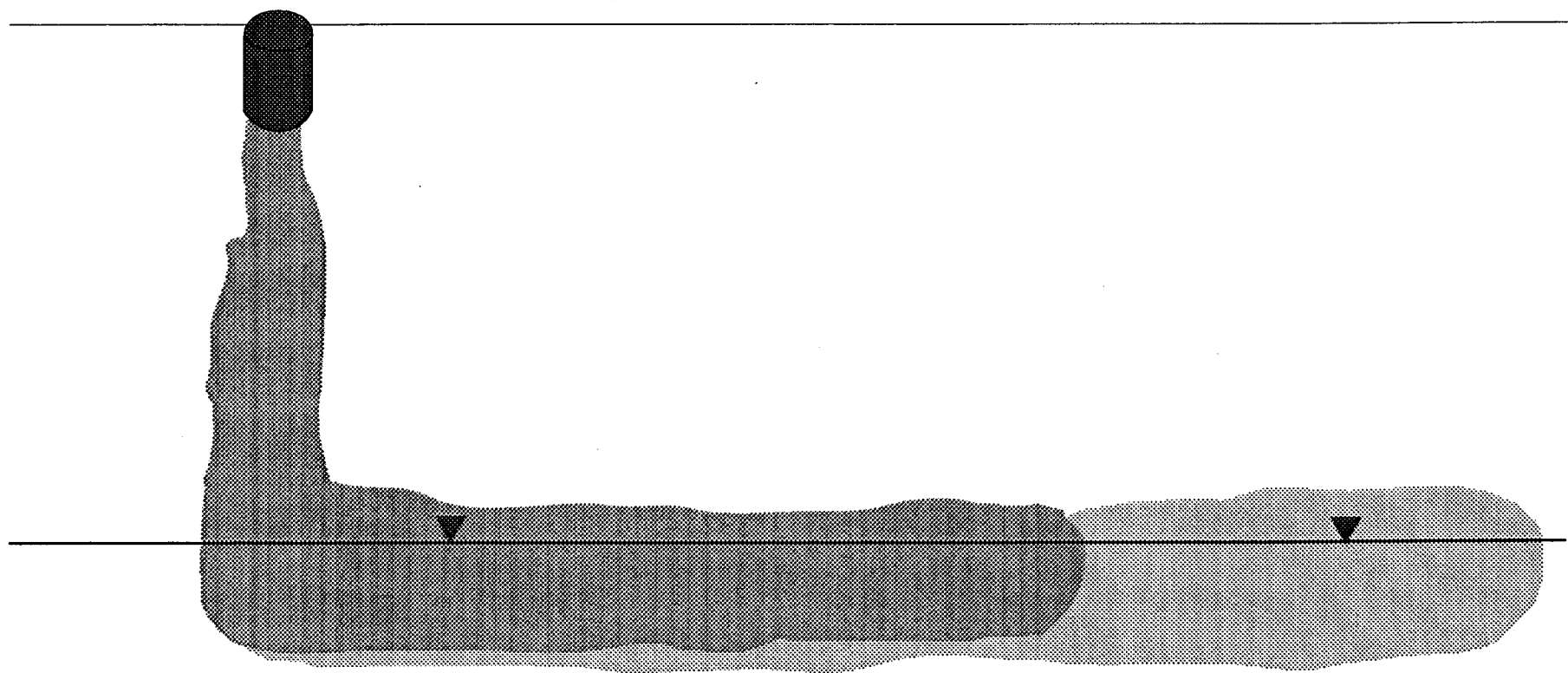
*< 1% solubility concentration*

*used solvent cleaned parts w/steam*

○ **Groundwater Plume Migration**

*Drop of WT, left behind residual adsorbed to soil => will be addressed*

# CONCEPTUAL SITE MODEL



## 2.0 TECHNOLOGIES FOR IN SITU CONTAMINANT DESTRUCTION/CONTAINMENT

2.1 Hydraulic Containment *picket at fringe*

2.2 Semipermeable Barriers *in-situ absorbent bed  $\Rightarrow$  oxidized*

2.3 Enhanced Biodegradation *the three are not degradable in same environment*

x 2.4 Natural Attenuation *degradation hydrolysis Anaerobic-aerobic, RE  
Maybe leave behind an amount of contamination. How clean is clean?*

## 3.0 TECHNOLOGIES FOR CONTAMINANT REMOVAL

x 3.1 Pumping *yes*

3.2 Vapor Extraction *yes - source reduction  $\Rightarrow$  one well may do the trick.  
Drill through cap  $\Rightarrow$  o.k.? How to make o.k.?*

3.3 Air Sparging *limited radius of influence, expensive.*

## 4.0 TECHNOLOGIES FOR ABOVEGROUND TREATMENT

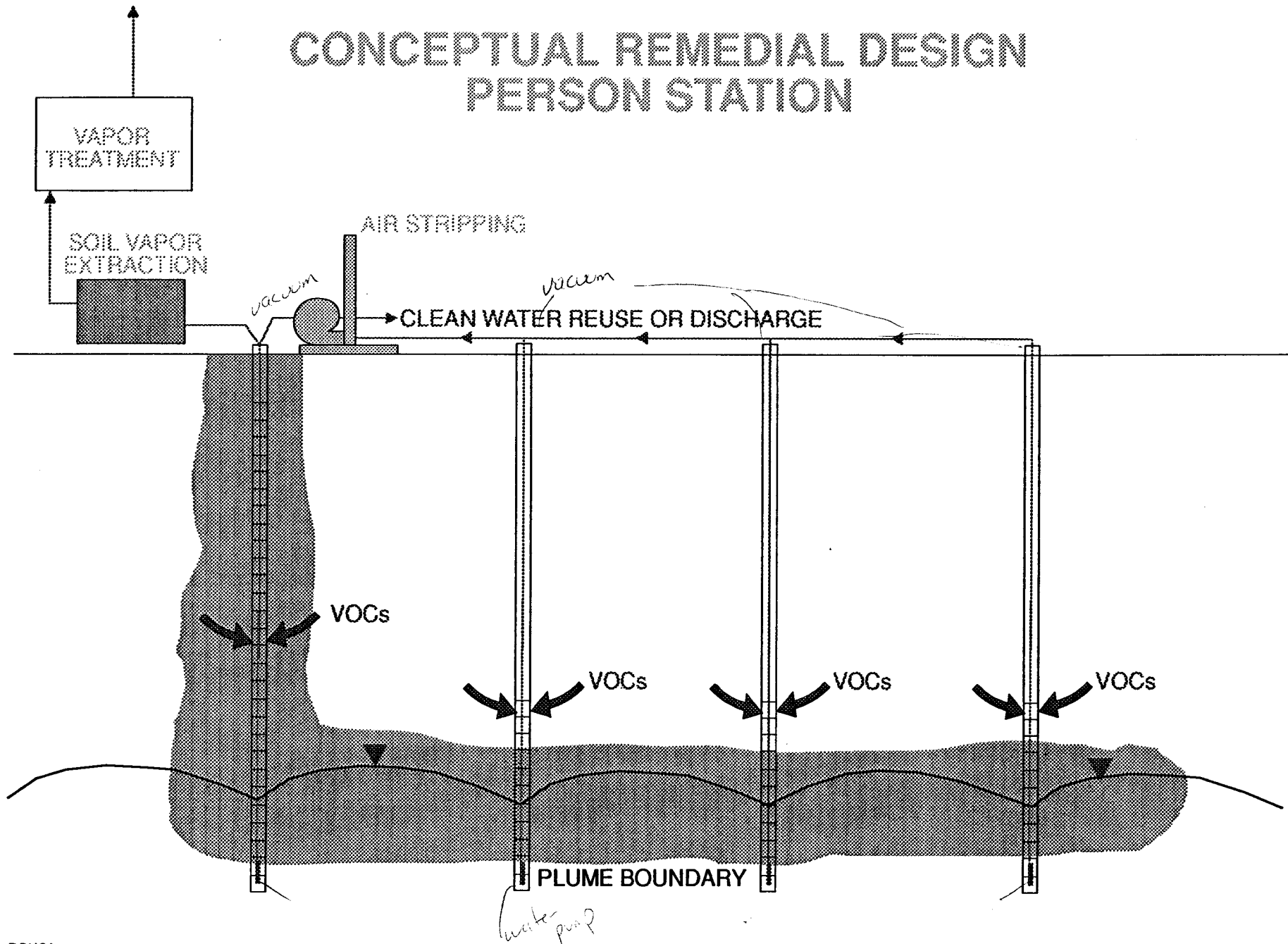
x 4.1 Air Stripping *- vapor extract  $\Rightarrow$  primary option.  $\Rightarrow$  reach MCLs  
& air quality questions?*

4.2 Activated Carbon *- potential use if air stripper doesn't do trick.*

4.3 Biological Treatment *- low rate,  $< 10$  gal/min*

4.4 Catalytic Oxidation

# CONCEPTUAL REMEDIAL DESIGN PERSON STATION

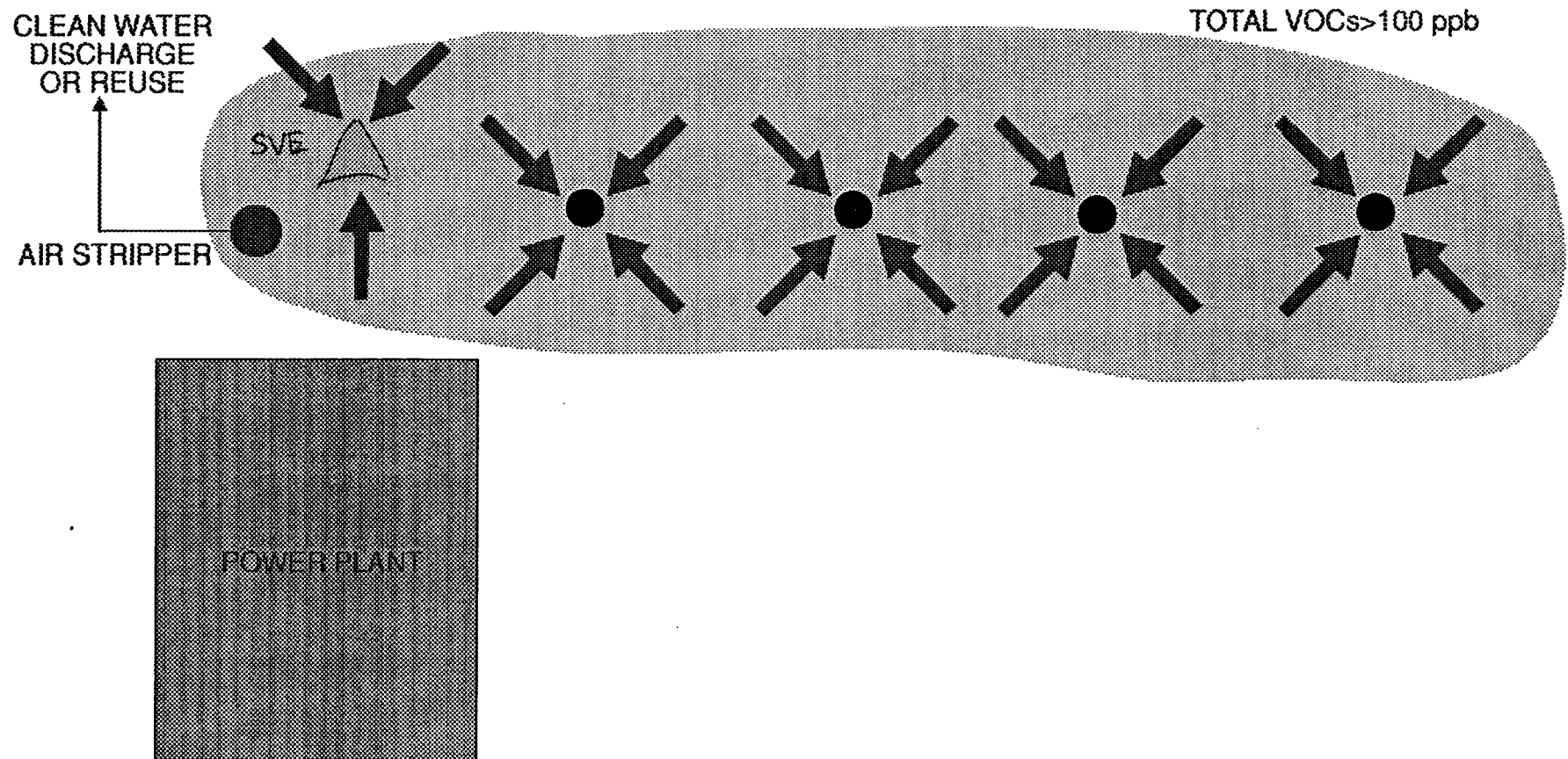


# RECOMMENDED APPROACH

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- **Step One - Source Removal/Pilot Testing**  $\Delta 100'$ 
  - hydrogeologic info
  - new & existing wells
- **Soil Vapor Extraction - Single Vent Well**  $\Rightarrow$  in vertical source column
- **Groundwater Pumping - Two Wells**
- **Air Stripping Treatment** - GW Treatment
- **90 Days or Less**  $\Rightarrow$  do soil vapor & pumping well evaluation  $\Rightarrow$
- **Gather Design Data for Step Two Final Design**

# CONCEPTUAL REMEDIAL DESIGN PERSON STATION



## RECOMMENDED APPROACH (continued)

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- **Step Two - Groundwater Pumping and Treatment**
  - **Use Step One Data to Space Wells and Size Equipment**
  - **Strategically Located Pumping Wells**
  - **Pulsed Pumping to Reduce Total Flow**
  - **Air Stripper Treatment of Groundwater**
  - **Seek Beneficial Use of "Clean" Groundwater**
  - **Cease Pumping When Residuals Reach No Risk Concentrations**

*100-150 gal/min per well*