**PLEASE DO NOT SEND A COPY OF THE INSTRUCTIONS IN WITH YOUR APPLICATION**

The information provided in this form will identify the equipment and processes that will be added, removed or modified at the facility, including the size and type along with the make and model, and any associated control devices and/or emission points. This form must include a description of the facility's proposed new or altered processes, including the physical and chemical properties and feed rate of the raw materials used and products made, from which the facility determined potential emissions. A process flow diagram / production process layout of all new or altered sources showing the flow of materials and intermediate and final products must be included as an Attachment to this form.

Additional rows may be added to each table as needed by selecting the **“unprotect document”** or **“stop protection”** function. The location and use of this function varies depending on your version of Word. The forms **“protect document”** tool should then be reselected so that you may resume navigating through the forms with the “tab” key.

**Project Description**

*Brief Project Description:* Provide one or two paragraphs describing the type of facility and the services provided or products produced. Describe the equipment that will be added, modified or removed. The process should be described here including a discussion of any effects the project will have on the overall facility such as the need to take limits to avoid certain regulations.

**Attachments**

This table lists the additional data and information that should be attached to this application for the items required by this form. Check the appropriate checkboxes if included as an attachment.

***Process Flow Diagram:*** Any new process or modified existing process needs to have a process flow diagram included. The process flow diagram should display the relationship between pieces of equipment within a process including flow direction, any loops, and interconnections with other systems. The process flow diagram / production process layout must identify all equipment, machines, and process steps or product lines within the production process. Emission points including fugitive emissions, leaks, and bypass stacks should be included.

For a source that is a process or a source that will be part of an existing process, the flow diagram/schematic must include all raw material and process material input streams, all product streams, exhaust streams (emission points) including fugitive within the production process, waste streams, in-process storage vessel (equipment), control devices (inherent, add-on, or voluntary), etc. The flow diagram must also include all non-emitting process equipment or activities that physically or operationally affect or have the potential to affect upstream and downstream emission polluting process equipment or activities.

***Detailed Project Description:*** Detailed narrative description of the project including the full scope of the project (each source installed or altered, associated control equipment, how the project affects other sources and their emissions, flow diagram/schematic of the process including all input and output streams.) For example, if the project is an alteration to an existing source, the narrative must describe the scope of the alteration and describe the source before and after the alteration. The narrative must describe each source to be installed or altered as part of the project.

If the project will remove bottlenecks allowing an existing, unaltered source to experience an increase in utilization, the narrative must include for each source experiencing an increase in utilization the following information: the actual operating rate incremental increase (e.g., 300 tons/hr to 350 tons/hr) and the actual incremental emission increase based on the incremental increase in the operating rate. Note: This incremental increase in actual emission must be included in project total emissions.

***Location in Application:*** Please specify an Appendix or Attachment to this construction permit application package.

**Equipment / Process Information**

Please identify the equipment and processes that are being added, removed, or modified and provide the information requested in this table. Additional information required to complete the review of this permit application should be submitted as attachments. This table is used to describe the individual pieces of equipment or processes that are being proposed for addition, removal, or modification.

***Equipment ID / Process ID****:* The equipment identification (tag number) for each new or altered process source. Each piece of equipment should have its own unique ID (alpha-numeric). This is an ID designated by the facility, such as Boiler #1 or Tank #1. This ID number should be carried throughout the application whenever Equipment ID is requested. If several processes will be included in a single emission unit, an ID for that process should be added to the equipment ID. An example of this is three lines, each with two saws. The equipment ID for each of the two saws could be: SAW1, SAW2. The process ID for each line could be: L1, L2, and L3. The equipment/process ID could then be L1SAW1, L1SAW2, L2SAW1, L2SAW2, L3SAW1, and L3SAW2.

***Action:*** The “Action” that is checked should describe the final disposition of the equipment or process. If the project is for the replacement of a boiler, there should be two entries, an entry checked “Remove” for the boiler being removed, and a new entry checked “Add” for the boiler being constructed. The “Modify” should be used for existing permitted equipment that will have changes requiring a construction permit such as increasing the process weight rate or adding a fuel that can be burned. The “Other” can be used for scenarios that do not fit the other three types of actions.

***Equipment / Process Description (Include the Make and Model if applicable.)****:* Define the equipment or process including all applicable process boundaries. Each piece of equipment within a process should be listed individually.

***Maximum Design Capacity (units)****:* This should be given in appropriate units of measure based on applicable regulations and/or determining emissions. Tanks should list their maximum capacity in terms of volume (liters, cubic meters). Boilers should list their maximum capacity in terms of heat input (million BTU/hr). There may be situations where a piece of equipment burns fuel and has a process weight rate; in these cases, both should be listed.

***Control Device ID(s):*** Identify all control equipment that the emissions from the equipment/process are routed to.

***Pollutants Controlled:*** List all of the pollutants controlled by this specific control device. Include the Chemical Abstract Service Number (CAS #) for all of the Toxic Air Pollutants and/or Hazardous Air Pollutants controlled by this control device.

***Capture System Efficiency and Description:***The efficiency of the capture system is based on the percentage of the emissions from the process enters the control device. Describe how process emissions are captured (i.e. ducts, hood, close loop system, etc.) to meet the required capture efficiency. Include details and sample calculations needed to verify the capture efficiency (e.g. fan motor specifications, air flow rates, etc.).

***Emission Point ID(s):*** Each point where a pollutant may exhaust at the equipment/process shall be identified with a unique number or label. Please use the same emission point ID that is used in your current air dispersion modeling scenario, if applicable. This ID number should be carried throughout the application whenever an emission point ID is requested.

**Control Device Information**

***Control Device ID:*** Each control device should have its own unique ID (CD-alpha-numeric) as designated by the facility for air permitting purposes. The Control Device ID is a specific identification (tag number) that should be carried throughout the application whenever the Control Device ID is requested.

***Action:*** The “Action” that is checked should describe the final disposition of the control device. If the project is for the replacement of a control device, there should be two entries, an entry checked “Remove” for the control device being removed, and a new entry checked “Add” for the control device being constructed. The “Modify” should be used for existing permitted control devices that will have changes made to it.

***Control Device Description (Include the Make and Model if applicable.):*** A brief written narrative of the control devices being added, removed, or modified in the proposed construction project. Include the Control Device Type (e.g. Baghouse, ESP, Thermal Oxidizer, Flare, Wet Scrubber, etc.) and a description of the control device including a discussion of any effects the project will have on the overall facility, how the project affects other sources and their emissions, flow diagram/schematic of the process including all input and output streams. For example, if the project is a modification to an existing source, the narrative must describe the scope of the modification and describe the control device before and after the modification.

***Maximum Design Capacity (Units):*** Design capacity of the control device; include units of measure (e.g. dry standard cubic feet per minute, air-to-cloth ratio for a bag house, etc.)

***Is the control device "Inherent to the Process”, “Voluntary” or “Required”?***

***Inherent to the Process:*** Control device is part of the process unit where process cannot operate without control device because it is inherent to the process. (e.g. product collection devices for which the value of the product collected greatly exceeds the cost of the collection device may also be considered as part of a process unit provided they are inherent to the running of that process).

***Voluntary:*** Control device is not relied-upon and un-controlled emissions are used to show compliance with applicable standards and regulations.

***Required:*** Control device is relied-upon and controlled emissions are used to show compliance with applicable standards and regulations.

***Destruction/Removal Efficiency Determination*:** The efficiency of the control device to destroy or remove the controlled pollutants. Describe the mechanism used to destroy or remove pollutants. Include the details and sample calculations needed to verify the destruction / removal efficiency.

**Raw Material and Products Information**

*Raw Material(s):* List all raw materials used in the total process.

*Product(s):* The product manufactured by the equipment/process. The product for a transferring operation will be the same as the raw material introduced.

*Fuels Combusted:*

List the type of fuels combusted and grades (e.g. Natural gas, No. 2 fuel oil, B20).

BTU Content: List the heat capacity of each fuel type (BTU/lb, BTU/gal, etc.).

% Sulfur by weight: List the maximum % sulfur allowed in the fuel type and grade as applicable.

% Ash by weight: List the maximum % ash allowed in the fuel type and grade as applicable.

**Monitoring and Reporting Information**

***Pollutant(s)*/*Parameter(s) Monitored:***List and describe each pollutant and/or parameter to be monitored or types of data that must be collected to ensure proper operation of equipment and/or processes at all times. Monitoring means the collection and use of measurement data or other information for the operation of equipment and/or processes or to verify a work practice standard relative to assuring compliance with applicable requirements.

***Pollutant(s)/ Parameter(s) Monitored****:* Identify which pollutant and/or parameter are to be monitored. (e.g. Particulate Matter, Opacity, pressure drop, flow rate, etc.)

***Monitoring Frequency:*** Provide the proposed frequency for monitoring the parameter.

***Monitoring Frequency****:* Identify the proposed frequency of conducting the monitoring. For example, control device parameters may be monitored once per week.

***Reporting Frequency****:* Provide the proposed frequency for reporting.

***Monitoring/Reporting Basis:*** Explain how periodic monitoring is adequate. Provide sufficient analysis to demonstrate how the monitoring and reporting requirements assure compliance with the regulations or yield reliable data from the relevant time period that is representative of compliance with the regulations.

***Monitoring/Reporting Basis****:* Explain the basis for how the operational ranges will be determined. Operational ranges shall be derived from vendor certification, source test data, operational history, or engineering calculations. If engineering calculations are cited, please include the calculations and justification. Other methods may be used to establish operational ranges but will be approved on a case by case basis.

***Averaging Period(s)*:** If applicable, identify the period over which discrete data points will be averaged for the purpose of determining whether a deviation has occurred. Such intervals must be commensurate with the time period over which a change in control device performance that would require actions by the owner or operator to return operations within normal ranges or designated conditions is likely to be observed. An “N/A” in this column indicates that an averaging time is not appropriate. An “N/A\*” in this column indicates that the permit holder may elect to collect monitoring data on a more frequent basis than is required and calculate the specified average for purposes of determining whether a deviation has occurred.

| **APPLICATION IDENTIFICATION**  *(Please ensure that the information list in this table is the same on all of the forms and required information submitted in this construction permit application package.)* | | |
| --- | --- | --- |
| Facility Name  *(This should be the name used to identify the facility)* | SC Air Permit Number (8-digits only)  *(Leave blank if one has never been assigned)*       - | Application Date |

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| **PROJECT DESCRIPTION** |
| Brief Project Description (What, why, how, etc.): |

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| **ATTACHMENTS** |
| Process Flow Diagram Location in Application: |
| Detailed Project Description Location in Application: |

| **EQUIPMENT / PROCESS INFORMATION** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Equipment ID**  **Process ID** | **Action** | **Equipment / Process Description** | **Maximum Design Capacity (Units)** | **Control Device ID(s)** | **Pollutants Controlled**  **(Include CAS#)** | **Capture System Efficiency and Description** | **Emission Point ID(s)** |
|  | Add  Remove  Modify  Other |  |  |  |  |  |  |
|  | Add  Remove  Modify  Other |  |  |  |  |  |  |
|  | Add  Remove  Modify  Other |  |  |  |  |  |  |
|  | Add  Remove  Modify  Other |  |  |  |  |  |  |
|  | Add  Remove  Modify  Other |  |  |  |  |  |  |

| **CONTROL DEVICE INFORMATION** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Control Device ID** | **Action** | **Control Device Description** | **Maximum Design Capacity (Units)** | **Inherent/Required/Voluntary**  **(Explain)** | **Destruction/Removal Efficiency Determination** |
|  | Add  Remove  Modify  Other |  |  |  |  |
|  | Add  Remove  Modify  Other |  |  |  |  |
|  | Add  Remove  Modify  Other |  |  |  |  |
|  | Add  Remove  Modify  Other |  |  |  |  |

| **RAW MATERIAL AND PRODUCT INFORMATION** | | | |
| --- | --- | --- | --- |
| **Equipment ID**  **Process ID**  **Control Device ID** | **Raw Material(s)** | **Product(s)** | **Fuels Combusted** |
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| **MONITORING AND REPORTING INFORMATION** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Equipment ID**  **Process ID**  **Control Device ID** | **Pollutant(s)/Parameter(s) Monitored** | **Monitoring Frequency** | **Reporting Frequency** | **Monitoring/Reporting Basis** | **Averaging Period(s)** |
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