

# Response to Comments Operations Plan for Soil Treatment Technologies Nikiski, Alaska

June 18 – July 2, 2022



Alaska Department of Environmental Conservation  
Division of Spill Prevention and Response  
Contaminated Sites Program

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## Publication Information

This Response to Comments document will be sent by email or mail to commenters that provided contact information.

For 30 days following publication the Response to Comments document will be

- posted on the Alaska Department of Environmental Conservation website at: <https://dec.alaska.gov/spar/csp/stt-thermal-soil-remediation/>
- available to review at the department's offices at 43335 Kalifornsky Beach Road, Soldotna, AK 99669 and 555 Cordova Street Anchorage, AK 99501

After 30 days the document will be available for review upon request at the contact below.

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## Introduction

This Response to Comments provides the Alaska Department of Environmental Conservation (DEC) Contaminated Sites Program’s reply to public comments received on the Soil Treatment Technologies, LLC (STT) Operations Plan.

The DEC would like to thank the public for their time and consideration in commenting on the Operations Plan.

The Contaminated Sites Program has authority to approve an operations plan for an offsite or portable treatment facility for the remediation of contaminated soil if the operations described in the plan are protective of human health, safety, and welfare, and of the environment.

The DEC Contaminated Sites Program’s regulatory authority to review and approve offsite or portable treatment facilities is found in 18 AAC 75.365 and 18 AAC 78.273 and the *Operation Requirements for Soil Treatment Facilities* (DEC 2013) guidance, adopted by regulation. (<https://dec.alaska.gov/media/11991/operation-requirements-for-soil-treatment-facilities-march-15-2013.pdf>)

In accordance with the *Operation Requirements for Soil Treatment Facilities* (DEC 2013), a public participation process is required for these facilities, involving a three-day publication of a Soil Treatment Facility Operations Plan Notice in a local newspaper and a two-week public comment period following the last date of publication.

## DEC Public Involvement Actions

A public notice was published in the Peninsula Clarion, the local newspaper, for three days. After the third day, a public notice was posted on the DEC website for the duration of the Public Comment period. A copy of the public notice posted in the Peninsula Clarion and on the DEC website can be found in Attachment 1. The public notice on the DEC website was linked to a webpage that hosts the full Operations Plan and other relevant documents available for review. The full Operations Plan was available for review during business hours at the DEC offices in Anchorage and Soldotna. The public was informed that comments could be submitted to the DEC through the website, in person, or by email, phone, fax, or mail.

**Table 1: Public Involvement and Operations Plan Approval Timeline**

DEC notifies STT that the Operations Plan is complete	June 9, 2022
Public Notice in Peninsula Clarion begins	June 15, 2022
End of Public Notice in Peninsula Clarion	June 17, 2022
Public Notice on DEC webpage and beginning of Public Comment period	June 18, 2022



DEC CS unannounced facility inspection	June 20, 2022
End of Public Comment period	July 2, 2022
DEC requests updates to the Operations Plan based on comments	July 11, 2022
STT submits revised Operations Plan	August 9, 2022
DEC requests additional revision of Operations Plan	September 21, 2022
STT submits final Operations Plan	September 22, 2022
Operations Plan Approval	February 15, 2023

## Response to Comments

DEC received ten submittals from the public. All comments were submitted through the website during the two-week public comment period. One comment correction was received by email.

All submittals, except as described below, are provided in this section as they were received by DEC. Individual comments are provided verbatim. Due to similarity between these comments and those from the previous comment period, general comment categories and DEC responses have been included, and in some cases re-used when appropriate, to address multiple similar comments.

### General Comment Categories and Responses

#### **General Response: Air Emissions and Air Quality Permit**

The Contaminated Sites Program received eight comments regarding air emissions and the Air Quality Permit. Section 3.5 of the Operations Plan is consistent with the requirements of the Air Quality Permit administered by the DEC Division of Air Quality. Consideration of air emissions and the Air Quality Permit is outside of the scope of the Operations Plan review conducted by the Division of Spill Prevention and Response in accordance with 18 AAC 75.365 and 18 AAC 78.273. Compliance with Air Quality requirements or permits is a condition of approval of the Operations Plan. <http://dec.alaska.gov/Applications/Air/airtoolsweb/Home/ViewAttachment/17005075/-H3najsAZIS0UzHRGBEe9w2>

### **General Response: Facility Location**

The Contaminated Sites Program received seven comments about the facility's location in an area with residences, a bike path, and a school. Some comments proposed alternate locations. Commenters expressed concern that operations of the facility would impact drinking water, air quality, traffic, and noise for nearby residents. These concerns are addressed in other general responses. The proposed facility, located at 52520 Kenai Spur Highway in Nikiski, is property privately owned by STT. There is no regulatory basis for the Contaminated Sites Program to require the facility to move from its proposed location or deny approval of the Operations Plan due to use of adjacent and nearby properties, as long as the Operations Plan meets the regulatory requirements and is protective of human health and the environment.

### **General Response: Protection of Groundwater**

The Contaminated Sites Program received six comments expressing concern for the impact that the proposed operation could have on groundwater. Well logs in the vicinity indicate nearby wells are between 25 and 90 feet below ground surface. Groundwater on the subject site is believed to flow southwest. In this area groundwater wells supply water for drinking and other uses. Regulations, 18 AAC 75.365(a)(1)(A)(3) and 18 AAC 78.273(a)(1)(A)(3), require identification of all wells (drinking water, water supply, monitoring wells) within 500 feet of the operation. Twelve wells were identified within 500 feet of the facility property boundaries including the onsite water supply well used for operations and the nearest off site Public Water Supply well (AK2242212) on the adjacent Pacific Seafood Nikiski property. Data for the Public Water Supply well can be found here : [https://dec.alaska.gov/dww/JSP/WaterSystemDetail.jsp?tinwsys\\_is\\_number=1938&tinwsys\\_st\\_co de=AK&wsnumber=AK2242212](https://dec.alaska.gov/dww/JSP/WaterSystemDetail.jsp?tinwsys_is_number=1938&tinwsys_st_co de=AK&wsnumber=AK2242212)

Because of facility reconfiguration, this Operations Plan anticipates increased wastewater volume. The increase in anticipated wastewater necessitated a more complex water treatment system described in this Operations Plan. Water will be treated by granular activated carbon (GAC) with a maximum flow rate of 10 gallons per minute in each of the four GAC containing drums. GAC will be changed in each drum after 40,000 gallons (10,000 each drum) of water is treated.

The facility's wastewater discharge location is more than the required 200 feet from the public water system. In 2022 STT installed a new sentry monitoring well that is directly between the discharge location and the Public Water Supply well.

The Operations Plan calls for annual sampling and reporting for the well. Annual reports will be reviewed by the Contaminated Sites Program and monitor for changes or impacts to groundwater from the operations. If groundwater monitoring data indicates that the facility's operations are causing groundwater to be impacted by petroleum compounds, further actions would be taken to ensure the facility's containment, treatment, and other mitigation measures are adequate. Bulk fuel will not be stored on the property and contaminated soil will be covered and contained protecting the groundwater from surface water runoff. Portable spill containment known as "duck ponds" will be used for equipment or vehicles stored outside of the contaminated soil storage area. The contaminated soil storage area, required by regulation, was designed and stamped by a professional engineer to fully contain contaminated soil and runoff from a 25 year-12 hour storm event and was reviewed by a DEC engineer.

The proposed facility is located in a former gravel pit that was previously excavated below the surrounding grade creating a raised vegetated berm around the facility. There is no surface water on

the property. The nearest surface water, including mapped wetlands, is more than 500 feet away. Due to the berms around the facility created when the property was a material site, surface runoff is not expected to leave the property. The facility equipment is elevated above the rest of the property to prevent run on from entering and overwhelming the soil containment areas and water management system.

### **General Response: Noise**

The Contaminated Sites Program received four comments regarding potential noise from the facility. STT has committed to monitoring decibel levels at the boundary of the property in the Operations Plan, however, threshold levels for noise and other noise considerations are outside of the scope of the Contaminated Sites Program's regulatory authority.

### **General Response: Operations Capacity**

The Contaminated Sites Program received four comments expressing concern about the increased facility capacity. Commenters expressed concern about increased emissions and impact to groundwater. Though additional soil is approved for treatment, the facility is still required to operate within the boundaries of their 2021 air permit. The air permit is unchanged and allowable emissions are not increased. The submitted Operations Plan is consistent with the approved Minor Permit for Air Quality Protection. The larger footprint and change in the facility's water management strategy will result in increased wastewater discharge. More details are discussed in the general response about protection of groundwater, above.

### **General Response: Structure Integrity**

The Contaminated Sites Program received four comments concerning the integrity and adequacy of the structure or covering mechanism identified in the plan. The cover described in the 2021 approval failed in January 2022 due to high winds and heavy snow load necessitating a new tactic to comply with 18 AAC 75.370 and 18 AAC 78.274. Under the new operations plan contaminated soil storage cell and sump will be covered with a 20-mil reinforced "shutdown" liner that will be manually rolled out over the containment and weighted with sand bags. The "shutdown" liner will be deployed during inactivity, winter dormancy, and heavy precipitation. During periods of operation absent of high precipitation, a 6-mil liner will be deployed.

### **General Response: Regulatory Oversight**

The Contaminated Sites Program received three comments expressing general concern about regulatory oversight of the facility. As a condition of approval the Contaminated Sites Program can conduct announced or unannounced inspections at any time to ensure compliance with the Operations Plan. The Contaminated Sites Program conducted an unannounced inspection in 2022 and found the facility to be operating according to their approval. An inspection is planned for 2023 when the facility starts up. The Contaminated Sites Program has staff in Anchorage and Soldotna, available to investigate complaints and conduct planned or unannounced inspections. The regulations also allow for the Contaminated Sites Programs to withdraw approval if the owner or operator fails to process soils to the department's satisfaction. Groundwater and wastewater sampling and self-inspections and record keeping requirements are described in the Operations Plan. Documentation submitted to the Contaminated Sites Program are public records and can be made available on request. If a member of the public has information that any soil treatment facility is not operating in accordance with the Operations Plan, non-compliance can be reported to the

designated soil treatment facility coordinator for Contaminated Sites Program: <https://dec.alaska.gov/spar/csp/offsite-remediation/>. To report non-compliance related to the Air Quality Permit, the public can submit a complaint using the online tool here <https://dec.alaska.gov/Applications/Air/airtoolsweb/Complaints> or contact the DEC Air Quality Division at 907-269-7577.

### **General Response: Adequacy of Public Process**

The Contaminated Sites Program received three comments that the department's overall public process for the facility was not adequate in when and how the public was notified of the facility and the amount of time provided for public comment and input. The public process for the Operations Plan, administered by the Contaminated Sites Program, is described in the *Operation Requirements for Soil Treatment Facilities* (DEC 2013) adopted by regulation (linked in the introduction). The Contaminated Sites Program followed the process and required STT to publish a public notice, approved by DEC, in the Peninsula Clarion, after which a public notice was posted on the DEC website and the public comment period was open for two weeks. The Contaminated Sites Program also created a webpage that included additional information about thermal desorption technology.

### **General Response: Traffic**

The Contaminated Sites Program received two comments concerning traffic to and from the proposed facility. Consideration of traffic is outside of the scope of the Operations Plan and the Contaminated Sites Program's regulatory authority.

### **General Response: Wet Soil**

The Contaminated Sites Program received two comments concerning treatment of wet soil. The facility is only approved to receive contaminated soil, it is not approved to take liquid waste. Soil excavated from the ground can vary in the how dry or wet it is, so some material received by STT could have more moisture than other soil received. DEC is aware of one instance of STT receiving soil with high moisture content from a contaminated site. STT stored the material in their contaminated soil storage area until the soil dried out to ensure efficient treatment. Thermally treating soil with excessive moisture is not efficient and may result in incomplete combustion of contaminants. Post-treatment sampling would identify inadequately treated soil and the soil would need to be treated and sampled again.

### **General Response: Hazardous Waste**

Two commenters raised concerns about hazardous waste being treated at the facility. Hazardous waste is a specific term defined in the Resource Conservation and Recovery Act (RCRA) and the proposed facility will not be allowed to accept hazardous waste for treatment or disposal. Under state regulation, petroleum hydrocarbons and petroleum constituents are hazardous substances, but not classified as hazardous waste under RCRA. Though the proposed facility will accept soil contaminated with petroleum, most soil contaminated with petroleum is not considered hazardous waste. All RCRA hazardous waste that is generated for off-site disposal is shipped outside of Alaska. Before soil will be accepted at the proposed facility the contaminated soil generator will provide STT with information about the contaminated soil which includes a statement that the material is not RCRA hazardous waste. STT will revise their Operations Plan to include the waste profiling form used. STT cannot accept any contaminated soil unless a DEC project manager has signed a Contaminated Media Transport Treatment and Disposal Form. This form references the

spill or contaminated site and is signed by the DEC project manager assigned to that cleanup who is familiar with the source of the contaminated soil. The form can be found here:  
<https://dec.alaska.gov/media/12127/transport-treatment-disposal-approval-form-for-contaminated-media-fillable.pdf>

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## Individual Comments and Responses

*Comments are provided verbatim as received by DEC.*

### **Comment 1: Len Niesen**

“The site description in the operations plan (Section 1.1) is disingenuous and misleading. It states, “The property is bordered by the Kenai Spur Highway to the north, vacant lot to the south, and commercial properties to the east and west.” - First, there is no such thing as “commercial” property in Nikiski, as Nikiski has no zoning designated as commercial. - Second, the lot immediately east of the property houses a residence in the upper floor (the lower floor is no longer an operating business). The second floor looks directly down on STT’s operations on the side nearest the burner. - Third, the idea that the property is “bordered” on the north by the Kenai Spur Highway is misleading, as the highway imposes no barrier whatsoever to exhaust and noise emissions, and there are several residences directly across from the STT facility. The wording in the operations plan appears designed to avoid admitting that they located in a residential area, but the fact is that they did so. Homeowners are rightly concerned about the concentration of exhaust gases coming from the facility so near them, especially when air monitoring is so lax. During the original submission for this facility, I expressed doubts about the overhead structure being sound or effective, given weather conditions in Nikiski. Sure enough, the shelter caved in over the winter. I reported this to the DEC; did the owner report it before I did? The DEC never acknowledged my email that reported this. The roof caved in on top of many sacks of soil that I assume were contaminated, as they were stored where contaminated soil was designated to be stored. How were those handled in order to prevent contaminant spread? Did any bags break or tear? The people who reside in this area are kept unaware about any details of such dealings, and I’m not even sure the DEC is aware of how these things were handled. After the roof caved in, the operator was allowed to continue operations. The overhead structure was an integral part of the original operations plan, and based on the premise that STT would need to follow their operating plan verbatim, I believed that operations would either include this structure or be shut down until a new operating plan was established. However, the DEC apparently allowed STT to continue operations without the overhead structure and without a new operating plan approved. This was an improper approach, and the DEC violated the public trust in allowing operations to continue without adhering to the original operations plan. Now STT is proposing that they be allowed to use a reinforced plastic cover, only 6 mil thick, over the contaminated soil. Are we all so naïve to believe that Nikiski winds will have no effect on that? And in the winter a 20 mil “shutdown liner” is to cover the containment cell? If high winds took out a Quonset-type shelter, it’s hard to believe they won’t affect a 20 mil “liner” that is basically a large tarp. Will the public need to monitor the failure of this item for you the same way we monitored the failure of the Quonset-like hood? I oppose any increase in storage capacity on the basis that this will lead to future increases in exhaust gas output. The DEC seems to rubber-stamp everything proposed by this operator. The more STT processes, the more money they make. Increases in contaminated exhaust gases seem likely to follow. Since the DEC appears to allow exceptions

regarding this facility without further public input, allowing them to carry on without meeting the promises made in their original operating plan, how can we trust the DEC's oversight of this facility? Nathan Oberlee told me, before this facility started up, that he would not be taking wet materials. Yet reports locally indicate that the facility has indeed accepted wet materials. If they have already accepted wet materials, how can we know they are actually aware of what is being unloaded at their site? The reporting on this site should be open to the public, so we can be assured of proper oversight of the facility and its operations. How can we be sure they won't process non-petroleum chemicals? Noise pollution continues to be a concern with the facility. Unlike gravel pits, this type of facility does not go through any public comment period having to do with actual pit operations. However, there is little difference between this type of operation and a gravel pit. Back-up alarms, rock screening, conveying of materials, heavy equipment and truck movements are all virtually identical to gravel pit operations. The facility should have been subjected to the same procedures imposed on gravel pits, at the very least, before operations began. STT's operating plan says it will monitor dB emissions for the first 30 days, and will only continue to monitor dB emissions if they exceed 85 dB. However, the CDC indicates that by 70 dB, persistent noise is "annoying" and by 80 dB, it is "very annoying" and hearing damage is possible. The EPA calculated the safe noise level for the public to prevent hearing loss to be a 70-decibel time-weighted average for a 24-hour period (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5308171/>). Therefore, STT should not only be measuring peak dB, but should calculate average dB over a 24 hour period, and this monitoring should continue as long as the average dB is more than 70 dB. As noted by the NIH, the EPA didn't account for lifetime noise exposure; therefore, "the real average safe noise level to prevent hearing loss is probably lower. Noise also has nonauditory health impacts—increases in stress hormones, hypertension, obesity, cardiac disease, and mortality—at average daily exposures of only 55 decibels, with activity interference beginning at 45 decibels." This facility should never have been located in a residential area. While I don't oppose the location of such a facility in an industrial area of Nikiski (and there is indeed an acknowledged industrial area but they chose not to locate there), I continue to oppose the location of this facility in a residential area and I question the ability or likelihood of DEC in Juneau to properly monitor this facility on any regular basis. Much of the operations plan is based on self-reporting, and that is a bit like the fox guarding the henhouse. To protect the public, particularly nearby residences who will have greater concentrations of exhaust gases, air monitors should be placed at the lot corners and air quality should continually be monitored and reported."

**DEC Response:** Several changes were made to the Operations Plan site description in response to Ms. Niesen's comments. The site description was changed to more accurately describe the uses of neighboring properties.

Ms. Niesen discussed the collapse of the facility's cover in January 2022 and asked if the STT had reported this to the department. STT reported the structure collapse to the department on February 1, 2022 and coordinated with DEC to ensure the contaminated soil, contained within lined sacks, was covered and that additional water storage was available to manage water accumulation during breakup. In April 2022, STT reported to the department on their actions to manage snow melt and ensure the soil remained covered. STT was allowed to continue to operate under the first operations plan, as its approval was still valid and they could responsibly treat soil. STT ensured that the soil was covered in accordance with regulations governing soil storage (18 AAC 75.370 and 18 AAC 78.274).

Ms. Niesen indicated that this facility has many similarities to the operations of a gravel pit. Rock



screening activities and use of heavy equipment are similar to activities at a gravel pit. The activities at gravel pits described however are not regulated by the Contaminated Sites Program.

Ms. Niesen noted that the reporting on the facility should be open to the public to ensure proper oversight of the facility and was concerned that STT might process non-petroleum chemicals. The files related to this facility are public record and are available by request. Though STT is ultimately responsible for only accepting material allowed by their plan, Contaminated Sites project managers verify the characterization of the waste before the soil is transported to STT. All material taken to STT must be accompanied by a form signed by the Contaminated Sites project manager familiar with the contaminated site from which the soil waste was generated. These forms are part of the public record for both the contaminated site and for STT. The form is linked here: <https://dec.alaska.gov/media/24930/transport-treatment-disposal-approval-form-for-contaminated-media-fillable.pdf>

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Facility Location

General Response: Air Emissions and Air Quality Permit

General Response: Structure Integrity

General Response: Noise

General Response: Increased Capacity

General Response: Wet Soil

General Response: Regulatory Oversight

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## **Comment 2: Tami Johnson**

“Please consider this operation and what the potential is to damage the surrounding environment. Another location must be considered. One that is away from the people of Nikiski. There have been comments made that refer to the changes made to the new structure and how it won't hold up and protect the equipment. Please consider whether you would want to live by this facility. There are too many areas of this plan to question and not enough to trust. This was put in place with approval before the opportunity for public opinion was made available. The conclusion must be, that the owners knew that there would be public opposition and wanted it to go through anyway. Thanks for this opportunity to speak out.”

### **DEC Response:**

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Adequacy of Public Process

General Response: Facility Location

General Response: Structure Integrity

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**Comment 3: Melinda Kay**

“BY DEC's decision to allow burning of hazardous materials in a residential area, the DEC has just approved poisoning a large number of people on the Kenai Peninsula. There are numerous studies that prove the burning of contaminated soil releases smoke that cannot be completely contained, and toxins will be released into neighborhoods from this smoke. In addition to the contamination released into the ground while the contaminated soil is stored prior to burning. This could potentially affect wells near the storage location.

It is a bad idea to burn toxic soil in a residential area!”

**DEC Response:**

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Hazardous Waste

General Response: Protection of Groundwater

General Response: Air Emissions and Air Quality Permit

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**Comment 4: James Roza**

“It is a shame that when the government wants to get something done, they will just go over everyone's heads to do it, no matter the opinions or consequences. We had signatures last year against this dirt burning operation, yet it is going fully ahead, despite the neighborhood's opinion or wishes. This is not small. It will be a large operation, and devastating to the environment and health of the people in this area. STT is already trying to burn wet dirt at their site. They said they were not going to do that. ACAT wrote 2 papers about the emissions this would cause in our environment. This should be in a different area, not in this neighborhood. There are other areas around here already prepared for this type of operation. Use them instead. I think with all the wells, people in the area, etc. that it is a shame you won't listen and are letting this happen anyways. Also, it seems like nobody is overseeing this dirt burning project at all. For instance, what about the piece of "Visqueen" being used for a cover? That is not going to work. Why would you think plastic is better than a building? With the weather we have here, the water is just going to leak and seep into the ground. Kind of like the warning last year about the type of building being used. The snow load last winter really helped that! Also, the comment period should have been before the operation plan. Our health is more important than this operation. Should be looked into a lot more thoroughly. What about the environmental study that was never done?”

**DEC Response:**

The public comment period occurs after the submission of the draft Operations Plan so that



commenters have adequate information about the proposed operations. A pre-application public comment period is not required. The approval process does not require an environmental study similar to those required by the National Environmental Policy Act for federal actions. Approval of the Operations Plan is not a federal action.

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Adequacy of Public Process

General Response: Wet Dirt

General Response: Air Emissions and Air Quality Permit

General Response: Protection of Groundwater

General Response: Facility Location

General Response: Regulatory Oversight

General Response: Structure Integrity

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#### **Comment 5: Bill Bookout**

“I agree completely with the comments submitted by  
Brian Zinck

I am opposed to the Operations

Plan submitted to the DEC by Soil Treatment Technologies for their facility at 52520 Kenai Spur Highway. The plan allows STT to increase the capacity of onsite contaminated soil.

It also allows an increase in the amount of discharged wastewater added to the local water table.

STT has been permitted and is currently treating contaminated soil at this location despite the objections of numerous local residents as evidenced in comments submitted to DEC in 2021. This has resulted in increased large truck traffic and noise. Current operations add pollutants to the air and groundwater in a residential area containing numerous houses with water wells.

Despite the availability of other locations in the Nikiski Petrochemical industrial area STT established the facility in a residential area and the State of Alaska permitted it. The operations plan should not be permitted.

This facility needs to be dismantled and relocated to the Industrial area at mile 23 of the Kenai Spur Highway. Contaminated soil could be treated there with the least amount of impact on the environment and the health, well being, and quality of life of the local residents.

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Bill & Mary Bookout”

#### **DEC Response:**

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Air Emissions and Air Quality Permit

General Response: Protection of Groundwater

General Response: Facility Location

General Response: Traffic

General Response: Noise

General Response: Operations Capacity

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**Comment 6: Brian Zinck**

“I am opposed to the Operations

Plan submitted to the DEC by Soil Treatment Technologies for their facility at 52520 Kenai Spur Highway. The plan allows STT to increase the capacity of onsite contaminated soil.

It also allows an increase in the amount of discharged wastewater added to the local water table.

STT has been permitted and is currently treating contaminated soil at this location despite the objections of numerous local residents as evidenced in comments submitted to DEC in 2021. This has resulted in increased large truck traffic and noise. Current operations add pollutants to the air and groundwater in a residential area containing numerous houses with water wells.

Despite the availability of other locations in the Nikiski Petrochemical industrial area STT established the facility in a residential area and the State of Alaska permitted it. The operations plan should not be permitted.

This facility needs to be dismantled and relocated to the Industrial area at mile 23 of the Kenai Spur Highway. Contaminated soil could be treated there with the least amount of impact on the environment and the health, well being, and quality of life of the local residents.

Brian E Zinck”

**DEC Response:**

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Air Emissions and Air Quality Permit

General Response: Protection of Groundwater

General Response: Facility Location

General Response: Traffic

General Response: Noise

General Response: Operations Capacity

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**Comment 7: Tom Carew**

“Inadequate monitoring led to the collapse of their steel fab building. The new plan calls for a larger space and is just going to be covered by a tarp anchored with concrete blocks. How in anyones mind can this be considered better??? Tarps rip and in wind blow off or expose parts of whatever is being contained.”

**DEC Response:**

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Structure Integrity

General Response: Operations Capacity

General Response: Regulatory Oversight

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**Comment 8: Joshua Yeh**

“Reject the Operation Plan. This operating plan will release large quantities of hazardous air pollutants. The analysis of Lauren A. Estrella demonstrates the immediate risk this operation plant has for the health of all of us: our pregnant women, our infants, our children, and our elders. I hope you will prioritize our health and reject the operation plan.”

**DEC Response:**

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Air Emissions and Air Quality Permit

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**Comment 9: Wilma Hampson**

“I wish to protest the soil treatment facility based on the fact that that facility is located In the middle of a residential area. This has the potential to contaminate the ground water and air quality of the local population. Alaska is Hugh. Put it some place else!”

**DEC Response:**

Please see the following General Comment Categories and Responses, in the previous section, to address other concerns described in the comment.

General Response: Facility Location

General Response: Protection of Groundwater

General Response: Air Emissions and Air Quality Permit

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**Comment 10: Letter submitted via email by the Alaska Community Action on Toxics (ACAT), Pamela Miller**

DEC Note: This comment, submitted as a letter by email can be found in Attachment 2.

**DEC Response to Letter in Attachment 2:**

ACAT provided a letter expresses concerns about the facility that included issues with the Air Quality Permit. The Air Quality Permit was approved in 2021 and was not the subject to this public comment period. A separate public comment period for the Air Quality Permit was held in 2021 prior to the permit's approval.

The Contaminated Sites Program conducted the review of the Operations Plan and the public comment period in accordance with 18 AAC 75.365, 18 AAC 78.274, and the guidance adopted by reference. A number of the concerns expressed by ACAT, including the Air Quality Permit concerns, are outside of the regulatory authority of the Contaminated Sites Program. These concerns include wildlife impacts, occupational safety considerations, property values, and fire prevention and preparedness.

Some of the concerns expressed in the letter including the facility's location, the adequacy of the public process, the regulatory oversight of STT by DEC are addressed in the general responses to comments.

STT is within the Kenai Peninsula Borough in an area that has mixed use. The facility's immediately adjacent neighbors include residences, businesses, an inactive material site, and a seafood processing facility. The property that STT is on was previously operated as a gravel site. The school described in the letter is approximately 3,000 feet away from the western boundary of the STT property.

ACAT's letter expressed concern about the facility treating soil contaminated with chlorinated compounds as thermal treatment of those wastes can generate other hazardous substances like dioxins. STT is not currently approved to accept waste containing chlorinated compounds. However, when other thermal treatment facilities do treat soil contaminated with chlorinated compounds in Alaska, DEC requires that the soil be sampled for dioxins both before and after treatment. If dioxin-contaminated material is generated during the thermal treatment process at approved facilities, it would have to be disposed of at an appropriate facility outside of Alaska. STT is not approved for treating waste with chlorinated compounds. Since other soil treatment facilities have thermally remediated non-hazardous waste soil contaminated with chlorinated compounds the department has not seen dioxins generated in the treated soil or baghouse.

The Operations Plan does allow for testing to be conducted to assess the facility's potential to treat soil contaminated with chlorinated compounds. Such testing would include a rigorous plan and

coordination between the Contaminated Sites Program and the Division of Air Quality. In order for treatment of chlorinated compounds to become a part of their regular operation, following successful testing STT would have to update their Operations Plan and undergo another public review.

ACAT's letter says that soil "into which chlorinated compounds have been dumped" is hazardous waste. Soil contaminated with chlorinated compounds can be RCRA hazardous waste if the source of the release is listed in the federal regulation or if the contaminants in the soil exhibit hazardous characteristics defined in the federal regulation, but soil with these contaminants of concern is not always a hazardous waste. There are no facilities in Alaska that commercially accept hazardous waste for treatment or disposal.

The ACAT letter stresses the need for testing and reporting to ensure STT does not accept and treat hazardous waste. STT is strictly prohibited from accepting hazardous waste. There are DEC processes required during investigation and cleanup of a contaminated site or spill outside of the Operations Plan that are already in place. Waste characterization occurs before STT accepts the soil for treatment at their facility as part of the site investigation or cleanup of a contaminated site or spill. Disposal or treatment of contaminated soil is coordinated with the department in advance by a responsible party (person responsible for the release of contamination). Typically the coordination is done on behalf of the responsible party by a Qualified Environmental Professional (QEP), 18 AAC 75.333. A QEP identifies appropriate treatment or disposal for the waste generated during investigation or cleanup. At this point the QEP would reach out to STT and STT would do their own required waste acceptance review. Once the QEP identifies appropriate treatment or disposal it will be included in a workplan that must be approved by a department project manager. Active contaminates sites or spills will have an assigned project manager that is familiar with the site history from which the waste is generated. All soil that goes to STT must be accompanied by a form signed by a DEC project manager. This form, filled out by the QEP, identifies what contaminated site or spill that the waste is generated from and identifies contaminants of concern in the waste. DEC project managers verify the accuracy of the information in the form and sign. STT retains the form and following treatment of the waste, provides the form to the DEC project manager that reviews the post-treatment sampling at STT.

ACAT includes a bullet point list of concerns. Those not addressed in general responses are addressed here.

Oversized material subject to the *Technical Memorandum- Petroleum Hydrocarbon Cleanup for Oversize Material* (DEC, 2005) and soil that is treated and meets the most stringent cleanup levels may be reused on site or sold.

Section 3.5 of the Operations Plan is consistent with the Air Quality permit. For additional information about the gases and emissions destruction, please refer to the Air Quality permit.

Baghouse fines are mixed in with the treated soil and sampled during post-treatment sampling.

The sampling frequency proposed is consistent with the *Field Sampling Guidance* (DEC, 2022) for excavated soil. Treatment of the soil tends to homogenize it so significant variability in concentrations detected would not be expected. STT, nonetheless, proposes head-space field screening prior to collecting laboratory samples.

In Section 4.6 STT commits to traversing the boundary of the facility with a photo-ionization detector to measure for volatile organic compounds. The practice will be discontinued after 30 days. This proposed monitoring is not required by regulation but will be reported in the annual report. If detections of volatiles are reported, the department will consider further monitoring or controls, if the data warrant actions.

The 5,200 tons of soil include 4,000 tons of contaminated soil before treatment (in the contaminated soil storage containment) and 400 tons in each of the three post-treatment cells.

The January 2022 collapse of the structure was reported to the department by STT and concerned members of the public. The soil that was stored there was covered in accordance with 18 AAC 75.370, STT ensured that the water treatment system was not overwhelmed by spring melt and communicated to the department during spring break up. The soil was successfully treated at STT in 2022.

STT is responsible for compliance with all laws and regulations governing their facility. STT is responsible for accepting only petroleum contaminated soil. The Operations Plan is compliant with 18 AAC 75 and 18 AAC 78. Contaminated Sites Program has the personnel and authority to conduct announced and unannounced inspections. Failure to comply with 18 AAC 75.365 and 18 AAC 78.273 could result in DEC rescinding approval of the Operations Plan.

General Response: Adequacy of Public Process

General Response: Facility Location

General Response: Air Emissions and Air Quality Permit

General Response: Regulatory Oversight

General Response: Noise

General Response: Protection of Groundwater

General Response: Hazardous Waste

## Attachment 1: Public Notices

PUBLIC NOTICE  
STATE OF ALASKA  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

An Operations Plan for an Offsite or Portable Treatment Facility for the remediation of contaminated soil has been submitted to the Department of Environmental Conservation (DEC) for approval in accordance with 18 AAC 75. 365 and 18 AAC 78.273. The plan details are as follows:

Applicant: Soil Treatment Technologies, LLC.  
8361 Petersburg Street  
Anchorage, AK 99507

Proposed Activity: Soil Treatment Technologies, LLC proposes to receive and treat contaminated soils under a DEC approved Operations Plan. Contaminated soil is transported and stored in containment pending treatment by thermal desorption. Thermal desorption is a two-phase treatment, volatilizing contaminants in the soil then treating the vapors with thermal oxidation. Following treatment, soils will be sampled to confirm that the DEC soil cleanup levels are met before the treated soils are released for reuse or disposal. The existing facility will be reconfigured to increase capacity of contaminated soil resulting in a larger footprint and increased wastewater treatment.

Location: 52520 Kenai Spur Highway, Nikiski Alaska

Any person wishing to submit comments regarding this Operation Plan may do so electronically via our public notice site at <https://dec.alaska.gov/comment/>. If you are unable to submit comments via this site, you may submit them in writing to Lisa Krebs-Barsis, Department of Environmental Conservation, SPAR/CSP, 555 Cordova St., Anchorage, AK 99501, 907-269-7691 (phone), 907-269-7687 (fax), or [lisa.krebs-barsis@alaska.gov](mailto:lisa.krebs-barsis@alaska.gov). The full contents of all submitted comments are considered public records and will be posted online in full during the public comment period. Comments submitted in writing directly to the Ms. Krebs-Barsis will be uploaded to the public comment site. It is preferable for commenters to submit directly through the public comment site.

The public comment period for this application begins on June 18, 2022 and ends at 11:59 p.m. on July 2, 2022. Comments must be received by 11:59 pm on July 2, 2022. It is the responsibility of the commenter to verify that facsimile and email submissions are received by the deadline.

Copies of the Operations Plan are available for public review at the following locations: the department's offices at 43335 Kalifornsky Beach Road, Soldotna, AK 99669; 555 Cordova Street Anchorage, AK 99501; and the department's website at <https://dec.alaska.gov/spar/csp/offsite-remediation>.

The State of Alaska, Department of Environmental Conservation complies with Title II of the Americans with Disabilities Act of 1990. If you are a person with a disability who may need an accommodation in order to participate in this public process, please contact Lisa Krebs-Barsis at 907-269-7691 or TTY Alaska Relay dial 711 or 1-800-770-8973 to ensure that any necessary accommodations can be provided.



Attachment 2: Alaska Community Action on Toxics Letter:  
Comment 10



1225 E. International Airport Road, Suite 220  
Anchorage, Alaska 99518  
Phone: (907) 222-7714; Fax (907) 222-7715  
[www.akaction.org](http://www.akaction.org)

**Comments on Proposed Operations Plan for the Soil Treatment  
Technologies, LLC Thermal Treatment Facility, Nikiski, Alaska**  
July 2, 2022

These comments are submitted by Alaska Community Action on Toxics (ACAT), a statewide non-profit public interest environmental health and justice research and advocacy organization dedicated to protecting public health. We are submitting comments on the Operations Plan (June 8, 2022) for the proposed Soil Treatment Technologies, LLC thermal treatment facility (“STT facility”), 52520 Kenai Spur Highway in Nikiski, Alaska. ACAT has members and their families who live, work, attend school, and recreate in the immediate area that would be affected. Members who live in the immediate vicinity have contacted us to express their concerns and opposition to the proposed facility.

In this set of comments, we re-state much of what we included in our comments on the prior draft operations plan (August 4, 2021) because our concerns have not been addressed in the new operations plan. We have supplemented the previous set of comments with additional substantive concerns and issues. The “new” operations plan proposes to increase soil capacity and re-configure the facility’s lay out and water management strategy, however, it fails to address substantive issues and concerns that have been raised by the community and in our prior comments. The operations plan does not describe the proximity to the residential area and school in the immediate vicinity nor the health hazards presented by the toxic air emissions to public health. In granting a permit for this facility and approving the operations plan, ADEC has failed in their responsibility to address public comments and concerns, demonstrated a bias favoring the applicant (STT) and a conflict of interest, and exhibited a lack of transparency. This public comment period is a sham because it is clear that ADEC intends to continue ignoring the very real threats to environmental and public health posed by the facility and approval is virtually pre-determined. It is also clear that STT and ADEC do not represent the best interests of the community and public health. We have no level of trust in STT to operate this facility in a safe manner nor in ADEC to provide proper oversight and regulation.

We note again that the majority of the 50+ comments on the proposed permit

were in opposition to the STT facility and based on legitimate concerns of people in the community about adverse effects that this facility will have on air and water quality, public health, property values, businesses and the local economy, wetlands, and wildlife. Over two hundred local residents signed a petition in opposition to the facility. ADEC failed to conduct a meaningful public review process and issued the "Minor Permit" without regard or due consideration of the public health, safety, and property rights issues raised in the public comments. People raised concerns about the lack of public notice, lack of adequate time for review, that the process was biased toward the applicant rather than the interests of the community and public health, and that many people were at unfair disadvantage in the process because they do not have computers or internet access. By issuing the permit, ADEC failed to meet the obligation to its mission of: *"Conserving, improving, and protecting Alaska's natural resources and environment to enhance the health, safety, and economic and social well-being of Alaskans."* It is within the Department's authority and pursuant to its obligations under the Constitution of the State of Alaska, the Public Trust Doctrine, and statutes and regulations to heed the public health threat posed by this proposed facility and to protect the rights and common welfare of present and future generations of Alaskans by revoking the permit and rejecting this Operations Plan. ADEC has not allowed sufficient time or meaningful public participation in the review of the permit or proposed operations plans. ADEC has ignored the public's legitimate concerns. ADEC claims "to ensure procedures were in place to protect human health, the environment, and Alaska's natural resources." This is a false assurance, as this facility presents a very real threat to environmental and public health.

The permit states that air pollution is prohibited and that "no person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property." Yet, the facility is permitted to release annually up to 18 tons of NO<sub>x</sub>, 12 tons of CO, 27.9 tons of SO<sub>2</sub>, 5.9 tons of PM<sub>10</sub>, 2.5 tons of PM<sub>2.5</sub>, and 27.4 tons of VOCs. Refer to Table 1 for a summary of health effects associated with these air pollutants. These emissions present a serious public health hazard to the community of Nikiski and in particular to the people downwind and living within ½ mile of the proposed facility and to the children, teachers, and workers attending school at the middle and high school.

A recent study published in the American Journal of Public Health stated: "Air pollution exposure has been linked with preterm birth and low birth weight, known risk factors for many neurodevelopmental disorders in children. A growing body of human studies associate exposure to combustion-related air pollutants (PM<sub>2.5</sub>, polycyclic aromatic hydrocarbons, nitrogen dioxide, black

carbon) with adverse effects on brain development, including deficits in intelligence, memory, and behavior. Polycyclic aromatic hydrocarbons, a component of PM<sub>2.5</sub>, have been associated with developmental delay; reduced IQ; symptoms of anxiety, depression, and inattention; ADHD; and reduced size of brain regions important for processing information and impulse control.<https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2018.304902> Other studies have linked roadway proximity, traffic-related PM, elemental carbon, or nitrogen dioxide to decreased cognitive function, including deficits in memory and attention. The effect of polycyclic aromatic hydrocarbon exposures during fetal development on cognitive and behavioral outcomes is magnified by material hardship or maternal demoralization. Low-income communities are thus disproportionately exposed and uniquely vulnerable because of family and community economic hardship. Increasing evidence links prenatal exposure to combustion-related air pollutants and PM<sub>2.5</sub> to autism spectrum disorder.”<sup>1</sup> Emerging research, including a study from Harvard T.H. Chan School of Public Health,<sup>2</sup> finds that breathing more polluted air over many years may itself worsen the effects of COVID-19.

In addition to the health hazards presented by toxic air emissions from this facility that are not addressed in the permit or operations plans, the “new” operations plan fails to provide adequate evidence that noise pollution will be properly monitored and prevented. The American Public Health Association identifies noise pollution as a hazard to public health, stating: “Chronic noise, even at low levels, can cause annoyance, sleep disruption, and stress that contribute to cardiovascular disease, cerebrovascular disease, metabolic disturbances, exacerbation of psychological disorders, and premature mortality. Noise interferes with cognition and learning, contributes to behavior problems, and reduces achievement and productivity.”<sup>3</sup>

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<sup>1</sup> Devon C. Payne-Sturges, Melanie A. Marty, Frederica Perera, Mark D. Miller, Maureen Swanson, Kristie Ellickson, Deborah A. Cory-Slechta, Beate Ritz, John Balmes, Laura Anderko, Evelyn O. Talbott, Robert Gould, and Irva Hertz-Picciotto, 2019: Healthy Air, Healthy Brains: Advancing Air Pollution Policy to Protect Children’s Health, *American Journal of Public Health* **109**, 550-554, <https://doi.org/10.2105/AJPH.2018.304902>.

<sup>2</sup> <https://doi.org/10.1126/sciadv.abd4049>

<sup>3</sup> <https://apha.org/Policies-and-Advocacy/Public-Health-Policy-Statements/Policy-Database/2022/01/07/Noise-as-a-Public-Health-Hazard>

**ACAT Table 1. Summary of Adverse Health Impacts for Major Harmful Air Pollutants**

<b>Pollutant</b>	<b>Health Impacts</b>
Nitrogen Oxides	NO <sub>2</sub> specifically: lower logical memory <sup>1</sup> , more severe allergic responses, reduced pulmonary function, asthma, lower birth weight, and increased risk of preterm birth <sup>2</sup> , increased risk of stroke <sup>4</sup> , deteriorates spatial learning and potentiates amyloid production <sup>7</sup> , contributes to an increased incidence of chronic cough <sup>20</sup>
Sulfur Dioxides	Respiratory irritant <sup>20</sup> , increased risk of stroke <sup>4</sup> , induces inflammation of membranes, causes bronchial narrowing, and slows mucus flow <sup>23</sup>
PM <sub>10</sub>	Contributes to more severe allergic responses, increased risk of preterm birth, increased risk of pneumonia, and reduced lung function <sup>2</sup>
PM <sub>2.5</sub>	Penetrates deep in to the respiratory tract wherein it can be absorbed in to the blood stream <sup>21</sup> , can be translocated to organ tissue through blood circulation, contributes to more severe allergic responses, decreased birth weight, and asthma <sup>2</sup> , lower verbal learning performance <sup>1</sup> , increased cardiovascular mortality <sup>4,5</sup> , reduced cardiovascular function <sup>5,22</sup> , has the ability to enter the olfactory epithelium and can be transported to the olfactory bulb causing olfactory dysfunction <sup>19</sup> , induces inflammatory reactions across organ systems <sup>22</sup>
Formaldehyde	Eye, nose, and throat irritant resulting in cough, wheezing, chest pains, and bronchitis; a carcinogen resulting in increased incidence of lung and nasopharyngeal cancer <sup>5, 26</sup>
Toluene	Physiological depression of the central nervous system <sup>16,17</sup> , cardiotoxic <sup>17</sup> , causes renal tubular acidosis and can cause headache, dizziness, confusion, muscle weakness, and even muscle paralysis <sup>17</sup>
Xylenes	Nose and throat irritation, severe lung congestion, pulmonary hemorrhages, edema, impaired short-term memory, as well as alteration in equilibrium or body balance <sup>8</sup> , reduced muscle power, depression of the central nervous system inducing symptoms such as headache, dizziness, and vomiting <sup>9</sup> , pathological changes in ovarian tissue, ovary atrophy <sup>10</sup>
Acetaldehyde	Carcinogenic and genotoxic <sup>11, 27</sup> , can cause mild respiratory irritation <sup>27</sup>
Ethyl Benzene	Ototoxic (having a toxic effect on the ear or its nerve supply) <sup>24, 25</sup>
Benzene	Reduced pulmonary function <sup>2</sup> , decreases the number of cells in bone marrow causing blood disorders <sup>2,5</sup> , genotoxic causing genetic damage including DNA cross linking and sister chromatid exchanges <sup>3,18</sup> , increases cardiovascular risk and injury <sup>6</sup> , shortness of breath and lethargy <sup>17</sup> , carcinogenic <sup>18</sup>
Phenol	Accelerates pubertal development and disrupts estrogenic activity <sup>12, 13</sup>
Hexane	Inhibits follicular development, damages ovarian cell ultrastructure, and can cause menstrual abnormalities <sup>14</sup> , gestational inhalation can alter the reproductive cycle of female offspring <sup>15</sup>

The Alaska Department of Environmental Conservation (ADEC) issued a “minor” permit (AQ1657MSS01) that would allow a waste treatment company, Soil Treatment Technologies, LLC (STT) to burn waste and generate toxic pollution

within yards of people's homes. ADEC's contravenes the Resource Conservation and Recovery Act (RCRA) and the Clean Air Act (CAA) and denies Alaskans vital health and environmental protection these statutes were enacted to provide.

There can be no question that the purpose of STT's "soil treatment unit" is to burn waste, specifically petroleum and solvent wastes that have been dumped or spilled in soil. According to the scanty information provided in ADEC's permit, the unit will cook contaminated soil in a rotary drum and then burn the organic chemicals that process yields in a thermal oxidizer. ADEC has made no effort to identify – let alone specify – the contaminated soils that can be burned in this unit. Nor has ADEC made any effort to identify the hazardous air pollutants that will be emitted from this unit, let alone provide assurance that they will not harm the health of the people who are forced to breathe this unit's pollution.

Of particular concern is ADEC's disregard of its own expectation that the unit will be treating soil contaminated with "chlorinated compounds." Heating and then burning chlorinated compounds will create dioxins, polycyclic organic matter, and other complex and persistent hazardous air pollutants. Even assuming that the thermal oxidizer will destroy 99 percent of volatile organic compounds, it will not destroy these organic chemicals. Moreover, because pollutants such as dioxins and furans are persistent, bioaccumulative, and extremely toxic even in tiny quantities, allowing the unit to create and emit even miniscule amounts of these pollutants will create long-term contamination of nearby neighborhoods and put the residents of these neighborhoods at risk of cancer and other serious adverse health effects.

**A. ADEC's Reliance on a One-Line Narrative Prohibition on Treating Hazardous Waste Contravenes RCRA and Defeats Its Preventative Purpose.**

It is well established that Congress enacted RCRA to be a preventative statute – a law that would prevent the harms that arise from treating hazardous wastes rather than just seeking to mitigate these harms after they occur. Discarded chlorinated solvents are hazardous wastes. The permit contemplates that STT will burn just that, soil into which "chlorinated compounds" have been dumped. Despite this, ADEC assumes that a single line in the permit will suffice to prevent precluding STT from burning hazardous waste. It will not. ADEC needs to establish testing and reporting requirements to ensure that STT does not burn hazardous waste. Otherwise, it is putting STT's neighbors at risk.

Nor does it suffice for the permit to say that "During a phone conversation

on April 7, 2021, the Permittee indicated that soils contaminated with chlorinated compounds may be treated on a case-by-case basis following approval by the Department's Division of Spill Prevention and Response, Contaminated Sites Program (CSP)." STT's vague "indicat[ion]" that CSP will review and approve the treatment of chlorinated solvents falls far short of ensuring that STT does not burn hazardous wastes. First, a statement of what STT has "indicated" is not a requirement of any kind. Second, neither CSP nor ADEC nor the people living near STT have any way of knowing whether STT will actually alert CSP and seek approval before it treats waste contaminated with chlorinated compounds, let alone whether those wastes are actually hazardous wastes for which a RCRA permit would be required. Third, the permit does not say what criteria CSP would apply in deciding to allow STT to treat wastes contaminated with chlorinated compounds, and provides no reason to expect that CSP's decisions will be adequately protective of public health and the environment.

**B. Even if It Does Not Treat Hazardous Waste, STT's Facility Is an Industrial Waste Incinerator That Must Comply With Clean Air Act Incinerator Standards.**

Assuming *arguendo* that SST will not be burning hazardous waste, it will be burning solid waste and is therefore subject to the Clean Air Act's requirements for solid waste incineration units.

ADEC states that the contaminated soil will first be cooked at 700 degrees Fahrenheit in a "rotary dryer drum." The stated purpose of the rotary dryer drum, however, is not to dry the contaminated soil but to "volatilize" the volatile organic compounds contaminating it. The same high temperatures that volatilize these compounds will also, necessarily, combust some of them. Because there at least some combustion will occur in it, the so-called "dryer drum" is in fact a combust unit. And because the soil being combusted in that unit, it is a solid waste incineration unit within the meaning of Clean Air Act § 129(g), 42 U.S.C. § 7429(g). Section 129(g) provides "[t]he term "solid waste incineration unit" means a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels)." *Id.* It is well established that the term "any" means "any."

Even if solid waste combustion will not occur in the "rotary drum dryer," it will occur in the thermal oxidizer. ADEC states the exhaust gases from the "dryer" – which by ADEC's admission could include chlorinated organic compounds – will be burned in a "thermal oxidizer." Gases contained within STT's thermal oxidizer

are “contained” gases that come from the waste that STT puts in the dryer. They are, therefore, solid waste within the meaning of RCRA and the Clean Air Act. The Clean Air Act provides that “solid waste” has the meaning established by EPA pursuant to RCRA, 42 U.S.C. § 7429(g)(6), and RCRA provides expressly that “[t]he term “solid waste” means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities,” 42 U.S.C. § 6903(27). Because it burns these contained gases, STT’s unit is a solid waste incineration unit.

Lastly, even if the dryer and thermal oxidizer could be viewed as something other than incinerators individually, they must be viewed together as a “distinct operating unit” of STT’s facility. Viewed together, they are a solid waste incineration unit that must meet the requirements of Clean Air Act § 129.

Because the Clean Air Act’s incinerator requirements apply unambiguously to all solid waste incineration units of any kind, STT must obtain a Clean Air Act Title V permit and meet all the requirements of EPA’s Clean Air Act for industrial incinerators. STT cannot avoid these requirements by obtaining a “minor” permit. Section 129 applies to all incinerators, regardless of their size. Indeed, Congress’ decision not to provide a size cutoff for the incinerator requirements in § 129 reflects its understanding that the pollution from all incinerators is especially dangerous even in small quantities and needs to be controlled, monitored, and reported to the public.

The “new” Operations Plans falsely claims that it is protective of human health and the environment. This is a dishonest claim and one that is not supported by the evidence, especially given that this facility is in such close proximity to a residential neighborhood, school, and businesses.

There are major deficiencies in the Operations Plan, including:

- Failure to prevent excessive releases of hazardous air pollutants in close proximity to a residential area, school, and recreational trails. There are homes, wells, a school, a seafood processing plant and other small businesses, and recreational paths in the near vicinity of the proposed facility. This is unacceptable. These hazardous air pollutants threaten human health.
- Failure to adequately demonstrate that it can prevent contamination of drinking water sources, including public and private wells in the area. The



operations plan must include a hydrological analysis. The operations plan does not provide sufficient evidence of protection of the aquifer and drinking water sources. There is a strong potential for groundwater contamination. The operations plan does not provide sufficient evidence that discharged water will remain on site. Annual groundwater monitoring is insufficient and off-site monitoring should also be required. The hydrology of the area is poorly described and not supported by scientific evidence.

- Failure to adequately demonstrate how it will protect wetlands, surface waters, and wildlife, including aquatic life, bald eagles, sandhill cranes, moose, and other species.
- Failure to adequately demonstrate how it will protect the workers of the plant, such as placement of eyewash stations etc., evacuation plans, training schedules, preventative maintenance plans to ensure the machinery is working properly and prevention of other hazards to occupational health.
- The operations plan does not specify how it is determined that the material has had an adequate retention time in the dryer.
- The operations plan does not define for what “beneficial reuse” the oversized material and treated soils will be used.
- The operations plan does not provide a sufficient explanation for the safe disposal of the concentrated, contaminated dust and particles from the filter bags.
- The post-treatment soil sampling described in the operations plan is inadequate and not scientifically defensible.
- The operations plan states that “clean gases are exhausted to the atmosphere at approximately 800 degrees F.” What are these “clean” gases?
- The operations plan claims emissions destruction of 99%, however this is not substantiated and is not credible.
- The operations plan states that: “For the first 30 days of plant operation, STT personnel will traverse the property boundary with a volatiles analyzer for measuring volatile organic concentrations and a decibel meter to measure the noise from operations.” It is not acceptable to allow the operator to conduct such a haphazard monitoring of VOCs and noise. This is not technically or scientifically defensible. ADEC should at least require a well-defined monitoring plan that includes sufficient placement of stationary monitors for particulates (PM 2.5 and PM10), VOCs, and noise that provide data to the public in real time.
- The operations plan states that: “If volatile concentration readings are detected, STT will take corrective measures. The appropriate corrective action for excessive decibel levels will be determined upon discovery of the source of the noise.” The “appropriate” corrective measures for addressing volatile pollutants and noise are completely vague and up to the discretion

of the operator. We liken this to the “fox watching the hen house.” This is unacceptable and not protective of the health of the community.

- The operations plan fails to address the likelihood of higher emissions and incomplete combustion during start up and shut down.
- The operations plan includes a proposal for increased storage capacity of four thousand tons of contaminated soil and 400 of “clean” soil, indicating a total of 5,200. This does not add up. We are unconvinced, based on the poor safety record exhibited by the operator and inadequate plans for containment in the “new” operating plan, that contaminated soils can be safely stored on site. The proposed methods of storage and cover are not adequate to prevent releases from the facility.
- The recent cave-in of the roof at the facility exposed stored contaminated soil to wind and water erosion, yet neither the operator nor ADEC have provided information to the public about how this failure was handled. What was the fate of the contaminated waste? Was the exposed material disposed? Was there spillage?
- It is not acceptable to merely inspect water collected in the catch basin before discharging it onto the post-treated pile. The water should be sampled to ensure it meets appropriate water quality standards.
- The operations plan states that: “Treated water will be discharged onto the ground surface at least one hundred feet away from any known drinking water wells or surface water bodies. Discharged treated water will be released in such a manner that it will infiltrate into the ground, will not create erosion or runoff, and will remain within the property boundaries.” This is not sufficient to protect the integrity of drinking water sources and there is no evidence or substantiation that the treated water will remain on site.
- The operations plan does not specify a schedule of how often ADEC will request emissions source testing and who conducts the source testing.
- Soils contaminated with chlorinated hydrocarbons should never be burned in a facility such as this (for reasons stated above). The operations plan states that STT will not accept any characteristic or listed RCRA hazardous waste, yet it is proposed that the facility might accept soils contaminated with chlorinated solvents and even attempts to define limits of emissions for hydrochloric acid (HCL) to no greater than 9.9 tons in any consecutive 12-month period. This is a blatant attempt to circumvent obligations under the Clean Air Act. HCL is toxic and corrosive (inhalation, ingestion, or contact with skin, eyes) with vapors, dusts or substance may cause severe injury, burns, or death. Thermal decomposition can lead to release of irritating gases and vapors.
- The number of samples per cubic yard is totally inadequate to properly characterize the post-treatment excavated soil.

- The operations plan fails to address and identify measures to prevent safety hazards such as fires and explosions or what to do if there is one (e.g. originating in baghouse or other parts of the facility).
- STT could remediate hazardous materials outside of DEC's knowledge. The operators do not have a demonstrated record of safe operations or compliance. There is a lack of public trust in STT as reflected in public comments on the proposed permit.

Based on the threat to public and environmental health, the permit (AQ1657MSS01) should be revoked, and the proposed "new" operations plan rejected. This facility should not be allowed to operate in this residential community. Safe non-combustion alternatives should be required for the destruction of contaminated soils.

Comments prepared by Pamela Miller, Executive Director and Senior Scientist with Alaska Community Action on Toxics; Lauren Estrella, Graduate Student Intern in Environmental and Occupational Health; in consultation with James Pew, Senior Attorney with the public interest environmental law firm Earthjustice.

CC EPA Region 10 Office of Air and Radiation, and RCRA Program

### References Cited

1. Gatto N, Henderson VW, Hodis HN, et al. Components of air pollution and cognitive function in middle-aged and older adults in Los Angeles. *NeuroToxicology*. 2014; 40: 1-7.
2. Kim D, Chen Z, Zhou L, Huang S. Air pollutants and early origins of respiratory diseases. *Chronic Dis Transl Med*. 2018; 4(2): 75-94.
3. Duarte-Davidson R, Courage C, Rushton L, Levy L. Benzene in the environment: an assessment of the potential risks to the health of the population. *Occup Environ Med*. 2001; 58(1): 2-13.
4. Bourdrel T, Bind MA, Bejot Y, Morel O, Argacha JF. Cardiovascular effects of air pollution. *Arch Cardiovasc Dis*. 2017; 110(11): 634-642.
5. Suh HH, Bahadori T, Vallarino J, Spengler JD. Criteria air pollutants and toxic air pollutants. *Environ Health Perspect*. 2000; 108(4): 625-633.
6. Abplanalp W, DeJarnett N, Riggs DW, et al. Benzene exposure is associated with cardiovascular risk. *PLoS One*. 2017; 12(9).
7. Yan W, Yun Y, Ku T, Li G, Sang N. NO<sub>2</sub> inhalation promotes Alzheimer's disease-like progression: cyclooxygenase-2-derived prostaglandin E<sub>2</sub> modulation and monoacylglycerol lipase inhibition-targeted medication. *Sci Rep*.

2016; 6: 22429.

8. Reese E, Kimbrough R. Acute toxicity of gasoline and some additives. *Environ Health Perspect.* 1993; 101(6): 115-131.

9. Kandyala R, Raghavendra SPC, Rajasekharan ST. Xylene: an overview of its health hazards and preventive measures. *J Oral Maxillofac Pathol.* 2010; 14(1): 1-5.

10. Niaz K, Bahadar H, Maqbool F, Abdollahi M. A review of environmental and occupational exposure to xylene and its health concerns. *EXCLI J.* 2015; 14:1167-1186.

11. Moeller BC, Recio L, Green A, et al. Biomarkers of exposure and effect in human lymphoblastoid TK6 cells following [<sup>13</sup>C<sub>2</sub>]- acetaldehyde exposure. *Toxicol Sci.* 2013; 133(1): 1-12.

12. Wolff MS, Teitelbaum SL, Pinney SM, et al. Investigation of relationships between urinary biomarkers of phytoestrogens, phthalates, and phenols and pubertal stages in girls. *Environ Health Perspect.* 2010; 118(7): 1039-1046.

13. Rasier G, Toppari J, Parent AS, Bourguignon JP. Female sexual maturation and reproduction after prepubertal exposure to estrogens and endocrine disrupting chemicals: a review of rodent and human data. *Mol Cell Endocrinol.* 2006; 254-255: 187-201.

14. Jin L, Ling HH, Fen P, Chang ZW. The effect of n-hexane on the gonadotoxicity of female mice. *Biomed Environ Sci.* 2012; 25(2):189-196.

15. Li H, Zhang C, Ni F, et al. Gestational n-hexane alters the expression of genes related to ovarian hormone production and DNA methylation states in adult female F1 rat offspring. *Toxicol Lett.* (239)3: 141-151.

16. Cohr KH. Toluene. A toxicological review. *Scand J Work Environ Health.* 1979; 5(2): 71-90.

17. Vitale CM, Gutovitz S. Aromatic (Benzene, Toluene) Toxicity. Treasure Island, FL: StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/nunm.idm.oclc.org/books/NBK532257/>. Published October 27, 2018. Accessed January 23, 2019.

18. Arnold SM, Angerer J, Boogaard PJ, et al. The use of biomonitoring data in exposure and human health risk assessment: benzene case study. *Crit Rev Toxicol.* 2013; 43(2):119-153.

19. Ajmani GS, Suh HH, Pinto JM. Effects of ambient air pollution on olfaction: a review. *Environ Health Perspect.* 2016; 124(11): 1683-1693.

20. Groneberg-Kloft B, Kraus T, Mark A, Wagner U, Fischer A. Analysing the cause of chronic cough: relation to diesel exhaust, ozone, nitrogen dioxides, sulphur oxides, and other environmental factors. *J Occup Med Toxicol.* 2006; 1:6.

21. Traboulsi H, Guerrina N, Iu M, Maysinger D, Ariya P, Baglolle C. Inhaled pollutants: the molecular scene behind respiratory and systemic diseases

associated with ultrafine particulate matter. *Int J Mol Sci.* 2017; 18(2): 243.

22. Nemmar A, Holme JA, Rosas I, Schwarze PE, Alfaro-Moreno E. Recent advances in particulate matter and nanoparticle technology: a review of the in vivo and in vitro studies. *Biomed Res Int.* 2013; 2013: 279371.

23. Rall DP. Review of the health effects of sulfur oxides. *Environ Health Perspect.* 1974; 8: 97-121.

24 Cappaert NLM, Klis SFL, Muijser H, et al. Ototoxic effects of ethyl benzene in rats. *Hear Res.* 1999; 137: 91-102.

25. Vyskocil A, Leroux T, Truchon G, et al. Ethyl benzene should be considered ototoxic at occupationally relevant exposure concentrations. *Toxicol Ind Health.* 2008; 24(4): 241-246.

26. Conolly RB, Kimbell JS, Janszen D, et al. Human respiratory tract cancer risks of inhaled formaldehyde: dose-response predictions derived from biologically-motivated computational modeling of a combined rodent and human dataset. *Toxicol Sci.* 2004; 82(1): 279-296.

27. Sapkota M, Wyatt TA. Alcohol, aldehydes, adducts, and airways. *Biomolecules.* 2015; 5: 2987-3008.

28. National Research Council. *Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope.* Washington, DC: The National Academies Press; 2003. <https://doi.org/10.17226/10639>.