



The Environmental Remediation Group

Request for Preliminary Evaluation Form

Thank you for considering ERG as your premier environmental remediation technology provider and requesting a preliminary project proposal for your remediation project. ERG looks forward to developing a reliable and informative preliminary remediation system design and associated budgetary cost estimate for your project opportunity.

ERG's ability to properly design and accurately estimate project costs during the **preliminary** project evaluation stage is directly related to the quality of the Site/Project information provided. Please avoid forwarding full historic reports or large unfiltered data sets. While all relevant Site information is important in the more detailed design and estimating process, to maintain an efficient preliminary evaluation process, please provide ERG's technical experts with **only** the information contained within this questionnaire, and relevant tables and figures as listed below:

1. All relevant information requested within this form.
2. A Site drawing clearly delineating the targeted treatment area (TTA), and showing lateral changes in proposed treatment area depths, if relevant.
3. A Site Map showing the TTA relative to site features, including natural or manmade structures.
4. Cross Sections or composed Subsurface Drawings showing lithologic and stratigraphic changes across the proposed treatment area.

Other information, which will help in the preliminary review and assessment, but is not essential at this stage, includes:

5. Recent laboratory analytical (soil and water) data (specific to the intended area of thermal treatment, including any directly upgradient areas) showing all known chemical compounds present. Please only provide relevant information, in a clear and editable format if available.
6. Any fully composed figures showing spatial distribution of contaminants in the subsurface. 3-D EVS models, or 2-D renderings both laterally and vertically.
7. Any maps showing available utilities, including underground and overhead utilities within or proximal to the TTA.

*ERG understands that specific site data may or may not be available and depending on the project status some sites may have limited site investigation data or robust site investigation data. **Please provide as much site detail as possible.***

For estimates, please forward a completed draft of this form to:



Allen Swift

Executive Vice President

The Environmental Remediation Group

A Division of CES

Mobile: (206) 271-1514

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Seattle, WA





The Environmental Remediation Group

Client Information

Contact Information

Name	
Company	
Office Location	
Email	
Phone Number	
Role on Project	

Project Information

Client Name	
Site Name	
Site Location	
Environmental Consultant on Project	Consultant: Office Location:
Fiscally Responsible Party	
Regulatory Agency	



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General Project Information

Please Check the boxes that are applicable in the tables below:

Project Type

In Situ Remediation	<input type="checkbox"/>
Ex Situ Remediation	<input type="checkbox"/>

Technologies of Interest:

Thermal Remediation	<input type="checkbox"/>
Bioremediation	<input type="checkbox"/>
Combined Remediation Approach	<input type="checkbox"/>

Air Movement Technology (SVE, MPE)	<input type="checkbox"/>
Groundwater Recirculation	<input type="checkbox"/>
Other (AS, ISCO, ISCR, PRB)	<input type="checkbox"/>

Please describe why you are interested in these technologies/approaches, if selecting other please elaborate below: _____

General Site Description: _____

New project or established project: _____

Active Facility (yes/no): _____

Utilities present (electrical, gas and sanitary and please specify above/below ground): _____

Time Table for Clean-Up: _____

Previous/On-Going Remediation at the site: _____

Surface Material at Site (concrete, asphalt, soil, field, etc.): _____

Remediation Purpose (property sale, exposure risk, etc.): _____



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Basic Technical Information

Contaminants of Concern: _____

Maximum and Average Conc. of COCs: _____

Remediation / Cleanup Goal: _____

Depth to Water Table: _____

Describe Soil Impacts: _____

Describe Groundwater Impacts: _____

Depth to Water Table: _____

Remediation / Cleanup Goal: _____

Any Additional Details which may be relevant to the Preliminary Design and Approach _____



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All Project Type Requests

Contaminants of Concern (COCs)

Contaminant Species	Average Conc. In soil	Max. Conc. In soil	Cleanup Goal in soil	Average Conc. In Groundwater	Max. Conc. In Groundwater	Cleanup Goal in Groundwater	Is NAPL Present ?	NAPL volume or mass estimate
	mg/kg	mg/kg	mg/kg	mg/L	mg/L	mg/L	yes/no	Gal or lbs

ALL In Situ Remediation Project Requests

In Situ Thermal, Heat Enhanced Bio, and all Combined In Situ Remedies

Plume Size

Length (Avg.)	
Width (Avg.)	
Depth (Avg.)	
Plume Geometry (ie. Square, irregular, etc.)	
Are there multiple Treatment Areas/Zones?	



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Please fill out **ALL** of the following parameters:

Parameter	Unit	Response
Total Aerial Footprint of TTZ	ft ²	
Top of Impact	ft bgs	
Bottom of Impact	ft bgs	
Total Treatment Volume	yd ³	
Groundwater Depth	ft bgs	
Confining Layer Depth	ft bgs	
Hydraulic Conductivity	cm ^{*s-1}	
Hydraulic Gradient	ft/ft	
Groundwater Velocity	ft/day	
TOC (Total Organic Carbon)	mg/kg	

Please fill out the subsurface parameters to the best of your ability:

Soil or Hydrostratigraphic unit	Soil Type	Top of Interval	Bottom of Interval	Soil Porosity	Soil Density	% Water Content	Hydraulic Conductivity
	<i>(silt, sand, etc)</i>	<i>ft bgs</i>	<i>ft bgs</i>	<i>PU as %</i>	<i>lbm/ft³</i>	<i>Mass of H₂O/Mass Dry Soil</i>	<i>Cm/sec</i>
<i>Unit 1</i>							
<i>Unit 2</i>							
<i>Unit 3</i>							
<i>Unit 4</i>							
<i>Unit 5</i>							

Please provide any additional information on the aquifer and Site hydrogeology _____



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Are NAPLs/ free phase observed or suspected? _____

Is the non aqueous phase DNAPLs or LNAPLs? _____

NAPL Plume Extent: length (ft.): _____ width (ft.): _____ Porosity: _____%

Average Thickness (inches): _____

Estimated Volume or Mass of NAPL in Proposed Treatment Volume: _____

Contaminant(s) (please include name, source, history, mass estimate, NAPL, etc.): _____



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Ex Situ (pile) Remediation Project Requests

Will the Soils be excavated and stockpiled prior to Ex Situ Thermal Remediation? _____

Will you, or other project parties involved, provide soil pile construction support in the form of excavator and heavy machinery operations to move the soils to the pile during the pile construction phase? _____

Are there Site constraints on the size of the treatment pile and system? If so, please provide an estimated area (length and width)? _____

Please provide the following information on the excavated soils to be treated:

Soil Type	Soil Porosity	Total Organic Carbon	Soil Density	% Water Content	Hydraulic Conductivity
<i>(silt, sand, etc.)</i>	<i>PU as %</i>	<i>TOC as %</i>	<i>lb./ft³</i>	<i>Mass of H₂O/Mass Dry Soil</i>	<i>Cm/sec</i>



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Heat Enhanced Bioremediation and Combined Remediation Approaches

Total Project timeline and Driver, and estimated timelines for each phase or stages of remediation: _____

Have Bioremediation or other remediation technologies been previously applied at the Site? Please provide a summary of past remedial efforts, the outcome, and why it was unsuccessful: _____

Groundwater Plume Extent: length (ft.): _____ width (ft.): _____ Depth Range (ft bgs)

Contaminant(s) (please include name, source, history, mass estimate, etc.): _____

Groundwater Geochemistry: DO: _____ ORP: _____ pH: _____

Dissolved chemistry, metals, or other pertinent geochemistry: _____

Please describe any data or understanding on current biodegradation (daughter products, qPCR analysis results, etc): _____

Any additional details which may be relevant to developing a heat enhanced bioremediation, or combined in situ remediation strategy: _____
