##### For Dune Technologies, LLC to develop a useful approach & estimate for any site, detailed & accurate information must be provided to ensure a clear understanding of all factors effecting job costs. In order to accomplish this, please submit:

1. All relevant information requested in this Site Summary. (Contribute what you can)
2. Several representative site boring logs and/or hydrogeological cross-sections.
3. Site figures clearly defining the anticipated treatment area/volume.

Name:             Date Needed:

Company:       Project Budget:

Address:

City/State/Zip:

Phone:

E-mail:

Site ID:

Town:

State:

Country:

## **Contaminant Plume Description**

## **Treatment Zone Description:**

### Please define the size and extent of your anticipated treatment area, soil & groundwater, with remedial objectives:

### What is the Remedial Matrix (Soil or Groundwater or Both):

### Treatment Zone Description (Soil or Groundwater or Both):

### Is your Treatment Zone (Source Area Soil – Dissolved Phase, or Both):

### Soil Type/Lithological Description:

### Depth to Water:

Plume Size: Length (ft.):

Plume Size Width (ft.):

Square Footage (ft2):

Thickness (ft.):

Contaminant Depth Range (ie 5-25 ft.BGS):

Total Cubic Yards for Treatment Area (yd3.):

If your treatment zone is primarily Soil Contamination, please fill out the table below, if it is primarily Groundwater Contamination, please fill out the Dissolved Phase Table, next page.

**Soil Source - Plume Geometry – Lithological Descripton (Soil) Contamination**

**Soil Contaminant Concentrations:** Please note that the soil contaminant levels are in PPM – (mg/kg)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contaminant** |       |       |       |       |
| **Max Level (ppm)** |       |       |       |       |
| **Avg. Level (ppm)** |       |       |       |       |
| **Target Level (ppm)** |       |       |       |       |

Can you describe your remedial objectives (soil/groundwater/reduction %/concentration):

Dissolved Phase Information (Saturated Zone):

**Treatment Zone Physical Dimensions:**

Aquifer Description – Hydrogeology, Lithology:

Length of treatment area parallel to groundwater flow (ft):

Width of treatment area perpendicular to groundwater flow (ft):

Saturated Treatment Thickness (ft):

Average Depth to Water (ft. bgs):

**Treatment Zone Hydrogeologic Properties:**

Total porosity, %:

Effective Porosity, %:

Average Aquifer Hydraulic Conductivity, ft/day:

Average Hydraulic Gradient, ft/ft:

Estimated groundwater velocity, ft/day:

Soil Bulk Density, lbs/cubic yard:

Soil Fraction Organic Carbon (foc), %:

Total Organic Carbon (TOC):

Seepage:

Contaminant Plume Age:

**Natural Attenuation Parameters (not all applicable for each site):**

Dissolved Oxygen, mg/L:

Nitrate, mg/L:

Sulfate, mg/L:

Carbon Dioxide (estimated as the amount of Methane produced), mg/L:

Manganese (IV) (estimated as the amount of Mn (II) produced), mg/L:

Iron (III) (estimated as the amount of Fe (II) produced), mg/L:

Methane, mg/L:

BOD (biological oxygen demand), mg/L:

COD (chemical oxygen demand), mg/L:

Ethene/Ethane, mg/L:

**Aquifer Geochemistry (Optional Screening Parameters):**

Oxidation-Reduction Potential (ORP), mV:

Temperature, ºC:

pH:

Hardness or Alkalinity (mg/L CaCO3):

Total Dissolved Solids (TDS, or salinity) , mg/L:

Specific Conductivity, µs/cm:

Chloride, mg/L:

Total Iron, mg/L:

Bacteria Counts:

Acid Demand of Aquifer Material (pH titration) mg (CaCO3/kg):

Acidity of Groundwater by Standard Methods 2310 (mg CaCO3/L):

Include Any Additional Site Chemistry:

**Groundwater Contaminant Concentrations:** Please note that the GW contaminant levels are in PPB – (ug/L)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contaminant** |       |       |       |       |
| **Max Level (ppb)** |       |       |       |       |
| **Avg. Level (ppb)** |       |       |       |       |
| **Target Level (ppb)** |       |       |       |       |

Can you describe your remedial objectives (soil/groundwater/reduction %/concentration):

Free Phase Information

Is free phase observed or suspected?

Depth Range (ft.):

Plume Size: Length (ft.):

Width (ft.):

Square Footage:

Thickness (ft.):

Porosity:      %

Average Actual Thickness (inches):       (Actual product thickness = measured well thickness / 4)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contaminant** |       |       |       |       |
| **Avg. Level (ppm)** |       |       |       |       |
| **Target Level (ppm)** |       |       |       |       |

**Project Drivers:**

General Site Description (Building Locations, Utilities, etc..):

What is the primary driver for the remediation (Regulatory/Voluntary)?

Is the project funded or only proposal (State/Federal/Private/Insurance funding)?

Regulatory Agencies Involved:

Project Schedule (Anticipated Remediation Start/End Date)?

What other remedial methods have been implemented?

What other remedial methods are being evaluated?

Do you have excavation costs for this project?

What percentage of the treatment area is located below buildings/structures?      %

When do you need project evaluation/preliminary estimate delivered?

Can you estimate the amount of funding available for the remediation portion of this project?

When does the remediation need to be completed? Is there a deadline?

Please add any additional information about the project: