

**DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION**



**Instruction Manual for  
Completing Air Quality Control  
Construction Permit  
Applications**

**Division of Air and Water Quality  
Air Permit Program  
August 25, 2003**



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## INSTRUCTION MANUAL FOR COMPLETING AIR QUALITY CONTROL CONSTRUCTION PERMIT APPLICATION FORMS

### General Instructions

The Alaska Department of Environmental Conservation (department) has developed permit application forms, this Instruction Manual, and a *Guidance Document for Preparing an Air Quality Control Construction Permit Application* (Guidance Document) (June 2003) to help applicants prepare a complete and accurate application for an air quality control construction permit. Applications that contain all the necessary information allow the department to conduct quicker reviews and to issue air quality control construction permits with minimal delay.

The purpose of this Instruction Manual is to provide specific instructions on how to complete each application form. The application forms are:

- Form A: Retainer Invoice;
- Form B: Source Identification;
- Form C: Potential to Emit Summary;
- Form D: Actual Emissions Summary;
- Form E: Hazardous Air Pollutants;
- Form F: Emission Unit Information;
- Form G: Air Quality Modeling Checklist;
- Form H: Owner Requested Limits to Avoid Classification;
- Form I: Revisions and Revocations;
- Form J: New Source Performance Standards;
- Form K: National Emission Standards for Hazardous Air Pollutants;
- Form L: Storage Tank Information;
- Form M: Nonattainment Permitting;
- Form N: Offset Source;
- Form O: Port of Anchorage; and
- Form P: Stack Injection.



## Alaska Department of Environmental Conservation Air Quality Control Construction Permit Application

Appendix B of the Guidance Document contains Permit Application Checklists for each stationary source classification to help you prepare a complete permit application. The checklists identify the elements that must be included for each classification. It is not necessary to submit these checklists as part of the permit application. However, doing so may speed the review time.

The Instruction Manual often refers to the Guidance Document. Whereas, the Instruction Manual provides specific instructions on how to complete each form, the Guidance Document provides detailed procedures, explanations of terms and regulations, and references to sources of information you may need to complete your application.

The basic steps to assemble a permit application are:

1. Fill out the appropriate application forms;
2. Ensure that all relevant information is attached to the appropriate application forms. All attachments must be numbered as described in the instructions for each individual form;
3. Assemble the application by placing each form and its associated attachments in consecutive order (e.g., Form A and its attachments [if any], followed by Form B and its attachments [if any], and so on);
4. Attach a check for the retainer amount to the first page of the application;
5. Certify the application by obtaining the notarized signature of the *responsible official*;
6. Mail the application (along with retainer check and certification statement) to:

Department of Environmental Conservation  
Air Permits Program  
Title I Program Permit Intake Clerk  
619 E. Ship Creek, Suite 249  
Anchorage, Alaska 99501

Section 3 of the Guidance Document for additional information on preparing a complete permit application.



## Instructions for Form A – Retainer Invoice

The information included in this form is required by 18 AAC 50.400.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

**Source Contact:** Enter the same source contact that appears in Section 1 of Form B.

**Telephone Number:** Enter the same telephone number that appears in Section 1 of Form B.

### **Section 2 Retainer Amount**

**Activity:** Mark the box for the appropriate source or modification classification.

- A source or modification may meet the criteria of more than one classification.
- You must identify all classifications that apply to your source or modification.
- If your classification is not shown on the form, mark the box for “Other Construction Permit Applications.” (Only check this box if no other boxes are checked).

### **Section 3 Total Due and Amount Remitted**

The retainer due is the sum of the retainers required for all of the categories checked in Section 2 of this form. Applicants are required to remit the entire retainer amount at the time of applying for a permit.

- Enter the total due.
- Enter the amount remitted.
- Make checks payable to: State of Alaska.
- Attach payment to Form A and send it to the department with the complete application.



## Instructions for Form B – Source Identification

The information included in this form is required by 18 AAC 50.310(c).

Existing department regulations effective before **May 2004**, and statute effective before 2003, use different meanings for “facility” and “source” than the new statute passed in 2003. The new law changes the definitions because they were very different from EPA’s.

Where the old statute and existing regulations use *facility*, the new law replaces the term with *stationary source*. The law replaces the old usage of *source* with the new term *emission unit*.

The term *stationary source* comes from 40 C.F.R. 51.166(b).

*Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant subject to regulation under the [Clean Air] Act.*

These forms use the new terminology.

The term “source” used in these forms means “stationary source.”

### **Section 1 Stationary Source Information**

**Source Name:** Enter a unique, specific name of the stationary source.

- This is typically the name specified at the entrance to the source, or the name the permittee commonly uses to describe the site. For operators of multiple units operated at different sites (for example, asphalt plants), the department recommends a unique identifier such as AEDCO #1, AEDCO #2, etc.

**Source Contact:** Enter the name of the person, located at the stationary source, who is primarily responsible for industrial relations or the source on-site management.

**Source Physical Address:** Enter the street address for where the stationary source is or will initially be physically located.

- If it is not located on a street, enter the proper legal description and the township, range, and meridian of the site.

**City:** Enter the city where the source is physically located.

- If it is not located within a city, describe the approximate distance to the nearest city.

**State:** Enter the state where the source is physically located.

**Zip:** Enter the zip code where the source is physically located.

**Telephone #:** Enter the telephone number for the Source Contact.

**E-Mail Address:** Enter the e-mail address for the Source Contact.

**UTM Coordinates or Latitude/Longitude:** Enter either the universal transverse mercator (UTM) coordinates (which include Northing, Easting, and Zone) or the latitude and longitude (in degrees and minutes).



## Instructions for Form B – Source Identification

### **Section 2 Legal Owner**

**Name:** Enter the name or names of the person or business that legally owns the source.

- Refer to the definition of “owner” in 18 AAC 50.990, which is included in Appendix A of the Guidance Document.

**Mailing Address:** Enter the mailing address for the Legal Owner of the source including city, state, and zip code.

**Telephone #:** Enter the telephone number for the Legal Owner of the source.

**E-Mail Address:** Enter the e-mail address for the Legal Owner of the source.

### **Section 3 Operator**

*Complete this section only if the Operator of the stationary source is different than the Legal Owner of the source.*

**Name:** Enter the name of the person/business that operates the source.

- Refer to the definition of “operator” in 18 AAC 50.990. (See Appendix A of the Guidance Document.)

**Mailing Address:** Enter the mailing address for the Operator of the source including city, state, and zip code.

**Telephone #:** Enter the telephone number for the Operator of the source.

**E-Mail Address:** Enter the e-mail address for the Operator of the source.

### **Section 4 Designated Agent**

**Name:** Enter the name of the Designated Agent or service of process in Alaska.

**Mailing Address:** Enter the mailing address for the Designated Agent including city, state, and zip code.

**Physical Address:** Enter the physical address of where the Designated Agent is located including city, state, and zip code.

**Telephone #:** Enter the telephone number for the Designated Agent of the source.

**E-Mail Address:** Enter the e-mail address for the Designated Agent of the source.

### **Section 5 Billing Contact Person**

*Complete this section only if the Billing Contact Person is different than the Legal Owner of the source.*

**Name:** Enter the name of the person responsible for billing activities, such as permit fees.

**Mailing Address:** Enter the mailing address for the Billing Contact Person including city, state, and zip code.

**Telephone #:** Enter the telephone number for the Billing Contact Person of the source.

**E-Mail Address:** Enter the e-mail address for the Billing Contact Person of the source.



## Instructions for Form B – Source Identification

### **Section 6 Application Contact**

**Name:** Enter the name of the person who should be contacted in regard to the Air Quality Control Construction Permit Application.

**Mailing Address:** Enter the mailing address for the Applicant Contact including city, state, and zip code.

**Telephone #:** Enter the telephone number for the Applicant Contact of the source.

**E-Mail Address:** Enter the e-mail address for the Applicant Contact of the source.

### **Section 7 Source Classifications**

Check each stationary source classification that applies.

- A stationary source may meet the criteria of more than one classification.
- You must identify all the classifications that apply to prepare a complete application.
- See Section 1.2 of the Guidance Document for details on source classifications.

### **Section 8 Modification Classifications**

*Complete this section only if you have an existing source and you are making a modification to the source. See the definition of “modification” in 18 AAC 50.990, in Appendix A of the Guidance Document.*

Check each modification classification that applies.

- A source may meet the criteria of more than one modification classification.
- You must identify all the classifications that apply to your modification to prepare a complete application.
- See Section 1.3 of the Guidance Document for details on modification classifications.

### **Section 9 Permit Action Request**

Check each Permit Action Request that applies.

- Check each owner requested limit type. Section 7 of the Guidance Document explains how to request limits of 18 AAC 50.305.
- If you are making a change to an existing source that already has an air quality control construction permit, be sure to enter the Permit # and Date for the most recent construction permit.
- If you check the box for “Other,” include an explanation of the permit action you are requesting.

### **Section 10 Other Permit Application Material**

You must submit the following information for a complete permit application:

- A map or aerial photograph that meets the following criteria [18 AAC 50.310(c)(7)]:
  - Has a scale at least one inch to one mile;



## Instructions for Form B – Source Identification

- Indicates the boundaries of the stationary source;
  - Indicates the location of homes, buildings, roads, and other adjacent stationary sources; and
  - Indicates the general topography within a 15 -kilometer radius of the source.
- A detailed schedule for construction or modification of the source. [18 AAC 50.310(c)(8)]

### **Section 11 Certification**

On the first line of this section, enter the name of the stationary source for which the permit application is being submitted and the date you are submitting the application to the department.

- This source name should match the name that appears in Section 1 of this Form.

Next, mark the appropriate box for the type of application being submitted (i.e., initial application, or change to an application already submitted).

Finally, have the responsible official for the source sign the Certification of Truth, Accuracy, and Completeness statement.

- The signature of the responsible official must be notarized.
- See Section 3.4 of the Guidance Document for a description of the term “responsible official”.

### **Section 12 Attachments**

The following attachments must be submitted with this form:

- A map or aerial photograph that meets the criteria listed in Section 10 above. [18 AAC 50.310(c)(7)]
- A detailed schedule for construction or modification of the source. [18 AAC 50.310(c)(8)]

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: B-1, B-2, B-3, etc. It is important to include the Form letter (i.e., “B” for Form B) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments B-1, B-2, and B-3, then enter “B-1, B-2, and B-3.”

### **Page Number**

Each attachment should be numbered separately. For example, if Attachment B -1 has two pages and Attachment B-2 has 1 page, the attachments should be numbered as follows:

- Attachment B-1: Page 1 of 2, Page 2 of 2.
- Attachment B-2: Page 1 of 1.



## Instructions for Form C –Potential to Emit Summary

The information included in this form is required by 18 AAC 50.310(c)(2).

All emissions reported on Form C must be calculated as potential to emit. Section 2 of the Guidance Document describes how to calculate potential to emit.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Potential to Emit – CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, VOC**

**Emission Unit No./Description:** Enter the unique Emission Unit number and description for the specific source.

- The permittee is free to select and assign the numbers and nomenclature for each emission unit, provided that each unit has a unique number assignment. The department recommends that the number and nomenclature be consistent with what is commonly used on-site.
- If this emission unit is an existing unit already included in an existing air quality control construction permit, the Emission Unit number should match the ID number listed in that permit.
- This Emission Unit number and description should match the number and description included on Form F for this unit.

**Capacity:** Enter the maximum rated capacity for the emission unit.

- This capacity should be the manufacturer rated nameplate capacity for the emission unit.
- If the actual maximum capacity of the emission unit is greater than the manufacturer rated capacity, enter the actual maximum capacity, and describe the basis for the discrepancy.
- For a boiler, the capacity may be represented by the fire input rating or the duty rating and will typically be reported in million Btu per hour (MMBtu/hr) high heating value, or steam horsepower. When there is a mechanical shaft output, the department prefers estimation using high heating value input.
- For internal combustion engines the capacity will typically be reported in horsepower (hp) or kilowatts (kW).

**Proposed Emissions (Tons per Year):** Enter the proposed annual emissions in tons per year (TPY) for each air pollutant (i.e., CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, and VOC) from each emission unit.

- These emissions must represent how the emission unit is being proposed to operate in the future.

**When Permit Was Last Issued (Tons per Year):** *Complete this section only if you are applying for an emission change (modification) at an existing stationary source.*



## Instructions for Form C –Potential to Emit Summary

Enter the annual emissions in tons per year (TPY) for each air pollutant (i.e., CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, and VOC) from each emission unit.

- These emissions must represent the emissions from the emission unit at the time the last permit was issued.

**Existing Emissions (Tons per Year):** *Complete this section only if you are applying for an emission change (modification) at an existing stationary source.*

Enter the annual emissions in tons per year (TPY) for each air pollutant (i.e., CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, and VOC) from each emission unit.

- These emissions must represent how the emission unit is currently operating (i.e., before any proposed changes included in this permit application).

**Total Tons Per Year:** Sum the emissions for each column and enter the result in the Total Tons Per Year box located at the bottom of each column.

- The Total Tons Per Year value must represent the total annual emissions (in tons per year) from all emission units at the stationary source.
- The Total Tons Per Year section should only be completed on the last page of Form C that will be submitted. For example, if you have a stationary source with numerous emission units, you may need to include multiple pages of Form C to enter all of your units. If this is the case, then only complete the Total Tons Per Year section on the last page that will be submitted.

**Detailed Emissions Calculations Are Attached:** As described in Section 5 below, you must include detailed emissions calculations to support the data included in this form. Check the box for “Detailed emissions calculations are attached,” and include the attachments as indicated in Section 5. If the detailed calculations are submitted as a spreadsheet, you must include sample calculations that demonstrate the methodology and assumptions you used.

### **Section 3 Potential to Emit – Other PSD Pollutants**

**Box 3a:** Check each air pollutant, if any, that will be emitted from your stationary source.

**Box 3b:** Enter the pollutant for which you are completing this section. Note: You must complete this section for each pollutant checked in Box 3a.

**Emission Unit No./Description:** Enter the unique Emission Unit number and description for the specific unit.

- The permittee is free to select and assign the numbers and nomenclature for each emission unit, provided that it has a unique number assignment. The department recommends that the number and nomenclature be consistent with what is commonly used on-site.
- If the emission unit is already included in an existing air quality control construction permit, the Emission Unit number should match the ID number listed in that permit.
- This Emission Unit number and description should match the number and description included on Form F for this unit.

**Capacity:** Enter the maximum rated capacity for the emission unit.

- This capacity should be the manufacturer rated nameplate capacity.



## Instructions for Form C –Potential to Emit Summary

- If the actual maximum capacity of the unit is greater than the manufacturer rated capacity, enter the actual maximum capacity, and describe the basis for the discrepancy.
- For a boiler, the capacity may be represented by the fire input rating or the duty rating and will typically be reported in million Btu per hour (MMBtu/hr) high heating value, or steam horsepower. When there is a mechanical shaft output, the department prefers estimation using high heating value input.
- For internal combustion engines the capacity will typically be reported in horsepower (hp) or kilowatts (kW).

**Proposed Emissions (Tons per Year):** Enter the proposed annual emissions in tons per year (TPY) for the specific air pollutant emitted from each emission unit that emits that pollutant.

- These emissions must represent how the emission unit is being proposed to operate in the future.

**When Permit Was Last Issued (Tons per Year):** *Complete this section only if you are applying for an emission change (modification) at an existing stationary source.*

Enter the annual emissions in tons per year (TPY) for the specific air pollutant emitted from each emission unit.

- These emissions must represent the emissions from the emission unit at the time the last permit was issued.

**Existing Emissions (Tons per Year):** *Complete this section only if you are applying for an emission change (modification) at an existing stationary source .*

Enter the annual emissions in units of tons per year (TPY) for the specific air pollutant emitted from each emission unit.

- These emissions must represent how the emission unit is currently operating (i.e., before any proposed changes included in this permit application).

**Total Tons Per Year:** Sum the emissions for each column and enter the result in the Total Tons Per Year box located at the bottom of each column.

- The Total Tons Per Year value must represent the total annual emissions (in tons per year) from all emission units at the stationary source.
- The Total Tons Per Year section should only be completed on the last page of Form C that will be submitted. For example, if you have a stationary source with numerous emission units, you may need to include multiple pages of Form C to enter all of your units. If this is the case, then only complete the Total Tons Per Year section on the last page that will be submitted.

**Detailed Emissions Calculations Are Attached:** As described in Section 5 below, you must include detailed emissions calculations to support the data included in this form. Check the box for “Detailed emissions calculations are attached,” and include the attachments as indicated in Section 5. If the detailed calculations are submitted as a spreadsheet, you must include sample calculations that demonstrate the methodology and assumptions you used .



## Instructions for Form C –Potential to Emit Summary

### **Section 4 Stationary Source Type**

If your stationary source is one of the types listed in 18 AAC 50.300(c)(2), check “YES”. If it is not, check “NO”. If you checked “YES”, enter the source type.

### **Section 5 Attachments**

This form asks for a summary of emission information . To have a complete application, you must also submit supporting documentation for department review. The following attachments must be submitted with this form:

- Detailed emission calculations that support the data presented in Form C for the proposed emissions. This attachment must be included for all stationary sources and modifications.
- Detailed emission calculations that support the data presented in Form C emissions When Permit Was Last Issued. This attachment is only required if your project is a modification of an existing stationary source and you have made prior emission changes since the most recent permit action; and
- Detailed emission calculations that support the data presented in Form C for the Existing Emissions. This attachment is only required if you are applying for an emission change at an existing stationary source.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: C-1, C-2, C-3, etc. It is important to include the Form letter (i.e., “C” for Form C) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments C-1, C-2, and C-3, then enter “C-1, C-2, and C-3.”

### **Page Number**

Enter the page number at the bottom of the form. For example, if you will be submitting 3 pages for Form C, then enter “Page 1 of 3” on the first page, “Page 2 of 3” on the second page, and “Page 3 of 3” on the last page.

The attachments should be numbered in the same way. Each attachment should be numbered separately. For example, if Attachment C-1 has two pages and Attachment C-2 has 1 page, the attachments should be numbered as follows:

- Attachment C-1: Page 1 of 2, Page 2 of 2.
- Attachment C-2: Page 1 of 1.



## Instructions for Form D – Actual Emission Summary

The information included in this form is required by 18 AAC 50.310(c).

**Complete Form D only for:**

- *Each emission unit that is affected by a proposed modification to an existing stationary source; and*
- *Each emission unit for which you have made prior emission changes since the most recent construction permit.*

*These include units that are new, modified, debottlenecked, or decommissioned and removed.*

The emissions reported on Form D must be calculated as actual emissions. Section 2 of the Guidance Document describes how to calculate actual emissions.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2a Previous Actual Emissions – CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, VOC**

**Emission Unit No./Description:** Enter the unique number and description for the specific emission unit.

- The permittee is free to select and assign the numbers and nomenclature for each emission unit provided the unit has a unique number assignment. The department recommends that the number and nomenclature be consistent with what is commonly used on -site.
- If the emission unit is already included in an existing air quality control construction permit, the emission unit number should match the ID number listed in that permit.
- The number and description should match the number and description included on Form F for this emission unit.

**Capacity:** Enter the actual capacity for the emission unit.

- This capacity should be the manufacturer rated nameplate capacity.
- If the actual maximum capacity is greater than the manufacturer rated capacity, enter the actual maximum capacity, and describe the basis for the discrepancy.
- For a boiler, the capacity may be represented by the fire input rating or the duty rating and will typically be reported in million Btu per hour (MMBtu/hr) high heating value, or steam horsepower. When there is a mechanical shaft output, the department prefers estimation using high heating value input.



## Instructions for Form D – Actual Emission Summary

- For internal combustion engines the capacity will typically be reported in horsepower (hp) or kilowatts (kW).

**Type of Modification:** Indicate whether the specific emission unit is new, modified, debottlenecked, or has been removed.

### Actual Emissions as of Last Permit (Tons per Year):

Enter emissions **ONLY** for emission units that have been changed since the last permit was issued, but before the modification of this application. This includes emission units that since the last permit issuance:

- Are new;
- Have been removed,
- Have had physical change or change in the method of operation that either increased or decreased the emission rate, or
- Have been debottlenecked – that is more of their capacity can be used because other emission units at the stationary source have been added or modified.

Enter the annual emissions in tons per year (TPY) for each air pollutant (i.e., CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, and VOC) emitted from the emission unit.

- These emissions must represent the actual emissions from the emission unit at the time the last permit was issued.

### Existing Actual Emissions – Before This Modification (Tons per Year):

Enter emissions **ONLY** for emission units affected by the modification that have NOT been changed since the last construction permit was issued.

Enter the annual emissions in tons per year (TPY) for each air pollutant (i.e., CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, and VOC) from each existing emission unit affected by the modification and each emission unit that was changed since the last construction permit was issued.

- These emissions must represent how the emission unit is currently operating (i.e., before any proposed changes included in this permit application).

**Total Tons Per Year:** Sum the emissions for each column and enter the result in the Total Tons Per Year box located at the bottom of each column.

- The Total Tons Per Year section should only be completed on the last page of Form D that will be submitted. For example, if you have a stationary source with numerous emission units, you may need to include multiple pages of Form D to enter all of your units. If this is the case, then only complete the Total Tons Per Year section on the last page that will be submitted.

**Detailed Emissions Calculations Are Attached:** As described in Section 6 below, you must include detailed emissions calculations to support the data included in this form. Check the box for “Detailed emissions calculations are attached,” and include the attachments as indicated in Section 6. If the detailed calculations are submitted as a spreadsheet, include sample calculations that demonstrate the methodology and assumptions used.



## Instructions for Form D – Actual Emission Summary

### **Section 2b Proposed Actual Emissions – CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, VOC**

Enter information as described below:

- For emission units that are new or modified as part of this modification – enter the potential to emit for the unit from Form C, Section 2, “Proposed Emissions.”
- For emission units that are debottlenecked as part of this modification – enter the actual emissions plus the increase in emissions that would result from operation of the new or modified emission units.
- For emission units that changed after the last construction permit issuance, but are not part of this modification,
  - if the unit has not yet operated for two years, enter the potential to emit from Form C, Section 2;
  - if the unit has operated for two years, enter the actual emissions calculated from the last two years of operation.
- For emission units that were changed after the last construction permit issuance, and are also affected by this modification,
  - if the emission unit will be modified, enter the potential to emit from Form C, Section 2, “Proposed Emissions”;
  - if the emission unit will be debottlenecked, enter the actual emissions from the last two years, plus the increase in emissions that would result from operation of the new or modified emission units.

### **Section 3 Actual Emissions – Other PSD Pollutants**

**Box 3a:** Check each air pollutant, if any, that will be emitted by emission units affected by the modification, and emission units that were changed since the last construction permit.

**Box 3b:** Enter the pollutant for which you are completing this section. Note: This section must be completed for each pollutant checked in Box 3a.

**Emission Unit No./Description:** Enter the unique number and description for the specific emission unit.

- The permittee is free to select and assign the numbers and nomenclature for each emission unit provided the unit has a unique number assignment. The department recommends that the number and nomenclature be consistent with what is commonly used on -site.
- If this emission unit is already included in an existing air quality control construction permit, the emission unit number should match the ID number listed in that permit .
- This number and description should match the number and description included on Form F for this emission unit.

**Capacity:** Enter the actual capacity for the emission unit.

- This capacity should be the manufacturer rated nameplate capacity.



## Instructions for Form D –Actual Emission Summary

- If the actual maximum capacity is greater than the manufacturer rated capacity, enter the actual maximum capacity, and describe the basis for the discrepancy.
- For a boiler, the capacity may be represented by the fire input rating or the duty rating and will typically be reported in million Btu per hour (MMBtu/hr) high heating value, or steam horsepower. When there is a mechanical shaft output, the department prefers estimation using high heating value input.
- For internal combustion engines the capacity will typically be reported in horsepower (hp) or kilowatts (kW).

### Proposed Actual Emissions (TPY): Enter information as described below:

- For emission units that are new or modified as part of this modification – enter the potential to emit for the unit from Form C, Section 2, “Proposed Emissions.”
- For emission units that are debottlenecked as part of this modification – enter the actual emissions plus the increase in emissions that would result from operation of the new or modified emission units
- For emission units that changed after the last construction permit issuance, but are not part of this modification,
  - if the unit has not yet operated for two years, enter the potential to emit from Form C, Section 2;
  - if the unit has operated for two years, enter the actual emissions calculated from the last two years of operation.
- For emission units that were changed after the last construction permit issuance, and are also affected by this modification,
  - if the emission unit will be modified, enter the potential to emit from Form C, Section 2, “Proposed Emissions”;
  - if the emission unit will be debottlenecked, enter the actual emissions from the last two years, plus the increase in emissions that would result from operation of the new or modified emission units.

### Actual Emissions as of Last Permit (Tons per Year):

Enter emissions **ONLY** for emission units that have been changed since the last permit was issued, but before the modification of this application. This includes emission units that, since the last permit issuance

- Are new;
- Have been removed,
- Have had physical change or change in the method of operation that either increased or decreased the emission rate, or
- Have been debottlenecked – that is more of their capacity can be used because other emission units at the stationary source have been added or modified.



## Instructions for Form D – Actual Emission Summary

Enter the annual emissions in tons per year (TPY) for the specific air pollutant emitted from the emission unit.

- These emissions must represent the actual emissions from the emission unit at the time the last permit was issued.

### Existing Actual Emissions (Tons per Year):

Enter emissions ONLY for emission units affected by the modification that have NOT been changed since the last construction permit was issued.

Enter the annual emissions in tons per year (TPY) for the air pollutant emitted from each existing emission unit affected by the modification and each emission unit that was changed since the last construction permit was issued.

- These emissions must represent how the emission unit is currently operating (i.e., before any proposed changes included in this permit application).

**Total Tons Per Year:** Sum the emissions for each column and enter the result in the Total Tons Per Year box located at the bottom of each column.

- The Total Tons Per Year section should only be completed on the last page of Form D that will be submitted. For example, if you have a stationary source with numerous emission units, you may need to include multiple pages of Form D to enter all of your units. If this is the case, then only complete the Total Tons Per Year section on the last page that will be submitted.

**Detailed Emissions Calculations Are Attached:** As described in Section 6 below, you must include detailed emissions calculations to support the data included in this form. Check the box for “Detailed emissions calculations are attached,” and include the attachments as indicated in Section 6. If the detailed calculations are submitted as a spreadsheet, include sample calculations that demonstrate the methods and assumptions used.

## Section 4 Summary of Increase in Actual Emissions – CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, VOC

**Proposed Emissions (TPY):** For each air pollutant (CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, and VOC), enter the total tons per year of proposed actual emissions from the last line of Section 2b of this form. This should be the total proposed emissions from all emission units listed in this form.

### Actual Emissions (TPY):

For each air pollutant (CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, and VOC), add:

total tons per year from Section 2a “Actual Emissions as of Last Permit,”

to:

total tons per year from Section 2a “Existing Actual Emissions – Before This Modification.”

Enter the sum for each pollutant.

**Actual Emissions Increase (TPY):** For each air pollutant (CO, NO<sub>x</sub>, PM-10, SO<sub>2</sub>, and VOC), enter the difference between proposed emissions and actual emissions.



## Instructions for Form D – Actual Emission Summary

### Section 5 Summary of Increase in Actual Emissions – Other PSD Pollutants

**This section must be completed for each pollutant checked in Box 3a.**

**Pollutant:** Enter the pollutant for which you are completing this section.

**Proposed Emissions (TPY):** Enter the total proposed actual emissions for the specific air pollutant in tons per year from the bottom line of Form D, Section 3b for that pollutant.

**Actual Emissions (TPY):** For the specific air pollutant, enter the total actual emissions in tons per year from all emission units listed on this form

Add:

total tons per year of the pollutant from Section 3b, Actual Emissions as of Last Permit

to:

total tons per year of the pollutant from Section 3b, Existing Actual Emissions – Before this Modification.

Enter the sum.

**Actual Emissions Increase (TPY):** For the specific air pollutant, enter the difference between proposed emissions (in tons per year) and actual emissions (in tons per year).

### Section 6 Attachments

This form asks for a summary of emission information. To have a complete application, you must also submit supporting documentation for department review. The following attachments must be submitted with this form:

- Detailed emission calculations that support the data presented in Form D. The detailed calculations must be adequate for the department to determine the methods and assumptions used for each pollutant and emission unit. You do not need to include detailed calculations as attachments to this form for proposed emissions if you have already provided them with Form C.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: D-1, D-2, D-3, etc. It is important to include the Form letter (i.e., “D” for Form D) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments D-1, D-2, and D-3, then enter “D-1, D-2, and D-3.”

### Page Number

Enter the page number at the bottom of the form. For example, if you will be submitting 3 pages for Form D, then enter “Page 1 of 3” on the first page, “Page 2 of 3” on the second page, and “Page 3 of 3” on the last page.



**Alaska Department of Environmental Conservation  
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## **Instructions for Form D –Actual Emission Summary**

The attachments should be numbered in the same way. Each attachment should be numbered separately. For example, if Attachment D-1 has two pages and Attachment D-2 has 1 page, the attachments should be numbered as follows:

- Attachment D-1: Page 1 of 2, Page 2 of 2.
- Attachment D-2: Page 1 of 1.



## Instructions for Form E – Hazardous Air Pollutants

The information included in this form is required by 18 AAC 50.310(c).

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Potential to Emit – Stationary Source Hazardous Air Pollutant (HAP) Emission Summary**

*The emissions reported in this section must be calculated as **potential to emit**. Section 2 of the Guidance Document describes how to calculate potential to emit.*

**Hazardous Air Pollutant:** List each hazardous air pollutant emitted from the source.

- Hazardous air pollutants are listed in Section 1.2.5 of the Guidance Document.

**Annual Emissions:** Enter the total annual emissions (in tons per year) for each hazardous air pollutant emitted from all emission units at the stationary source.

**Total Annual HAPs:** Enter the total annual emissions in tons per year for all of the hazardous air pollutants emitted from all emission units at your stationary source.

**Maximum Single HAP:** Enter the total annual emissions from all emission units (in tons per year) for the hazardous air pollutant that has the highest annual emissions.

For example, if your stationary source emits three hazardous air pollutants at the following rates: acetaldehyde at 3.7 tons per year, benzene at 11.4 tons per year, and hexane at 7.9 tons per year, then you would enter 11.4 tons per year in the box for Maximum Single HAP.

**Detailed Emissions Calculations Are Attached:** As described in Section 5 below, you must include detailed emissions calculations to support the data included in this form. Check the box for “Detailed emissions calculations are attached,” and include the attachments as indicated in Section 5. If the detailed calculations are submitted as a spreadsheet, include sample calculations that demonstrate the methods and assumptions used.

**NOTE: Complete Sections 3 and 4 ONLY if you are making a change to an existing stationary source. These sections need only be completed for emission units that are affected by the proposed modification.**



## Instructions for Form E – Hazardous Air Pollutants

### **Section 3 Emission Units Affected by the Modification**

**Emission Unit No./Description:** Enter the unique number and description for the emission unit.

- The permittee is free to select and assign the numbers and nomenclature for each emission unit provided that the unit has a unique number assignment. The department recommends that the number and nomenclature be consistent with what is commonly used on-site.
- If the emission unit is already included in an air quality control construction permit, the number should match the ID number listed in that permit.
- This number and description should match the number and description included on Form F for this emission unit.

**Capacity:** Enter the actual capacity for the emission unit.

- This capacity should be the manufacturer rated nameplate capacity.
- If the actual maximum capacity of the unit is greater than the manufacturer rated capacity, enter the actual maximum capacity, and describe the basis for the discrepancy.
- For a boiler, the capacity may be represented by the fire input rating or the duty rating and will typically be reported in million Btu per hour (MMBtu/hr) high heating value, or steam horsepower. When there is a mechanical shaft output, the department prefers estimation using high heating value input.
- For internal combustion engines the capacity will typically be reported in horsepower (hp) or kilowatts (kW).

**Type of Modification:** Indicate whether the emission unit is new, modified, or debottlenecked – that is, more of the unit's capacity can be used because other emission units at the stationary source have been added or modified.

### **Section 4 Actual Emissions for Emission Units Affected by the Modification – HAP Emission Summary**

*The emissions reported in this section must be calculated as **actual emissions**. Section 2 of the Guidance Document describes how to calculate actual emissions.*

**Hazardous Air Pollutant:** List each hazardous air pollutant emitted from the emission units affected by the modification.

- Hazardous air pollutants are listed in Section 1.2.5 of the Guidance Document.

**Proposed Emissions:** For each hazardous air pollutant, enter the sum of the proposed emissions from all emission units that are affected by the modification.

- For each new or modified emission unit, use the potential to emit from Section 2.
- For each emission unit removed, assume zero emissions.
- For each emission unit debottlenecked, use the current actual emissions plus the emissions from that unit that would result from the new or modified emission units being operated at full potential to emit.



## Instructions for Form E – Hazardous Air Pollutants

**Existing Actual Emissions:** For each hazardous air pollutant, enter the total actual emissions (in tons per year) from all emission units affected by the modification.

**Increase in Actual Emissions:** For each hazardous air pollutant, subtract the Existing Actual Emissions from the Proposed Emissions, and enter the difference.

**Increase in Actual Emissions – All HAPs Combined:** Add the Increase in Actual Emissions for each hazardous air pollutant, and enter the total.

**Increase in Actual Emissions – Maximum Single HAP:** Enter the Increase in Actual Emissions for the hazardous air pollutant with the largest increase.

**Detailed Emissions Calculations Are Attached:** As described in Section 5 below, you must include detailed emissions calculations to support the data included in this form. Check the box for “Detailed emissions calculations are attached,” and include the attachments as indicated in Section 5. If the detailed calculations are submitted as a spreadsheet, include sample calculations that demonstrate the methods and assumptions used.

You must show the methods and assumptions for each hazardous air pollutant and emission unit.

### Section 5 Attachments

This form asks for a summary of information necessary for a complete permit application. As part of the application, supporting documentation must also be submitted for department review. The following attachments must be submitted with this form:

- Detailed emission calculations that support the data presented in Form E.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: E-1, E-2, E-3, etc. It is important to include the Form letter (i.e., “E” for Form E) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments E-1, E-2, and E-3, then enter “E-1, E-2, and E-3.”

### Page Number

Enter the page number at the bottom of the form. For example, if you will be submitting 3 pages for Form E, then enter “Page 1 of 3” on the first page, “Page 2 of 3” on the second page, and “Page 3 of 3” on the last page.

The attachments should be numbered in the same way. Each attachment should be numbered separately. For example, if Attachment E-1 has two pages and Attachment E-2 has 1 page, the attachments should be numbered as follows:

- Attachment E-1: Page 1 of 2, Page 2 of 2.
- Attachment E-2: Page 1 of 1.



## Instructions for Form F – Emission Unit Information

The information included in this form is required by 18 AAC 50.310(c).

This form must be completed for each emission unit to be constructed, reconstructed, or modified.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Emission Unit Identification**

**Emission Unit No.:** Enter the unique number for the specific emission unit.

- If the emission unit is already included in an existing air quality control construction permit, the number should match the ID number listed in that permit.

### **Section 3 Emission Unit Description**

**Equipment Type:** Enter the equipment type (e.g., heater, boiler, internal combustion engine, turbine, mix tank, distillation tower, incinerator, etc.)

**Make:** Enter the manufacturer name and make of the unit.

**Model:** Enter the manufacturer model for the unit.

- Attach vendor specification sheets if available, listing capacity, throughput, exhaust characteristics and maximum emission rates.

**Serial No.:** Enter the manufacturer assigned serial number of the unit. This number should come from the equipment's nameplate.

**Maximum Rated Capacity/Maximum Design Throughput:** Enter the maximum rated capacity.

- This capacity should be the manufacturer rated nameplate capacity.
- If the actual maximum capacity of the emission unit is greater than the manufacturer rated capacity, enter the actual maximum capacity, and describe the basis for the discrepancy.
- For a boiler, the capacity may be represented by the fire input rating or the duty rating and will typically be reported in million Btu per hour (MMBtu/hr) high heating value, or steam horsepower. When there is a mechanical shaft output, the department prefers estimation using high heating value input.
- For internal combustion engines the capacity will typically be reported in horsepower (hp) or kilowatts (kW).
- Note: The rated capacity or design throughput for the emission unit may become a permit limit.



## Instructions for Form F – Emission Unit Information

### **Section 4 Fuels and Materials Processed**

**Fuel Type(s):** Enter each type of fuel (e.g., natural gas, diesel, etc.) that the emission unit is capable of burning, or proposed fuel types. NOTE: Proposed fuel types may be imposed as permit limits.

- If no fuels will be burned by the emission unit, enter “NA” for not applicable.

**Maximum Design Fuel Consumption Rate:** Enter the manufacturer-specified maximum design fuel consumption rate, or rates if burning multiple fuels. Rates may be expressed as units of energy, volume, or mass flow rate.

**Materials Processed:** Enter each type of material that will be processed by the unit for the material types identified.

- If no materials will be processed, enter “NA” for not applicable.

**Maximum Materials Processing Rate:** Enter the maximum materials processing rate or rates.

- This rate(s) should be the design materials processing rate.
- If the actual maximum materials processing rate is greater than the manufacturer -specified rate, enter the actual maximum materials processing rate.

**Describe Method of Operation:** Include a description of how the emission unit will operate.

- For example, if a boiler will primarily burn natural gas but will use diesel as a back -up fuel, then the description should include a statement indicating the intended uses, such as how many hours per day and hours per year the unit will burn each type of fuel.
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Schedule of Operation:** Indicate the maximum operation for each time period.

- For example, if you plan to operate this emission unit continuously, then enter 3 hours in the “3 -hr” box, 8 hours in the “8 -hr” box, 24 hours in the “24-hr” box, and 365 days in the “Days/yr” box.
- As another example, if you plan to operate this unit intermittently for no more than 7 hours per day and 200 days per year, then enter 3 hours in the “3 -hr” box (if you will operate the source for 3 *consecutive* hours), 7 hours in the “8 -hr” and “24-hr” boxes, and 200 days in the “Days/yr” box.
- Note: The schedule of operation for the emission unit may become a permit limit.

### **Section 5 Exhaust Parameters**

*See Section 2.6 of the Guidance Document for conversion factors that can be used to convert units, e.g.:*

- feet to meters
- degrees Fahrenheit or Celsius to Kelvin.

**Stack Height:** Enter the stack or vent height of the emission unit in meters.

**Base Elevation:** Enter the base elevation of the emission unit in meters.



## Instructions for Form F – Emission Unit Information

**Stack Inner Exhaust Diameter or Dimensions:** For round stacks, enter the stack internal diameter in meters. If the stack is not round, enter the stack internal dimensions in meters.

**Actual Flow Rate:** Enter the design flow rate of the stack exhaust in cubic meters per second (acm/s), or the actual flow rate if no design data is available.

**Exit Temperature:** Enter the design temperature in Kelvin (K) of the exhaust at the stack exit point

**Is stack height greater than 65 meters?:** If the stack height is less than or equal to 65 meters, check “NO” and go to Section 6. If the stack height is greater than 65 meters, check “YES” and attach a calculation of good engineering practices stack height, including any computer modeling analyses or field studies.

### **Section 6 Plans Showing Emission Unit Location and Exhaust Point Location**

Attach a set of plans showing in UTM or relative coordinates the location of the emission unit, associated buildings, and other nearby building, stack, and structure locations. Also attach a table of building dimensions. If air dispersion modeling is required, the department recommends that locations be expressed in UTM coordinates.

### **Section 7 Emission Control Information**

*Complete this section only if the emission unit will have emission control equipment. NOTE: If the control equipment will be installed as BACT or LAER for PSD and Nonattainment Major Sources and Modifications, skip this section and complete Section 11.*

**Control Equipment:** Enter the type of emission control device, (e.g., wet scrubber, baghouse, low -NO<sub>x</sub> burner, etc.)

**Pollutants Controlled:** Enter the pollutant(s) controlled by the control equipment.

**Provide a physical description of the control equipment:** Include the manufacturer make and model and serial number, if available.

- If additional space is required, provide the details as an attachment.

**Provide a description of the significant operating parameters and set points for the control equipment:** List the emission operating parameters and set points that are critical to achieving the proposed controlled emission rate.

- If additional space is required, provide the details as an attachment.

**The control equipment is necessary:** If this control equipment is being installed to comply with an emission standard or to avoid a specific project classification, check the appropriate box. If this control equipment is not being installed for either of these reasons, check the “Other” box and indicate the purpose of the control equipment.

### **Section 8 Applicable Federal Emission Limits**

**New Source Performance Standards (NSPS) Affected Facility:** If an NSPS applies to this emission unit, check “YES”. If no NSPSs apply, check “NO”.

- See Section 5.1 of the Guidance Document for information on potentially applicable NSPSs.
- If you check “YES”, be sure to complete Form J.



## Instructions for Form F – Emission Unit Information

**National Emission Standards for Hazardous Air Pollutants (NESHAPs) Affected Facility:** If a NESHAP applies to this emission unit, check “YES”. If no NESHAPs apply, check “NO”.

- See Section 5.2 of the Guidance Document for information on potentially applicable NESHAPs.
- If you check “YES”, be sure to complete Form K.

**Maximum Achievable Control Technology (MACT) Affected Facility:** If a MACT Standard applies to this emission unit, check “YES”. If no MACT Standards apply, check “NO”.

- See Section 5.2 of the Guidance Document for information on potentially applicable MACT Standards.
- If you check “YES”, be sure to complete Form K.

**Other Emission Limits listed in 18 AAC 50.040:** If any regulations, other than NSPS, NESHAPs, or MACT Standards, specified in 18 AAC 50.040 apply to this emission unit, enter the relevant emission limit or standards and the corresponding regulatory citation.

- See Section 5.3 of the Guidance Document for information on potentially applicable emission limits or standards, other than NSPS, NESHAPs, and MACT Standards, that may be required by 18 AAC 50.040.

**Demonstration of Compliance:** Include a demonstration of compliance for each applicable emission limit or standard. Check the box and include the demonstration as an attachment.

- See Sections 5.1.3 and 5.2.3 of the Guidance Document.

### **Section 9 Applicable State Emission Limits**

If any regulations specified in 18 AAC 50.050 through 50.090 apply to this emission unit, enter the relevant emission limit or standards and the corresponding regulatory citation.

- See Section 4 of the Guidance Document for information on potentially applicable emission limits or standards that may be required by 18 AAC 50.050 through 50.090.

**Demonstration of Compliance:** Include a demonstration of compliance for each applicable emission limit or standard. Check the box and include the demonstration as an attachment.

- See Section 4.2 of the Guidance Document.

### **Section 10 Mass Emission Rates**

*Complete this section only if you are required to submit an Air Quality Impact Analysis with your permit application.*

Enter the mass emission rate in units of grams per second (g/s) for the relevant time period for the following regulated air pollutants: carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM<sub>-10</sub>), and sulfur oxides (SO<sub>x</sub>).

- For each pollutant, enter the mass emission rate in the unshaded box.
- The emissions reported in this section must be calculated at the rated capacity of the equipment, or otherwise as limited by the permit.



## Instructions for Form F – Emission Unit Information

### **Section 11 Emission Control Information for PSD and/or Nonattainment Major Sources and Modifications Only**

*Complete this section only if your project is a PSD Major or Nonattainment Major classification and the emission control equipment is being installed to meet the BACT or LAER limit.*

**Control Equipment:** Enter the type of emission control device that will be used, such as wet scrubber, baghouse, low-NO<sub>x</sub> burner, etc.

**Pollutants Controlled:** Enter the air pollutant(s) that will be controlled by the control equipment.

**Provide a physical description of the control equipment:** Include the manufacturer make and model and serial number, if available.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Provide a description of the significant operating parameters and set points for the control equipment:** List the emission operating parameters and set points that are critical to achieving the proposed controlled emission rate.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**The control equipment is proposed as:** Check appropriate box if the control equipment is for meeting Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER).

- Section 8 of the Guidance Document provides an overview of BACT and LAER. It includes the basic procedures to perform a BACT analysis and to determine LAER. It also identifies which project classifications are required to meet BACT/LAER requirements for new and modified sources.
- If you check the box for either BACT or LAER, you must also identify the pollutants for which BACT or LAER is being proposed. Only list those pollutants that require a BACT analysis or LAER demonstration.
- For example, catalytic oxidation is capable of controlling emissions of carbon monoxide (CO) and volatile organic compounds (VOCs) from a gas turbine. However, if you are only required to evaluate BACT for CO emissions, then you should only enter CO as the pollutant in the BACT/LAER section.

**Proposed BACT/LAER performance limit:** Enter the proposed BACT or LAER performance limit preferably in a short-term basis, such as in units of pounds per hour (lb/hr).

- Only list a performance limit for the pollutants that require a BACT analysis or LAER demonstration.
- Section 8 of the Guidance Document for information on proposed BACT/LAER performance limits.
- The proposed BACT/LAER performance limits may become permit limits. The department may set different limits if we find that some other technology better represents BACT or LAER than that recommended in the application.



## Instructions for Form F – Emission Unit Information

**Proposed as BACT/LAER:** If this emission control device is being used to meet BACT/LAER requirements, mark the box and attach a detailed BACT analyses or LAER demonstration.

### Section 12 Attachments

This form asks for a summary of information necessary for a complete permit application. As part of the application, supporting documentation must also be submitted for department review. The following attachments must be submitted with this form:

- Vendor specifications, if available, for sources and control devices. This should include all specifications related to capacity, throughput, exhaust characteristics and maximum emission rates.
- If the exhaust stack height is greater than 65 meters, a calculation of good engineering practice stack height, including any computer modeling analyses or field studies;
- A set of plans showing the location of the emission unit, associated buildings, and other nearby structures;
- A table of building dimensions;
- A demonstration of compliance for any applicable emission limits or standards, other than NSPS or NESHAPs, specified in 18 AAC 50.040. (Compliance demonstration for NSPS and NESHAPS will be included on Forms J and K, respectively.);
- A demonstration of compliance for any applicable emission limits or standards specified in 18 AAC 50.050 through 50.090;
- A BACT analysis or LAER demonstration if applicable; and
- If additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: F-1, F-2, F-3, etc. It is important to include the Form letter (i.e., “F” for Form F) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments F-1, F-2, and F-3, then enter “F-1, F-2, and F-3.”

### Page Number

Each attachment should be numbered separately. If an attachment has 3 pages, the attachment should be numbered as “Page 1 of 3,” “Page 2 of 3,” and “Page 3 of 3.”



**Alaska Department of Environmental Conservation  
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**Instructions for Form G – Air Quality Modeling Checklist**

*The instructions for Form G are included in the form itself. Section 6 of the Guidance Document provides information on preparing an air quality impact analysis, and Section 9 of the Guidance Document provides information on assessing air quality related values.*



## Instructions for Form H – Owner Requested Limits to Avoid Classification

The information included in this form is required by 18 AAC 50.310(l).

Section 7.1 of the Guidance Document provides information on owner requested limits to avoid classification.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Stationary Source or Modification Classification to be Avoided**

**Stationary Source Classifications:** Check each Source Classification that will be avoided by the permit action.

- More than one Stationary Source Classification may be avoided by the permit action.
- You must identify all the Classifications that will be avoided.
- See Section 1.2 of the Guidance Document for details on the criteria for each Stationary Source Classification.

**Modification Classifications:** *Complete this section only if you have an existing source and you are making a modification to the source. Refer to the definition of “modification” in 18 AAC 50.990, which is included in Appendix A of the Guidance Document.*

Check each Modification Classification that will be avoided by the permit action.

- More than one Modification Classification may be avoided by the permit action.
- You must identify all the Classifications that will be avoided.
- See Section 1.3 of the Guidance Document for details on the criteria for each Modification Classification.

### **Section 3 Proposed Physical or Operational Restrictions**

Describe the physical or operational restrictions being proposed to avoid meeting the criteria for the Source or Modification Classifications listed in Section 2 of the form.

- Include a description of how the proposed physical or operational restrictions affect emissions.
- Attach any calculation the department will need to determine that the proposed restrictions will avoid the classification or classifications that otherwise would apply.



## **Instructions for Form H – Owner Requested Limits to Avoid Classification**

### **Section 4 List the proposed terms or conditions to limit operations or emissions**

List each proposed permit term or condition to limit operations or emissions.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

### **Section 5 List proposed monitoring techniques**

For each proposed permit term or condition listed in Section 4 of this form, describe the proposed monitoring strategy to ensure compliance with the permit term or condition.

- The proposed term or condition number used in this section should match the permit term or condition number in Section 4 for which the monitoring strategy is being proposed.
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

### **Section 6 List the proposed record keeping requirements**

For each proposed permit term or condition listed in Section 4 of this form, describe the proposed record keeping strategy to ensure compliance with the permit term or condition.

- The proposed term or condition number used in this section should match the permit term or condition number in Section 4 for which the monitoring strategy is being proposed.
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

### **Section 7 Attachments**

This form asks for a summary of information necessary for a complete permit application. As part of the application, supporting documentation must also be submitted for department review. The following attachments must be submitted with this form:

- Attach any calculations the department will need to determine that the proposed restrictions will avoid classification.
- If additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: H-1, H-2, H-3, etc. It is important to include the Form letter (i.e., “H” for Form H) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments H-1, H-2, and H-3, then enter “H-1, H-2, and H-3.”

### **Page Number**

Each attachment should be numbered separately. If an attachment has 3 pages, the attachment should be numbered as “Page 1 of 3,” “Page 2 of 3,” and “Page 3 of 3.”



## Instructions for Form I – Revisions and Revocations

The information included in this form is required by 18 AAC 50.310(k).

Section 7.2 of the Guidance Document provides information on revisions and revocations.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

**Permit Number:** Enter the number of the permit that contains the conditions you wish to have revised or revoked.

### **Section 2 Revisions or Revocations**

**Condition No.:** List the permit term or condition number for each term or condition that you are requesting to revise or revoke.

**Suggested Revision Language:** If you are requesting that a permit term or condition be revised, then include the suggested revised language. If you are requesting that a permit term or condition be revoked, simply state “REVOKE”.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

### **Section 3 Explanations**

*For each term or condition to be revised or revoked, attach a copy of this page.*

**Box 3a:** List the specific permit term or condition number for which the explanations will be provided.

**Box 3b:** Include an explanation describing why the permit term or condition should be revised or revoked.

**Box 3c:** Explain the effect of revising or revoking the permit term or condition on emissions, other permit terms, and compliance monitoring.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

### **Section 4 Changes to Stationary Source Classifications**

**Box 4a:** Indicate whether any of the revisions or revocations of the terms or conditions result in a change of the stationary source’s air quality control construction permit classification. If you check “NO,” go to Section 5 of this form. However, if you check “YES,” complete the following items and then go to Box 4b:

- Include all additional information required of an application for the new classification in this permit application.



## Instructions for Form I – Revisions and Revocations

- List the proposed conditions that change the stationary source’s classification(s).

**Box 4b:** Identify any new Stationary Source or Modification Classifications resulting from the revision or revocation.

- Check each classification that applies to the stationary source or modification.
- A stationary source or modification may meet the criteria of more than one classification.
- You must identify all the classifications that apply to your stationary source or modification in order to prepare a complete permit application.
- See Section 1.2 of the Guidance Document for details on how to determine stationary source classifications.
- See Section 1.3 of the Guidance Document for details on how to determine modification classifications.

### **Section 5 Copy of Permit**

Attach a copy of the air quality control construction permit that established the permit term or condition to be revised or revoked. Check the box on the form to indicate that a copy of the air quality control construction permit is attached.

### **Section 6 Attachments**

This form asks for a summary of information necessary for a complete permit application. As part of the application, supporting documentation must also be submitted for department review. The following attachments must be submitted with this form:

- Attach a copy of the air quality control construction permit that established the permit term or condition to be revised or revoked.
- If additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: I-1, I-2, I-3, etc. It is important to include the Form letter (i.e., “I” for Form I) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments I-1, I-2, and I-3, then enter “I-1, I-2, and I-3.”

### **Page Number**

Enter the page number at the bottom of the form. For example, if you will be submitting 3 pages for Form I, then enter “Page 1 of 3” on the first page, “Page 2 of 3” on the second page, and “Page 3 of 3” on the last page.

The attachments should be numbered in the same way. Each attachment should be numbered separately. For example, if Attachment I-1 has two pages and Attachment I-2 has 1 page, the attachments should be numbered as follows:

- Attachment I-1: Page 1 of 2, Page 2 of 2.
- Attachment I-2: Page 1 of 1.



## Instructions for Form J – New Source Performance Standards

The information included in this form is required by 18 AAC 50.310(c).

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Emission Unit Identification**

**Emission Unit No:** Enter the unique emission unit number.

- If the emission unit is included in an existing air quality control construction permit, the number should match the ID number in that permit for this unit.
- This emission unit number should match the number included on Form F for the unit.

**New, Modified, Reconstructed:** Check the appropriate box as to whether the emission unit is new or will be modified or reconstructed.

- See Section 5.1 of the Guidance Document for the definitions of new, modified, and reconstructed.

### **Section 3 40 CFR 60 Subpart A**

**List applicable sections of Subpart A:** All of the sections of 40 CFR Part 60, Subpart A may not apply to each source. Therefore, list only those sections of Subpart A that apply to the specific source.

### **Section 4 Applicable Subpart: 40 CFR 60 Subpart \_\_\_\_\_**

Enter the specific NSPS Subpart that applies to the emission unit. For example, if Subpart GG applies, then enter GG here. See Section 5.1 of the Guidance Document for information on potentially applicable NSPSs.

**List applicable sections:** Not all sections of the specific NSPS Subpart may apply to the emission unit. List only those sections of the specific NSPS Subpart that apply.

**List applicable emission standards:** List each of the specific NSPS emission standards that apply to the emission unit.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**List inapplicable sections:** Some sections of the specific NSPS Subpart may not apply to the emission unit. List those sections of the specific NSPS Subpart that do **not** apply.

**Description of inapplicability:** For each section of the applicable NSPS that is listed as being inapplicable to the emission unit, include a description stating why it does not apply.



## Instructions for Form J – New Source Performance Standards

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**List Monitoring, Record Keeping, and Reporting Requirements:** Each NSPS Subpart includes requirements for monitoring, record keeping, and reporting. List all of the monitoring, record keeping, and reporting requirements from the specific NSPS Subpart that apply to the emission unit, including the regulatory citation for each monitoring, record keeping, and reporting requirement.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

### **Section 5 Attachments**

There are no specific attachments required for this form. However, if additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: J-1, J-2, J-3, etc. It is important to include the Form letter (i.e., “J” for Form J) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments J-1, J-2, and J-3, then enter “J-1, J-2, and J-3.”

### **Page Number**

Each attachment should be numbered separately. If an attachment has 3 pages, the attachment should be numbered as “Page 1 of 3,” “Page 2 of 3,” and “Page 3 of 3.”



## Instructions for Form K – National Emission Standards for Hazardous Air Pollutants

The information included in this form is required by 18 AAC 50.310(c).

Normally you must complete a separate Form K for each emission unit that is subject to the NESHAP. However, you can use only one Form K for multiple units for the following:

- If the *affected facility* that is subject to the NESHAP contains a large number of subject fugitive sources. For example the Petroleum Refinery MACT would apply to numerous flanges, valves, pumps, etc. Complete one Form K for the entire *affected facility*.
- If you have more than one similar emission unit that is subject to the same subpart AND every requirement of the subpart that applies is identical for each of the units. Identify each of the emission units that are subject in Section 2 of the completed Form K.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Emission Unit Identification**

**Emission Unit No:** Enter the unique emission unit number.

- If this emission unit is in an existing air quality control construction permit, the number should match the ID number listed in that permit.
- This emission unit number should match the number included on Form F for this unit.

**New, Modified, Reconstructed:** Check the appropriate box as to whether this is new or will be modified or reconstructed.

- See Section 5.2 of the Guidance Document for the definitions of new, modified, and reconstructed.

### **Section 3 Applicable Subpart: 40 CFR 61 63 Subpart A**

The NESHAP requirements are included in 40 CFR Parts 61 and 63. Specify which CFR Part applies.

- See Section 5.2 of the Guidance Document for information on 40 CFR Parts 61 and 63.

**List Applicable Sections of Subpart A:** Not all of the sections of Subpart A may apply. List only those sections of Subpart A that do apply to this emission unit.



## Instructions for Form K – National Emission Standards for Hazardous Air Pollutants

### **Section 4** Applicable Subpart: 40 CFR 61 63 Subpart \_\_\_\_\_

The NESHAP requirements are included in 40 CFR Part 61 and 40 CFR Part 63. Specify which CFR Part applies to the emission unit. Also indicate the specific NESHAP Subpart that applies. For example, if 40 CFR 63 Subpart N applies, then mark the box for “63” and enter “N” after Subpart.

- See Section 5.2 of the Guidance Document for information on potentially applicable NESHAPs.

**List Applicable Sections:** Not all of the sections of the specific NESHAP Subpart may apply. List only those sections of the specific NESHAP Subpart that do apply to the emission unit.

**List Applicable Pollutant(s):** List all of the pollutants addressed by the applicable NESHAP.

**List applicable emission standards:** List each of the specific NESHAP emission standards that apply to the emission unit.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**List inapplicable sections:** List those sections of the specific NESHAP Subpart that do **not** apply to the emission unit.

**Description of inapplicability:** For each section of the applicable NESHAP that you list as being inapplicable, include a description stating why the section does not apply.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**List Monitoring, Record Keeping, and Reporting Requirements:** Each NESHAP Subpart includes requirements for monitoring, record keeping, and reporting. List all of the monitoring, record keeping, and reporting requirements from the specific NESHAP Subpart that apply to the emission unit, including the regulatory citation for each monitoring, record keeping, and reporting requirement.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

### **Section 5** Case-By-Case MACT

Complete this section only if your stationary source is a major source of hazardous air pollutants, and you must propose a case-by-case MACT standard.

- See Section 8.3 of the Guidance Document for information on case-by-case MACT.

**List Applicable Pollutant(s):** List all of the pollutants for which your stationary source is HAP major and for which you must propose a case-by-case MACT standard for this emission unit.

**List case-by-case MACT standards:** List the proposed case-by-case MACT emission standards for the source.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**List Monitoring, Record Keeping, and Reporting Requirements:** List the monitoring, record keeping, and reporting requirements that you propose for showing compliance with the proposed MACT standards.



## Instructions for Form K – National Emission Standards for Hazardous Air Pollutants

- If additional space is required, check the box for “See a ttached for additional details,” and include the details as an attachment.

**Supporting documentation for Case-By-Case MACT determination is attached:** Attach the case-by-case MACT demonstration.

### **Section 6 Attachments**

- If you are required to do a case -by-case MACT demonstration, you must attach it to this form.
- If additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: K-1, K-2, K-3, etc. It is important to include the Form letter (i.e., “K” for Form K) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments K-1, K-2, and K-3, then enter “K-1, K-2, and K-3.”

### **Page Number**

Each attachment should be numbered separately. If an attachment has 3 pages, the attachment should be numbered as “Page 1 of 3,” “Page 2 of 3,” and “Page 3 of 3.”



## Instructions for Form L – Storage Tank Information

The information included in this form is required by 18 AAC 50.310(c).

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Storage Tank Information**

**Tank ID:** Enter a unique identification number for the tank.

- If this emission unit is already included in an existing air quality control construction permit, the number should match the ID number listed in that permit.

**Tank Type/Description:** Indicate whether the tank is located aboveground or underground. Also indicate the tank type as follows:

- Horizontal Tank;
- Vertical Fixed Roof Tank;
- Internal Floating Roof Tank;
- External Floating Roof Tank; or
- Domed External Floating Roof Tank.

**Capacity:** Enter the manufacturer-specified tank capacity in units of gallons.

**Product:** Enter the name of the product that will be stored in the tank.

**VOC Emissions:** Enter the annual volatile organic compound (VOC) emissions in units of tons per year from the tank.

- The emissions reported in this section must be calculated as potential to emit. Section 2 of the Guidance Document describes how to calculate potential to emit.

**Total Tons Per Year:** Add the annual VOC emissions from all tanks at the stationary source. Enter the sum for all of the tanks.

**Detailed Emissions Calculations Are Attached:** You must include detailed emissions calculations to support the data included in this form. Check the box for “Detailed emissions calculations are attached,” and include the attachments as indicated in Section 3. At a minimum, the detailed emission calculations must include the following information:

#### **TANK DATA**

- Tank dimensions (in units of feet);



## Instructions for Form L – Storage Tank Information

- Turnovers per year;
- Net throughput per year (in units of gallons);
- Whether the tank is heated;
- Tank shell color/shade:
- Shell condition (e.g., good or poor);
- Vacuum and pressure settings (in units of pound per square inch gage (psig))
- Roof color/shade;
- Roof condition (e.g., good or poor)
- Roof type (e.g., cone, dome, etc.)
- Roof height (in units of feet)

### TANK SITE DATA

- Daily average ambient temperature (in degrees Fahrenheit);
- Annual average maximum ambient temperature (in degrees Fahrenheit);
- Annual average minimum ambient temperature (in degrees Fahrenheit);
- Average wind speed (in units of miles per hour (mph));
- Annual average solar insolation factor (in units of Btu/(ft<sup>2</sup> t\*day));
- Atmospheric pressure (in units of pounds per square inch absolute (psia))

### PRODUCT DATA

- Vapor pressure at liquid surface temperature (psia); and
- Liquid molecular weight; and
- Vapor molecular weight.

If you used the EPA TANKS program, attach a printout of the assumptions and output results to satisfy this requirement.

### Section 3 Attachments

This form asks for a summary of information necessary for a complete permit application. As part of the application, supporting documentation must also be submitted for department review. The following attachments must be submitted with this form:

- Detailed emission calculations that support the data presented in Form L.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: L-1, L-2, L-3, etc. It is important to include the Form letter (i.e., “L” for Form L) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments L-1, L-2, and L-3, then enter “L-1, L-2, and L-3.”



## **Instructions for Form L – Storage Tank Information**

### **Page Number**

Enter the page number at the bottom of the form. For example, if you will be submitting 3 pages for Form L, then enter “Page 1 of 3” on the first page, “Page 2 of 3” on the second page, and “Page 3 of 3” on the last page.

The attachments should be numbered in the same way. Each attachment should be numbered separately. For example, if Attachment L-1 has two pages and Attachment L-2 has 1 page, the attachments should be numbered as follows:

- Attachment L-1: Page 1 of 2, Page 2 of 2.
- Attachment L-2: Page 1 of 1.



## Instructions for Form M – Nonattainment Permitting

The information included in this form is required by 18 AAC 50.310(f).

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

**Nonattainment Pollutant:** Enter the name of the nonattainment pollutant.

**Nonattainment Area:** Enter the name of the nonattainment area.

- Nonattainment areas are listed in 18 AAC 50.015. These are also described in Section 1.1.3 of the Guidance Document.

### **Section 2 Statewide Compliance**

**Box 2a:** Complete this section for all other stationary sources in the State of Alaska owned or operated by the applicant.

- List the stationary source name, physical address, and city where the stationary source is located.
- If the stationary source is in compliance with AS 46.14, 18 AAC 50, the Clean Air Act, other applicable federal regulations or any orders issued under AS 46.03, check “YES”. If the stationary source is not in compliance with the indicated regulations, check “NO”. **Note: Each of the stationary sources in the State of Alaska that you own or operate must be in compliance with these requirements for the department to be able to issue this permit.**
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Box 2b:** You must attach compliance demonstration documents for each stationary source listed in Section 2a to demonstrate that the stationary source is indeed in compliance with AS 46.14, 18 AAC 50, the Clean Air Act, other applicable federal regulations or any orders issued under AS 46.03.

Examples of compliance demonstration documents include but are not limited to compliance orders by consent (COBC), consent decrees, notices of violations (NOVs), and annual Title V certifications.

### **Section 3 Cost/Benefit Demonstration**

Describe how the benefits of construction, operation, or modification of this stationary source will significantly outweigh the environmental and social costs incurred, considering factors such as alternative sizes, production processes, and environmental control techniques.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.



## Instructions for Form M – Nonattainment Permitting

### Section 4 Emissions Reductions

**Box 4a:** Describe how reductions in actual emissions from another stationary source or sources within the nonattainment area will equal or exceed the expected maximum emissions increase from the construction and operation of the stationary source to be permitted.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Box 4b:** List the stationary sources that will be providing emission offsets.

- List the stationary source name, physical address, and city where the source is located.
- List the Alaska Department of Environmental Conservation permit number(s) for the permit(s) allowing the emission offsets.
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Box 4c:** You must certify that reductions in actual emissions will occur before the onset of emission increases due to construction, operation, or modification of the new or modified source. Checking this box provides that certification, and is included under the signed certification to be provided in Form B.

### Section 5 Attachments

The following attachments must be submitted with this form:

- A demonstration that each other stationary source that you own or operate in Alaska complies with state and federal air pollution control laws and regulations.
- If additional space is necessary for any of the information required in this form, the information should be presented as an attachment to this form.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: M-1, M-2, M-3, etc. It is important to include the Form letter (i.e., “M” for Form M) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments M-1, M-2, and M-3, then enter “M-1, M-2, and M-3.”

### Page Number

Enter the page number at the bottom of the form. For example, if you will be submitting 3 pages for Form M, then enter “Page 1 of 3” on the first page, “Page 2 of 3” on the second page, and “Page 3 of 3” on the last page.

The attachments should be numbered in the same way. Each attachment should be numbered separately. For example, if Attachment M-1 has two pages and Attachment M-2 has 1 page, the attachments should be numbered as follows:

- Attachment M-1: Page 1 of 2, Page 2 of 2.
- Attachment M-2: Page 1 of 1.



## Instructions for Form N – Offset Source

Use this form for a permit that will reduce emissions to offset emission increases at a new major source or major modification in a nonattainment area. The information included in this form is required by 18 AAC 50.310(j).

Section 7.3 of the Guidance Document provides information on offset stationary sources.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

**Nonattainment Pollutant:** Enter the name of the nonattainment pollutant.

**Nonattainment Area:** Enter the name of the nonattainment area.

- Nonattainment areas are listed in 18 AAC 50.015. These are also described in Section 1.1.3 of the Guidance Document.

### **Section 2 Offset Stationary Source**

**Box 2a:** List each proposed permit term or condition to limit actual emissions.

- Include the proposed permit condition. Assign a number to each condition. The purpose of the condition number is to link the condition to the proposed monitoring and record keeping you list in boxes 2b and 2c. (The numbers may change in the final permit.)
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Box 2b:** Describe the proposed monitoring to ensure compliance with each permit term or condition listed in Section 2a of this form.

- For each proposed monitoring condition use the same condition number you used for the corresponding permit limit in Section 2a for which the monitoring is being proposed.
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Box 2c:** Describe the proposed record keeping to ensure compliance with each permit term or condition listed in Section 2a of this form.

- For each proposed record keeping condition, use the same condition number you used for the corresponding permit limit in Section 2a for which the record keeping is being proposed.
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.



## Instructions for Form N – Offset Source

### Section 3 Total Reduction and Certification

**Pollutant:** List the nonattainment pollutants for which emissions are being reduced.

**Annual Reduction in Emissions:** List the total annual emission reductions (in tons per year) that will result from the proposed permit terms or conditions.

**Detailed Emissions Calculations Are Attached:** As described in Section 4 below, you must include detailed emissions calculations to support the data included in this form. Check the box for “Detailed emissions calculations are attached,” and include the attachments as indicated in Section 4.

**Certification:** In order for the emission reductions from this permit to be usable for offsetting emission increases from a Nonattainment Area Major Source or Modification, you must certify that reductions in actual emissions will occur before the onset of emission increases due to construction, operation, or modification of the new or modified source. Checking this box provides that certification, and is included under the signed certification in Form B.

### Section 4 Attachments

This form asks for a summary of information necessary for a complete permit application. As part of the application, supporting documentation must also be submitted for department review. The following attachments must be submitted with this form:

- Detailed emission calculations that support the data presented in Form N for the Source.
- If additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: N-1, N-2, N-3, etc. It is important to include the Form letter (i.e., “N” for Form N) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments N-1, N-2, and N-3, then enter “N-1, N-2, and N-3.”

### Page Number

Each attachment should be numbered separately. If an attachment has 3 pages, the attachment should be numbered as “Page 1 of 3,” “Page 2 of 3,” and “Page 3 of 3.”



## Instructions for Form O – Port of Anchorage

The information included in this form is required by 18 AAC 50. 310(i).

Before completing Form O, you should obtain a copy of the Department’s *Air Quality Compliance Certification Procedures for Volatile Liquid Storage Tanks, Delivery Tanks, and Loading Racks*, adopted by reference in 18 AAC 50.030. A copy of this document is included in Appendix F of the Guidance Document.

The document *Air Quality Compliance Certification Procedures for Volatile Liquid Storage Tanks, Delivery Tanks, and Loading Racks* also constitutes Section IV, Subpart I, of Volume II of the State Air Quality Control Plan. Therefore, throughout this form, whenever “Subpart I” is used, it is referring to the *Air Quality Compliance Certification Procedures for Volatile Liquid Storage Tanks, Delivery Tanks, and Loading Racks*.

Section 10 of the Guidance Document provides information on the Port of Anchorage.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Control Systems for Storage Tanks and Loading Racks**

**Box 2a:** If a flare will be used as the control device, check “YES”. If a flare will not be used, check “NO”. If you check “YES”, complete the following items:

- Attach the information required by 40 C.F.R. 60.18.

**Box 2b:** If an alternative control system under 18 AAC 50.085(a)(4) or 18 AAC 50.090(a)(1)(D)(ii) is being proposed, check “YES”. If an alternative control system is not being proposed, check “NO”. If you check “YES”, complete the following items:

- Attach the information required by Subpart I, Section 2.a.ii.

### **Section 3 Storage Tank Information**

*Complete this section for each volatile liquid storage tank with a capacity of 952 barrels (40,000 gallons) or greater.*

**Tank ID:** Enter a unique identification number for the tank.

- If this source is an existing source already included in an existing air quality control construction permit, the Source No. should match the Permit ID number listed in the permit for this source.

**Tank Diameter:** Enter the tank diameter in units of feet.

**Tank Height:** Enter the tank height in units of feet.



## Instructions for Form O – Port of Anchorage

**Expected Yearly Throughput in Gallons:** Enter the most recent yearly product throughput if it is representative of expected future throughput. Otherwise, enter the expected future throughput.

**Products to be Stored:** List each product that will be stored in the tank.

- For each product to be stored, complete Section 4 of this form.

**Emission Control Equipment:** Check the box for the type of emission control equipment that will be used.

- If you checked “Tank with Closed Vent System Control Device,” the operating plan described in Subpart I, Section 2.b.iii must be attached. Check the box to indicate whether the operating plan is attached.

### **Section 4 Product Information**

*Complete this section for each volatile liquid kept in a storage tank with a capacity of 952 barrels (40,000 gallons) or greater.*

**Product Name:** Enter the name of the volatile liquid that will be stored in the tank.

**Product Common Name (if applicable):** If applicable, enter the common name of the volatile liquid that will be stored in the tank.

**Tank ID #s where Product Is Stored:** Enter the Tank ID #s where the product will be stored.

- Each Tank ID # entered should match one of the Tank ID #s listed in Section 3.

**Product Volatility (RVP):** Enter the reed vapor pressure (RVP) of the product in units of pounds per square inch (psi). If applicable, enter the RVP for specific seasons.

**Slope of the ASTM distillation curve at 10 percent evaporated, if known:** If known, enter the slope of the ASTM distillation curve at 10 percent evaporated. The following equation should be used to calculate this value:

$$\text{Slope (at 10\% evaporated)} = (\text{°F at 15 percent} - \text{°F at 5 percent})/10$$

**Molecular weight of the vapor (lb/lb-mole) at 60° F, if known:** If known, enter the molecular weight of the vapor, in units of pound per pound -mole (lb/lb-mole), at 60°F.

**Average organic liquid density (lb/gal), if known:** If known, enter the average organic liquid density, in units of pound per gallon (lb/gal).

**The weight percentage and molecular weight of each compound in the stored liquid:** Enter the weight percentage and molecular weight of each compound in the stored liquid.

### **Section 5 Internal Floating Roof Tank**

*Complete this section for each volatile liquid storage tank with an internal floating roof.*

**Tank ID:** Enter a unique identification number for the tank.

- Each Tank ID # entered should match one of the Tank ID #s listed in Section 3.

**Box 5a:** Check Box 5a if this tank will be a new storage tank subject to 18 AAC 50.085.



## Instructions for Form O – Port of Anchorage

**Box 5b:** Check Box 5b if this tank is an existing storage tank that will become subject to 18 AAC 50.085 because the product stored in it in the future will be a volatile liquid.

**Box 5c:** Complete as follows:

**Tank Construction:** Check the appropriate box, either welded or riveted, that describes the tank construction.

**Basic Dimensions of Tank:** Enter the tank diameter and height in units of feet.

**Vent Design for Internal Roof:** Check the appropriate box, either freely vented or pressure -vacuum vent, that describes the vent design.

**Vent Information:** Enter the vent height and dimensions in units of feet. Also describe the relative location of the vent.

**Number and Types of Roof Seals:** Check the appropriate box for the type of roof seal and enter the corresponding number of seals.

**Type and Number of Each Deck Fitting, if known:** If known, check the appropriate box for the type of each deck fitting and enter the corresponding number of fittings.

**Floating Roof Deck Construction:** Check the appropriate box, either welded or bolted, that describes the floating roof deck construction.

- If bolted, list the typical dimensions of the panels or sheets used to construct the roof, if known.

**Number of Columns Supporting Roof, if known:** If known, enter the number of columns supporting the roof.

**Column Construction (e.g., built-up or pipe) and Dimensions, if known:** If known, enter the construction type and dimensions of the column.

**Tank Capacity (gallons):** Enter the design tank capacity in units of gallons.

**Content (type of product stored in tank):** Enter the name of the product stored in the tank.

**Box 5d:** Complete this section only if you checked Box 5b.

**Year Tank Installed:** Enter the year that the tank was installed.

**Year Floating Roof Installed:** Enter the year that the floating roof was installed.

**Dates of any upgrades in seals or fittings:** Enter the dates that any upgrades were made to the seals or fittings.

**Roof Seal Condition:** Check the appropriate box, either good or poor, that describes the roof seal condition.

**Inside Condition of Tank:** Check the appropriate box (light rust, dense rust, or gunite lined) that describes the inside condition of the tank.



## Instructions for Form O – Port of Anchorage

### **Section 6 Tanks with Closed Vent System and Control Device**

*Complete this section for each volatile liquid storage tank with a closed vent/control device system.*

**Box 6a:** For each volatile liquid storage tank with a Closed Vent System and Control Device, the operating plan described in 40 C.F.R. 60.113b(c)(1)(i) and (ii) must be attached. Check the box indicating that the plan is attached.

- Attach the information required by 40 C.F.R. 60.113b(c)(1)(i) and (ii).

### **Section 7 Loading Racks**

*Complete this section for each volatile liquid loading rack. Note that some of the required information in this section may be partly satisfied under Section 2 of this form.*

**Box 7a:** Enter the loading rack identification information.

**Box 7b:** Attach the following three items:

1. A description of the volatile liquid loading rack as described in Subpart I, Section 2.c.i.
2. A description of the vapor collection system as described in Subpart I, Section 2.c.ii.
3. A description of the vapor processing system as described in Subpart I, Section 2.c.iii.

### **Section 8 Attachments**

This form asks for a summary of information necessary for a complete permit application. As part of the application, supporting documentation must also be submitted for Department review. The following attachments must be submitted with this form:

- If you will be using a flare as the control device, attach the information required by 40 C.F.R. 60.18;
- If you are proposing an alternative control system under 18 AAC 50.085(a)(4) or 18 AAC 50.090(a)(1)(D)(ii), attach the information required by Subpart I, Section 2.a.ii;
- If you will be using a “Tank with Closed Vent System Control Device,” attach the operating plan described in Subpart I, Section 2.b.iii;
- For each volatile liquid storage tank with a Closed Vent System and Control Device, attach the operating plan described in 40 C.F.R. 60.113b(c)(1)(i) and (ii); and
- For each volatile liquid loading rack, attach the following items:
  - A description of the volatile liquid loading rack as described in Subpart I, Section 2.c.i;
  - A description of the vapor collection system as described in Subpart I, Section 2.c.ii; and
  - A description of the vapor processing system as described in Subpart I, Section 2.c.iii.
- If additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.



## **Instructions for Form O – Port of Anchorage**

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: O-1, O-2, O-3, etc. It is important to include the Form letter (i.e., “O” for Form O) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments O-1, O-2, and O-3, then enter “O-1, O-2, and O-3.”

### **Page Number**

Enter the page number at the bottom of the form. For example, if you will be submitting 10 pages for Form O, then enter “Page 1 of 10” on the first page, “Page 2 of 10” on the second page, and so on.

The attachments should be numbered in the same way. Each attachment should be numbered separately. For example, if Attachment O-1 has two pages and Attachment O-2 has 1 page, the attachments should be numbered as follows:

- Attachment O-1: Page 1 of 2, Page 2 of 2.
- Attachment O-2: Page 1 of 1.



## Instructions for Form P – Stack Injection

This form should only be completed for stacks into which materials other than process emissions, products of combustion, or materials introduced to control air pollutant emissions will be introduced.

The information included in this form is required by 18 AAC 50.310(m).

Section 7.4 of the Guidance Document provides information on applying for a permit to allow stack injection.

### **Section 1 Stationary Source Information**

*The information included in this section is necessary to ensure that the forms for each permit application are maintained as a cohesive package.*

**Source Name:** Enter the same stationary source name that appears in Section 1 of Form B.

**Source Physical Address:** Enter the same stationary source physical address that appears in Section 1 of Form B.

**City:** Enter the same city that appears in Section 1 of Form B.

### **Section 2 Emission Unit Information**

**Emission Unit No.:** List the emission unit number for each unit associated with the stack:

- If this emission unit is included in an existing air quality control construction permit, the number should match the ID number listed in that permit.
- This number should match the number on Form F for this emission unit.

### **Section 3 Material Description**

**Box 3a:** Describe the material(s) proposed to be introduced into the stack.

**Box 3b:** Attach a laboratory analysis describing the amount and content of the material.

**Box 3c:** Describe other environmentally sound procedures available to treat or dispose of the material, if any.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

### **Section 4 Stack Description**

**Box 4a:** Provide an engineering analysis showing that the combined exhaust can meet the emission standards and opacity limitations specified in 18 AAC 50.

- See Section 4 of the Guidance Document for a description of the state regulations that establish emission standards and opacity limits.
- See Section 5 of the Guidance Document for a description of the Federal regulations that establish emission standards and opacity limits.
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.



## Instructions for Form P – Stack Injection

**Box 4b:** If the material(s) that will be introduced into the stack does **not** contain hazardous air pollutants, check the “NO” box and skip to Box 4c.

However, if the material(s) that will be introduced into the stack contain hazardous air pollutants, check the “YES” box. and complete the following items:

- Provide an estimate of the maximum ambient concentration resulting from the stack.
- Attach back-up documentation for the estimated maximum ambient concentration. Mark the box indicating that the back-up documentation is attached.

**Box 4c:** Describe the stack conditions necessary to ensure complete combustion of the material.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Box 4d:** If the stack is **not** equipped with pollution control equipment, check the “NO” box and skip to Box 4e.

However, if the stack is equipped with pollution control equipment, check the “YES” box and complete the following items:

- Describe the effect of the material on the efficiency and useful life of the pollution control equipment.
- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

**Box 4e:** Discuss the operating parameters showing how the rate material is introduced into the stack will be controlled.

- If additional space is required, check the box for “See attached for additional details,” and include the details as an attachment.

## **Section 5 Attachments**

This form asks for a summary of information necessary for a complete permit application. As part of the application, supporting documentation must also be submitted for department review. The following attachments must be submitted with this form:

- A laboratory analysis describing the amount and content of the material to be introduced.
- An engineering analysis showing that the exhaust can meet emission and opacity standards.
- If the material(s) that will be introduced into the stack contain hazardous air pollutants, back -up documentation for the estimated maximum ambient concentration. If additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.
- If additional space is necessary for any of the information required in this form, the information should be presented as an attachment and should be submitted with this form.

**IMPORTANT:** On the top of the first page of each attachment, enter the number of the attachment. The attachments should be numbered as follows: P-1, P-2, P-3, etc. It is important to include the Form letter (i.e., “P” for Form P) when numbering the attachments since other forms will also have attachments.

Mark the box for “Attachments Included,” and identify the attachments included. For example, if you will be including Attachments P-1, P-2, and P-3, then enter “P-1, P-2, and P-3.”



**Alaska Department of Environmental Conservation  
Air Quality Control Construction Permit Application**

## **Instructions for Form P – Stack Injection**

### **Page Number**

Each attachment should be numbered separately. If an attachment has 3 pages, the attachment should be numbered as “Page 1 of 3,” “Page 2 of 3,” and “Page 3 of 3.”