December 23, 2025

Alaska Department of Environmental Conservation
Air Permit Program
555 Cordova Street
Anchorage, Alaska 99501
(907) 269-6881

Re: New Stationary Source Permit Application for Soil Remediation Unit

To Whom It May Concern:

Please see the attached versions of the Soil Treatment Technologies LLC (STT) Stationary Source Identification application that were cutoff in the previous submittal.

If you have any questions, please feel free to contact me at (907) 570-4806.

Respectfully Submitted,

Zack Kirk
Principal, Regulatory Compliance Manager
Soil Treatment Technologies, LLC

Alaska Department of Environmental Conservation
Air Quality Minor Permit Application

STATIONARY SOURCE IDENTIFICATION FORM

TMcG markup 10/23/25 Insert new data in yellow boxes and fix others that may not apply to this site xxx

Section 1 Stationary Source Information

Name: Soil Remediation Unit 02			SIC:
Project Name (if different):	Contact: Zack Kirk		
Physical Address: 2301 Spar Avenue, Anchorage, Alaska 99501	City: Anchorage	State: AK	Zip: 99507
	Telephone: 907-570-4806		
	E-Mail Address: z.kirk@sttalaska.com		
UTM Coordinates 61.222808° N -149.837046° W	Northing:	Easting:	Zone:
	Latitude:	Longitude:	

Section 2 Legal Owner

Name: Soil Treatment Technologies, LLC		
Mailing Address: 8361 Petersburg Street		
City: Anchorage	State: AK	Zip: 99507
Telephone #: 907-677-7423		
E-Mail Address: n.oberlee@sttalaska.com		

Section 3 Operator *(if different from owner)*

Name:		
Mailing Address:		
City:	State:	Zip:
Telephone #:		
E-Mail Address:		

Section 4 Designated Agent *(for service of process)*

Name: Zack Kirk		
Mailing Address: 8361 Petersburg Street		
City Anchorage	State: AK	Zip:99507
Telephone #: 907-570-4806		
E-Mail Address: z.kirk@sttalaska.com		

Section 5 Billing Contact Person *(if different from owner)*

Name:		
Mailing Address:		
City:	State:	Zip:
Telephone #:		
E-Mail Address:		

Section 6 Application Contact

Name: Zack Kirk			
Mailing Address: 8361 Petersburg Street	City: Anchorage	State: AK	Zip: 99507
	Telephone: 907-570-4806		
	E-Mail Address: z.kirk@sttalaska.com		

Section 7 Desired Process Method *(Check only one – see 18 AAC 50.542(a) for process descriptions and restrictions)*

☐ Fast track for a permit classification under 18 AAC 50.502 [18 AAC 50.542(b)]

☒ Public comment [18 AAC 50.542(d)]

Section 8 Source Classification(s) *(Check all that apply)*

[18 AAC 50.502(b)]

- ☐ Asphalt Plant [≥ 5 ton per hour]
- ☒ Thermal Soil Remediation Unit [≥ 5 ton per hour]
- ☐ Rock Crusher [≥ 5 ton per hour]
- ☐ Incinerator(s) [total rated capacity ≥ 1000 lb/hour]
- ☐ Coal Preparation Plant
- ☐ Port of Anchorage Facility

If you checked any of the above, is (are) the emission unit(s) ☒ new, ☐ relocated*, or ☐ existing?

[18 AAC 50.502(c)(1)]

New or relocated* stationary source with potential emissions greater than:

- ☐ 40 tons per year (tpy) NOx
- ☐ 40 tpy SO_2
- ☐ 15 tpy PM-10
- ☐ 10 tpy PM-2.5
- ☐ 0.6 tpy lead
- ☐ 100 tpy CO in a nonattainment area

[18 AAC 50.502(c)(2)]

Construction or relocation* of a:

- ☐ Portable oil and gas operation
- ☐ ≥ 10 MMBtu/hr fuel burning equipment in a SO_2 special protection area

* *Relocation does NOT include moving equipment from one place to another within your current stationary source boundary.*

Section 9 Modification Classification(s) *(Check all that apply)*

[18 AAC 50.502(c)(3)]

- ☐ NOx Increase > 10 tpy [and existing PTE > 40 tpy]
- ☐ SO_2 Increase > 10 tpy [and existing PTE > 40 tpy]
- ☐ PM-10 Increase > 10 tpy [and existing PTE > 15 tpy]
- ☐ PM-2.5 Increase > 10 tpy [and existing PTE > 10 tpy]
- ☐ CO Increase > 100 tpy [and existing PTE > 100 tpy in a nonattainment area]

[18 AAC 50.502(c)(4)]

- ☐ NOx Increase > 40 tpy [and existing PTE ≤ 40 tpy]
- ☐ SO_2 Increase > 40 tpy [and existing PTE ≤ 40 tpy]
- ☐ PM-10 Increase > 15 tpy [and existing PTE ≤ 15 tpy]
- ☐ PM-2.5 Increase > 10 tpy [and existing PTE ≤ 10 tpy]
- ☐ CO Increase > 100 tpy [and Existing PTE ≤ 100 tpy in a nonattainment area]

Basis for calculating modification:

- ☐ Projected actual emissions minus baseline actual emissions
- ☐ New potential emissions minus existing potential emissions

Section 10 Permit Action Request *(Check all that apply)*

[18 AAC 50.508]

- ☐ Establish Plant-wide Applicability Limitation (PAL)
- ☐ Establish emission reductions to offset nonattainment pollutant
- ☐ Owner Requested Limit* (ORL)
- ☐ Revise or Rescind Title I Permit Conditions *
  Permit Number: Condition No.
  Date:

* *Which to use? See* http://www.dec.state.ak.us/air/ap/docs/orlrtc.pdf

Section 11 Existing Permits and Limits

For an existing stationary source, do you have an existing:
(Check all that apply)

- ☐ Air quality permit Number(s)*:
- ☐ Owner Requested Limit(s) Permit Number(s):
- ☐ Pre-Approved Emission Limit (PAEL) Number(s)**:

* *All active construction, Title V, and minor permit numbers.*
***Optional. Please provide this number if possible.*
http://dec.alaska.gov/Applications/Air/airtoolsweb/

Section 12 Project Description

Provide a short narrative describing the project. Discuss the purpose for conducting this project, what emission units/activities will be added/modified under this project (i.e., project scope), and the project timeline. If the project is a modification to an existing stationary source, describe how this project will affect the existing process. Include any other discussion that may assist the Department in understanding your project or processing your application. Include a schedule of construction.

Please use additional copies of this sheet if necessary.

Soil Treatment Technologies LLC (STT) is submitting this Stationary Source Identification Form for the authorization of a Minor Stationary Source permit of a mobile thermal soil remediation unit (Soil Remediation Unit 02 [SRU02]) at 2301 Spar Avenue in Anchorage, Alaska. The stationary source will consist of a direct fired Gencor thermal unit with a design throughput 25 tons per hour. The stationary source will receive petroleum contaminated soil for thermal treatment. The soil will be stored in covered stockpiles to mitigate exposure to precipitation and wind and fugitive dust emissions. The soil will be loaded into a feed hopper for depositing the soil onto a conveyor that discharages into a rotary dryer drum. The temperature inside the dryer drum will be maintained at approximately 600 to 700 degrees Fahrenheit (°F) for volatilization of the contaminant compounds in the soil.

The generated steam, heated gasses and suspended particulates will be processed out of the drum and into the baghouse filter where finer particles are filtered out by an array of high efficiency filter bags. The baghouse is equipped with a 20 horsepower (HP) baghouse auger and a TECO AEHE Type, 50 HP induced draft fan to pull in the vapor quotient. The primary air emission control function of the baghouse is the reduction of particulate matter; with a 99.8% particulate extraction efficiency. The 238 filter bags in the baghouse will collect the dust and fine particles on their surface while allowing the remaining exhaust air to pass on through a plenum to the fan. To mitigate dust accumulation on the surface of the bags and the restriction of airflow, the bags will be cleaned by dislodging the dust cake through the introduction of a sequence of highly compressed air pulses (shock waves) at the top of the bags. The frequency and duration of the pulses is controlled by an electronic timer. The dislodged dust from the filters in the baghouse will then be homogenized with the thermally treated soil and transferred to the soil conditioner by a 12-inch auger located under the filter housing. Water mist injection ports are located on the baghouse for injecting clean water into the airstream as needed to maintain a minimum relative humidity and ensure combustion does not occur in the baghouse.

After passing through the baghouse, the filtered gas vapor will then be pulled away by a centrifugal fan and transferred to the thermal oxidizer for volatile contaminant destruction. The oxidizer consists of a refractory lined chamber equipped with a burner that directly fires into the chamber fueled by natural gas. The 22 million BTU burner in the thermal oxidizer will maintain an operating temperature of 1,500°F with a higher heating value (HHV) of 1,000 BTUs per cubic foot (BTU/CF) to ensure an emissions destruction rate of 99%. The treated gases will then be exhausted to the atmosphere at approximately 800°F. In accordance with the ADEC Division of Air Quality Emission Standards, the following operating requirements will be maintained at all times via the constant operation of the baghouse and thermal oxidizer.

- Effluent exhaust shall not reduce visibility by more than 20% averaged over any six consecutive minutes.
- STT shall maintain and comply with its Fugitive Dust Control Plan to control the generation of fugitive dust.
- Particulate matter from effluent exhaust shall not exceed 0.05 grains per standard cubic foot (gr/scf) of exhaust gas corrected to standard conditions and averaged over a period of three hours.
- Sulfur compound emissions, expressed as SO2, shall not exceed 500 ppmaveraged over three hours.

The remediated soil will be water cooled and conveyed to storage piles for post treatment analytical sampling. If post-treatment sample results indicate that the contaminated soil has successfully been remediated to levels below ADEC regulatory criteria, the soil will be used for beneficial reuse in accordance with ADEC restrictions.

STATIONARY SOURCE IDENTIFICATION FORM

STT will operate the SRU02 facility only during non-frozen periods of the year. However, the system's potential to emit (PTE) emissions on a continuos operation yearly basis are all below the thresholds listed under 18 AAC 50.502 (c)1 for effluent modeling. The SRU02 unit will be fueled entirely by natural gas.

STT intends to thermally treat soil impacted only with petroleum hydrocarbons. However, in the unlikely scenario, STT may seek permission from ADEC to treat soil contaminated with chlorinated compounds on a case-by-case basis. When chlorinated compounds in soil are combusted, HCl emissions are generated, which is classified as a hazardous air pollutan (HAP). In accordance with the Minor Permit requirements, emissions of a single HAP cannot exceed 10 tons per year (TPY), as it would necessitate a reclassification of the facility as a major source of HAP and require additional permitting requirements.

A calculation of the various compound concentration thresholds for three common chlorinated compounds is included as attachment 02b for reference. However, STT will not treat (or accept) any soil impacted with chlorinated compounds prior to notification and receipt of ADEC approval.

Section 12 Project Description Continued

For **PALs under Section 10** of this application, include the information listed in 40 C.F.R. 52.21(aa)(3), adopted by reference in 18 AAC 50.040 [18 AAC 50.540(h)].

For a **limit to establish offsetting emissions under Section 10** of this application, specify the physical or operational limitations necessary to provide actual emission reductions of the nonattainment air pollutant; including [18 AAC 50.540(i)]:

- A calculation of the expected reduction in actual emissions; and

- The emission limitation representing that quantity of emission reduction.

Section 12 Project Description Continued

For **ORLs under Section 10** of this application [18 AAC 50.540(j)], include:

A description of each proposed limit, including for each air pollutant a calculation of the effect the limit will have on the stationary source's potential to emit and the allowable emissions [18 AAC 50.225(b)(4)];

A description of a verifiable method to attain and maintain each limit, including monitoring and recordkeeping requirements [18 AAC 50.225(b)(5)];

Citation to each requirement that the person seeks to avoid, including an explanation of why the requirement would apply in the absence of the limit and how the limit allows the person to avoid the requirement [18 AAC 50.225(b)(6)];

A statement that the owner or operator of the stationary source will be able to comply with each limit [18 AAC 50.225(b)(8)];

Section 12 Project Description Continued

For **revising or rescinding Title I permit conditions under Section 10** of this application [18 AAC 50.540(k)], include:

An explanation of why the permit term or condition should be revised or rescinded [18 AAC 50.540(k)(2)];

The effect of revising or revoking the permit term or condition on [18 AAC 50. 540 (k)(3)]:

- Emissions;
- Other permit terms;
- The underlying ambient demonstration, if any;
- Compliance monitoring; and

For revising a condition that allows avoidance of a permit classification, the information required for that type of permit, unless the revised condition would also allow the owner or operator to avoid the classification. [18 AAC 50.540(k)(4)]

Section 13 Other Application Material

The information listed below must be included in your air quality control minor permit application. *Note: These must be attached in order for your application to be complete.*

If required to submit an analysis of ambient air quality under 18 AAC 50.540(c)(2), or if otherwise requested by the Department:

☐ Attached are maps, plans, and/or aerial photographs as necessary to show the locations and distances of nearby or adjacent residences, roads, other occupied structures and general topography within 15 kilometers.

(Indicate compass direction and scale on each.)

☐ Attached is a document (e.g., spreadsheet) showing coordinates and elevations of each modeled unit, along with parameters necessary to characterize each unit for dispersion modeling.

☐ Attached is an electronic copy of all modeling files.

Section 14 Certification

This certification applies to the Air Quality Control Minor Permit Application for the submitted to the Department on: 23 Dec 2025

Soil Treatment Technologies
(Stationary Source Name)

Type of Application

☒ Initial Application
☐ Change to Initial Application

The application is **NOT** complete unless the certification of truth, accuracy, and completeness on this form bears the signature of a **Responsible Official**. Responsible Official is defined in 18 AAC 50.990. (18 AAC 50.205)

CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

"Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete."

Signature:	Date: 23 December 2025
Printed Name: Zack Kirk	Title: Principal, Compliance Manager

Section 15 Attachments

☒ Attachments Included. List attachments:

- Application Cover Letter
- Emissions Summary Form – New Stationary Source
- a Emissions Summary Form Calculations
- b Emissions Summary Form Calculations – Chlorinated Compounds
- c Fugitive Dust Emissions Calculations
- Minor Permit Application – Emission Unit Information
- MPA – EUI: Supplementary Forms for Asphalt Plants, Soil Remediation Units & Rock Crushers
- Fugitive Dust Control Plan

Section 16 Mailing Address

Submit the minor permit application to the Permit Intake Clerk in the Department's Anchorage office. Submitting to a different office will delay processing. The mailing address and phone number for the Anchorage office is:

Permit Intake Clerk
Alaska Department of Environmental Conservation
Air Permit Program
555 Cordova Street
Anchorage, Alaska 99501
(907) 269-6881

Alaska Department of Environmental Conservation
Air Quality Control Minor Permit Application

EMISSIONS SUMMARY FORM
NEW STATIONARY SOURCE

Section 1 Stationary Source Information

Stationary Source Name: Soil Remediation Unit 02

Section 2 Potential to Emit (PTE) for the Entire Stationary Source

EU ID No.	PTE (tpy)									
	CO	NO_X[4]	PM-2.5[1]	PM-10[1]	PM	SO_2	VOC[2]	Fugitive VOC[3]	Fugitive PM[3]	Lead
SRU02	10.1	12.1	2.116	6.395	7.083	1.527	0.664	N/A	N/A	$6.03\ E^{-5}$
Total tpy	10.1	12.1	2.116	6.395	7.083	1.527	0.664	N/A	N/A	$6.03\ E^{-5}$

☒ Detailed Excel spreadsheet emissions calculations are attached. *These must be attached in order for your application to be complete. Include multiple copies of this page if more space is required.*

☐ *Check this box if fugitive emissions are included in permit applicability under 18 AAC 50.502(i).*

Brief description of why fugitive emissions are included in permit applicability:

Notes:

[1] Include condensable particulate matter for PM-10 and PM-2.5.
[2] If total PTE for volatile organic compounds (VOCs) is at least 10 tpy, include a separate Excel spreadsheet that shows the HAP emissions.
[3] Fugitive VOC and PM emissions are included as assessable emissions regardless of permit applicability.
[4] Fugitive NOx emissions from blasting should be included in the PTE column for NOx.

Have you completed Section 2, above? ☒ Yes ☐ No

If not, please explain:

Soil Treatment Technologies, LLC
Emissions Summary Form Calculations
December 2025

Emissions Calculations for New Stationary Source										
Parameter	NOx	CO	Lead in CH4	SO2 from CH4[4]	SO2 from organic in soil[1,2]	VOC[1,3]	HAPs	Condensable PM[4]	PM, PM 10[1,4]	PM 2.5[1,5]
Emission Factor Uncontrolled lb/10E6 SCF gas (Sources AP-42, Table 1.4-1, 1.4-2 and 1.4-3)	100	84	0.00005	0.6	NA	5.5	1.88	5.7	NA	NA
EF converted to, lb/MM Btu (=EF#/1020)	0.098	0.082	0.00000005	0.001	NA	0.005	0.002	0.006	NA	NA
Total Heat Input of the System, MM Btu/hr[6]	28.1	28.1	28.1	28.1	NA	28.1	28.1	28.1	NA	NA
EF Converted to lb/hr	2.75	2.31	0.000001	0.02	NA	0.15	0.05	0.16	NA	NA
System Feed Rate (tons/hr)	25	25	25	25	25	25	25	25	25	25
Emissions (lb/ton)	0.110	0.093	5.51E-08	0.001	NA	0.006	0.0021	0.0063	NA	NA
Emissions (tons/hr)	0.001377	0.001157	0.00000000069	0.00000826	NA	0.0000758	0.000026	0.000079		
Tarmac (Mfg) Calculated Emissions Based on Heat and Mass Balance Equations (lb/hr)					0.332	6.25			1.46	0.483
Tarmac lb/ton at feed rate of 25 Tons/Hr				0.0000083	0.000166					
Emissions (Tons/Hr)	0.001377451	0.001157059	6.887255E-10	0.00017426471		0.0000758	0.0000259	0.000078515	0.0007300	0.0002415
Total Hours/Year (Continuous Operation)	8760	8760	8760	8760		8760	8760	8760	8760	8760
Potential To Emit (TPY)	12.1	10.1	6.03E-06	1.5266		0.664	0.227	0.688	6.395	2.116

Notes:
[1] For SO2, VOC and PM, PM-10 and PM-2.5, STT, LLC, Used Tarmac, Ins (Mfg) Mass and Balance Equations in Determination of Emissions Calculations.
[2] Based on Manufacturer's Mass Balance Equation for sulfur concentrations in contamnated soil (see attached spreadsheet)
[3] Based on Manufacturer's Mass Balance Equation for conservative estimate of VOC concentration in contaminated soil of 12,500 ppm (see attached spreadsheet)
[4] NOx, CO, Lead, SO2, VOCs, Condensable, HAPs from AP-42 Table 1.4-1, -2 and -3 for small natural gas boilers <100 MM Btu/hr
[5] PM 2.5 is 33% of total PM per AP-42 Table 11.1-2 for Sand and Gravel Dryers
[6] Combined heat input of SRUD1 Dryer (23.1 MM Btu/hr) and Oxidizer (10.2 MM Btu/hr)

Sulfur in Natural Gas Ref: AP-42 table NG 1.4-2

Sulfur 2000 grains per 10e6 scf	
Grains	2000
Lb	0.286
scf gas	1.00E-06
Density CH4	0.042
Weight of CH4	42,000
% by weight S	0.00068%
	6.80E-06

Soil Treatment Technologies, LLC
Emissions Summary for Chlorinated Compounds
December 2025

SRU02 Emissions Summary for Chlorinated Compounds	
Total Hours (Continuous Operation) (hr/yr)	8760
System Feed Rate (tons/hr)	25
Maximum Feed Potential (tons/yr)	219000
Maximum Feed Potential at 25 tons per hour for 8760 hours (Lb/yr)	438000000
Maximum HCL Emissions (tons/yr)	9.9
Maximum HCL Emissions, (Lb/yr)	19800
Percent of Chlorine in HCL (%)	97.26027397
ppm as Chlorine (ppm)	972602.7397
Total Chlorine (ppm Lb/yr)	19257534247
Maximum Feed Potential (Lb/yr)	438000000
Maximum ppm as Chlorine in Soil (ppm)	43.97

Parameters	PCE	TCE	PCB (Aroclor 1254)
MW, (lb/mol)	165.83	131.38	326.4
% Chlorine	85%	81%	54%
Maximum ppm as Chlorine in Soil (ppm)	43.97		
Maximum Compound Conc. in soil (ppm)	51.73	54.28	81.43

Soil Treatment Technologies
Emissions Summary for Fugitive Dust
Dec 2025

Emissions Calculations for Fugitive Dust				
Particulate Size		**PM-2.5**	**PM-10**	**PM-30**
Empirical Constants[1]	**k (lb/VMT)**	0.15	1.50	4.90
	a	0.90	0.90	0.70
	b	0.45	0.45	0.45
Silt Content (Sand and Gravel Processing, %)[2]		4.8		
Maximum Truck Weight (Ton)		40.0		
Particulate Emissions Factors (lb/VMT)		0.210944246	2.109442456	8.27676273
Number of "Wet" Days per Year[3]		120		
Emissions Factors After Natural Mitigation Controls (lb/VMT)		0.141592713	1.415927128	5.555635257
Emissions Factors After Natural Mitigation Controls (Tn/VMT)		7.07964E-05	0.000707964	0.002777818
Maximum Feed Potential (Tn/yr)		219000		
Tonnage per Dump Vehicle		25		
Maximum Number of Dump Vehicles per Year (1/hr)		8760		
Unpaved Mileage Driven per Dump Vehicle (VMT)		0.10		
Maximum Potential Vehicle Miles Driven (VMT/yr)		876		
Potential to Emit (TPY)		**0.062017608**	**0.620176082**	**2.433368242**

Notes:
[1] - Empirical Constant Values Taken from Table 13.2.2-2 of AP-42 Chapter 13.
[2] - Typical Silt Content Values of Surface Material on Industrial Unpaved Roads Table 13.2.2-1 of AP-42 Chapter 13.
[3] - Derived from Figure 13.2.2-1 of AP-42 Chapter 13.
VMT = Vehicle Mile Traveled

Alaska Department of Environmental Conservation
Air Quality Control Minor Permit Application

MINOR PERMIT APPLICATION – EMISSION UNIT INFORMATION

FOR A NEW STATIONARY SOURCE: Complete this form for all emissions units.

FOR A MODIFICATION TO AN EXISTING STATIONARY SOURCE:
IF YOU HAVE A TITLE V PERMIT: Complete this form for each emissions unit that is new or that is affected by a physical change or change in the method of operation.
IF YOU DO NOT HAVE A TITLE V PERMIT or APPLICATION CLASSIFIED UNDER 18 AAC 50.508(5): Complete this form for all emissions units.

Section 1 Stationary Source Information

Stationary Source Name: Soil Remediation Unit - 02

Section 2 Emissions Unit (EU) Identification (ID) and Description

Note: Do not use this section for emission units associated with asphalt plants, soil remediation, and rock crushers. Use the Supplementary Forms for these units.

EU ID No.	Description	Construction Date	Make / Model		Serial No.	Requested Limit* (specify units)	Max. Rated Capacity (kW, MMBtu), Horsepower (hp) or. Design Throughput

**If no annual limit is applicable (e.g., hours, fuel), then specify not applicable (N/A).*
Please use additional copies of this sheet if necessary.

Have you identified each emission unit (if you do not have a Title V permit), or each new or affected emission unit (if you have an existing Title V permit) in Section 2 above? ☐ Yes ☐ No
If not, please explain:

Section 3 Emissions Unit Use

EU ID No.	Is unit portable?		Is the unit:						Is this unit a:		If limited operation, is the unit:		
[List same EUs as in Section 2.]	Yes	No	a nonroad engine? Yes	a nonroad engine? No	an intermittently used oil field support equipment per Policy 04.02.105? Yes	an intermittently used oil field support equipment per Policy 04.02.105? No	an oil field construction unit per Policy 04.02.104? Yes	an oil field construction unit per Policy 04.02.104? No	primary (base load) unit?	or limited operation unit?	emergency or black start unit?	subject to a permit limit?	or other (specify)?
SRU02	☐	☒	☒	☐	☐	☒	☐	☒	☒	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please use additional copies of this sheet if necessary.

Have you specified the use of each emission unit in Section 3 above? ☒ Yes ☐ No
If not, please explain:

Section 4 Fuel Information

Complete Section 4a or 4b for each emissions unit, as appropriate.

Section 4a Fuel Burning Equipment not Including Flares

EU ID No.	Fuel type(s)	Maximum fuel sulfur content	Fuel density (lb/gal) (if liquid fuel)	Higher heating value*	Maximum fuel consumption rate (gallons/hour or MMscf/hour)
SRU02	Natural Gas	0.00068 ☒ wt. % S ☐ ppmv H_2S		1,000 ☐ Btu/gal ☒ Btu/dscf Other	0.02
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☒ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	
		☐ wt. % S ☐ ppmv H_2S		☐ Btu/gal ☐ Btu/dscf Other	

**Use British thermal unit (Btu) per gallon (gal) for liquid fuels. Use Btu per dry standard cubic foot (dscf) for gaseous fuels. Please use additional copies of this sheet if necessary.*

Have you provided the fuel details for each fuel-burning emission unit (excluding flares) in Section 4a above? ☒ Yes ☐ No

If not, please explain:

Section 4b Flares

Complete this section if the project/stationary source contains a flare.

Do you own or operate a flare? ☐ Yes ☒ No *(If not skip this section)*

EU ID No:	Heat release rate for pilot / purge operation (MMBtu/hr)	Maximum heat release rate (MMBtu/hr)	Flare gas heat content (Btu/scf)	Flare gas H_2S content (ppmv)

Please use additional copies of this sheet if necessary

Include additional notes as warranted.

Have you provided the fuel use details for all flares in Section 4b above? ☐ Yes ☐ No

If not, please explain:

Section 5 Materials Processed and Methods of Operation

Complete this section if the project/stationary source contains a materials-handling process.

Do you own or operate a flare? ☐ Yes ☒ No *(If not, skip this section)*

EU ID No.	Materials processed	Maximum material processing rate	Describe method of operation

Please use additional copies of this sheet if necessary

Include additional notes as warranted.

Have you specified the material processing details in Section 5 above? ☐ Yes ☐ No

If not, please explain:

Section 6 Emission Control Information (if applicable)

Complete this section if the project/stationary source contains emission control equipment.

Do you own or operate emission control equipment? ☒ Yes ☐ No *(If not, note below and skip this section.)*

EU ID No.	Control equipment	Pollutant(s) controlled:	Description of the control equipment	Description of significant operating parameters and set points for the control equipment	The control equipment is necessary:		
					To comply with an emission standard	To avoid a project classification	Other – give purpose of control equipment
SRU02	Cyclone/Baghouse	PM	Equipped with a Leeson 20HP Baghouse Auger and a TECO AEHE Type, 50HP Induced Draft Fan	BH Inlet/Outlet Temp: 350 deg F / 325 deg F BH production rate: 8962 dscf/min BH inlet / outlet PM loading: Inlet: 5,000 lb/hr Outlet: 3.84lb/hr BH efficiency: 99.9%	☒	☐	
SRU02	Thermal Oxidizer	VOCs	Thermal Oxidizer	Operating Temp: 1,500 deg F HHV: 1000 BTU/CF 99% Destruction Efficiency	☒	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	

Please use additional copies of this sheet if necessary

Include additional notes as warranted.

Have you specified the details of any emission controls in Section 6 above? ☒ Yes ☐ No

If not, please explain:

Section 7 Emission Factors

Give exact citations of emission factor sources.

EU ID No.	Emission Factors								
	NOx	CO	PM-2.5	PM-10	PM	SO_2	VOC	HAPs	Lead
SRU02	100 lb/10^6 scf	84 lb/10^6 scf	0.483 lb/hr	1.46 lb/hr	5.7 lb/10^6 scf	0.6 lb/10^6 scf	5.5 lb/10^6 scf	4.78 lb/10^6 scf	0.0005 lb/10^6 scf

EU ID No.	Sources and References for Emission Factors								
	NOx	CO	PM-2.5	PM-10	PM	SO_2	VOC	HAPs	Lead
SRU02	AP-42 Table 1.4-1	AP-42 Table 1.4-1	Mfg Heat and Mass Balance Eqn.	Mfg. Heat and Mass Balance Eqn.	AP-42 Table 1.4-2	AP-42 Table 1.4-2	AP-42 Table 1.4-2	AP-42 Table 1.4-3	AP-42 Table 1.4-2

Please use additional copies of this sheet if necessary.

Include additional notes as warranted.

Have you specified all emission factors and reference sources in Section 7 above? ☒ Yes ☐ No

If not, please explain:

Section 8 Applicable State Emission Limits (listed in 18 AAC 50.050 through 18 AAC 50.090)

Complete this section for emissions units that are new or are affected by the physical change or change in operation.

EU ID No.	Emission Limit or Standard	Regulation Citation	Compliance Method
SRU02	Effluent exhaust may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	18 AAC 50.055 (a)(1)	Facility staff will ensure that natural gas is the only fuel source utilized for powering the SRU. In addition, the baghouse and thermal oxidizer will be in operation at all times that SRU is running.
SRU02	Particulate matter may not exceed 0.05 gr/scf averaged over a period of three hours.	18 AAC 50.055 (b)(1)	The baghouse will be in operation at all times that SRU is running. Adherence to the facility Fugitive Dust Mitigation Plan.

Please use additional copies of this sheet if necessary.

Have you specified all applicable state emission limits in Section 8 above? ☒ Yes ☐ No

Have you specified a demonstration of compliance for each emission limit or standard? ☒ Yes ☐ No

If you answered "no" to either question, please explain:

Section 9 Incinerators

Complete this section if the project/stationary source contains an incinerator.
Do you own or operate an incinerator? ☐ Yes ☐ No *(If not, skip this section.)*

EU ID No.	Fuels Burned (type and consumption rate)	Rated capacity in pounds per hour	Type of waste burned

Please use additional copies of this sheet if necessary

Include additional notes as warranted.

Have you specified the details of all incinerators in Section 9 above? ☐ Yes ☐ No
If not, please explain:

Alaska Department of Environmental Conservation
Air Quality Control Minor Permit Application

MINOR PERMIT APPLICATION – EMISSION UNIT INFORMATION SUPPLEMENTARY FORMS FOR ASPHALT PLANTS, SOIL REMEDIATION UNITS & ROCK CRUSHERS

FOR A NEW STATIONARY SOURCE: Complete this form for all emission units.

FOR A MODIFICATION TO AN EXISTING STATIONARY SOURCE:
IF YOU HAVE A TITLE V PERMIT: Complete this form for each emissions unit that is new or that is affected by the project.
IF YOU DO NOT HAVE A TITLE V PERMIT: Complete this form for all emissions units.

Section 1 Stationary Source Information

Stationary Source Name: Soil Remediation Unit - 02
Owner/Operator: Soil Treatment Technologies
Physical Address: 8361 Petersburg Street
City and Zip Code: Anchorage, 99507

☐ Asphalt Plants (Section 2)

☒ Soil Remediation (Section 3)

☐ Rock Crusher (Section 4)

Have you completed Section 1, above? ☒ Yes ☐ No
If not, please explain:

Section 2: Asphalt Plant

If the stationary source contains an asphalt plant(s), complete this section instead of Section 2 of Emission Unit Information Form.

Type of Equipment	Make and Model	Primary burner size (Btu per hour)	Plants Production Rate (maximum and rated)	Maximum Fuel Feed Rate: ☐Gallon/hr ☐Scf/hr
☐ Dryer:				
☐ Afterburner :				
☐ Dryer:				
☐ Afterburner :				

Identify each piece of installed equipment by placing an "x" in the box beside the piece of equipment. If the equipment listed has a place to provide the size and capacity, provide that additional information. List only diesel engines that are stationary.

Material handling devices:
- ☐ Conveyors,
- ☐ Loaders,
- ☐ Bins,
- ☐ Elevators,
- ☐ Screens, or
- ☐ Chutes

Dryer control devices:
- ☐ Baghouse
- ☐ Cyclone
- ☐ Scrubber
- ☐ Knockout box

Any of the following:
- ☐ Asphalt cement heaters,
- ☐ Fuel fired silo heaters
- ☐ Mixers
- ☐ Pug mills
- ☐ Other emission control equipment. List:

_____

_____

☐Diesel engines:

Make & model _____, Size _____hp, Max fuel rate_____gal/hr
Make & model _____, Size _____hp, Max fuel rate_____gal/hr
Make & model _____, Size _____hp, Max fuel rate _____gal/hr

Nearest distance from dryer exhaust outlet to:
Residence _____miles
Other occupied structure _____miles
Building use:_____

Was the asphalt plant constructed, modified, or reconstructed before June 11, 1973? If so, check appropriate box.
- ☐ Constructed
- ☐ Modified
- ☐ Reconstructed

If requested by the Department:
- ☐ Attached is a copy of the operation and maintenance plan for the unit.
- ☐ Attached is
  - ☐ a copy of the most recent particulate matter source test conducted within the last five years; or
  - ☐ a schedule for conducting the test.
- ☐ For an asphalt plant within one mile of the nearest residence or occupied structure, a fugitive dust control plan is attached.

Have you completed Section 2, above? ☐ Yes ☐ No

If not, please explain:

Section 3: Soil Remediation Unit

If the stationary source contains a soil remediation unit(s), complete this section instead of Section 2 of Emission Unit Information Form.

Type of Equipment	Make and model	Plants Production Rate (maximum and rated)	Maximum fuel feed: ☐ Gallon/hr ☒ Scf/hr
☒ Dryer, rotary kiln, combustion device in fluidized bed, etc.:	Rotary Drum	25 tph	20,700
☒ Afterburner :			7,500
☐ Dryer, rotary kiln, combustion device in fluidized bed, etc.:			
☐ Afterburner :			

Identify each piece of installed equipment by placing an "x" in the box beside the piece of equipment. If the equipment listed has a place to provide the size and capacity, provide that additional information. List only diesel engines that are stationary.

Material handling devices:
- ☒ Conveyors,
- ☒ Loaders,
- ☒ Bins,
- ☐ Elevators,
- ☒ Screens, or
- ☐ Chutes

Dryer control devices:
- ☒ Baghouse
- ☒ Cyclone
- ☐ Scrubber
- ☐ Knockout box

☒ Other emission control equipment. List:
Thermal Oxidizer with a 99% destruction efficiency.
Cyclone & Baghouse

☒ Diesel engines:

Make & model Deere 544E Loader, Size 94hp, Max fuel rate 3.2 gal/hr

Make & model Volvo 135 Skid steer, Size 55hp, Max fuel rate 2.1 gal/hr

Make & model EZ Screen 1200xl, Size 42hp, Max fuel rate 1.6 gal/hr

Storage areas for
- ☒ Untreated soils (Describe): Untreated soil will be stored within a paved containment area covered under 6-mil reinforced liners.
  If storage bin provide the date installed:
- ☒ Treated soils (Describe):Treated effluent soil will be temporarily stockpiled onsite and wetted with diffusion water sprayers to prevent dust generation until receipt of post-treatment analytical sample results.
  If storage bin provide the date installed:
- ☐ Enclosed truck loading station Date Installed:
- ☐ Railcar loading station Date Installed:

Nearest distance from emission unit outlet to:
Residence 0.5 miles
Other occupied structure 270 feet
Building Use: Commercial

☒ Attached is a VOC and dust control plan. - ***A Fugitive Dust Control Plan is attached. VOC control will be performed by the oxidizer on the SRU02.*** ☐ Attached is a carbon monoxide continuous emission monitor performance test report, or schedule for conducting the test.	If requested by the Department: ☐ Attached is a copy of the operation and maintenance plan for the unit. ☐ Attached is ☐ a copy of the most recent particulate matter source test if conducted within the last five years; or ☐ a schedule for conducting the particulate matter source test.

Have you completed Section 3, above? ☒ Yes ☐ No
If not, please explain:

Section 4 Rock Crushers

If the stationary source contains a rock crusher(s), complete this section for emission units related to rock crushing.

Initial Crushers			**Other Crushers**	
Equipment ID.	Rated capacity (tons per hour		Equipment ID.	Rated capacity (tons per hour)

Other Grinding Mills			**Screening Operations**	
Equipment ID.	Rated capacity (tons per hour)		Equipment ID.	Rated capacity (tons per hour)

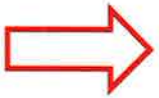
Belt Conveyors			**Belt Conveyors**	
Equipment ID.	Rated capacity (tons per hour)		Equipment ID.	Rated capacity (tons per hour)

Bucket Elevators			**Storage Bins**	
Equipment ID.	Rated capacity (tons per hour)		Equipment ID.	Rated capacity (tons per hour)

Bagging Operations			**Enclosed Truck or Railcar Loading Stations**	
Equipment ID.	Rated capacity (tons per hour)		Equipment ID.	Rated capacity (tons per hour)

Nearest distance from equipment listed above to: Residence _____ miles Other occupied structure _____ miles Building Use:_____	If requested by the Department: ☐ For a rock crusher, a fugitive dust control plan is attached.

NOTE: Rock crushers and asphalt plants may be subject to federal New Source Performance Standards (40 C.F.R. 60, Subparts I, LL, and OOO.) The Department no longer enforces these standards through air quality minor permits. Address all correspondence about compliance with these standards to EPA.



Have you completed Section 4, above? ☐ Yes ☐ No

If not, please explain:

SOIL REMEDIATION UNIT 01

FUGITIVE DUST CONTROL PLAN

SOIL TREATMENT TECHNOLOGIES, LLC

8361 Petersburg Street
Anchorage, Alaska 99507

December 2025

TABLE OF CONTENTS

1. INTRODUCTION

Soil Treatment Technologies, LLC (STT) developed this planning document to outline measures to be taken to control fugitive dust at the Soil Remediation Facility in Anchorage, Alaska.

The Soil Remediation Unit 02 [SRU01]) consists of a direct fired Gencor thermal unit with a design throughput 25 tons per hour. STT will operate the facility to thermally remediate contaminated soil.

1.1 Plan Organization

This Fugitive Dust Control Plan is organized into the following sections:

- Section 2, *System Operation*, presents details on the operations at the facility.
- Section 3, *Dust Control Measures*, provide details of the dust mitigation and dust monitoring measures; and
- Section 4, Action Levels and Maintenance, presents the numeric criteria that will be used in conjunction with dust monitoring activities to control emissions from the Site.

2. SYSTEM OPERATION

The SRU receives and thermally treats petroleum impacted soil from contaminated sites in Alaska. Once deposited in the containment cell, the contaminated soil will be stockpiled by front end loaders and covered under 6-mil reinforced liners to prevent exposure to precipitation and wind and mitigate fugitive dust generation. The liners will be secured with sand bags and/or tires to prevent displacement. The stockpiles will remain covered under liner at all times. Only the working portion of a pile will be uncovered to enable access for adding or transferring soil to the SRU or the trommel screen. As the need to access a specific stockpile is satisfied the cover will be replaced and secured with tires and/or sand bags.

Facility personnel will inspect the condition of the liners daily. Any liners with evidence of damage or degradation will be immediately replaced. Additionally, STT has installed live feed high-definition video cameras throughout the facility for monitoring site conditions during periods of inactivity or winter shutdown.

The contaminated soil will be transferred to a covered hopper that will load the soil via a conveyor into the SRU. The conveyor transports the soil directly into a rotary dryer drum heated to 700° Fahrenheit (°F) for volatilization of the VOCs in the soil. The exhaust gas from the dryer flows through a primary dust collector then a baghouse for particulate matter removal. From the baghouse, the exhaust gas enters a thermal oxidizer, which operates at a temperature of 1,500°F for the destruction of remaining VOCs and carbon monoxide (CO). The minimum organic compound destruction efficiency of the oxidizer is 99.0%. Upon exiting the system, the thermally treated soil is stockpiled in a temporary holding cell for post treatment sampling.

3. DUST CONTROL MEASURES

The 170-foot by 335-foot contaminated soil containment cell is paved with concrete to both prevent contaminant migration to the underlying soil and also to minimize dust generation. The vehicle entrance and 0.5 acre treated soil staging area are the only unpaved portions of the property.

3.1 Soil Storage and Water Application Practices

In order to prevent exposure of the contaminated soil to weather, the soil will be stored under liners until it is ready to be loaded into the SRU02. This protocol greatly limits the exposure of the contaminated soil to the weather and prevents mobilization of contaminants or fugitive dust generation.

The post-treatment remediated soil is water cooled and conveyed to storage piles pending the follow-up analytical sampling. Diffusion water sprayer nozzles connected via water supply lines are installed along the edge of the post-treatment storage area and along vehicle traffic areas. The fine atomized diffusion sprayers will be used to keep the roadways and treated soil piles sufficiently wetted. The facility staff will utilize water application to suppress or mitigate the generation of fugitive dust during all phases of soil transport activities and storage.

3.2 Vehicular Practices

STT will enforce the following vehicular practices to minimize dust and VOC generation from truck and vehicle traffic.

- Trucks are to minimize idling time to avoid unnecessary exhaust fumes;
- All vehicles are required to maintain slow speeds, e.g., less than five miles per hour (5 mph), for safety purposes and for dust control measures;
- Vehicular traffic in non-designated travel areas is to be prohibited.

Facility staff must also apply water, as necessary, to suppress dust on vehicle traffic areas on the property.

3.3 Inclement Weather

Facility staff are to regularly assess the onsite weather conditions to ensure that daily operations are not contributing to adverse fugitive dust conditions. If standard mitigation

measures (i.e. hydrating the vehicle traffic areas, wind screens, etc) are deemed ineffective in preventing unfavorable dust conditions due to high wind events, operations at the facility will cease until the weather conditions improves.