### Best Available Control Technology (BACT) Guideline 1.1.1\*

Last Update: 11/30/2022

## Natural gas or propane fired boilers/steam generators\*\* with heat input rate greater than 5 MMBtu/hr and less than or equal to 20 MMBtu/hr

| Pollutant | Achieved in Practice or contained in the SIP       | Technologically<br>Feasible | Alternate Basic<br>Equipment |
|-----------|--|-----------------------------|------------------------------|
| VOC       | PUC quality natural gas or propane with LPG backup |                             |                              |
| SOx       | PUC quality natural gas or propane with LPG backup |                             |                              |
| PM10      | PUC quality natural gas or propane with LPG backup |                             |                              |
| NOx       | 5 ppmvd @ 3% O2<br>(0.0061 lb/MMBtu)               |                             |                              |
| СО        | 50 ppmvd @ 3% O2<br>(0.037 lb/MMBtu)               |                             |                              |

<sup>\*</sup> This is a Summary Page for this Class of Source.

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

<sup>\*\*</sup> This guideline is applicable to units fired solely on natural gas from a PUC or FERC regulated source or propane/LPG. This guideline is not applicable to Oilfield Steam Generators or Electric Utility Steam Generating Units.

### Best Available Control Technology (BACT) Guideline 1.1.2\*

Last Update: 11/30/2022

## Natural gas or propane fired boilers/steam generators\*\* with heat input rate greater than 20 MMBtu/hr

| Pollutant | Achieved in Practice or contained in the SIP       | Technologically<br>Feasible | Alternate Basic<br>Equipment |
|-----------|--|-----------------------------|------------------------------|
| VOC       | PUC quality natural gas or propane with LPG backup |                             |                              |
| SOx       | PUC quality natural gas or propane with LPG backup |                             |                              |
| PM10      | PUC quality natural gas or propane with LPG backup |                             |                              |
| NOx       | 2.5 ppmvd @ 3% O2<br>(0.003 lb/MMBtu)              |                             |                              |
| СО        | 50 ppmvd @ 3% O2<br>(0.037 lb/MMBtu)               |                             |                              |

<sup>\*</sup> This is a Summary Page for this Class of Source.

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

<sup>\*\*</sup> This guideline is applicable to units fired solely on natural gas from a PUC or FERC regulated source or propane/LPG. This guideline is not applicable to Oilfield Steam Generators or Electric Utility Steam Generating Units.

### Best Available Control Technology (BACT) Guideline 1.1.3\*

Last Update: 10/26/2009

## Boiler - > 20.0 MMBtu/hr, Natural gas fired, with highly variable loads or high turndown ratios. \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.1.4\*

Last Update: 10/26/2009

### **Digester Gas Fired Boiler \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.1.5\*

Last Update: 10/26/2009

### **Boiler-Dual Fuel for Facilities Requiring Liquid Backup Fuel \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.1.6\*

Last Update: 10/26/2009

### **Boiler - Fired with a High-Ammonia Fuel \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.1.7\*

Last Update: 10/26/2009

### Limited Use Boiler - Natural Gas Fired, < 9 Billion Btu/yr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.1.8\*

Last Update: 10/26/2009

### Biomass-fired Boiler - Grate Systems \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.2.1\*

Last Update: 4/11/2023

### Oilfield Steam Generator (> or = 20 MMBtu/hr) \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.2.2\*

Last Update: 10/26/2009

## Steam Generator - >20.0 MMBtu/Hr Vertically Oriented w/Counterflow Heat Transfer \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.2.3\*

Last Update: 5/1/2004

## Oilfield Steam Generator/TEOR Gas Incinerator \*\*RESCINDED - part of 5/04 update to guideline 1.2.1\*\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.3.1\*

Last Update: 8/27/2005

## Fluidized-Bed Combustor => 272 MMBtu/hr, Cogeneration Operation, Fired with Delayed Petroleum Coke (DPC)

| Pollutant | Achieved in Practice or contained in the SIP   | Technologically<br>Feasible   | Alternate Basic<br>Equipment |
|-----------|--|---|------------------------------|
| VOC       | 0.008 lb/MMBtu, natural gas and fuel oil as auxiliary fuel   |   |                              |
| SOx       | 20.2 ppmvd (as SO2 corrected to 3% O2) (DPC with 2% sulfur by weight) or lowest sulfur content fuel available when 2% sulfur by weight fuel is not available, Sorbent injection and natural gas and low-sulfur fuel oil (15 ppmvd sulfur or less), as auxiliary fuel | lowest sulfur content DPC fuel available, with Sorbent Injection and scrubber; natural gas and low-sulfur fuel oil (15 ppmvd sulfur or less), as auxiliary fuel |                              |
| PM10      | 0.005 gr/dscf corrected to<br>12% CO2, baghouse,<br>natural gas and low sulfur<br>fuel oil as auxiliary fuel   |   |                              |
| NOx       | 28 ppmvd (as NO2<br>corrected to 3% O2),<br>ammonia injection (less than<br>30 ppmvd ammonia slip)<br>and natural gas and fuel oil<br>as auxiliary fuel)   |   |                              |
| СО        | natural gas and fuel oil as<br>auxiliary fuel  |   |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.3.2\*

Last Update: 3/12/2012

### Fluidized Bubbling Bed Combustor (biomass-fired) \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.4.1\*

Last Update: 11/7/2016

## Waste Gas Flare - 15.3 MMBtu/hr, Serving a Tank Vapor Control System \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.4.2\*

Last Update: 11/7/2016

### Waste Gas Flare - Incinerating Produced Gas \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.4.3\*

Last Update: 1/12/2021

### **Landfill Gas Vapor Collection System**

| Pollutant | Achieved in Practice or contained in the SIP   | Technologically<br>Feasible | Alternate Basic<br>Equipment |
|-----------|--|-----------------------------|------------------------------|
| VOC       | Use of an enclosed ultra-low NOx flare with a control efficiency of ≥ 98% or a controlled VOC emissions concentration of ≤ 20 ppmvd @ 3% O2 (as hexane, equivalent to 0.038 lb-VOC/MMBtu) and a NOx emissions rate of ≤ 0.025 lb-NOx/MMBtu |                             |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.4.4\*

Last Update: 11/7/2016

### **Digester Gas-Fired Flare \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.4.5\*

Last Update: 11/7/2016

#### Oilfield Waste Gas Incinerator \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.4.6\*

Last Update: 11/7/2016

Biogas-Fired Flare: = or > 10.9 MMBtu/hr, Limited Use \* RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.4.7\*

Last Update: 11/7/2016

## Waste Gas Flare - Oilfield Well Drilling and Testing Operation, < 50 MMscf/day \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.4.8\*

Last Update: 11/7/2016

### Refinery Flare \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.1\*

Last Update: 8/16/2023

## Fiberglass Production Furnace and Manufacturing Line, Natural Gas-Fired \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.2\*

Last Update: 8/16/2023

#### Flat Glass Production Float Furnace \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.3\*

Last Update: 5/11/2022

## Existing flat glass furnace with a 3R system and a backup thermal De-NOx system \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.4\*

Last Update: 5/18/2020

### Metal Melting Crucible/Furnace \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.5\*

Last Update: 8/16/2023

### Glass Bottle Label Curing Lehr - < 10 MMBtu/hr, Natural Gas Fired \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.6\*

Last Update: 8/16/2023

#### **Metal Heat Treatment Oven \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.7\*

Last Update: 8/16/2023

#### **Glass Furnace Forehearth \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.8\*

Last Update: 8/16/2023

#### **Container Glass Production - Container Glass Distributor \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.9\*

Last Update: 8/16/2023

### **Container Glass Melting Furnace \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.10\*

Last Update: 10/9/2018

### **Container Glass Annealing Lehr**

| Pollutant | Achieved in Practice or contained in the SIP   | Technologically<br>Feasible | Alternate Basic<br>Equipment |
|-----------|--|-----------------------------|------------------------------|
| VOC       | Utilize PUC quality natural<br>gas fuel with LPG as backup<br>fuel   |                             | Electric Annealing Lehr      |
| SOx       | Utilize PUC quality natural<br>gas fuel with LPG as backup<br>fuel   |                             | Electric Annealing Lehr      |
| PM10      | Utilize PUC quality natural<br>gas fuel with LPG as backup<br>fuel   |                             | Electric Annealing Lehr      |
| NOx       | Utilize burner system with 60 ppmvd NOx @ 3% O2 or 0.073 lb-NOx/MMBtu fired on PUC quality natural gas, and LPG as backup fuel |                             | Electric Annealing Lehr      |
| СО        | Utilize burner system with 20 ppmv CO @ 3% O2 or 0.015 lb-CO/MMBtu fired on PUC quality natural gas, and LPG as backup fuel    |                             | Electric Annealing Lehr      |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.11\*

Last Update: 5/21/2020

### **Container Glass Production - Mold Swabbing Operation**

| Pollutant | Achieved in Practice or contained in the SIP  | Technologically<br>Feasible | Alternate Basic<br>Equipment |
|-----------|---|-----------------------------|------------------------------|
| PM10      | Using best management practices and the judicial use of mold swabbing material (< or = 0.211 lb of material per ton of glass produced) with PM10 emissions of 0.19 lb/ton of glass formed |                             |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.12\*

Last Update: 7/7/2020

## Secondary Aluminum Melting: Sweat Furnace, Holding Furnace and Reverb Furnace

| Pollutant | Achieved in Practice or contained in the SIP   | Technologically<br>Feasible  | Alternate Basic<br>Equipment |
|-----------|--|--|------------------------------|
| VOC       | Sweat Furnaces:<br>Afterburner (≥0.3 sec<br>retention time at ≥1,400°F)<br>or secondary combustion<br>chamber            |  |                              |
|           | Holding and Reverb<br>Furnaces (non-sweating):<br>None   |  |                              |
| SOx       | Use natural gas fuel   |  |                              |
| PM10      | Sweat Furnaces: Use of natural gas fuel, afterburner with 1400°F chamber temperature, and a baghouse with fabric filters |  |                              |
|           | Holding and Reverb<br>Furnaces (non-sweating):<br>Use of natural gas fuel and<br>a baghouse with fabric filters          |  |                              |
| Nox       | Sweat Furnaces:<br>50 ppmvd @ 3% O2<br>(Use of Low-NOx Burners)  | Sweat, Holding, and Reverb Furnaces: 1) 6.0 ppmvd @ 3% O2 (Use of Low-NOx Burners and Selective Catalytic Reduction) | Use of Electric<br>Furnaces  |
|           | Holding Furnaces:<br>40 ppmvd @ 3% O2<br>(Use of Low-NOx Burners)  | 2) 12.0 ppmvd @ 3% O2<br>(Use of Low-NOx Burners and<br>Regenerative Selective Catalytic                             |                              |
|           | Reverb Furnaces (non-<br>sweating):  | Reduction)   |                              |
|           | 53 ppmvd @ 3% O2<br>(Use of Low-NOx Burners)   | 3) 30 ppmvd @ 3% O2<br>(Use of Low-NOx Burners and Selective<br>Non-Catalytic Reduction)                             |                              |
| СО        | Use natural gas fuel   | 1) 5 ppmvd @ 3% O2, Oxidation catalyst or equivalent control;  | Use of Electric<br>Furnaces  |
|           |  | 2) 50 ppmvd @ 3% O2  |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.5.13\*

Last Update: 8/16/2023

### **Aluminum Diecasting Furnace \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.6.1\*

Last Update: 4/14/2020

### **Vegetable Dry Roasting Operation**

| Pollutant | Achieved in Practice or contained in the SIP                                      | Technologically<br>Feasible  | Alternate Basic<br>Equipment |
|-----------|---|--|------------------------------|
| NOX       | 60 ppmv @ 3% O2<br>(equivalent to 6.5 ppmv @<br>19% O2 or 0.073 lb-<br>NOX/MMBtu) | 9 ppmv @ 3% O2 (equivalent to 1.0 ppmv @ 19% O2 or 0.011 lb-NOX /MMBtu) or less with Selective Catalytic Reduction |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.6.2\*

Last Update: 4/20/2020

### Oven - Tortilla, <= 5 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

# Best Available Control Technology (BACT) Guideline 1.6.3\*

Last Update: 2/21/2020

#### **Snack Chip Fryer with Indirect-Fired Heat Transfer System**

| Pollutant | Achieved in Practice or contained in the SIP   | Technologically<br>Feasible   | Alternate Basic<br>Equipment |
|-----------|--|---|------------------------------|
| VOC       | COMBUSTION EMISSIONS: Use PUC quality natural gas fuel with LPG/Propane as backup fuel FRYING PROCESS EMISSIONS: | FRYING PROCESS EMISSIONS: 1) 85% control (combined VOC and PM control by thermal oxidizer, or equal); 2) 80% control (combined VOC and PM control by carbon adsorber, or equal) |                              |
|           | None   |   |                              |
| SOx       | Use PUC quality natural gas<br>fuel with LPG/Propane as<br>backup fuel   |   |                              |
| PM10      | COMBUSTION EMISSIONS: Use PUC quality natural gas fuel with LPG/Propane as backup fuel                           | FRYING PROCESS EMISSIONS: 1) 85% control (combined VOC and PM control by thermal oxidizer, or equal); 2) 80% control (combined VOC and PM control by carbon adsorber, or equal) |                              |
|           | FRYING PROCESS EMISSIONS: 75% control (oil mist eliminator or equal)   |   |                              |
| NOx       | 9 ppmvd @ 3% O2 for units<br>greater than 5 MMBtu/hr to<br>less than or equal to 20<br>MMBtu/hr                  |   |                              |
|           | 7 ppmvd @ 3% O2 for units greater than 20 MMBtu/hr   |   |                              |
| СО        | 100 ppmvd @ 3% O2  |   |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.4\*

Last Update: 6/21/2023

#### **Snack Chip Oven**

| Pollutant | Achieved in Practice or contained in the SIP  | Technologically<br>Feasible   | Alternate Basic<br>Equipment |
|-----------|---|---|------------------------------|
| VOC       | Use of PUC quality natural gas  |   |                              |
| SOx       | Use of PUC quality natural gas  |   |                              |
| PM10      | Use of PUC quality natural gas  |   |                              |
| NOx       | 30 ppmvd @ 3% O2 (0.036 lb/MMBtu) with use of low-NOx burner system and using natural gas as primary fuel, or equivalent controls | Low temperature selective catalytic reduction (SCR) to achieve 2.5 ppmvd NOx @ 3% O2 (0.003 lb/MMBtu) and use of PUC quality natural gas fuel, or equivalent controls |                              |
| СО        | 400 ppmvd @ 3% O2 and use of PUC quality natural gas  |   |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

# Best Available Control Technology (BACT) Guideline 1.6.5\*

Last Update: 4/20/2020

#### Cornnut (tm) cooker \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.6\*

Last Update: 4/20/2020

# Peanut Roasting Operation \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.6.7\*

Last Update: 5/11/2022

### Pistachio Roasting Operation \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.6.8\*

Last Update: 11/1/2022

# Pistachio Nut Column Dryer (including Silo Heaters and Sample Dryers rated < 5 MMBtu/hr)

| Pollutant | Achieved in Practice or contained in the SIP  | Technologically<br>Feasible                         | Alternate Basic<br>Equipment |
|-----------|---|---|------------------------------|
| VOC       | Natural gas, or     Post of the second  |   |                              |
| SOx       | 1) PUC-quality natural gas, or 2) LPG for operations with no access to a PUC-quality natural gas fuel source  |   |                              |
| PM10      | Natural gas, or     Description or Description or Description     Section of the section of |   |                              |
| NOx       | 1) Low NOX burner and natural gas @ 0.0832 lb-NOX/MMBtu, or 2) Low NOX burner and LPG @ 0.1248 lb-NOX/MMBtu for operations with no access to a natural gas fuel source  | Low NOx burner and natural gas @ 0.024 lb-NOx/MMBtu |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.6.9\*

Last Update: 5/11/2022

### Dryer - Almond Processing, < 10 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.10\*

Last Update: 5/11/2022

#### Oven - Wheat Drying, < or = 10 MMBtu/hour \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.11\*

Last Update: 5/9/2019

### **Direct-Fired Dairy Products Spray Dryer**

| Pollutant | Achieved in Practice or contained in the SIP  | Technologically<br>Feasible  | Alternate Basic<br>Equipment |
|-----------|---|--|------------------------------|
| VOC       | Use of PUC quality natural<br>gas fuel with LPG as backup<br>fuel   |  |                              |
| SOx       | Use of PUC quality natural gas fuel with LPG as backup fuel   |  |                              |
| PM10      | Use of a baghouse/dust collector and PUC quality natural gas fuel with LPG as backup fuel   |  |                              |
| NOx       | Use of a 2.2 ppmv NOx @<br>19% O2 (equivalent to 20<br>ppmv NOx @ 3% O2 or<br>0.0243 lb-NOx/MMBtu) low<br>NOx burner (or equivalent)<br>fired on PUC quality natural<br>gas with LPG as backup fuel | Use of a 1.0 ppmv NOx @ 19% O2 (equivalent to 9 ppmv NOx @ 3% O2 or 0.0109 lb-NOx/MMBtu) ultra low NOx burner (or equivalent) fired on PUC quality natural gas with LPG as backup fuel |                              |
| СО        | Use of a 42 ppmv CO @<br>19% O2 (equivalent to 387<br>ppmv CO @ 3% O2 or 0.286<br>lb-CO/MMBtu) burner (or<br>lower) fired on PUC quality<br>natural gas with LPG as<br>backup fuel                  |  |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

# Best Available Control Technology (BACT) Guideline 1.6.12\*

Last Update: 5/11/2022

#### Dryer - Whey, Filtermat, < 50 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.13\*

Last Update: 11/17/2020

#### **Dehydrator - Vegetable, Continuous Process \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.14\*

Last Update: 5/11/2022

### **Dehydrator Tunnel - Fruit, Natural Gas Fired \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.6.15\*

Last Update: 5/9/2019

### Dryer - Milk Spray, < 20 MMBtu/hr \*\*RESCINDED - see Guideline 1.6.11\*\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.16\*

Last Update: 5/11/2022

### Dryer - Seed Processing, < 20 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.17\*

Last Update: 4/20/2020

# Food Preparation Oven, <800 degrees Fahrenheit, = or < 3.7 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.18\*

Last Update: 4/20/2020

# Chicken Fryer - Natural Gas-Fired, Continuous Process, = or < 7 tons/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.19\*

Last Update: 4/20/2020

#### Meat Smokehouse - Natural Gas-Fired, < or = 2 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.20\*

Last Update: 8/16/2023

# Feather Meal Processing Rotary Dryer - Natural Gas Fired, High Ammonia Environment \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.21\*

Last Update: 4/20/2020

#### Flake Cereal Dryer - < 20 MMBtu/hr, Conveyor-fed \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.22\*

Last Update: 7/1/2020

## **Wood Drying Kiln**

| Pollutant | Achieved in Practice or contained in the SIP          | Technologically<br>Feasible   | Alternate Basic<br>Equipment |
|-----------|---|---|------------------------------|
| VOC       | Natural gas (good operating practice and maintenance) | <ol> <li>98% or greater capture and control<br/>(thermal oxidizer, catalytic oxidizer or<br/>equivalent)</li> </ol>   |                              |
|           |   | <ol> <li>95% or greater capture and control<br/>(carbon adsorption, provided the<br/>contaminated air stream does not<br/>contain any ingredient that could<br/>combust as a result of adsorption to<br/>carbon or equivalent)</li> </ol> |                              |
| SOx       | Natural gas (good operating practice and maintenance) |   |                              |
| PM10      | Natural gas (good operating practice and maintenance) |   |                              |
| Nox       | Natural gas (good operating practice and maintenance) | 1) ≤ 10 ppmvd @ 3% O2 (equivalent to 0.012 lb/MMBtu or less)  |                              |
|           |   | 2) ≤ 15 ppmvd @ 3% O2 (equivalent to 0.018 lb/MMBtu or less)  |                              |
| СО        | Natural gas (good operating practice and maintenance) | ≤ 25 ppmvd @ 3% O2  |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.23\*

Last Update: 8/16/2023

# Pistachio, Almond, and Walnut Dryers (<10 MMBtu/hr and <2,160 hr/yr) \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.24\*

Last Update: 12/30/2020

#### **Commercial Bakery Oven**

| Pollutant | Achieved in Practice or contained in the SIP  | Technologically<br>Feasible                               | Alternate Basic<br>Equipment |
|-----------|---|---|------------------------------|
| VOC       | Overall 98% capture and control efficiency with the use of thermal/catalytic incineration (or equivalent) with NOx emissions ≤ 60 ppmvd @ 3% O2 (0.073 lb-NOx/MMBtu) for thermal/catalytic incinerator units rated equal to or greater than 0.325 MMBtu/hr, and CO emissions of 800 ppmvd @ 3% O2 (or less) for thermal/catalytic incinerator units |   |                              |
| SOx       | Use PUC quality natural gas fuel  |   |                              |
| PM10      | Use PUC quality natural gas fuel  |   |                              |
| Nox       | 30 ppmvd @ 3% O2<br>equivalent to 0.036<br>lb/MMBtu and use of PUC<br>quality natural gas fuel  | Use of low Temperature – Selective<br>Catalytic Reduction | Electric Oven                |
| СО        | 800 ppmvd @ 3% O2 and<br>use of PUC quality natural<br>gas fuel   |   |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

# Best Available Control Technology (BACT) Guideline 1.6.25\*

Last Update: 12/29/2021

#### **Blood Drying Operation**

| Pollutant | Achieved in Practice or contained in the SIP  | Technologically<br>Feasible   | Alternate Basic<br>Equipment |
|-----------|---|---|------------------------------|
| VOC       | 95% Overall Capture and<br>Control Efficiency<br>(Incineration at 1,600 °F for<br>not less than<br>0.5 seconds, or equal) |   |                              |
| PM10      | 0.579 lb-PM10/ton of dried blood  |   |                              |
| NH3       | 0.6 lb-NH3/ton of dried<br>blood (Venturi<br>Scrubber vented to Packed<br>Bed Scrubber,<br>thermal oxidizer, or equal)    | Wet scrubber for NH3 removal prior to<br>thermal oxidizer (only if thermal oxidizer<br>is used and the oxidation of NH3 results<br>in more than 2.0 lb/day of NOx<br>emissions) |                              |
| H2S       |   | Wet scrubber for H2S removal prior to thermal oxidizer (only if thermal oxidizer is used and the oxidation of H2S results in more than 2.0 lb/day of SOx emissions              | )                            |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.26\*

Last Update: 8/16/2023

### Rotary Kiln Dryer for Poultry Litter\* Processing \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.28\*

Last Update: 8/16/2023

#### **Direct-Fired Conveyorized Hotdog Cooking Oven \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

# Best Available Control Technology (BACT) Guideline 1.6.29\*

Last Update: 8/16/2023

#### Indirect-fired Impingement Meatball Cooking Oven \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

# Best Available Control Technology (BACT) Guideline 1.6.30\*

Last Update: 3/24/2022

#### Heat-Sterilizing Kiln for Wood, Gaseous Fuel Fired

| Pollutant | Achieved in Practice or contained in the SIP   | Technologically<br>Feasible   | Alternate Basic<br>Equipment |
|-----------|--|---|------------------------------|
| VOC       | Use of natural gas-fired kiln,<br>or LPG-fired kiln (for<br>operations with no access to<br>a natural gas fuel source) |   |                              |
| SOx       | Use of natural gas-fired kiln,<br>or LPG-fired kiln (for<br>operations with no access to<br>a natural gas fuel source) |   |                              |
| PM10      | Use of natural gas-fired kiln,<br>or LPG-fired kiln (for<br>operations with no access to<br>a natural gas fuel source) |   |                              |
| NOx       | Use of natural gas-fired kiln,<br>or LPG-fired kiln (for<br>operations with no access to<br>a natural gas fuel source) | <ol> <li>Ultra-low NOx burner rated at ≤ 10 ppmvd @ 3% O2 using natural gas or LPG</li> <li>Low NOx burner rated at ≤ 30 ppmvd @ 3% O2 using natural gas, or ≤ 40 ppmvd @ 3% O2 using LPG (for operations with no access to a natural gas fuel source)</li> </ol> |                              |
| СО        | Use of natural gas-fired kiln,<br>or LPG-fired kiln (for<br>operations with no access to<br>a natural gas fuel source) | Burner rated at ≤ 25 ppmvd @ 3% O2  |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.6.31\*

Last Update: 5/14/2024

#### **Chain-driven Charbroiler**

| Pollutant | Achieved in Practice or contained in the SIP | Technologically<br>Feasible | Alternate Basic<br>Equipment |
|-----------|--|-----------------------------|------------------------------|
| VOC       | Catalytic Oxidizer (86% control for VOC)     |                             |                              |
| PM10      | Catalytic Oxidizer (83% control for PM10)    |                             |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.7.1\*

Last Update: 8/16/2023

#### Oven - Polyethylene Curing, = or < 20 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.7.2\*

Last Update: 5/11/2022

#### Oven - Plastisol curing/fusing, = or < 2.5 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.7.3\*

Last Update: 5/11/2022

### Oven - Parts Cleaning, Burnoff or Burnout \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.8.1\*

Last Update: 10/26/2009

# Refinery Heater, fired on refinery fuel gas and/or natural gas (< or = 50 MM Btu/hr) \*\*RESCINDED\*\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.8.2\*

Last Update: 10/26/2009

# Refinery Heater, fired on refinery fuel gas and/or natural gas ( > 50 MM Btu/hr) \*\*RESCINDED\*\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

## Best Available Control Technology (BACT) Guideline 1.8.3\*

Last Update: 10/26/2009

#### Gas Dehydration - Glycol Reboiler \*\*RESCINDED\*\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.8.4\*

Last Update: 10/26/2009

#### Heater Treater < 20 MMBtu/hr, Natural Gas Fired \*\*RESCINDED\*\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.8.5\*

Last Update: 3/29/2023

#### Process heaters\*\* with heat input rate =< 20 MMBtu/hr

| Pollutant | Achieved in Practice or contained in the SIP       | Technologically<br>Feasible          | Alternate Basic<br>Equipment |
|-----------|--|--------------------------------------|------------------------------|
| VOC       | PUC quality natural gas or propane with LPG backup |                                      |                              |
| SOx       | PUC quality natural gas or propane with LPG backup |                                      |                              |
| PM10      | PUC quality natural gas or propane with LPG backup |                                      |                              |
| NOx       | 9 ppmvd @ 3% O2<br>(0.011 lb/MMBtu)                | 5 ppmvd @ 3% O2<br>(0.0061 lb/MMBtu) |                              |
| СО        | 50 ppmvd @ 3% O2<br>(0.037 lb/MMBtu)               |                                      |                              |

<sup>\*\*</sup>This guideline is applicable to units fired solely on natural gas from a PUC regulated source or propane/LPG. This guideline is not applicable to Refinery Units, Oilfield Steam Generators, or Electric Utility Steam Generating Units.

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.8.6\*

Last Update: 3/1/2024

### Natural Gas-Fired Process Heater (> 20 MMBtu/hr)

| Pollutant | Achieved in Practice or contained in the SIP | Technologically<br>Feasible | Alternate Basic<br>Equipment |
|-----------|--|-----------------------------|------------------------------|
| SOx       | Use of PUC-Quality Natural<br>Gas            |                             |                              |
| PM10      | Use of PUC-Quality Natural<br>Gas            |                             |                              |
| NOx       | 5 ppmvd @ 3% O2                              | 2.5 ppmvd @ 3% O2           |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.8.7\*

Last Update: 3/1/2024

### Hydrogen Production - Steam Hydrocarbon Reformer: Process Heater

| Pollutant | Achieved in Practice or contained in the SIP  | Technologically<br>Feasible             | Alternate Basic<br>Equipment   |
|-----------|---|---|--|
| SOx       | Process heater firing on a<br>fuel meeting the District<br>Rule 4320 fuel sulfur<br>requirement of 5 grains |   | Hydrogen     production via     electrolysis   |
|           |   |   | 2) Hydrogen production via partial oxidation process**, autothermal reforming or gasification              |
| PM10      | Process heater meeting a limit of 0.0039 lb/MMBtu   |   | Hydrogen     production via     electrolysis   |
|           |   |   | Hydrogen     production via partial     oxidation process**,     autothermal reforming     or gasification |
| NOx       | Process heater meeting a limit of 2.7 ppmv @ 3% O2  | Process Heater meeting 2.5 ppmv @ 3% O2 | Hydrogen     production via     electrolysis   |
|           |   |   | Hydrogen     production via partial     oxidation process**,     autothermal reforming     or gasification |

<sup>\*\*</sup> Partial oxidation includes the Grannus Process™ (2023)

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.1\*

Last Update: 5/11/2022

#### Metal Parts Washer - Natural Gas-fired \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.2\*

Last Update: 4/20/2020

### Sulfuric Acid Plant Start-up Heater - < 15 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.3\*

Last Update: 6/9/2022

### Crematory (Funeral Service and Crematories, Animal Crematory) - Gaseous Fuel Fired

| Pollutant | Achieved in Practice or contained in the SIP   | Technologically<br>Feasible                                | Alternate Basic<br>Equipment |
|-----------|--|--|------------------------------|
| VOC       | Natural Gas/LPG fuel and a<br>secondary combustion<br>chamber (afterburner) ><br>1,600 ° F |  |                              |
| SOx       | Natural Gas/LPG fuel   | Natural Gas/LPG fuel with a Dry<br>Scrubber and a Baghouse |                              |
| PM10      | Natural Gas/LPG fuel and a secondary combustion chamber (afterburner) > 1,600 ° F          | Natural Gas/LPG fuel with a Baghouse                       |                              |
| NOx       | Natural Gas/LPG fuel and<br>60 ppmv @ 3% O2 (0.073<br>lb/MMBtu) without charge             |  |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.4\*

Last Update: 5/11/2022

### Dryer - Natural Gas Fired, Solvent-Laden Towels, = or < 950 lb towels/day \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.5\*

Last Update: 5/11/2022

#### Gas Absorption Chiller - Natural Gas Fired, < 20 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.6\*

Last Update: 8/16/2023

#### Asphalt-Surface-Repair Heater, Propane Fired, < 20 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.7\*

Last Update: 8/16/2023

### Auxiliary Burner System, Dryer, Natural Gas Fired, < 20 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.8\*

Last Update: 4/20/2020

#### Municipal-waste Incinerator - < 750 lb waste/hr feed rate \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.9\*

Last Update: 8/16/2023

#### Molded Paper Products Dryer - Natural Gas Fired, < 20 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.10\*

Last Update: 8/16/2023

#### Mineral Products Spray Dryer - Natural Gas Fired, < or = 20 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.11\*

Last Update: 7/1/2020

#### Commercial Laundry Dryer, Natural Gas-Fired - < 5.0 MMBtu/hr

| Pollutant | Achieved in Practice or contained in the SIP  | Technologically<br>Feasible  | Alternate Basic<br>Equipment |
|-----------|---|--|------------------------------|
| VOC       | Use of PUC quality natural gas fuel   |  |                              |
| SOx       | Use of PUC quality natural gas fuel   |  |                              |
| PM10      | Use of a lint collector with a control efficiency of ≥ 75% or equivalent and PUC quality natural gas fuel   | <ul> <li>1) Use of a baghouse with a control efficiency of ≥ 99% or equivalent and PUC quality natural gas fuel</li> <li>2) Use of a venturi scrubber with a control efficiency of ≥ 90% or equivalent and PUC quality natural gas fuel</li> </ul> |                              |
| Nox       | Use of 30 ppmvd NOx @<br>3% O2 (equivalent to 0.0365<br>lb-NOx/MMBtu) low NOx<br>burner (or equivalent) fired<br>on PUC quality natural gas<br>fuel | Use of 9.2 ppmvd @ 3% O2 (equivalent to 0.0111 lb-NOx/MMBtu) ultra-low NOx burner (or equivalent) fired on PUC quality natural gas fuel  |                              |
| СО        | Use of 114 ppmvd CO @<br>3% O2 (equivalent to 0.084<br>lb-CO/MMBtu) burner (or<br>lower) fired on PUC quality<br>natural gas fuel                   | Use of 4.6 ppmvd CO @ 3% O2 (equivalent to 0.0034 lb-CO/MMBtu) burner fired on PUC quality natural gas fuel  |                              |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.12\*

Last Update: 4/20/2020

#### **Transportable Diesel-Fired Nitrogen Vaporizer \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.13\*

Last Update: 8/16/2023

#### **Blood Meal Processing Ring Dryer Burner \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.14\*

Last Update: 8/16/2023

### Natural Gas Fired Dryer with High Turndown Ratio \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.15\*

Last Update: 4/20/2020

#### **Jet Aircraft Fire Training Facility \*RESCINDED\***

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

### Best Available Control Technology (BACT) Guideline 1.9.16\*

Last Update: 8/16/2023

### Power Oxidizer - VOC Incineration and Power Generation, < or = 35 MMBtu/hr \*RESCINDED\*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.