



# Maine Air Inventory Reporting Information System (MAIRIS)

2019 International Emission  
Inventory Conference  
Dallas, TX

July 31, 2019

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MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

*Protecting Maine's Air, Land and Water*

# MAIRIS background

- Since 2010
- 2009 & earlier: iSteps
- ~130 facilities this year (162 in 2010)
- Pollutants:
  - CAPs and GHGs annually
  - HAPs every 3 years
- Small staff (5-7; 2 work on inventories)





## TEST Main Menu

- Facility Site List
- Information Links
- Certify

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Sorted column indicator: \*\*

## Welcome to MAIRIS TEST

Welcome to MAIRIS TEST

# Facility homepage view





**TEST Main Menu**

- Facility Site List
- Information Links
- Certify

**Current page indicator:** <<

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### Welcome to MAIRIS TEST

Welcome to MAIRIS TEST

# Facility homepage view





## TEST Main Menu

[Facility Site List](#)  
[Information Links](#)

### Administration

[Admin Reports](#)  
[Configuration](#)  
[EFIS Integration](#)  
[Manage Inventory](#)  
[People and Accounts](#)

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## Welcome to MAIRIS TEST

Welcome to MAIRIS TEST

# Administrator homepage view



## Facility Site List

### Instructions:

- The grid below displays all facilities associated with this user's account.
- To enter emissions inventory information, click on the name in the **Facility Name** column.
- The **Inventory Status** column displays the state of the facility's inventory. Clicking on the link will redirect the browser to the Inventory Status page.

<u>MAIRIS Facility Id</u>	<u>Air License Number</u>	<u>Facility Name</u>	<u>Facility Operating Status</u>	<u>Inventory Status</u>
2300500009	A-000077	<a href="#">ABC Facility</a>	Operating	<a href="#">Initial</a>
2301100004	A-000372	<a href="#">VA MAINE HEALTH CARE SYSTEM - AUGUSTA</a>	Operating	<a href="#">Initial</a>

Export options: [CSV](#) | [Excel](#) | [PDF](#)

### TEST Main Menu

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**TEST Main Menu**

- Facility Site List
- Information Links
- Certify

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**ABC Facility**

- Facility Detail** <<
- Inventory Status
- Document List (0)
- Facility Reports

---

**EMISSIONS UNITS**

- + BOILER #1
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

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**Current page indicator:** <<

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## ABC Facility : Initial Facility Detail

- Instructions:**
- Verify the details of your facility below.
  - Please note any corrections in the **Comment** field or click on the **Help Request** link in the upper right of your browser.
  - Select the appropriate **Facility Operating Status** and click **Save** at the bottom of the screen when complete.

\* Required Fields Marked By Asterisk

**Facility Information**


<b>MAIRIS Facility ID:</b>	2300500009	💡
<b>Facility Name:</b>	ABC Facility	
<b>Facility Site Description:</b>	FOOD PRODUCTS	
<b>Parent Company:</b>	ABC Facility Corporation	
<b>NAICS Code:</b>	311422	💡
<b>NAICS Code Desc:</b>	Specialty Canning	
<b>Comment (required for Facility Operating Status other than Operating):</b>	<input type="text"/>	

Sorted column indicator: \*\*

\* **Facility Operating Status:**  

**Operating Status Year:** 2018 

**Physical Address**

**Physical Address - Street:** 123 Main Street 

**Physical Address - City:** Coopers Mills

**Physical Address - State:** ME

**Facility Address Zip Code:** 04341


**Geographic Coordinates**


**Latitude:** 43.678102

**Longitude:** -70.254537

**Air Emissions License Information**

**Air License Number:** A-000077

**License Type:** Synthetic Minor 

**Air License Expiration Date:** 9/19/24 

**License Engineer Name:** BENJAMIN GOUNDIE

**License Engineer Telephone:** (207) 287-7688

Save

Reset

Cancel and Return





- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

Current page indicator: <<  
Required field indicator: \*  
Sorted column indicator: \*\*

**NAICS Code:** 311422

**NAICS Code Desc:** Specialty Canning

**Comment (required for Facility Operating Status other than Operating):**

\* **Facility Operating Status:**

- Operating
- Operating
- Permanently Shutdown
- Temporarily Shutdown
- Under Construction

**Operating Status Year:** 2018

**Physical Address**

**Physical Address - Street:** 123 Main Street

**Physical Address - City:** Coopers Mills

**Physical Address - State:** ME

**Facility Address Zip Code:** 04341

**Geographic Coordinates**

**Latitude:** 43.678102

**Longitude:** -70.254537

**Air Emissions License Information**

**Air License Number:** A-000077

**License Type:** Synthetic Minor

**Air License Expiration Date:** 9/19/24



- BOILER #1** <<
- (1) EXHAUST POINTS
  - o STACK 1 FOR BOILER #1
- (2) EMISSIONS PROCESSES
  - o #6 FUEL OIL / BUNKER C EMISSIONS (SCC 10200401)
  - o NATURAL GAS EMISSIONS (SCC 10200602)
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

**Current page indicator:** <<

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**Sorted column indicator:** \*\*

- The **Exhaust Points** section at the bottom of the screen lists the stack(s) or fugitive point to which this equipment exhausts.
- Press **Save** at the bottom of the screen at any time to save your progress and before exiting this page.

**\* Required Fields Marked By Asterisk**

Emissions Unit Information	
<b>Emissions Unit Id:</b>	001
<b>Emissions Unit Description:</b>	BOILER #1
<b>Unit Type Code:</b>	100
<b>Unit Type Description:</b>	Boiler
<b>Design Capacity:</b>	39.0
<b>Design Capacity Description:</b>	E6BTU/HR
<b>Associated CEMS?:</b>	
<b>Unit Operating Status Year:</b>	2018
<b>Comment:</b>	<div style="border: 1px solid gray; height: 100px; width: 100%;"></div>
<b>* Unit Operating Status:</b>	<input type="text" value="Operating"/> <span style="float: right;">💡</span>

**Emissions Unit Operating Details**

- The Operating Details describe the hours the process is active or operating during the reporting year.
- Enter the average **Hours Per Day**, **Days Per Week** and **Weeks Per Year** and press

\* Unit Operating Status:

Operating



### Emissions Unit Operating Details

- The Operating Details describe the hours the process is active or operating during the reporting year.
- Enter the average **Hours Per Day**, **Days Per Week** and **Weeks Per Year** and press the **Calculate Hours** button. **Hours Per Year** will be calculated for you.
- **Hours Per Day** and **Days Per Week** may be entered with one decimal place; **Weeks Per Year** must be an integer.

Inventory Year:

2018

Hours Per Day:

Days Per Week:

Weeks Per Year:

\* Hours Per Year:



Summer Operating Days:



Save

Reset

Calculate Hours

### Exhaust Point(s) Associated With This Emissions Unit

Exhaust Point ID	Exhaust Point Name	Exhaust Type
EXH001	STACK 1 FOR BOILER #1	Vertical

Export options: [CSV](#) | [Excel](#) | [PDF](#)



\* Unit Operating Status:

Operating



### Emissions Unit Operating Details

- The Operating Details describe the hours the process is active or operating during the reporting year.
- Enter the average **Hours Per Day**, **Days Per Week** and **Weeks Per Year** and press the **Calculate Hours** button. **Hours Per Year** will be calculated for you.
- **Hours Per Day** and **Days Per Week** may be entered with one decimal place; **Weeks Per Year** must be an integer.

Inventory Year: 2018

Hours Per Day:

Days Per Week:

Weeks Per Year:

\* Hours Per Year:



Summer Operating Days:



Save

Reset

Calculate Hours

### Exhaust Point(s) Associated With This Emissions Unit

Exhaust Point ID	Exhaust Point Name	Exhaust Type
EXH001	STACK 1 FOR BOILER #1	Vertical

Export options: [CSV](#) | [Excel](#) | [PDF](#)



**STACK 1 FOR BOILER #1 <<**


- (2) EMISSIONS PROCESSES
  - #6 FUEL OIL / BUNKER C EMISSIONS (SCC 10200401)
  - NATURAL GAS EMISSIONS (SCC 10200602)
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

Current page indicator: <<

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**EXHAUST POINT INFORMATION**

<b>Exhaust Point ID:</b>	EXH001
<b>Exhaust Point Name:</b>	STACK 1 FOR BOILER #1
<b>Exhaust Type:</b>	Vertical 
<b>Stack Height (feet):</b>	150
<b>Stack Diameter (feet):</b>	6
<b>Stack Exit Gas Velocity (ft/sec):</b>	0.1
<b>Stack Exit Gas Flow Rate (acfm):</b>	
<b>Stack Exit Gas Temperature (Fahrenheit):</b>	50

**Emissions Unit(s) Associated With This Exhaust Point**

Emissions Unit Desc	Percent Emissions Unit's Exhaust	Comment
BOILER #1	100.0	

Export options: [CSV](#) | [Excel](#) | [PDF](#)

**EXHAUST POINT GEOGRAPHIC COORDINATES**

<b>Latitude:</b>	43.678102
<b>Longitude:</b>	-70.254537

**EXHAUST POINT OPERATING STATUS AND COMMENT**

**Comment:**

\* Exhaust Point Operating Status: Operating ▼





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### ABC Facility

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### EMISSIONS UNITS

- BOILER #1

- (1) EXHAUST POINTS
  - o STACK 1 FOR BOILER #1

### (2) EMISSIONS PROCESSES

- o **#6 FUEL OIL / BUNKER C <<**
    - EMISSIONS (SCC 10200401)
  - o NATURAL GAS
    - EMISSIONS (SCC 10200602)
- + BOILER #3
  - + BOILER #4
  - + GENERATOR #1
  - + GENERATOR #2
  - + GREENHOUSE GASES

## ABC Facility : Initial Emissions Process Detail

### Instructions:

- Verify the details of the Emissions Process below and use the **Comment** field to note any errors.
- To enter throughput values, you must first select and set **Process Material**; select and set **Material Throughput Units**; and select the **Process Descriptor**.
- You may enter **Total Annual Throughput** or enter each monthly value and **Sum Throughput**.
- Press **Save** at any time to save your progress.

**Note:** For the purpose of petroleum product measurement, a barrel is 42 gallons.

\* Required Fields Marked By Asterisk

### Emissions Process Information

<b>Emissions Unit Description:</b>	BOILER #1
<b>Emissions Process Description:</b>	#6 FUEL OIL / BUNKER C
<b>MAIRIS ID:</b>	001-2
<b>Source Classification Code (SCC):</b>	10200401
<b>SCC Description:</b>	External Combustion Boilers; Industrial; Residual Oil; Grade 6 Oil
<b>Emissions Process Comment:</b>	<input type="text"/>



▼ NATURAL GAS  
EMISSIONS (SCC 10200602)

- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

Current page indicator: <<

Required field indicator: \*

Sorted column indicator: \*\*

**MAIRIS ID:** 001-2  
**Source Classification Code (SCC):** 10200401  
**SCC Description:** External Combustion Boilers; Industrial; Residual Oil; Grade 6 Oil

**Emissions Process Comment:**

\* **Operating Status:**

Operational ▼

**Process Throughput**

**Inventory Year:** 2018

\* **Process Material:**

Residual Oil - No. 6 ▼

Set Process Material



\* **Material Throughput Units:**

Thousands of Gallons ▼

Set Throughput Units



\* **Process Descriptor:**

I (Burned) ▼



**January Monthly Throughput:**

0

**February Monthly Throughput:**

0

**March Monthly Throughput:**

0


**April Monthly Throughput:**

0

**May Monthly Throughput:**

0



<b>February Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>March Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>April Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>May Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>June Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>July Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>August Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>September Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>October Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>November Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>December Monthly Throughput:</b>	<input type="text" value="0"/>	
<b>* Total Annual Throughput:</b>	<input type="text" value="0"/>	
<input type="button" value="Sum Throughput"/> <input type="button" value="Clear Throughput"/>		

**Additional Fuel Parameters**


Some emission factors require the use of ash and sulfur content to properly calculate emissions. Enter the ash and sulfur content of the fuel, expressed in percent (%).

<b>Ash Content (%):</b>	<input type="text"/>
<b>Sulfur Content (%):</b>	<input type="text"/>

<input type="button" value="Save"/>	<input type="button" value="Reset"/>
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<b>February Monthly Throughput:</b>	<input type="text" value="667"/>	
<b>March Monthly Throughput:</b>	<input type="text" value="324"/>	
<b>April Monthly Throughput:</b>	<input type="text" value="834"/>	
<b>May Monthly Throughput:</b>	<input type="text" value="432"/>	
<b>June Monthly Throughput:</b>	<input type="text" value="234"/>	
<b>July Monthly Throughput:</b>	<input type="text" value="435"/>	
<b>August Monthly Throughput:</b>	<input type="text" value="273"/>	
<b>September Monthly Throughput:</b>	<input type="text" value="315"/>	
<b>October Monthly Throughput:</b>	<input type="text" value="435"/>	
<b>November Monthly Throughput:</b>	<input type="text" value="625"/>	
<b>December Monthly Throughput:</b>	<input type="text" value="364"/>	
<b>* Total Annual Throughput:</b>	<input type="text" value="5181"/>	
<input type="button" value="Sum Throughput"/> <input type="button" value="Clear Throughput"/>		

**Additional Fuel Parameters**

Some emission factors require the use of ash and sulfur content to properly calculate emissions. Enter the ash and sulfur content of the fuel, expressed in percent (%).

<b>Ash Content (%):</b>	<input type="text"/>
<b>Sulfur Content (%):</b>	<input type="text" value="0.05"/>

<input type="button" value="Save"/>	<input type="button" value="Reset"/>
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Required field indicator: \*

Sorted column indicator: \*\*

### Process Throughput

<b>Inventory Year:</b>	2018
* <b>Process Material:</b>	Residual Oil - No. 6 <input type="button" value="Set Process Material"/>
* <b>Material Throughput Units:</b>	Thousands of Gallons <input type="button" value="Set Throughput Units"/>
* <b>Process Descriptor:</b>	I (Burned) <input type="button" value="Set Process Material"/>
<b>January Monthly Throughput:</b>	<input type="text" value="243"/>
<b>February Monthly Throughput:</b>	<input type="text" value="667"/>
<b>March Monthly Throughput:</b>	<input type="text" value="324"/>
<b>April Monthly Throughput:</b>	<input type="text" value="834"/>
<b>May Monthly Throughput:</b>	<input type="text" value="432"/>
<b>June Monthly Throughput:</b>	<input type="text" value="234"/>
<b>July Monthly Throughput:</b>	<input type="text" value="435"/>
<b>August Monthly Throughput:</b>	<input type="text" value="273"/>
<b>September Monthly Throughput:</b>	<input type="text" value="315"/>
<b>October Monthly Throughput:</b>	<input type="text" value="435"/>
<b>November Monthly Throughput:</b>	<input type="text" value="625"/>
<b>December Monthly Throughput:</b>	<input type="text" value="364"/>
* <b>Total Annual Throughput:</b>	<input type="text" value="5181"/> <input type="button" value="Sum Throughput"/> <input type="button" value="Clear Throughput"/>

### Additional Fuel Parameters

Some emission factors require the use of ash and sulfur content to properly calculate emissions. Enter the ash and sulfur content of the fuel, expressed in percent (%).

<b>Ash Content (%):</b>	<input type="text"/>
<b>Sulfur Content (%):</b>	<input type="text" value="0.05"/>



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## ABC Facility

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## EMISSIONS UNITS

- BOILER #1
- (1) EXHAUST POINTS
  - o STACK 1 FOR BOILER #1
- (2) EMISSIONS PROCESSES
  - o **#6 FUEL OIL / BUNKER C <<**  
EMISSIONS (SCC 10200401)
  - o NATURAL GAS  
EMISSIONS (SCC 10200602)
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES

## ABC Facility : Initial

## Emissions Process Detail

### Information

- The emissions process has been successfully updated.

### Instructions:

- Verify the details of the Emissions Process below and use the **Comment** field to note any errors.
- To enter throughput values, you must first select and set **Process Material**; select and set **Material Throughput Units**; and select the **Process Descriptor**.
- You may enter **Total Annual Throughput** or enter each monthly value and **Sum Throughput**.
- Press **Save** at any time to save your progress.

**Note:** For the purpose of petroleum product measurement, a barrel is 42 gallons.

### \* Required Fields Marked By Asterisk

[View Pollutants](#)

[Reset](#)

### Emissions Process Information

<b>Emissions Unit Description:</b>	BOILER #1
<b>Emissions Process Description:</b>	#6 FUEL OIL / BUNKER C
<b>MAIRIS ID:</b>	001-2



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### EMISSIONS UNITS

- BOILER #1
  - (1) EXHAUST POINTS
    - o STACK 1 FOR BOILER #1
  - (2) EMISSIONS PROCESSES
    - o #6 FUEL OIL / BUNKER C
      - EMISSIONS (SCC 10200401) <<
      - o NATURAL GAS EMISSIONS (SCC 10200602)
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2

## ABC Facility : Initial

## Emissions Summary Page

### Instructions:

- To enter emissions for a pollutant, select the **Pollutant Code** for that pollutant.
- To add additional pollutants, select the **Add Pollutant** button.
- To remove a pollutant from the list, select the **Remove Pollutant** button.

**\* Required Pollutants Marked By Asterisk May Not Be Removed**

Emissions Unit Description: BOILER #1

Process Description: #6 FUEL OIL / BUNKER C

Pollutant Code	Pollutant Name	Pollutant Category	Calculation Method	Last Year's Reported Emissions	Current Year's Estimated Emissions
7439921	Lead	CAP *	Trade Group Emission Factor (no Control Efficiency used) 0.0042 LB per E3GAL/I-BURNED		0.011 Tons
CO	Carbon Monoxide	CAP *			
			EPA Emission Factor		



- (2) EMISSIONS PROCESSES
- #6 FUEL OIL / BUNKER C EMISSIONS (SCC 10200401) <<
  - NATURAL GAS EMISSIONS (SCC 10200602)

- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

Current page indicator: <<

Required field indicator: \*

Sorted column indicator: \*\*

Pollutant Code	Pollutant Name	Pollutant Category	Calculation Method	Last Year's Reported Emissions	Current Year's Estimated Emissions
<a href="#">7439921</a>	Lead	CAP *	Trade Group Emission Factor (no Control Efficiency used) 0.0042 LB per E3GAL/I-BURNED		0.011 Tons
<a href="#">CO</a>	Carbon Monoxide	CAP *			
<a href="#">NH3</a>	Ammonia	CAP *	EPA Emission Factor (no Control Efficiency used) 0.8 LB per E3GAL/I-BURNED	2	Tons
<a href="#">NOX</a>	Nitrogen Oxides	CAP *	Trade Group Emission Factor (no Control Efficiency used) 55.0 LB per E3GAL/I-BURNED	142	Tons
<a href="#">PM10-FIL</a>	Particulate Matter, 10 microns, filterable	CAP *	Trade Group Emission Factor (no Control Efficiency used) 18.0 LB per E3GAL/I-BURNED	46.6	Tons
<a href="#">PM25-FIL</a>	Particulate Matter, 2.5 microns, filterable	CAP *	Trade Group Emission Factor (no Control Efficiency used) 4.0 LB per E3GAL/I-BURNED	10	Tons
<a href="#">SO2</a>	Sulfur Dioxide	CAP *	EPA Emission Factor (no Control Efficiency used) 157.0 LB per E3GAL/I-BURNED	2E+1	Tons



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**EMISSIONS UNITS**

- BOILER #1

(1) EXHAUST POINTS

- STACK 1 FOR BOILER #1

(2) EMISSIONS PROCESSES

- #6 FUEL OIL / BUNKER C

**EMISSIONS (SCC 10200401)**

- NATURAL GAS EMISSIONS (SCC 10200602)

+ BOILER #3

+ BOILER #4

+ GENERATOR #1

+ GENERATOR #2

+ GREENHOUSE GASES

+ SAFETY KLEEN PARTS WASHER

+ WATER HEATER #1

**Current page indicator: <<**

**Required field indicator: \***

**Sorted column indicator: \*\***

www.maine.gov/dep/air/

**ABC Facility : Initial**

**Emissions Summary Page**

Add Pollutant Remove Pollutant Cancel and Return

**Instructions:**

- To enter emissions for a pollutant, select the **Pollutant Code** for that pollutant.
- To add additional pollutants, select the **Add Pollutant** button.
- To remove a pollutant from the list, select the **Remove Pollutant** button.

**\* Required Pollutants Marked By Asterisk May Not Be Removed**

**Emissions Unit Description:** BOILER #1

**Process Description:** #6 FUEL OIL / BUNKER C

<u>Pollutant Code</u>	<u>Pollutant Name</u>	<u>Pollutant Category</u>	<u>Calculation Method</u>	<u>Last Year's Reported Emissions</u>	<u>Current Year's Estimated Emissions</u>
<a href="#">7439921</a>	Lead	CAP *	Trade Group Emission Factor (no Control Efficiency used) 0.0042 LB per E3GAL/I-BURNED		0.011 Tons
<a href="#">CO</a>	Carbon Monoxide	CAP *			
<a href="#">NH3</a>	Ammonia	CAP *	EPA Emission Factor (no Control Efficiency used) 0.8 LB per E3GAL/I-BURNED	2	Tons
<a href="#">NOX</a>	Nitrogen Oxides	CAP *	Trade Group Emission Factor (no Control Efficiency used) 55.0 LB per E3GAL/I-BURNED	142	Tons
<a href="#">PM10-FIL</a>	Particulate Matter, 10 microns, filterable	CAP *	Trade Group Emission Factor (no Control Efficiency used) 18.0 LB per E3GAL/I-BURNED	46.6	Tons
<a href="#">PM25-FIL</a>	Particulate Matter, 2.5 microns, filterable	CAP *	Trade Group Emission Factor (no Control Efficiency used) 4.0 LB per E3GAL/I-BURNED	10	Tons
<a href="#">SO2</a>	Sulfur Dioxide	CAP *	EPA Emission Factor (no Control Efficiency used) 157.0 LB per E3GAL/I-BURNED	2E+1	Tons

Facility Detail  
Inventory Status  
Document List (0)  
Facility Reports

**EMISSIONS UNITS**

- BOILER #1

(1) EXHAUST POINTS

- o STACK 1 FOR BOILER #1

(2) EMISSIONS PROCESSES

- o #6 FUEL OIL / BUNKER C

**EMISSIONS (SCC  
10200401)**

<<

- o NATURAL GAS

EMISSIONS (SCC 10200602)

+ BOILER #3

+ BOILER #4

+ GENERATOR #1

+ GENERATOR #2

+ GREENHOUSE GASES

+ SAFETY KLEEN PARTS WASHER

+ WATER HEATER #1

**Current page indicator:** <<

**Required field indicator:** \*

**Sorted column indicator:** \*\*

**Method** button to set your selection.

- Enter the **Estimated Emissions** and **Emissions Comment**.
- If using an emission factor, a list of emission factors for the pollutant will appear with additional instructions.
- Press **Save** when complete.

**\* Required Fields Marked By Asterisk**

**Emissions Data**

<b>Emissions Unit Description:</b>	BOILER #1
<b>Emissions Process Description:</b>	#6 FUEL OIL / BUNKER C
<b>Source Classification Code (SCC):</b>	10200401
<b>SCC Description:</b>	External Combustion Boilers; Industrial; Residual Oil; Grade 6 Oil
<b>Pollutant Code:</b>	CO
<b>Pollutant Name:</b>	Carbon Monoxide
<b>Pollutant Category:</b>	CAP

**Emissions Calculation Method:**

Set Calculation Method

Remember to **SAVE** your changes before leaving

Cancel and Return

- Select --
- Select --
- CEMS - Continuous Emission Monitoring System
- EPA Speciation Profile
- Engineering Judgement / Manual Calculation
- Manufacturer Specification
- Material Balance
- Stack Test (no Control Efficiency used)
- Stack Test (pre-control) plus Control Efficiency
- State/Local Speciation Profile
- Calculated Using An Emission Factor

**\* Emissions Calculation Method:**

Calculated Using An Emission Factor ▼



Set Calculation Method

**\* Available Emission Factors:**



- 5.0 LB per E3GAL/Residual Oil - No. 6  
Ash/N Sulfur/N  
CO emissions may increase by factors of 10 to 100 if the unit is improperly operated or not well mai  
AP-42 Table 1.3-1
- 6.1 LB per E3GAL/Residual Oil - No. 6  
Ash/N Sulfur/N  
Calculated from 2015 stack test

**Estimated Emissions:**



16

Tons Per Year

(Emission Factor 6.1 \* Annual Throughput 5181) / 2000

Calculate Emissions

View Factor Details

Save

Cancel and Return

Add Emission Factor





## TEST Main Menu

Facility Site List  
Information Links  
Certify

## ABC Facility

Facility Detail  
Inventory Status  
Document List (0)

**Facility Reports** <<

## EMISSIONS UNITS

- BOILER #1
- (1) EXHAUST POINTS
  - o STACK 1 FOR BOILER #1
- (2) EMISSIONS PROCESSES
  - o **#6 FUEL OIL / BUNKER C** <<<  
EMISSIONS (SCC 10200401)
  - o NATURAL GAS  
EMISSIONS (SCC 10200602)
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

Current page indicator: <<

## ABC Facility : Initial

## Facility Reports

### Instructions:

- To run an analysis report, select the title of the report you wish to see.
- The Completeness Report must be run prior to certifying and submitting your emissions inventory.
- There must be zero critical errors OR all critical errors must be justified prior to certifying your submission.

### Completeness Report

#### Last Run:

A completeness report has not been run for the current inventory year.

#### Status:

No warnings or errors.

- [Run Completeness Report](#)

### Facility Reports

- [Facility Contacts](#)
- [Full Facility Report \(PDF\)](#)
- [Comparison Report of the current emissions to the last inventory year emissions. \(PDF\)](#)
- [HAP Comparison Report \(PDF\)](#)
- [Facility License Limit Report \(PDF\)](#)





- TEST Main Menu**
- Facility Site List
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- ABC Facility**
- Facility Detail
  - Inventory Status
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  - Facility Reports
- EMISSIONS UNITS**
- BOILER #1** <<
- (1) EXHAUST POINTS
    - o STACK 1 FOR BOILER #1
  - (2) EMISSIONS PROCESSES
    - o #6 FUEL OIL / BUNKER C EMISSIONS (SCC 10200401)
    - o NATURAL GAS EMISSIONS (SCC 10200602)
  - + BOILER #3
  - + BOILER #4
  - + GENERATOR #1
  - + GENERATOR #2
  - + GREENHOUSE GASES

### ABC Facility : Initial Completeness Report

Review the results of your completeness report below. If errors may be justified, a justification field will appear. Type in a comment and reference any supporting documents you may have attached to the inventory. If a justification field does not appear, you must return to your inventory and correct the errors. The completeness report may not contain any unjustified errors for the inventory to be submitted to the DEP.

#### Completeness Report

**Last Run Date:** 04/11/2019 2:21 PM

**Inventory Year:** 2018

Inventory Item	Check Number	Check Name	Check Description	Error Level	Justification
<a href="#">Process: NATURAL GAS</a>	915	Null Estimated Emissions Value	Estimated Emissions field must be reported (at least a value of zero).	Critical	Cannot Justify
<a href="#">Process: NATURAL GAS</a>	364	Null Required Combustion Pollutant(s)	If an emissions process is a combustion process, the 11 required pollutants associated with combustion must have emissions reported for each one or be justified.	Critical	<a href="#">Justify</a>

Export options: [CSV](#) | [Excel](#) | [PDF](#)





### TEST Main Menu

- [Facility Site List](#)
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- [Certify](#)

### ABC Facility

- [Facility Detail](#)
- [Inventory Status](#)
- [Document List \(0\)](#)
- [Facility Reports](#)

### EMISSIONS UNITS

- BOILER #1

#### (1) EXHAUST POINTS

- STACK 1 FOR BOILER #1

#### (2) EMISSIONS PROCESSES

- #6 FUEL OIL / BUNKER C EMISSIONS (SCC 10200401)
- **NATURAL GAS** EMISSIONS (SCC 10200602) <<

+ BOILER #3

+ BOILER #4

+ GENERATOR #1

+ GENERATOR #2

+ GREENHOUSE GASES

## ABC Facility : Initial

## Completeness Report

Review the results of your completeness report below. If errors may be justified, a justification field will appear. Type in a comment and reference any supporting documents you may have attached to the inventory. If a justification field does not appear, you must return to your inventory and correct the errors. The completeness report may not contain any unjustified errors for the inventory to be submitted to the DEP.

### Completeness Report

<b>Last Run Date:</b>	04/11/2019 2:32 PM
<b>Inventory Year:</b>	2018

Inventory Item	Check Number	Check Name	Check Description	Error Level	Justification
----------------	--------------	------------	-------------------	-------------	---------------

The completeness report was run and has no errors or errors with justification.



**TEST Main Menu**

- Facility Site List
- Information Links
- Certify

**ABC Facility**

- Facility Detail
- Inventory Status** <<
- Document List (0)
- Facility Reports

**EMISSIONS UNITS**

**- BOILER #1** <<

- (1) EXHAUST POINTS
  - o STACK 1 FOR BOILER #1

- (2) EMISSIONS PROCESSES
  - o #6 FUEL OIL / BUNKER C EMISSIONS (SCC 10200401)
  - o NATURAL GAS EMISSIONS (SCC 10200602)

- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

**ABC Facility : Initial**

**Facility Inventory Status**

**Instructions:**

- The table below shows the inventory status history for this facility, in reverse order, beginning with the current status.
- If your user account allows you to change the inventory status, then a form is displayed that contains a pick list of allowable status transitions and a field to enter a comment associated with the status change.
- Please see the MAIRIS User Manual for information about user accounts and inventory states.
- Approvers: If you are ready to CERTIFY and SUBMIT your inventory, please click the "Certify" link in the Main Menu at the top left of the screen.

**Facility Name:** ABC Facility

**\* Required Fields Marked By Asterisk**

**\* Inventory Status:**

**\* Status Change Comment:**

Save	Reset	Cancel and Return
------	-------	-------------------

### TEST Main Menu

- Facility Site List
- Information Links
- Certify

### ABC Facility

- Facility Detail
- Inventory Status** <<
- Document List (0)
- Facility Reports

### EMISSIONS UNITS

#### - BOILER #1 <<

- (1) EXHAUST POINTS
  - STACK 1 FOR BOILER #1
- (2) EMISSIONS PROCESSES
  - #6 FUEL OIL / BUNKER C EMISSIONS (SCC 10200401)
  - NATURAL GAS EMISSIONS (SCC 10200602)
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

## ABC Facility : Initial Facility Inventory Status

### Instructions:

- The table below shows the inventory status history for this facility, in reverse order, beginning with the current status.
- If your user account allows you to change the inventory status, then a form is displayed that contains a pick list of allowable status transitions and a field to enter a comment associated with the status change.
- Please see the MAIRIS User Manual for information about user accounts and inventory states.
- Approvers: If you are ready to CERTIFY and SUBMIT your inventory, please click the "Certify" link in the Main Menu at the top left of the screen.

Facility Name: ABC Facility

### \* Required Fields Marked By Asterisk

\* Inventory Status:


\* Status Change Comment:








### TEST Main Menu

- Facility Site List
- Information Links
- Certify

### ABC Facility

- Facility Detail
- Inventory Status** <<
- Document List (0)
- Facility Reports

### EMISSIONS UNITS

- + BOILER #1
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

Current page indicator: <<

Required field indicator: \*

Sorted column indicator: \*\*

## ABC Facility : Ready to Review and Certify Facility Inventory Status

### Information

- The facility status has been successfully updated.

### Instructions:

- The table below shows the inventory status history for this facility, in reverse order, beginning with the current status.
- If your user account allows you to change the inventory status, then a form is displayed that contains a pick list of allowable status transitions and a field to enter a comment associated with the status change.
- Please see the MAIRIS User Manual for information about user accounts and inventory states.
- Approvers: If you are ready to CERTIFY and SUBMIT your inventory, please click the "Certify" link in the Main Menu at the top left of the screen.

Facility Name: ABC Facility

### \* Required Fields Marked By Asterisk

\* Inventory Status:

\* Status Change Comment:



### Main Menu

- Facility Site List
- Information Links
- Certify** <<
- Reset page indicator: <<
- Required field indicator: \*
- Hidden column indicator: \*\*

## Certify and Submit Facility Inventory

### Instructions:

- The list below contains all the facility inventories which you are authorized to submit to Maine DEP and which have an **Inventory Status** of **Ready to Review and Certify** or **Returned**.
- The **Completeness Report** must be run and free of critical errors to certify and submit an inventory.
- The **Action** column will lead you to your next step in the certification/submission process. Click on that link to proceed.

<u>MAIRIS Id</u>	<u>Air License Number</u>	<u>Facility Name</u>	<u>Facility Operating Status</u>	<u>Operating Status Year</u>	<u>Passed Completeness Report Checks</u>	<u>Inventory Status</u>	<u>Action</u>
2300500009	A-000077	ABC Facility	Operating	2018	Yes	Ready to Review and Certify	<a href="#">Certify and Submit</a>

Export options: [CSV](#) | [Excel](#) | [PDF](#)



## TEST Main Menu

Facility Site List  
Information Links  
Certify

Current page indicator: <<

Required field indicator: \*

Sorted column indicator: \*\*

# Certify and Submit Facility Inventory

## Instructions:

- Review the certification statement below.
- Your **Facility Approver name** must exactly match the name on your MAIRIS user account.
- Enter your MAIRIS password.
- Answer the challenge question provided.
- Click the **Submit Inventory** button only once when complete.

**Facility Name:** ABC Facility

## \* Required Fields Marked By Asterisk

I certify, under penalty of Maine statutes 38 MRSA, Section 349(3) and Section 585-C(2)(c), that I am the facility's responsible official and have undertaken due diligence to personally examine and otherwise familiarize myself with the information contained in these forms and underlying input data.

I further certify, to the best of my knowledge, that the Annual Air Emissions inventory is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Entering my name in the field below acts as my signature. By entering my name, I acknowledge that I understand this certification and that this certification can only be revoked by me, in writing, to the Department of Environmental Protection.

\* **Name (e.g. Emily Smith):**

\* **MAIRIS Password:**

\* **Comment:**





**Facility Name:** ABC Facility

**\* Required Fields Marked By Asterisk**

I certify, under penalty of Maine statutes 38 MRSA, Section 349(3) and Section 585-C(2)(c), that I am the facility's responsible official and have undertaken due diligence to personally examine and otherwise familiarize myself with the information contained in these forms and underlying input data.

I further certify, to the best of my knowledge, that the Annual Air Emissions inventory is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Entering my name in the field below acts as my signature. By entering my name, I acknowledge that I understand this certification and that this certification can only be revoked by me, in writing, to the Department of Environmental Protection.

**\* Name (e.g. Emily Smith):**

**\* MAIRIS Password:**

**\* Comment:**

**Challenge Question:** What street/road did you live on in third grade?

**\* Answer:**

Submit Inventory

Cancel and Return



**Facility Name:** ABC Facility

**\* Required Fields Marked By Asterisk**

I certify, under penalty of Maine statutes 38 MRSA, Section 349(3) and Section 585-C(2)(c), that I am the facility's responsible official and have undertaken due diligence to personally examine and otherwise familiarize myself with the information contained in these forms and underlying input data.

I further certify, to the best of my knowledge, that the Annual Air Emissions inventory is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Entering my name in the field below acts as my signature. By entering my name, I acknowledge that I understand this certification and that this certification can only be revoked by me, in writing, to the Department of Environmental Protection.

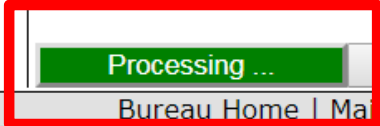
**\* Name (e.g. Emily Smith):**

**\* MAIRIS Password:**

**\* Comment:**

**Challenge Question:** What street/road did you live on in third grade?

**\* Answer:**





### TEST Main Menu

- Facility Site List
- Information Links
- Certify

### ABC Facility

- Facility Detail
- Inventory Status** <<
- Document List (0)
- Facility Reports

### EMISSIONS UNITS

- + BOILER #1
- + BOILER #3
- + BOILER #4
- + GENERATOR #1
- + GENERATOR #2
- + GREENHOUSE GASES
- + SAFETY KLEEN PARTS WASHER
- + WATER HEATER #1

Current page indicator: <<

Required field indicator: \*

Sorted column indicator: \*\*

## ABC Facility : Submitted

## Facility Inventory Status

### Information

- The facility inventory has been successfully submitted.

### Instructions:

- The table below shows the inventory status history for this facility, in reverse order, beginning with the current status.
- If your user account allows you to change the inventory status, then a form is displayed that contains a pick list of allowable status transitions and a field to enter a comment associated with the status change.
- Please see the MAIRIS User Manual for information about user accounts and inventory states.
- Approvers: If you are ready to CERTIFY and SUBMIT your inventory, please click the "Certify" link in the Main Menu at the top left of the screen.

**Facility Name:** ABC Facility

There are no status transitions that you can change for this facility at this time.

Status	Status Change Comment	Date Changed	Changed By	Inventory Year	Certification	Facility Report
--------	-----------------------	--------------	------------	----------------	---------------	-----------------



**TEST Main Menu**

Facility Site List  
Information Links

**Administration**

Admin Reports  
Configuration  
EFIS Integration  
Manage Inventory  
People and Accounts

**ABC Facility**

Facility Detail  
**Inventory Status** <<  
Review Status  
Facility Notes  
Document List (0)  
Facility Reports

**EMISSIONS UNITS**

+ BOILER #1  
+ BOILER #3  
+ BOILER #4  
+ GENERATOR #1  
+ GENERATOR #2  
+ GREENHOUSE GASES  
+ SAFETY KLEEN PARTS WASHER  
+ WATER HEATER #1

**ABC Facility : Submitted**

**Facility Inventory Status**

**Instructions:**

- The table below shows the inventory status history for this facility, in reverse order, beginning with the current status.
- If your user account allows you to change the inventory status, then a form is displayed that contains a pick list of allowable status transitions and a field to enter a comment associated with the status change.
- Please see the MAIRIS User Manual for information about user accounts and inventory states.
- Approvers: If you are ready to CERTIFY and SUBMIT your inventory, please click the "Certify" link in the Main Menu at the top left of the screen.

**Facility Name:** ABC Facility

**\* Required Fields Marked By Asterisk**

**\* Inventory Status:**

**\* Status Change Comment:**

-- Select --  
-- Select --  
Approved  
Returned

Save      Reset      Cancel and Return



2018 MAIRIS Inventory Facility Detail Report with 2017 Comparisons

License #: License # and name hidden

MAIRIS ID: 2303100046

2018 Status: Operating

Facility Comment: Operations similar to previous years

**KILN (001)**

Unit Status: Operating

Unit Comment: Operations similar to previous years

Unit Operating Details

Hours/Day: 9  
 Days/Week: 5  
 Weeks/Year: 40  
 # Summer Days: 66  
 Hours/Year: 1,800

Emission Unit Controls

% Time Operational

Capture %

Fabric Filter or Baghouse

100

100

Comment: Operations similar to previous years

Pollutant Reduction Efficiency

PM10-FIL 99%

**KILN**

**ASPHALT BATCHING (001-1)**

SCC: 30500252

2018 Throughput: 210,888.35 TON Hot Mix Asphalt Produced

Sulfur %:

Ash %:

2017 Throughput: 234,670.53 TON Hot Mix Asphalt Produced

	<u>2018 Emission Calc Method</u>	<u>2018 Emission Factor</u>	<u>2017 Emission Factor</u>	<u>Emission Factor Source/Comment</u>	<u>2018 Tons</u>	<u>2017 Tons</u>
<u>CAPs</u>						
<b>Ammonia</b>	Engineering Judgement / Manual Calculation				0	0
<u>Emissions Comment:</u> No emission factors available						
<b>Carbon Monoxide</b>	EPA Emission Factor (no Control Efficiency used)	0.4 LB/TON	0.4 LB/TON	AP-42 Table 11.1-5.	40	50
<b>Lead</b>	Site-Specific Emission Factor (no Control Efficiency used)	0.00000089 LB/TON	0.00000089 LB/TON	Harry Crooker 2009 AEI	0.000094	0.0001
<b>Nitrogen Oxides</b>	Trade Group Emission Factor (pre-control) plus Control Efficiency	0.12 LB/TON	0.12 LB/TON	AP-42 Table 11.1-5/Factor has rating of E	13	14
<b>PM-10 Filterable</b>	Trade Group Emission Factor (pre-control) plus Control Efficiency	0.0098 LB/TON	0.0098 LB/TON	AP-42 Table 11.1-2/Includes fabric filter control	1	1.1
<b>PM-2.5 Filterable</b>	Trade Group Emission Factor (pre-control) plus Control Efficiency	0.0083 LB/TON	0.0083 LB/TON	AP-42 Table 11.1-2/Includes fabric filter control	0.88	0.97
<b>Sulfur Dioxide</b>	Trade Group Emission Factor (pre-control) plus Control Efficiency	0.088000 LB/TON	0.088000 LB/TON	EPA, AP-42, Table 11.1-5/Factor has rating of E	9.3	10
<b>VOCs</b>	Trade Group Emission Factor (pre-control) plus Control Efficiency	0.0082 LB/TON	0.0082 LB/TON	AP-42 Table 11.1-6/Factor has rating of D	0.86	0.96

GHGs

Data review



# Things we'd like to (may) change:

- Common complaint by facility users:
  - It's too easy to navigate away from a page without hitting save. There is no warning.
- Remove ash content field
- Check for and add any new EPA QA checks



# Key features facilities love:

- Sync with licensing database
  - Updates overnight; have a starting point
- Emission factors carried over from previous year (previous HAPs year) – Much faster process
- Can see emissions and emission factor used on initial emissions screen
- Radio buttons for emission factors
- Can see where emission factors come from
- Does the math – Needs throughput and emission factor)



# Key features facilities love:

- Processing button – green
- Customer service (push a button and get a response)
- Per consultants, our interface is more intuitive than over systems
- Uses plain language







Contact:

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