

## ON-SITE PROJECT EVALUATION



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The ESMI Companies offer on-site thermal treatment of hazardous and non-hazardous contaminated soils. Key considerations when evaluating the benefits of on-site thermal treatment are:

1. Does the cost of transportation of the impacted material to an off-site treatment/disposal facility along with the cost to purchase and transport backfill materials to the site for restoration exceed the cost of mobilizing and demobilizing the treatment unit to the site? Soils treated by Low Temperature Thermal Desorption (LTTD) are reusable for site backfill and restoration. The relatively low temperatures utilized to vaporize soil contaminants does not impact the physical mineral characteristics of the soil.

Typical Site Requirements:

Water: 80 gpm (does not need to be potable)

Electrical Service: Three phase, 480 volt, 1200 amp (Generator available)

Fuel Source: 84 mmbtu/hr; Natural Gas preferred, Propane and Fuel oils are available alternatives

2. Generally, on-site treatment costs are comparable to that for a fixed treatment facility. However, in the case of hazardous wastes, the on-site treatment unit rate is substantially less than handling, treatment, and off-site disposal. Average treatment costs range from \$60 to \$100/ton dependent upon the following parameters:

Soil Treatment Temperatures: 950 degrees maximum

Soil BTU content: Maximum 350 btu/lb

Soil Moisture Content: 18% on a dry-weight basis; Additional costs for higher percentages

Price of fuel

Soil Physical Characteristics: Percentages of Silt, Clay, Solid Organics, etc.

The above treatment costs are based on ESMI feeding stockpiled soils that has been screened to 3-inch minus and are being discharged to a treated soil stockpile. ESMI is able to provide preprocessing services when needed. Typical treatment rates are 30 to 45 tons per hour or 700 to 1000 tons per day, while running 24hrs per day, 6 days a week.

3. The treatment plant with area for a feed stockpile and discharge bins requires an area of about 150' x 225' or about three quarters (3/4) of an acre. The actual plant footprint is less than 10,000 sf.
4. Typically on-site treatment projects that are part of an approved Regulatory Agency Remedial Action Plan (RAP) operate under a permit equivalency in which the unit must be tested to verify the destruction removal efficiency of contaminants, particulate matter emissions, etc. This testing typically costs around \$50,000 to \$125,000 depending on the specific project contaminants and requirements.