



## Drilling Waste Landfill Permit Application

Alaska Department of Environmental Conservation  
Solid Waste Program

**ADEC Office Only:**

Facility Name: \_\_\_\_\_

Authorization #: \_\_\_\_\_

### Instructions:

This application is for a permit to allow disposal of Resource Conservation and Recovery Act (RCRA) exempt drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy (drilling waste) or related RCRA non-hazardous waste in a landfill.

In the application, the term **“facility”** refers to all land, structures, other appurtenances, and improvements on land used for treatment, storage, or disposal of solid waste.

If required information is not applicable, please explain why. Please include all the applicable data for each item regardless if it has been previously submitted. The specific location of information within each submitted document or attachment must also be noted for each item.

**The application must be stamped and signed by a registered engineer, in accordance with 18 AAC 60.210(c).**

For a new facility or significant change to an existing facility, prepare a draft application with a list of questions and schedule a meeting with the ADEC Solid Waste Program.

### Section 1. Property Information

Facility Name: \_\_\_\_\_

Field & Pad Name/Address: \_\_\_\_\_

Legal Property Description: \_\_\_\_\_

Section: \_\_\_\_\_

Township: \_\_\_\_\_

Range: \_\_\_\_\_

Meridian: \_\_\_\_\_

General Property Description: \_\_\_\_\_

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_

Landowner: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

**Section 2. Contact Information**

**Permit Applicant** (Co. or Entity):

Contact Name:

Address:	City:	State:	Zip:
Email:	Phone:		
Type of Entity:	Government	Corporation	Other:
State of Incorporation or Registration:		Alaska Business License Number:	
IRS Tax ID Number:			

**Facility Owner** (if different than applicant):

Contact Name:

Address:	City:	State:	Zip:
Email:	Phone:		

**Facility Operator** (if different than applicant):

Contact Name:

Address:	City:	State:	Zip:
Email:	Phone:		

**Agent/Consultant:**

Contact Name:

Address:	City:	State:	Zip:
Email:	Phone:		

**Section 3. Fees**  
 A check or money order for the appropriate fees [listed in 18 AAC 60.700(a) Table E-2] must be submitted with the permit application. If not included, the application will be returned to the applicant.

- |    |   |
|----|---|
| 1. | Submit payment for the first year’s annual fee with the initial application for a facility. No fee is required for permit renewal applications; annual fees will be billed each year. |
| 2. | You will be billed separately for time spent reviewing waiver requests.   |

This application is for a:	New Permit	Permit Renewal
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#### Section 4. Cover Letter and Certifications

Submit a cover letter with the following information and signature.

1.	A statement indicating you wish to obtain a permit for a drilling waste landfill.
2.	Evidence showing that the proposed facility meets the requirements for a drilling waste landfill.
3.	A brief general description of the topography, geology, climate, surface hydrology and groundwater hydrology of the facility.
4.	A statement that you are aware of all applicable local ordinances and zoning requirements and a list of any other necessary permits or authorizations.
5.	The applicant must sign the cover letter.
6.	The applicant must submit the following signed statement, which may be added exactly as shown in the box below to the cover letter, or the applicant may sign this sheet and submit it as an attachment to the cover letter.

**I certify, under penalty of perjury, that all of the information and exhibits in this cover letter and application are true, accurate, and complete.**

Printed Name:	Title:
Signature:	Date:

**All applications must be signed as follows per 18 AAC 15.030:**

- **Corporations:** A principal executive officer, an officer that is no lower than the level of vice president, or a duly authorized representative who is responsible for the overall management of the project or operation.
- **Municipal, state, federal, or other public entity:** A principal executive officer, ranking elected official, or duly authorized employee.
- **Partnerships:** A general partner.
- **Sole proprietorship:** The proprietor

**Section 5. Waste Handling and Processing Information** [18 AAC 60.210]

1. List the approximate quantities of waste you expect to receive at the site each year:

<u>Quantity</u>		<u>Waste</u>
Tons	Cubic yds.	
		Drilling Waste
		RCRA Non-Hazardous Waste from Oil & Gas Field Operations
		Other Waste:

2. List any treatment methods that may be applied **at the facility** based on the type of waste.

<u>Waste type</u>	<u>Treatment</u>

**Section 6. Location Information** Please specifically identify the attachment for each requested item

1. **Property Ownership and Location Information** [18 AAC 60.210] Identify Attachment

a. Attach a copy of the deed or another legal document that identifies the landowner(s) of the facility.	
b. If the applicant is not the landowner, attach a written and notarized statement or a copy of any lease agreement signed by the landowner showing that the landowner consents to the facility and placement of a notation to the deed of the property as required by 18 AAC 60.490.	

2. **Surface Water Information** [18 AAC 60.210; 18 AAC 60.225; 18 AAC 60.410]

a. Distance to nearest surface water body:		feet
b. Provide information on potential for surface water (storm water or ponds, streams, etc.) to run-on to the facility.		
c. Provide information on the potential for sediment carried by run-off from the facility to impact nearby surface waters.		
d. If the facility is located in a floodplain, attach documentation to demonstrate the facility will not restrict the flow of the flood, reduce the temporary storage capacity of the floodplain, and is designed to protect against washout of the solid waste.		
e. For new facilities or lateral expansion, attach a Wetlands Determination from the U.S. Army Corps of Engineers or information from the National Wetlands Inventory documenting that the property is not designated as wetlands. <i>Note: If the new facility site or lateral expansion is located in a wetland, you must also complete an ADEC Additional Wetlands Information Form.</i>		

<b>Section 6. Location Information</b> (continued)		
3.	<b>Groundwater Information</b> [18 AAC 60.040; 18 AAC 60.210; 18 AAC 60.217]	<u>Identify Attachment</u>
	a. Attach information documenting the highest measured level of groundwater under the facility.	
	b. Annual precipitation:	inches
	c. Source used to determine annual precipitation:	
4.	<b>Permafrost Information</b> [18 AAC 60.210; 18 AAC 60.227; 18 AAC 60.41018 AAC 60.432]	
	a. If the facility is located on permafrost, provide details regarding why there is not a practical alternative to the site.	
	b. If the facility is located in discontinuous permafrost, provide details of what is known regarding the permafrost (e.g. total depth, depth of active zone, areal extent, temperature, etc.).	
5.	<b>Maps</b> Attach maps and/or aerial photographs as needed to show the following. You may submit maps that show more than one of the required items. For example, one map can show property boundaries, wetland and surface water locations, etc. [18 AAC 60.040; 18 AAC 60.210; 18 AAC 60.227; 18 AAC 60.233; 18 AAC 60.410; 18 AAC 60.432]	
	a. Location of the facility property boundaries.	
	b. Location and flow direction of surface water bodies, streams, and containment or diversion structures, within 500 feet of the facility property boundaries.	
	c. Location of all drinking water sources within one-half mile of the facility property boundary. There should be no drinking water sources within 500 feet of the facility property boundary.	
	d. Location of the boundary of any wetlands within 500 feet of the facility property boundary.	
	e. Location of the known or inferred boundaries of permafrost or discontinuous permafrost within 500 feet of the facility property boundaries.	
	f. Location of the boundary of any 100-year floodplain in the area.	
	g. Location of any documented earthquake faults or unstable areas within 200 feet of the property boundary.	

<b>Section 7. Facility Design</b>		
A complete set of design drawings with the following information must be submitted. Please ensure that the documentation represents the current conditions for the entire facility.		
1.	<b>Site map(s) which show site conditions, including:</b> [18 AAC 60.210; 18 AAC 60.320, 18 AAC 60.410; 18 AAC 60.432]	<u>Identify Attachment</u>
	a. All previous, existing and planned disposal areas. The drawings should demonstrate all waste will remain at least 50 feet from the facility property boundary.	
	b. Fences, gates, berms and other access control devices.	
	c. Access roads to and within the facility.	
	d. Storage area(s) for equipment, cover material, etc.	

<b>Section 7. Facility Design (continued)</b>		
2.	<b>Plan view drawings</b> with contour lines <u>and</u> cross section drawings that show: [18 AAC 60.210]	<b>Identify Attachment</b>
	a. All planned excavations before facility construction	
	b. All roads, ditches, trenches and berms associated with the facility.	
	c. Any planned liquid or leachate collection piping system, including manholes, sumps, and pump stations.	
3.	<b>Construction detail drawings and cross sections</b> that show: [18 AAC 60.210; 18 AAC 60.225; 18 AAC 60.227; 18 AAC 60.432]	
	a. Any liner construction details, including liner anchors, liner penetrations, etc.	
	b. Storm water drainage structures, culverts and other surface water control devices.	
4.	<b>Permafrost Design Requirements</b> [18 AAC 60.227; 18 AAC 60.432]	
	a. Engineering properties of each earthen layer of ground beneath the facility, including grain size distribution, thaw strain properties, and water content.	
	b. An estimation of maximum thaw depth that is likely to occur beneath the facility and an estimation of the ground deformation that will occur based on thawing	
	c. Design of engineering features that will be incorporated at the facility to prevent thawing of the ground.	
5.	<b>Design calculations, data and documentation</b> must include the following with supporting calculations. [18 AAC 60.210; 18 AAC 60.227; 18 AAC 60.410; 18 AAC 60.432]	
	a. Printouts of inputs, assumptions and outputs from any computer model used to support the facility design.	
	b. Information and calculations of the wastes that will be disposed onsite over the usable life of the facility, including the maximum design capacity of the facility.	
	c. Information and calculations showing how the facility will be protected from any reasonably anticipated natural event such as aufeis, floods, earthquakes, thawing of unstable permafrost, and the effects of freezing and thawing.	
	d. If located on permafrost, documentation showing that the permafrost will remain frozen to the greatest extent practical, including relevant modeling and literature or case studies.	
	e. If located in an unstable area, attach information and calculations for engineering measures to ensure the integrity of the structural components will be protected.	
	f. If located in a seismic impact zone, attach documentation showing how the requirements of 18 AAC 60.320(a)(1) and (2) will be met.	
	g. A Quality Assurance Plan for any liner installation.	
6.	<b>Facility Closure Drawings</b> [18 AAC 60.210; 18 AAC 60.432; 18 AAC 60.490]	
	a. <b>Conceptual drawings</b> of the facility after closure is completed.	

## Section 8. Operations Plan

The operations plan should be a separate document that provides sufficient detail and information that the operator could use it to perform all necessary tasks for day-to-day operation of the facility.

The operations plan is a flexible document that should be reviewed annually and updated as necessary. The following table represents the minimum requirements which must be included. Additional information should be added, as needed, to ensure the facility operates in compliance with all applicable State and Federal and Local Regulations. A copy of the operations plan must be kept at the operating facility.

Please include a reference page and section of the Operations Plan where each item is addressed.

1.	<b>Access control</b> [18 AAC 60.210; 18 AAC 60.220]	<u>page/section</u>
	b. Access to the facility will be controlled, including gates, fences, berms or other means of preventing access; hours of operation; signage; and other control measures.	
	c. Access and onsite roads for facility will be kept passable and safe for vehicles during operating months.	
	d. Prohibited activities, such as target practice or off road vehicle use will be prevented.	
2.	<b>Waste acceptance and handling policy</b> [18 AAC 60.210; 18 AAC 60.240; 18 AAC 60.420; 18 AAC 60.432]	
	a. Waste screening procedures to ensure that no prohibited wastes are accepted at the facility.	
	b. Any signage placed at the facility entrance.	
	c. Any waste processing procedures that will be applied prior to disposal.	
3.	<b>Waste placement plan</b> [18 AAC 60.210; 18 AAC 60.225]	
	a. Waste placement methods.	
	b. How unstable slopes and damage to the liner will be avoided.	
4.	<b>Fluid Management Plan</b> [18 AAC 60.432]	
	a. Liquids in the waste will be minimized prior to disposal	
	b. Procedures for removal of fluids collected in the cell.	
	c. Procedures for ensuring that at least two feet of freeboard will be maintained at all times.	
5.	<b>Surface &amp; Storm Water Control Plan</b> [18 AAC 60.225; 18 AAC 60.432]	
	a. Describe how run-off from the facility will be controlled and monitored to ensure that all waste and leachate remains onsite and does not pollute any surface water.	
	b. Describe how run on water will be controlled to reduce production of leachate.	
	c. Include any additional related permitting or water quality monitoring requirements.	
6.	<b>Litter, vector and nuisance control plan</b> [18 AAC 60.210; 18 AAC 60.230; 18 AAC 60.233; AS 46.06.080]	
	a. Describe procedures to ensure wildlife and domestic animals do not endanger the public or facility staff, are not harmed by contact with the waste, and do not become a nuisance.	
	b. Explain how dust, noise, traffic, litter, disease vectors and other effects will be controlled so they do not become a nuisance or hazard outside of the facility boundary.	

**Section 8. Operations Plan (Continued)**

7.	<b>Corrective action plan</b> – Describe the actions for: [18 AAC 60.210; 18 AAC 60.815]	<u>page/section</u>
	a. Removing any improper or unauthorized waste.	
	b. Repairing any damage to the facility or structures.	
	c. Addressing any violations of regulations or permit conditions.	
	d. Responding to combustion or a fire within the waste.	
8.	<b>Operator training</b> [18 AAC 60.235; 18 AAC 60.240]	
	a. Identify any training that will be required for an operator, including on-the-job training.	
	b. Describe how that training will be documented and filed in the operating record.	
9.	<b>Operating record</b> [18 AAC 60.235]	
	a. The operating record include all the elements listed in 18 AAC 60.235, as well as any other documentation specific to the facility and operation.	
	b. The plan must state where the operating record will be located.	

**Section 9. Monitoring Plan**

The monitoring plan must include sufficient detail to allow all monitoring to be completed in full compliance with the applicable regulations and permit conditions. It must include the following information and a statement for each monitoring type that explains why the monitoring is being done.

Please identify the page and section number where each item is addressed in the plan

1.	<b>Visual monitoring plan</b> [18 AAC 60.210; 18 AAC 60.800]	<u>page/section</u>
	a. Description of the procedures for visual monitoring of the facility.	
	b. Checklist or visual monitoring form including all applicable items in 18 AAC 60.800(a).	
2.	<b>Surface water monitoring plan</b> (if required by ADEC) [18 AAC 60.210; 18 AAC 60.810; 18 AAC 60.840]	
	a. Information about topography and surface water flow at the facility.	
	b. A detailed map showing permanent sampling site locations and surface water flow direction.	
	c. Identification of and information about background and compliance sampling sites, including an explanation of why each site was chosen.	
	d. Specific information about sampling frequency and schedules.	
	e. A list of constituents for which samples will be analyzed.	
	f. Detailed monitoring procedures as outlined in 18 AAC 60.810(e).	
	g. A Quality Assurance and Quality Control Plan providing specific details about sampling and testing methodology.	
	h. A statement that monitoring reports will be submitted to ADEC within 90 days of the sampling event or by the date(s) stipulated in the permit.	

<b>Section 9. Monitoring Plan</b> (continued)		
3.	<b>Groundwater monitoring plan</b> (if required by ADEC) [18 AAC 60.210; 18 AAC 60.217; 18 AAC 60.820-860]	<u>page/section</u>
	a. Information about groundwater hydrology at the facility including depth to groundwater, direction and velocity of flow, with supporting documentation.	
	b. A detailed map showing well locations and groundwater flow direction and rate.	
	c. Well drilling logs, soil boring logs and well installation information for all background and compliance wells.	
	d. An explanation of how each groundwater monitoring well location was selected, including documentation such as geophysical reports, survey data or maps and any other data used to evaluate subsurface conditions at the site and to determine monitoring well placement.	
	e. Specific information about sampling frequency and schedules.	
	f. A list of constituents for which samples must be analyzed.	
	g. Information about statistical methods that will be used in statistical analysis of the analytical data.	
	h. A Quality Assurance and Quality Control Plan providing specific details about sampling and testing methodology.	
	i. A statement that monitoring reports will be submitted to ADEC within 90 days of the sampling event or by the date(s) stipulated in the permit, and the reports will comply with the Groundwater Monitoring Checklist on the ADEC website.	
4.	<b>Thermal Monitoring Plan</b> (if required by ADEC) [18 AAC 60.227; 18 AAC60.432]	
	a. Information about the construction and location of thermal monitoring wells	
	b. A map showing all thermal monitoring well location	
	c. Monitoring frequency and schedules	
	d. Procedures and equipment for conducting monitoring	
	e. Information regarding how and when results will be reported to ADEC	
5.	<b>Other Required Monitoring Plan</b> [18 AAC 60.215]	
	For any other monitoring required by ADEC at the facility, include a plan that provides specific information on the process, procedures, equipment, and quality assurance procedures required for the monitoring process.	

## Section 10. Closure Plan and Cost Estimate

It is understood that the closure plan submitted with the permit application will be conceptual and may change throughout the active life of the facility. If the facility is within 1 year of closure, a detailed closure plan must be submitted and approved by ADEC. The closure plan must include the following information.

1.	<b>Description of the closure process</b>	<b>Section or Attachment</b>
	[18 AAC 60.210]; 18 AAC 60.245; 18 AAC 60.270; 18 AAC 60.490]	
	a. A description of the final cover and appearance of the facility meeting the standards of 18 AAC 60.432(h).	
	b. A description of the methods and procedures for final cover installation.	
	c. A timeline or schedule for all activities needed to complete closure.	
	d. A description of the anticipated post closure (future) use of the property.	
	e. A description and map of proposed survey monuments or permanent markers.	
	f. A statement of how ADEC will be notified that the requirements of 18 AAC 60.270 and 18 AAC 60.490 have been met.	
2.	<b>Financial information</b> [18 AAC 60.210; 18 AAC 60.265]	
	<b>Landfill Cost Estimate Worksheets CEW-01 &amp; CEW-02</b> in Excel is available online at <a href="http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/Forms.aspx">http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/Forms.aspx</a> to assist you in calculating costs. Please note that you need to complete both tabs (CEW-01 and CEW-02), but only sections relevant to closure of your facility. <i>Courtesy of the State of Virginia</i>	
	a. The total present-day equivalent cost estimate for an independent contractor (do not assume onsite use of any material or machinery) to close the facility. A quote from a consultant or calculation showing all relevant operations for closure is required.	
	b. The total present-day equivalent cost estimate for an independent contractor to perform post-closure care of the facility.	
	c. Demonstration of the mechanism of financial responsibility to cover the cost of closing the facility and post-closure care. Proof of financial responsibility may be demonstrated by self-insurance, insurance, or other guarantee approved by ADEC.	

## Section 11. Waiver Requests and Justification

18 AAC 60.900 allows ADEC to grant an exemption from any regulation not required by federal law. The applicant will be billed separately for time spent reviewing waiver requests at the rate identified in 18 AAC 60.700(e).

1.	<b>Waiver requests must</b> include the specific regulation for which you are requesting a waiver, and for each requested waiver, a detailed justification that meets the criteria of 18 AAC 60.900 by demonstrating that: [18 AAC 60.210]	
	a. The proposed alternative action will provide equal or better environmental protection, reduction in public health risk, and control of nuisance factors than compliance with the identified provision; or	
	b. Compliance with the identified provision would cost significantly more than the value of the environmental benefit, public health risk reduction, and nuisance avoidance that could be achieved through that compliance.	

## Additional information

Attach any additional information necessary to accurately reflect the location, construction, and operations of the facility.