Massachusetts Department of ENVIRONMENTAL PROTECTION

Source Registration/Greenhouse Gas

INSTRUCTIONS

Detailed instructions for the online Source Registration and/or Greenhouse Gas Forms

17 August 2018

Massachusetts Department of
Environmental Protection
One Winter Street
Boston, MA 02108-4746

Produced by Bureau of
Air & Waste

NOTICE: check the Source Registration web page for additional guidance and reference material https://www.mass.gov/guides/massdep-source-registration

This information is available in alternate format by calling our ADA Coordinator at 617-574-6872.

Notice

From time to time MassDEP will publish SR Updates that clarify, add to, or amend these Instructions. The Updates are part of these instructions. You can find these Updates published at: https://www.mass.gov/guides/massdep-source-registration

2018: Facilities required to report Greenhouse Gas (GHG) Emissions used Climate Registry Information System (CRIS) software platform between 2009 and 2016. For the 2016 emissions year, MassDEP decided to combine GHG Reporting within the Source Registration (SR) Reporting package. As a result of this process, three different packages were created: SR Only, SRGHG, and GHG Only. Instructions for SR Only and SRGHG are combined in this document; GHG Only instructions are listed in a separate document.

NOTE: Information present is to be used for reporting both SR and GHG emissions except as noted.

HELP TEXT: The "?" icons will reveal information about a particular portion of the form or question such as definitions, instructions, sources of assistance or information. Additional information about filling out these forms is available at the Source Registration and Greenhouse Gas Reporting Website: https://www.mass.gov/guides/massdep-source-registration

Revision History

Clarification to AP1/2/4 form applicability	**18 Apr 2007**
Update to address User comments and concerns	**16 Jan 2008**
Clarification to Stack dimensions	**30 July 2008**
Correction to GHG reporting	**8 May 2009**
Corrections to cover and combined units	**19 Mar 2011**
Notes on filterable vs. condensable PM	**28 Feb 2018**
Added GHG Reporting, Order of SR questions changed to accommodate GHG Reporting	**28 Feb 2018**
Added (New) & Updated (Updated) sections highlighted in green	**28 Feb 2018**

CONTENTS

Notice 2
Help Text: 2
Revision History 2
OVERVIEW OF SOURCE REGISTRATION PROGRAM WITH GREENHOUSE GAS INFORMATION 30
Purpose of Source Registration (SR) Program 30
Purpose of Greenhouse Gas (GHG) Program 30
Who must file this form? 30
How many versions of this form are required? 30
What if my facility is also required to report GHG emissions? 30
What if my facility's classification changed, do I still report? 31
Do I have to report if I did not receive a letter from MassDEP? 31
Why can't I login using my facility's TIN? 31
What units must be submitted? 31
Do I need to report small portable heating units or other small sources? 31
Do I report temporary emission units? 31
Do I need to report Nonroad Engines? 32
How should non-stationary units be reported? 32
What do you enter into the basis fields for restrictions if you don't have a permit? 32
Will MassDEP review what I have submitted? 32
BAW AQ OVERVIEW FORM 33
Purpose 33
Who must file this form? 33
How many versions of this form are required? 33
Note for repeat filers 33
A. Create a Source Registration Package 33
1. Select existing or new facility: 33
Existing Facilities 33
Check if you added emission units or stacks since your last report 33
New Facilities 33
Note concerning "New Unit Creator Form (New Form Creator)" 33
B. amend a PACKAGE 33
1. Check if you need to 34
2. Facility Name 34
How to amend a previously submitted package 34
Facility Information 34
TES (Total Emissions Statement) 34
New Unit Creator Form (New Form Creator) 34
Emission Units 34
BAW AQ NEW UNIT CREATOR FORM (NEW FORM CREATOR) 35
Purpose 35
Who must file this form? 35
Note to new facilities or first time submitters 35
1. Enter the number of new units and new stacks to add to this package 35
Fuel Burning Device (AP-1) 35
Process (AP-2) 35
Incinerator (AP-3) 35
Tank (AP-4) 35
Stack 35
GHG Only (found on SRGHG package) 35
BAW AQ FACILITY INFORMATION FORM 36
Purpose 36
Who must file this form? 36

How many versions of this form are required? 36
In what order should I complete this package? 36
Note for repeat filers: 36
A. Facility Information 36
How to change locked fields? 36
1. Facility 36
a. Facility Name 36
b. Facility Street Address Line 1 37
c. Facility Street Address Line 2 37
d. City/Town 37
e. State 37
f. Zip Code 37
g. Facility Phone Number 37
h. Facility Fax Number 37
2. Mailing Address 37
a. Facility Mailing Address/PO Box Line 1 37
b. Facility Mailing Address/PO Box Line 2 37
c. City/Town 37
d. State 37
e. Zip Code 37
3 Facility Type: 37
4. ORIS Facility Code 37
5. ID Numbers 37
a. DEP Account Number 37
b. Facility AQ Identifier 37
6. Location 37
a. Latitude 37
b. Longitude: 37
How to find/verify the latitude/longitude for your facility? 37
7. North American Industry classification code(s) NAICs 39
How to find NAICS codes? 39
8. Facility description 39
9. Facility's normal hours of operation 39
a. Start time 39
b. End Time 39
c. Continuous 39
d. Which days is the facility open? 39
How to count the number of employees 39
10. Number Of Employees 39
Who is the owner? 39
11. Facility Owner 39
a. Owner or Corporation Name 40
b. Mailing Address Line 1 40
c. Mailing Address Line 2 40
d. City/Town 40
e. State 40
f. Zip Code 40
g. Country 40
h. Owner TIN (Taxpayer Identification Number) 40
i. Owner Phone Number 40
j. Extension 40
k. Owner Fax Number 40

l. Owner E-mail Address 40
12. Facility contact information contact 40
a. Facility Contact First Name and Last Name 40
b. Mailing Address Line 1 40
c. Mailing Address Line 2 40
d. City/Town 40
e. State 40
f. Zip Code 40
g. Country 40
h. E-mail Address 40
i. Phone Number 40
j. Extension 40
k. Fax Number 40
Country – foreign owners 40
Owner TIN –please correct your TIN 40
13. Air emissions information contact 40
a. Air Emissions Contact First Name and Last Name 40
b. Mailing Address Line 1 40
c. Mailing Address Line 2 40
d. City/Town 40
e. State 40
f. Zip Code 40
g. Country 40
h. E-mail Address 40
i. Phone Number 40
j. Extension 40
k. Fax Number 40
14. GHG emissions information contact (for SRGHG package) 40
a. GHG Emissions Contact First Name and Last Name 41
b. Mailing Address Line 1 41
c. Mailing Address Line 2 41
d. City/Town 41
e. State 41
f. Zip Code 41
g. Country 41
h. E-mail Address 41
i. Phone Number 41
j. Extension 41
k. Fax Number 41
B. Preparer 41
1. Contact information for preparer of this submittal 41
a. Preparer Contact First Name and Last Name 41
b. Mailing Address Line 1 41
c. Mailing Address Line 2 41
d. City/Town 41
e. State 41
f. Zip Code 41
g. Country 41
h. E-mail Address 41
i. Phone Number 41
j. Extension 41
k. Fax Number 41
C. Notes and Attachments 41

1 Notes: 41
2. Attachments 41
D. Certification 41
Signature of Responsible Official (RO), signed under pains and penalties of perjury with submission date 41
Who is a responsible official? 42
What if you are not a responsible official? 42
How do I share this package? 42
1. Responsible Official (RO) information: 42
a. Print First Name 42
b. Print Last Name 42
c. Title 42
d. Phone Number 42
e. E-mail Address 42
BAW AQ EMISSION UNIT –INSTRUCTIONS: FUEL BURNING DEVICE (AP-1) 43
Purpose 43
When is this form applicable? 43
How many versions of this form are required? 43
CAUTION: for filers with new COMBUSTION emission units since their last submittal 44
CAUTION: regarding the order in which you complete your forms 44
A. Equipment Description 45
1. Facility Identifiers 45
a. Facility Name 45
b. DEP Account Number 45
c. Facility AQ Identifier 45
How is a flare reported? 45
How should ovens and/or dryers be reported? 45
Can I change the responses to the emission unit identifier fields? 45
2. Emission unit identifiers 46
a. Facility's choice of emission unit name- edit as needed. 46
b. Facility's emission unit number / code – edit as needed. 46
d. ORIS id # – for large electrical utilities only 46
e. Combined units- enter number of individual units 46
Combined unit help text 46
What are combined units and when can individual unit operations be reported as combined units? 47
How do you enter data for Combined Units? 47
f. Is GHG emissions reporting required for this emission unit? (for SRGHG package) 48
3. Emission unit installation and decommission dates 48
a. Installation dates – estimate if unknown (mm/dd/yyyy) 48
b. Decommission dates – If applicable (mm/dd/yyyy) 48
Delete a unit help text 48
How / when to delete a unit? 48
4. Emission unit replacement 49
a. Is this unit replacing another emission unit? 49
b. DEP's emission unit number and facility unit name. 49
How to be sure the unit being replaced appears in this menu? 49
What if one emission unit is replacing more than one unit? 49
5. Equipment 49
EPA Unit Type Code 49
EPA unit type code help text 49
a. Type: 49
a1 If engine, is this an emergency generator? 49

Emergency generator help text 49
How to record restrictions on emergency engines? 50
a2 Emergency use 50
a3. Non emergency use 50
a4. Maintenance and readiness testing 50
What to do if data unknown or not available? 50
b. Manufacturer 50
c. Model number 50
d. Maximum input rating MMBtu/hr 51
e. Number of burners 51
f. Type of burner 51
g. Burner manufacturer 51
h. Burner model number 51
i. Burner installation date (mm/dd/yyyy) 51
What if the emission unit has more than one MassDEP approval? 51
6. DEP Air Quality Approvals 51
a. Most recent approval number 51
b. DEP approval date (mm/dd/yyyy) 52
7. Is this unit exempt under 310 CMR 7.02 Exemptions from Plan Approval? 52
8. If exempt from Plan Approval, indicate reason why (cite a specific MassDEP AQ Regulation) 52
9. Additional reporting requirements 52
a. Are there other routine air quality reporting requirements for this emission unit? 52
b. Reporting frequency – check all that apply: 52
c. Is this unit subject to (check all that apply): 52
10. Hours of operation for the emission unit: 52
a. Check if typically continuously operated - 24 x 7 x 52 52
b. Number of hours per day 52
c. Number of days per week 52
d. Number of weeks per year 52
e. Percent of time emission unit is operated each calendar quarter: 53
11. Ozone season schedule – May 1 through September 30: 53
a. Ozone season hours per day 53
b. Ozone seasons days per week 53
c. Weeks operated in ozone season 53
12. Emissions release point 53
What is a release point? 53
What is the difference between stacks and non-stacks? 53
What about unusual exhausts, such as short vertical vents? 53
13. Link this unit to a physical stack (if applicable) - Pick from the list. 54
14. Are there air pollution control (APC) devices on this emission unit? 54
How do I add a new APC? 54
How are my existing APCs displayed? 54
How do I revise an existing APC? 54
What if my APC is used by other EUs? 54
Are Low Nox Burners considered control devices? 54
How to delete an air pollution control device? 55
How to replace an air pollution control device? 55
What to do if you don't know the date? 55
a. Type 55
b. Manufacturer ** 55
c. Model Number ** 55
d. Facility's ID for this Device. ** (the unique number assigned by the facility for the APC equipment) 55
e. Installation Date ** 55

f. MassDEP approval number 55
g. MassDEP approval date 55
h. Decommission date 55
i. Percent overall efficiency – enter for all pollutants that the device was designed to control: 55
What is the % overall efficiency? 55
15. Is there monitoring equipment on this emission unit? 56
Do I need to include Fireye or other Flame monitors? 56
How to delete a monitor? 56
How to replace a monitor? 56
a. Monitor type: 56
How do I use CEM data? 56
How do I use Part 75 reported values? 56
b. Manufacturer: 56
c. Model number: 56
d. Monitor ID #: 56
e. Installation date: 56
f. DEP approval #: 57
g. DEP approval date: 57
h. Decommission date: 57
i. Recorder? 57
j. Audible alarm? 57
k. Data System? 57
What is a "data system"? 57
l. Monitored pollutants: 57
B. Fuels and Emissions (Section B Parent Form) 57
1. Fuel Name / Characteristics: 57
DEP Fuel #: 57
Can I change the DEP fuel identifier? 57
Number of fuels for this unit (previous records): 58
How does eDEP handle multiple fuels? 58
Is GHG emissions reporting required for this fuel? (for SRGHG package) 58
Add a New Fuel: 58
Number of Additional Fuels: 58
When to not check "Add a new fuel" box 58
Delete this fuel: 58
a. Source Classification Code (SCC) 59
SCC Description 59
How does eDEP use Source Classification Codes (SCC)? 59
What SCC should be used for a residential boilers/water heater at a commercial/ institutional facility? 59
Are there any SCC Codes that should not be utilized on Fuel Burning Device (AP-1) form? 59
b. Type of fuel : 59
c. Sulfur content for oils and coal: (Acceptable Range 0 – 2.2) 59
d. Ash Content for oils and coal 60
e. Maximum hourly fuel rate for all firing burners: 60
What is the definition of maximum hourly fuel rate for all firing burners? 60
f. Do you have fuel or usage restrictions? 60
What if I have multiple unit fuel restrictions and multiple approvals? 60
g. DEP approval number for fuel restrictions: most recent for this fuel. 60
What if the restriction is mentioned in multiple approvals? 60
How to record restrictions on emergency engines? 61
h. Annual usage restriction (amount or hours) for this fuel: 61
What if the restriction applies to multiple units? 61
i. Short term fuel usage restriction (amount or hours) for this fuel: 61

2. Annual usage: 62
a. Amount –year of record 62
b. Units 62
Units help text 62
c. Total annual usage for prior year of record 62
B. Source Registration Emissions (Parent Form) 62
3. Total emissions for this fuel **only** in tons per year: 62
Calculations: Read First 62
Why you may want to calculate your own emissions values? 62
When is NH3 emissions required? 63
PM Filterable vs. PM Condensable 63
Actual (in Tons) for previous year : 63
What are "actual emissions"? 63
Actual (in Tons) for year of record 63
How do I use CEMs data? 64
How do I use Part 75 reported values? 64
Potential Emissions (in Tons) 64
What are potential emissions? 64
Emission factor 65
in pounds per unit (EF Units): 65
What are emission factors (EF)? 65
Calculation Method 66
Maximum allowed emissions (in Tons) - annual: 66
Maximum allowed emissions (in Tons) - short term: 66
Short term period (or MMBtu) 66
When to enter maximum allowed emissions? 66
Basis- DEP approval number or regulation: 67
4. Ozone season emissions – May 1 through September 30: 67
a. Typical day VOC emissions – pounds per day 67
b. Typical day NOx emissions – pounds per day 67
Check to enter your own values 67
What if I have more than one fuel? 67
B. Greenhouse Gas Emissions (Parent Form) (in SR/GHG package) 68
4. Total GHG emissions for this fuel only in tons per year: 68
Calculations: Read First 68
Why you may want to calculate your own emissions values? 68
Actual (in Tons) for previous year - eDEP only: 68
What are "actual emissions"? 68
Actual (in Tons) for year of record 69
What are emission factors? 69
Emission factor (EF) 69
in pounds per unit (EF units): 69
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions? 69
How do I use CEMs data? 69
Calculation Method 70
Specify General Reporting Protocol EF 70
CO2e for previous year 70
CO2e for year of record 70
Total CO2e emissions 70
CO2e for previous year 70
CO2e for year of record 70
5. Ozone season emissions – May 1 through September 30: 71

a. Typical day VOC emissions – pounds per day 71
b. Typical day NOx emissions – pounds per day 71
Check to enter your own values 71
What if I have more than one fuel? 71
C. Notes and attachments (found on parent form only) 72
1 Notes: 72
2. Attachments 72
B. Fuels and Emissions (Section B Child Form) 72
1. Fuel Name / Characteristics: 72
DEP Fuel #: 72
Can I change the DEP fuel identifier? 72
How does eDEP handle multiple fuels? 73
Is GHG emissions reporting required for this fuel? (for SRGHG package) 73
Delete this fuel: 73
a. Source Classification Code (SCC) 73
SCC Description 73
How does eDEP use Source Classification Codes (SCC)? 73
What SCC should be used for a residential boilers/water heater at a commercial/ institutional facility? 73
Are there any SCC Codes that should not be utilized on Fuel Burning Device (AP-1) form? 74
b. Type of fuel : 74
c. Sulfur content for oils and coal: (Acceptable Range 0 – 2.2) 74
d. Ash Content for oils and coal 74
e. Maximum hourly fuel rate for all firing burners: 74
What is the definition of maximum hourly fuel rate for all firing burners? 74
f. Do you have fuel or usage restrictions? 75
What if I have multiple unit fuel restrictions and multiple approvals? 75
g. DEP approval number for fuel restrictions: most recent for this fuel. 75
What if the restriction is mentioned in multiple approvals? 75
How to record restrictions on emergency engines? 75
h. Annual usage restriction (amount or hours) for this fuel: 76
What if the restriction applies to multiple units? 76
i. Short term fuel usage restriction (amount or hours) for this fuel: 76
2. Annual usage: 76
a. Amount –year of record 76
b. Units 76
Units help text 76
c. Total annual usage for prior year of record 76
B. Source Registration Emissions (Section B Child Form) 76
3. Total emissions for this fuel **only** in tons per year: 76
Calculations: Read First 77
Why you may want to calculate your own emissions values? 77
When is NH3 emissions required? 77
PM Filterable vs. PM Condensable 77
Actual (in Tons) for previous year : 77
What are “actual emissions”? 77
Actual (in Tons) for year of record 78
How do I use CEMs data? 78
How do I use Part 75 reported values? 78
Potential Emissions (in Tons) 79
What are potential emissions? 79
Emission factor 79
in pounds per unit (EF Units): 79

What are emission factors (EF)? 80
Calculation Method 80
Maximum allowed emissions (in Tons) - annual: 81
Maximum allowed emissions (in Tons) - short term: 81
Short term period (or MMBtu) 81
When to enter maximum allowed emissions? 81
Basis- DEP approval number or regulation: 81
B. Greenhouse Gas Emissions (in SR/GHG package) Section B Child form 81
4. Total GHG emissions for this fuel only in tons per year: 81
Calculations: Read First 82
Why you may want to calculate your own emissions values? 82
Actual (in Tons) for previous year - eDEP only: 82
What are "actual emissions"? 82
Actual (in Tons) for year of record 82
What are emission factors? 83
Emission factor (EF) 83
in pounds per unit (EF units): 83
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions? 83
How do I use CEMs data? 83
Calculation Method 84
Specify General Reporting Protocol EF 84
CO2e for previous year 84
CO2e for year of record 84
Total CO2e emissions 84
CO2e for previous year 84
CO2e for year of record 84
D. Total Emissions for Emission Unit (separate child form) 85
1. Total Emissions for this emission unit in tons per year 85
What are total emissions for this emission unit? 85
Actual (in Tons) for previous year 85
Actual (in Tons) Emissions 85
Potential emissions (in Tons) 85
Maximum allowed emissions (in Tons) – annual 86
Basis – DEP approval number or regulation: 86
When do I complete the "allowable" emission fields? 86
What if a restriction applies to multiple units? 86
2. Ozone season schedule - May 1 through September 30: 87
a. Typical day VOC emissions – pounds per day 87
b. Typical day NOx emissions – pounds per day 87
How do I use Part 75 reported values? 87
D. GHG Emissions Reporting (in SR/GHG package) 87
3. Total GHG Emissions for this emission unit in tons per year 87
What are total emissions for this emission unit? 87
Actual (in Tons) for previous year 88
Actual (in Tons) Emissions 88
CO2e for previous year (in Tons) 88
CO2e for year of record (in Tons) 88
Total CO2e emissions 88
CO2e for previous year 88
CO2e for year of record 88
BAW AQ EMISSION UNIT –INSTRUCTIONS: PROCESS (AP-2) 89
Purpose 89
When is this form applicable? 89

How many versions of this form are required? 89
CAUTION: for filers with new process emission unit since their last submittal 90
CAUTION: regarding the order in which you complete your forms 90
A. Process Description 91
1. Facility Identifiers 91
a. Facility name 91
b. DEP account number 91
c. Facility AQ identifier – 91
How should ovens and/or dryers be reported? 91
Do I need to report Nonroad Engines? 91
How should non-stationary units be reported? 91
How do I report emissions from fuel use of a thermal oxidizer? 92
How is a flare reported? 92
2. Emission Unit Identifiers 92
a. Facility's choice of emission unit name 92
b. Facility's emission unit number / code 92
c. DEP emission unit # - 92
Can I change the responses to the emission unit identifier fields? 93
d. Combined units- enter number of individual units 93
Combined unit help text 93
What are combined units and when can individual unit operations be reported as combined units? 93
How do you enter data for Combined Units? 93
e. Is GHG emissions reporting required for this emission unit? (for SRGHG package) 94
3. Emission unit installation and decommission dates 94
a. Installation dates – estimate if unknown (mm/dd/yyyy) 94
b. Decommission dates – If applicable (mm/dd/yyyy) 94
Delete a unit help text 94
How / when to delete a unit? 94
4. Emission unit replacement 94
a. Is this unit replacing another emission unit**?** 95
b. DEP's emission unit number and facility unit name. 95
How to be sure the unit being replaced appears in this menu? 95
What if one emission unit is replacing more than one unit? 95
5. Equipment 95
a. Type: 95
EPA Unit Type Code 95
EPA unit type code help text 95
EPA Unit Type (describe): 95
What to do if data unknown or not available? 95
b. Manufacturer 95
c. Model number 95
d. Maximum input rating MMBtu/hr (required, if the process unit burns fuel) 96
What if the emission unit has more than one MassDEP approval? 96
6. DEP Air Quality Approvals 96
a. Most recent approval number 96
b. DEP approval date (mm/dd/yyyy) 96
7. Is this unit exempt under CMR 7.02 Exemptions from Plan Approval? 96
8. If exempt from Plan Approval, indicate reason why (cite specific MassDEP AQ Regulation) 96
9. Additional reporting requirements 96
a. Are there other routine air quality reporting requirements for this emission unit? 96
b. Reporting frequency – check all that apply: 97
c. Is this unit subject to -check all that apply: 97

10. Hours of operation for the emission unit: 97
a. Check if typically continuously operated - 24 x 7 x 52 97
b. Number of hours per day 97
c. Number of days per week 97
d. Number of weeks per year 97
e. Percent of time emission unit is operated each calendar quarter: 97
11. Ozone season schedule – May 1 through September 30: 97
a. Ozone season hours per day 97
b. Ozone seasons days per week 97
c. Weeks operated in ozone season 97
12. Emissions release point 98
What are release points? 98
What is the difference between stacks and non-stacks? 98
What about unusual exhausts, such as short vertical vents? 98
13. Link this emission unit to a physical stack (if applicable) – pick from the list: 98
14. Are there air pollution control (APC) devices on this emission unit? 98
How do I add a new APC? 98
How are my existing APCs displayed? 98
How do I revise an existing APC? 98
What if my APC is used by other EUs? 99
How to delete an air pollution control device? 99
How to replace an air pollution control device? 99
a. Type 99
b. Manufacturer ** 99
c. Model Number ** 99
d. Facility's ID for this Device. ** (the unique number assigned by the facility for the APC equipment) 99
e. Installation Date ** 99
f. MassDEP approval number 99
g. MassDEP approval date 99
h. Decommission date 99
What to do if you don't know the date? 99
How do I report my flare as control device? 99
i. Percent overall efficiency – enter for all pollutants that the device was designed to control: 99
What is the % overall efficiency? 99
15. Is there monitoring equipment on this emission unit or its related control device? 100
How to delete a monitor? 100
How to replace a monitor? 100
a. Monitor type: 100
How do I use CEM data? 100
b. Manufacturer: 100
c. Model number: 100
d. Monitor ID #: 100
e. Installation date: 100
f. DEP approval #: 100
g. DEP approval date: (mm/dd/yyyy) 100
h. Decommission date: 100
i. Recorder? 100
j. Audible alarm? 100
k. Data System? 101
What is a "data system"? 101
l. Monitored pollutants: 101
B. Fuels and Emissions for Raw Materials / Finished Products/ Fuels (Section B Parent Form) 101
Special rules for organic compounds 101
How does eDEP handle multiple raw materials or finished products? 101

Add a New material/product/fuel 102
Number of Additional Fuels: 102
When to not check "Add a new fuel" box 102
Delete this material/product/fuel: 102
1. Operation Description 102
Is GHG emissions reporting required for this raw material, finished product or fuel? (in SRGHG package) 102
a. Raw material, finished product, or fuel name: 102
EPA material type code help text 102
Number of segments for this unit (previous records): 102
Is this fuel, waste, or raw material/finished product an input, output or fuel? 102
DEP # 103
Can I change the DEP fuel identifier? 103
c. Process description: 103
d. Source Classification Code (SCC) 103
What SCC should be used to report SF6 emissions? (for SR/GHG package) 103
How does eDEP use Source Classification Codes (SCC)? 103
e. Maximum process rate for material/product: 103
What is the definition of maximum process rate? 104
f. If organic material, give weight % of: VOC, HOC, HYC 104
What is the weight percentage of VOC, HOC, HYC? 104
and If fuel is an oil, give percent by weight of Sulfur content (Acceptable Range 0 – 2.2) 104
g. Total actual raw material used or finished product produced for year of record: 104
h. Do you have raw material or finished product or fuel restrictions? 105
What if there are multiple raw material or finished product or fuel restrictions? 105
What if a restriction applies to multiple units? 105
i. DEP approval number for restrictions: 105
j. Short term raw material/finished product/fuel restriction– if none, leave blank: 105
k. Annual material/finished product or fuel restriction – if none, leave blank: 105
l. Indicate which air pollution control devices from Section A, Question 14 control this material/product/fuel by listing the facility-designated control device ID # for each unit that applies: 105
What to do if your new control device does not show up in the drop-down menu? 106
B. Source Registration Emissions (Section B Parent Form) 106
2. Total emissions for this raw material/product – tons per year: 106
What are total emissions for this material/finished product? 106
Calculations: Read First 106
When is NH3 emissions required? 106
PM Filterable vs. PM Condensable 106
Actual for previous year 106
What are "actual emissions"? 106
Actual for year of record: 107
How do I use CEMs data? 107
Potential Emissions (in Tons) 107
What are potential emissions? 108
Emission factor: 108
in pounds per unit (EF Units): 108
What are emission factors (EF)? 108
Calculation Method 108
Maximum allowed emissions – annual: 109
Maximum allowed emissions - short term: 109
Short term period 109
When to enter maximum allowed emissions? 109
Basis- DEP approval number or regulation: 109

4. Ozone season emissions – May 1 through September 30: 110
a. Typical day VOC emissions – pounds per day 110
b. Typical day NOx emissions – pounds per day 110
What if I have more than one raw material/finished product/fuel? 110
B. Greenhouse Gas Emissions (in SR/GHG package) (Section B Parent Form) 110
3. Total GHG emissions for this fuel only in tons per year: 111
Calculations: Read First 111
Why you may want to calculate your own emissions values? 111
Actual (in Tons) for previous year: 111
What are "actual emissions"? 111
Actual (in Tons) for year of record 111
What are emission factors? 112
Emission factor 112
in pounds per unit: (EF Units) 112
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions? 112
How do I use CEMs data? 112
Calculation Method 113
Specify General Reporting Protocol EF 113
CO2e for previous year 113
CO2e for year of record 113
Total CO2e emissions 113
CO2e for previous year 113
CO2e for year of record 113
1 Notes: 114
2. Attachments 114
B. Fuels and Emissions for Raw Materials / Finished Products/ Fuels (Section B Child Form) 114
How does eDEP handle multiple raw materials or finished products? 114
Delete this material/product/fuel: 114
1. Operation Description 114
a. Raw material, finished product, or fuel name: 114
EPA material type code help text 114
Is this fuel, waste, or raw material/finished product an input, output or fuel? 115
DEP # 115
Can I change the DEP fuel identifier? 115
c. Process description: 115
d. Source Classification Code (SCC) 115
What SCC should be used to report SF6 emissions? (for SR/GHG package) 115
How does eDEP use Source Classification Codes (SCC)? 116
f. If organic material, give weight % of: VOC, HOC, HYC 116
What is the weight percentage of VOC, HOC, HYC? 116
and If fuel is an oil, give percent by weight of Sulfur content (Acceptable Range 0 – 2.2) 116
g. Total actual raw material used or finished product produced for year of record: 116
h. Do you have raw material or finished product or fuel restrictions? 117
What if there are multiple raw material or finished product or fuel restrictions? 117
What if a restriction applies to multiple units? 117
i. DEP approval number for restrictions: 117
j. Short term raw material/finished product/fuel restriction– if none, leave blank: 117
k. Annual material/finished product or fuel restriction – if none, leave blank: 117
l. Indicate which air pollution control devices from Section A, Question 14 control this material/product/fuel by listing the facility-designated control device ID # for each unit that applies: 118
What to do if your new control device does not show up in the drop-down menu? 118
B. Source Registration Emissions (Section B child form) 118

2. Total emissions for this raw material/product – tons per year: 118
What are total emissions for this material/finished product? 118
Calculations: Read First 118
When is NH3 emissions required? 118
PM Filterable vs. PM Condensable 119
Actual for previous year 119
What are "actual emissions"? 119
Actual for year of record: 119
How do I use CEMs data? 119
Potential Emissions (in Tons) 120
What are potential emissions? 120
Emission factor: 120
in pounds per unit (EF Units): 120
What are emission factors (EF)? 121
Calculation Method 121
Maximum allowed emissions – annual: 122
Maximum allowed emissions - short term: 122
Short term period 122
When to enter maximum allowed emissions? 122
Basis- DEP approval number or regulation: 122
B. Greenhouse Gas Emissions (in SR/GHG package) (Section B Child Form) 122
3. Total GHG emissions for this fuel only in tons per year: 123
Calculations: Read First 123
Why you may want to calculate your own emissions values? 123
Actual (in Tons) for previous year: 123
What are "actual emissions"? 123
Actual (in Tons) for year of record 123
What are emission factors? 124
Emission factor 124
in pounds per unit: (EF Units) 124
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions? 124
How do I use CEMs data? 124
Calculation Method 125
Specify General Reporting Protocol EF 125
CO2e for previous year 125
CO2e for year of record 125
Total CO2e emissions 125
CO2e for previous year 125
CO2e for year of record 125
D. Total Emissions for Emission Unit (separate Child Form) 126
1. Total Emissions for this emission unit in tons per year 126
Actual (in Tons) for previous year 126
Actual (in Tons) Emissions 126
Potential emissions (in Tons) 126
Maximum allowed emissions (in Tons) – annual 126
Maximum allowed emissions (in Tons) - short term 126
Short term period: 126
Basis – DEP approval number or regulation: 127
2. Ozone season schedule - May 1 through September 30: 127
a. Typical day VOC emissions – pounds per day 127
b. Typical day NOx emissions – pounds per day 127
D. GHG Emissions Reporting (in SR/GHG package) 127

3. Total GHG Emissions for this emission unit in tons per year 128
What are total emissions for this emission unit? 128
Actual (in Tons) for previous year 128
Actual (in Tons) Emissions 128
CO2e for previous year (in Tons) 128
CO2e year (in Tons) 128
Total CO2e emissions 128
CO2e for previous year 128
CO2e for year of record 128
BAW AQ EMISSION UNIT –INSTRUCTIONS: INCINERATOR (AP-3) 129
Purpose 129
When is this form applicable? 129
How many versions of this form are required? 129
CAUTION: for filers with new INCINERATOR emissions units since their last submittal 129
CAUTION: regarding the order in which you complete your forms 130
A. Emission Unit—Incinerator Information 130
1. Facility Identifiers 130
a. Facility Name 130
b. DEP Account number 130
c. Facility AQ Identifier 130
Can I change the responses to the emission unit identifier fields? 130
2. Emission unit identifiers 130
a. Facility's choice of emission unit name- edit as needed. 130
b. Facility's emission unit number / code – edit as needed. 130
How is a flare reported? 131
c. DEP emission unit # 131
d. Is GHG emissions reporting required for this emission unit? 131
3. Emission unit installation and decommission dates 131
a. Installation dates – estimate if unknown (mm/dd/yyyy) 131
b. Decommission dates – If applicable (mm/dd/yyyy) 131
Delete a unit help text 131
How / when to delete a unit? 131
4. Emission unit replacement 132
a. Is this unit replacing another emission unit? 132
b. DEP's emission unit number and facility unit name. 132
How to be sure the unit being replaced appears in this menu? 132
What if one emission unit is replacing more than one unit? 132
5. Incinerator description: 132
a. Type: 132
b. Manufacturer 132
c. Model number 132
d. Maximum operating capacity: 132
What to do if data unknown or not available? 132
e. Pounds of steam per hour 132
f. MMBtu per hour 133
g. Charging rate restriction (for batch units only): 133
h. Heat recovery: 133
i. Number of hearths: 133
j. Total hearth area: (in square feet) 133
k. Automatic feeder? 133
What if the emission unit has more than one DEP approval? 133
6. DEP Air Quality Approvals 133
a. Most recent approval number 133

b. DEP approval date (mm/dd/yyyy) 133
7. Additional reporting requirements 134
a. Are there other routine air quality reporting requirements for this emission unit? 134
b. Reporting frequency – check all that apply: 134
c. Is this unit subject to (check all that apply): 134
8. Hours of operation for the emission unit: 134
a. Check if typically continuously operated - 24 x 7 x 52 134
b. Number of hours per day 134
c. Number of days per week 134
d. Number of weeks per year 134
e. Percent of time emissions unit is operated each calendar quarter: 134
9. Ozone season schedule – May 1 through September 30: 134
a. Ozone season hours per day 135
b. Ozone seasons days per week 135
c. Weeks operated in ozone season 135
10. Emissions release point 135
What is a release point? 135
What is the difference between stacks and non-stacks? 135
What about unusual exhausts, such as short vertical vents? 135
11. Link this unit to a physical stack (if applicable) - Pick from the list. 135
12. Are there air pollution control (APC) devices on this emissions unit? 136
How do I add a new APC? 136
How are my existing APCs displayed? 136
How do I revise an existing APC? 136
What if my APC is used by other EUs? 136
How to delete an air pollution control device? 136
How to replace an air pollution control device? 136
a. Type 136
b. Manufacturer ** 136
c. Model Number ** 136
d. Facility's ID for this Device. ** (the unique number assigned by the facility for the APC equipment) 136
e. Installation Date ** 136
f. MassDEP approval number 136
g. MassDEP approval date 136
h. Decommission date 136
What to do if you don't know the date? 136
How do I report my flare as control device? 137
i. Percent overall efficiency – enter for all pollutants that the device was designed to control: 137
What is the % overall efficiency? 137
13. Is there monitoring equipment on this emissions unit or its related control device? 137
How to delete a monitor? 137
How to replace a monitor? 137
a. Monitor type: 138
How do I use CEM data? 138
b. Manufacturer: 138
c. Model number: 138
d. Monitor ID #: 138
e. Installation date: 138
f. DEP approval #: 138
g. DEP approval date: (mm/dd/yyyy) 138
h. Decommission date: 138
i. Recorder? 138
j. Audible alarm? 138
k. Data System? 138

What is a “data system”? 138
I. Monitored pollutants: 138
B. Fuels and Emissions (Parent Form: DEP Fuel #1) 138
1. Waste Type Description: 139
Is GHG emissions reporting required for this fuel, waste or raw material/finished product? (in SRGHG package) 139
Is this fuel, waste, or raw material/finished product an input, output or fuel? 139
Add a New Fuel: 139
When to not check “Add a new fuel” box 139
Delete this fuel: 139
Number of fuels for this unit (previous records): 139
How does eDEP handle multiple fuels? 140
1. DEP Fuel #: 140
Can I change the DEP fuel identifier? 140
a. Source Classification Code (SCC) 140
SCC Description 140
How does eDEP use Source Classification Codes (SCC)? 140
b. Fuel/Material/Waste Type 140
EPA material type code help text 140
c. Do you have fuel or usage restrictions? 141
What if there are multiple raw material or finished product or fuel restrictions? 141
What if a restriction applies to multiple units? 141
d. DEP approval number for restrictions: 141
e. Annual material/finished product or fuel restriction – if none, leave blank: 141
f. Short term raw material/finished product/fuel restriction– if none, leave blank: 141
2. Annual usage: 142
a. Total actual amount used for year of record 142
b. Units 142
Units help text 142
Prior year (Annual usage) 142
B. Source Registration Emissions (Parent Form: DEP Fuel #1) 142
3. Total emissions for this waste type only – tons per year: 142
What are total emissions for this material/finished product? 142
Calculations: Read First 142
When is NH3 emissions required? 142
PM Filterable vs. PM Condensable 143
Actual for previous year 143
What are “actual emissions”? 143
Actual for year of record: 143
How do I use CEMs data? 143
Potential Emissions (in Tons) 144
What are potential emissions? 144
Emission factor: 144
in pounds per unit (EF Units): 144
What are emission factors (EF)? 145
Calculation Method 145
When to enter maximum allowed emissions? 145
Maximum allowed emissions – annual: 146
Maximum allowed emissions - short term: 146
Short term period 146
Basis- DEP approval number or regulation: 146
3. Ozone season emissions – May 1 through September 30: 146
a. Typical day VOC emissions – pounds per day 146

b. Typical day NOx emissions – pounds per day 146
What if I have more than one raw material/finished product/fuel? 147
B. Greenhouse Gas Emissions (Parent Form: DEP Fuel #1) in SRGHG Package 147
4. Total GHG emissions for this fuel only in tons per year: 147
Calculations: Read First 147
Why you may want to calculate your own emissions values? 147
What are "actual emissions"? 147
Actual (in Tons) for previous year 147
Actual (in Tons) for year of record 147
What are emission factors? 148
Emission factor (EF) 148
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions? 148
in pounds per unit (EF units): 148
Calculation Method 148
Specify General Reporting Protocol EF 148
CO2e for previous year 149
CO2e for year of record 149
Total CO2e emissions 149
CO2e for previous year 149
CO2e for year of record 149
C. Notes and Attachments (found on parent form only) 149
1 Notes: 149
2. Attachments 149
B. Fuels and Emissions (Section B Child Forms: (DEP Fuel# 2) Primary Chamber Information) 149
Is GHG emissions reporting required for this fuel, waste or raw material/finished product? (in SRGHG package) 149
Is this fuel, waste, or raw material/finished product an input, output or fuel? 150
1. DEP Fuel #: 150
Can I change the DEP fuel identifier? 150
a. Source Classification Code (SCC) 150
SCC Description 150
How does eDEP use Source Classification Codes (SCC)? 150
b. Fuel/Material/Waste Type: 150
d. Is this a Primary chamber auxiliary burner? 151
Temperature - degrees in Fahrenheit 151
a. Operating range 151
b. Permitted range: 151
Retention time in seconds 151
Chamber auxiliary burner 151
a. Type of burner: 151
b. Burner manufacturer 151
c. Burner model number 151
d. Maximum rating MMBtu/hr 151
e. Sulfur content for oils (Acceptable Range 0 – 2.2): 151
f. Maximum hourly fuel rate for all firing burners: 152
g. Do you have fuel or usage restrictions? 152
h. DEP approval number for fuel restrictions: most recent for this fuel. 152
What if the restriction is mentioned in multiple approvals? 152
i. Annual usage restriction for this fuel: 152
What if the restriction applies to multiple units? 152
j. Short term fuel usage restriction for this fuel: 152
2. Annual usage: 153
a. Total actual amount used for year of record 153

b. Units 153
Units help text 153
Prior year (Annual usage) 153
B. Greenhouse Gas Emissions (DEP Fuel# 2) Primary Chamber (in SRGHG Package) 153
3. Total emissions for this fuel only in tons per year: 153
Calculations: Read First 154
Why you may want to calculate your own emissions values? 154
Actual (in Tons) for previous year - eDEP only: 154
What are "actual emissions"? 154
Actual (in Tons) for year of record 154
What are emission factors? 154
Emission factor (EF) 154
in pounds per unit (EF units): 154
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions? 155
How do I use CEMs data? 155
Calculation Method 155
Specify General Reporting Protocol EF 155
CO2e for previous year 155
CO2e for year of record 155
4 Total CO2e emissions 156
CO2e for previous year 156
CO2e for year of record 156
B. Fuels and Emissions (Section B Child Forms: (DEP Fuel# 3) Secondary Chamber Information) 156
Is GHG emissions reporting required for this fuel, waste or raw material/finished product? (in SRGHG Package) 156
Is this fuel, waste, or raw material/finished product an input, output or fuel? 156
1. DEP Fuel #: 156
Can I change the DEP fuel identifier? 157
a. Source Classification Code (SCC) 157
SCC Description 157
How does eDEP use Source Classification Codes (SCC)? 157
b. Fuel/Material/Waste Type: 157
d. Is this a Primary chamber auxiliary burner? 157
Temperature - degrees in Fahrenheit 157
a. Operating range 157
b. Permitted range: 157
Retention time in seconds 157
a. Operating range 157
b. Permitted range: 157
Chamber auxiliary burner 158
a. Type of burner: 158
b. Burner manufacturer 158
c. Burner model number 158
d. Maximum rating MMBtu/hr 158
e. Sulfur content for oils (Acceptable Range 0 – 2.2): 158
f. Maximum hourly fuel rate for all firing burners: 158
g. Do you have fuel or usage restrictions? 158
h. DEP approval number for fuel restrictions: most recent for this fuel. 159
What if the restriction is mentioned in multiple approvals? 159
i. Annual usage restriction for this fuel: 159
What if the restriction applies to multiple units? 159
j. Short term fuel usage restriction for this fuel: 159
2. Annual usage: 159

a. Total actual amount used for year of record 159
b. Units 159
Units help text 159
Prior year (Annual usage) 159
B. Greenhouse Gas Emissions (DEP Fuel# 3) Secondary Chamber (in SRGHG Package) 159
3. Total GHG emissions for this fuel only in tons per year: 160
Calculations: Read First 160
Why you may want to calculate your own emissions values? 160
Actual (in Tons) for previous year - eDEP only: 160
What are "actual emissions"? 160
Actual (in Tons) for year of record 160
What are emission factors? 161
Emission factor (EF) 161
in pounds per unit (EF units): 161
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions? 161
How do I use CEMs data? 161
Calculation Method 161
Specify General Reporting Protocol EF 161
CO2e for previous year 162
CO2e for year of record 162
4 Total CO2e emissions 162
CO2e for previous year 162
CO2e for year of record 162
D. Total Emissions for Emission Unit (separate child form) (in SRGHG Package) 162
1. Total Emissions for this emission unit in tons per year: 162
What are total emissions for this emission unit? 162
Actual (in Tons) for previous year 163
Actual (in Tons) Emissions 163
Potential emissions (in Tons): 163
Maximum allowed emissions (in Tons) – annual 163
Maximum allowed emissions (in Tons)) - short term 163
Short term period: 163
Basis – DEP approval number or regulation: 163
When do I complete the "allowable" emission fields? 164
What if a restriction applies to multiple units? 164
2. Ozone season schedule - May 1 through September 30: 164
a. Typical day VOC emissions – pounds per day 164
b. Typical day NOx emissions – pounds per day 164
3. Total GHG Emissions for this emission unit in tons per year 164
What are total emissions for this emission unit? 164
Actual (in Tons) for previous year 164
Actual (in Tons) Emissions 164
CO2e for previous year (in Tons) 164
CO2e for year of record (in Tons) 164
Total CO2e emissions 165
CO2e for previous year 165
CO2e for year of record 165
BAW GHG FORM EMISSION UNIT INSTRUCTIONS: GHG-ONLY (FOR SRGHG PACKAGE) 166
Purpose 166
When is this form applicable? 166
How many versions of this form are required? 166
CAUTION: for filers with new GHG emission unit since their last submittal 166
A. Equipment Description 167

1. Facility Identifiers 167
a. Facility Name 167
b. DEP Account number 167
c. Facility AQ Identifier 167
Can I change the responses to the emission unit identifier fields? 167
2. Emission unit identifiers 167
a. Facility's choice of emission unit name- edit as needed. 167
b. Facility's emission unit number / code – edit as needed. 167
c. DEP emission unit # - 167
d. ORIS id # – for large electrical utilities only 167
e. Combined units- enter number of individual units 168
f. Emission Unit Category 168
g. Is GHG emissions reporting required for this emission unit? 168
WHAT ARE COMBINED UNITS AND WHEN CAN EQUIPMENT BE COMBINED AS ONE EMISSION UNIT? 168
3. Emission unit installation and decommission dates 168
a. Installation dates – estimate if unknown (mm/dd/yyyy) 168
b. Decommission dates – If applicable (mm/dd/yyyy) 168
How / when to delete a unit? 168
4. Emission unit replacement 169
a. Is this unit replacing another emission unit? 169
b. DEP's emission unit number and facility unit name. 169
How to be sure the unit being replaced appears in this menu? 169
What if one emission unit is replacing more than one unit? 169
5. Equipment 169
a. Type: 169
EPA Unit Type Code 169
EPA unit type code help text 169
EPA Unit Type (describe): 169
What to do if data unknown or not available? 169
b. Manufacturer 169
c. Model number 169
d. Maximum input rating MMBtu/hr 170
B. Fuels and Emissions (for Parent and Section B Child Forms) 170
Is GHG emissions reporting required for this fuel,waste or raw material/finished product? 170
Is material/product/fuel an input or output or fuel? 170
How does eDEP handle multiple fuels? 170
Add a New Fuel: 170
Delete this fuel: 171
1. Process Description 171
DEP Fuel #: 171
a. Source Classification Code (SCC) 171
SCC Description 171
How does eDEP use Source Classification Codes (SCC)? 171
What SCC should be used to report emissions from a natural gas distribution system? 171
b. Fuel/Material/Waste Type:: 171
c. Fuel/Process Description 171
2. Total actual used for year of record 172
Amount 172
Units per hour 172
Prior year (Amount and Units) 172
3. Total GHG emissions for this fuel only in tons per year: 172
Calculations: Read First 172
Why you may want to calculate your own emissions values? 172

Actual (in Tons) for previous year 172
What are “actual emissions”? 172
Actual (in Tons) for year of record 173
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions? 173
Emission factor 173
in pounds per unit (EF units): 173
What are emission factors? 173
Calculation Method 174
Specify General Reporting Protocol EF 174
CO2e for previous year 174
CO2e for year of record 174
4 Total CO2e emissions 174
CO2e for previous year 174
CO2e for year of record 174
C. Notes 175
D. Total GHG Emissions for Emission Unit (separate Child Form) 175
1. Total GHG Emissions for this emission unit in tons per year 175
What are total emissions for this emission unit? 175
Actual (in Tons) for previous year 175
Actual (in Tons) Emissions 175
CO2e for previous year (in Tons) 175
CO2e year (in Tons) 175
2 Total CO2e emissions 176
CO2e for previous year 176
CO2e for year of record 176
BAW AQ EU – ORGANIC MATERIAL STORAGE INSTRUCTIONS: TANK (AP-4) 177
Purpose 177
When is this form applicable? 177
How many versions of this form are required? 177
When does a tank need to be reported? 177
Do waste tanks need to be reported? 177
Do I need to report emissions from tanks (breathing/standing, drawdown, and transfer losses)? 177
How do I report lube oil tanks? 177
Is there a de minimis concentration of organic matter below which a form is not required for a tank? 177
CAUTION for filers with new storage tanks since their last submittal 178
A. Equipment Description 178
1. Facility Identifiers 178
a. Facility Name 178
b. DEP Account number 178
c. Facility AQ Identifier 178
2. Emission Unit Identifiers 178
a. Facility’s choice of emission unit name 178
b. Facility’s emission unit number / code 179
Can I change the responses to the emission unit identifier fields? 179
c. DEP emission unit # 179
d. Combined Units – enter number of individual units 179
What is a combined unit? 179
3. Emission unit installation and decommission dates 179
a. Installation date – estimate if unknown (mm/dd/yyyy) 179
b. Decommission date (mm/dd/yyyy) – if applicable 179
How / when to delete a unit? 179
4. Emission unit replacement 180
a. Is this unit replacing another emission unit? 180
b. DEP’s emission unit number and facility unit name 180

How to be sure the unit being replaced appears in this menu? 180
What if one emission unit is replacing more than one unit? 180
5. Unit descriptions 180
a. Description 180
b. Roof type 180
c. Height/Length – feet 180
d. Diameter – feet 180
e. Capacity – gallons 180
How to report on combined units? 180
6. Construction: 180
7 – 8. Material stored and New material stored (enter new material if contents changed during year of record): 180
a. Name of material 180
b. CAS number if single chemical 180
c. SCC for standing / breathing loss 180
d. SCC description 181
Where do you find Source Classification Codes (SCC)? 181
e. Vapor pressure PSI at 25 C 181
f. Temperature - ºFahrenheit 181
What do I enter for temperature? 181
g. Annual throughput in gallons 181
h. RVP – **gasoline only** 181
i. Total oxygen content in gallons - **gasoline only** 181
j. Oxygenate name – **gasoline only** 181
How do I report blends of gasoline? 181
What if there are more than 2 contents during the year? 181
B. Notes and Attachments 182
1 Notes: 182
2. Attachments 182
BAW AQ INSTRUCTIONS: STACK 183
Purpose 183
When is this form applicable? 183
How many versions of this form are required? 183
CAUTION: for filers with new stacks (vertical release points) since their last SUBMITTAL 183
How do I enter in the forms unusual exhausts, such as vertical vents? 184
CAUTION: regarding the order in which you complete your forms 184
A. Stack Description 184
1. Facility Identifiers 184
a. Facility Name 184
b. DEP Account number 184
c. Facility AQ Identifier 184
Can I change the responses to the stack identifier fields? 184
2. Stack Identifiers: 185
a. Facility's choice of stack name 185
b. Facility's stack number 185
c. DEP stack # 185
3. Stack type: Check the box 185
3.b Combined stacks 185
When can stacks be combined on one form? 185
How should the data be reported? 185
4. Dimensions: 185
Height in feet above the ground 185
Internal Diameter in feet 185
5. Gas exit velocity: 185
Low end – feet per second 185

High end – feet per second 186
6. Exit temperature 186
Low end – ° Fahrenheit 186
High end – ° Fahrenheit 186
7. Stack liner material: 186
8. Decommission date –if applicable (mm/dd/yyyy) 186
When / how to delete (decommission) a stack? 186
B. Emission Units Associated with Stack 186
C. Notes and Attachments 187
1 Notes: 187
2. Attachments 187
BAW AQ TOTAL EMISSIONS STATEMENT (TES) INSTRUCTIONS & HAZARDOUS AIR POLLUTANT (HAP) LIST 188
Purpose 188
Who must file this form? 188
How many versions of this form are required? 188
When is this form applicable? 188
CAUTION: regarding the order in which you complete your forms 188
A. Annual Total Emissions Statement 188
1. Facility Identifiers 188
a. Facility Name 188
b. DEP Account number 188
c. Facility AQ Identifier 188
2. Total Emissions 188
How are total emissions calculated? 189
3. Facility-wide Emission Limits 189
Total Emissions - 189
Actual for previous year 189
Actual for year of record 189
Potential emissions at maximum capacity 189
Facility-wide max allowed (permitted) emissions-annual 189
Facility-wide max allowed (permitted) emissions- short term: 189
Short term period: 189
Basis: DEP approval number or regulation: 189
When do I complete the “max-allowed” (permitted) emission fields? 190
If the restriction is mentioned in multiple approvals: 190
4. If you have facility-wide fuel, raw materials, or product restrictions, complete the following: 190
DEP approval number (most recent) 190
Amount of restriction 190
Restriction units (e.g., gallons, tons) 190
Per unit time (e.g. yr, mo, wk, day, hr) 190
Description of fuel, raw material or product restricted. 190
When do I complete the facility-wide restriction fields? 190
If the restriction is mentioned in multiple approvals: 190
B. Greenhouse Gas (GHG) List (for SR Only Package) 190
What are the thresholds for reporting greenhouse gases? 190
Please indicate which – if any - of the following greenhouse gas chemicals are used and/or emitted by checking the appropriate box: 190
B. Greenhouse Gas (GHG) Emissions (for SRGHG Package) 191
1. Total GHG Emissions: 191
Actual for previous year 191
Actual for year of record 191
CO2e for previous year 191
CO2e for year of record 191
2. Total CO2e Emissions 191

Actual for previous year ... 191
Actual for year of record ... 191
C. Hazardous Air Pollutant (HAP) List ... 191
What is a HAP? ... 191
What are the thresholds for reporting HAPs in this section? ... 192
1. Does your facility use any of the Hazardous Air Pollutant chemicals regulated under Section 112 of the Clean Air Act listed below and on the following pages? ... 192
D. Hazardous Air Pollutant Emissions ... 192
1. Does the facility have the potential to emit (PTE) 10 tons of any single listed Hazardous Air Pollutant (HAP) ... 193
Do you need an Air Operating Permit? ... 193
2. Does the facility have the potential to emit (PTE) a total of 25 tons of any combination of listed Hazardous Air Pollutants (HAPs)? ... 193
Are you subject to TURA? ... 193
3. Does the facility have a restriction on total HAPS? ... 193
4. Are you required to report HAP emissions for any other reason? (e.g. a permit condition) ... 194
5. If you answered "yes" to any of the Questions 1 – 4 above, eDEP will generate additional pages in which you may enter those emissions. ... 194
E. Notes and Attachments ... 194
1 Notes: ... 194
2. Attachments ... 194
F. Hazardous Air Pollutant Emissions ... 195
Where do you enter Total HAP emissions? ... 195
Which HAPs must be reported? ... 195
HAP name ... 195
CAS # for individual HAPs, if applicable: ... 195
Actual for previous year ... 195
Actual for year of record ... 195
Potential Emissions (in Tons) ... 196
What are potential emissions? ... 196
Facility-wide permitted--annual: ... 197
Facility-wide permitted-–– short term: ... 197
Short term period: ... 197
Basis: DEP approval number or regulation: ... 197
G. Hazardous Air Pollutant (HAP) Emissions Total ... 197
1. Total HAP Emissions ... 197
a. Actual for previous year ... 197
b. Actual for year of record ... 197
c. Potential Emissions (in Tons) ... 198
What are potential emissions? ... 198
d. Max allowed emissions (permitted) -annual: ... 199
e. Max allowed emissions (permitted) – short term: ... 199
f. Short term period: ... 199
g. Basis for max allowed emissions: ... 199
COMPLETION OF YOUR SUBMITTAL ... 200
Responsible official's (RO) SIGNATURE ... 200
Sharing a package ... 200
Electronically Signing Your Package ... 200
Submitting Your Package ... 200
Printing a copy/Saving an electronic copy ... 200
APPENDICES ... 201
APPENDIX A: DEFINITIONS ... 202
Actual Emissions ... 202
Air Contaminant ... 202
Areas of Critical Concern ... 202

Best Available Control Technology (BACT) 203
Calculation Method Type 203
Chemical Abstract Service (CAS) number 203
Clean Air Act Chemical (CAA Chemical) 204
Combustion Device 204
Criteria Pollutant 204
Emission Unit (EU) 204
Enforceable Limit 204
Facility-wide Potential Emissions: 204
FEDERALLY ENFORCEABLE 205
FEDERAL POTENTIAL EMISSIONS 205
Federal Register (FR) 205
Formulation 205
GHG Only 206
Global Warming Potential (GWP) 206
Halogenated Organic Compound (HOC) 206
Hazardous Air Pollutant (HAP) 206
Insignificant Activities 207
LOWEST ACHIEVABLE EMISSION RATE (LAER) 207
Major facility Threshold 208
Material Safety Data Sheet (MSDS) 208
New Source Performance Standards (NSPS) 208
Numbering Stacks, Points, and Segments 208
Organic Compound 209
Organic Material 210
Ozone Season 210
Permitted Emissions 210
Permitted by rule 210
Point 210
Pollutant 210
Potential Emissions 210
REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT) 212
Responsible Official (RO) 212
Segment 212
Stack 212
Volatile Organic Compound (VOC) 213
APPENDIX B: LIST OF ACRONYMS 215
APPENDIX C: CALCULATIONS 217
SECTION C.1: ESTIMATING EMISSIONS 217
Section C.1.1: Basic Methodology 217
Section C.1.2: EXAMPLE CALCULATIONS FOR PROCESS EMISSIONS (for SR Emissions Reporting) 217
Section C.1.2.1 Example Calculations for Coating Operations Using VOC Coatings 218
Section C.1.2.2: Example Calculations for Other Process Emissions 219
SECTION C.1.3: FORMULAS AND SAMPLE CALCULATIONS FOR FUEL UTILIZATION FACILITIES 220
Section C.1.3.1: Formulas for Estimating Emissions from Fuel Utilization Facilities using Emission Factors 220
Section C.1.3-2 Oil Heat Values 222
Section C.1.3.3: Example Calculations for a Boiler 223
Section C.1.4: EXAMPLE CALCULATIONS FOR GHG EMISSIONS 225
SECTION C.2: THE WEIGHT OF THE VOC, HOC, or HYC CONTROLLED 226
APPENDIX D: AIR POLLUTION CONTROL EQUIPMENT CODES 227
APPENDIX E: EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS 229
APPENDIX F: MassDEP REGIONAL OFFICES 230
MassDEP Regional Facility Master File (FMF) Contacts 230

OVERVIEW OF SOURCE REGISTRATION PROGRAM WITH GREENHOUSE GAS INFORMATION

PURPOSE OF SOURCE REGISTRATION (SR) PROGRAM

Source Registration reporting provides MassDEP with valuable information on air pollution sources, their emissions, and their effects on ambient air quality across Massachusetts. This information is also used for program planning, technical assistance targeting, state and federal emissions inventories, and state implementation plans (SIPs). Source Registration serves as a mechanism to report actual emissions, potential emissions, and restricted emissions which are utilized to estimate fees that are used to offset MassDEP's costs for monitoring, inspection, technical assistance, and other compliance and enforcement activities and payment of these fees is required to maintain valid permits. In addition, the program is utilized to report daily emissions during the Peak Ozone Season, which occurs from May 1 to September 30.

PURPOSE OF GREENHOUSE GAS (GHG) PROGRAM
(for SRGHG package)

The Massachusetts **Global Warming Solutions Act (GWSA)**, which became law in 2008, required the Department of Environmental Protection (MassDEP) to promulgate mandatory greenhouse gas (GHG) reporting regulations. MassDEP responded by issuing **310 CMR 7.71**, which identifies the facilities that need to report, establishes methodologies for calculating and verifying emissions, and allows voluntary reporting by facilities for which it is not mandatory.

WHO MUST FILE THIS FORM?

Source Registration is required of any person owning, operating or controlling a facility that meets the requirements listed in 310 CMR 7.12(1)(a) - See **310 CMR 7.00: Air Pollution Control** for details.

Reporting of greenhouse gas emissions is required of any person owning, operating or controlling a facility that meets the requirements listed in **310 CMR 7.71.** See **310 CMR 7.00: Air Pollution Control** for details.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

One package is required for the entire facility. This report must include information on all emission units, emission processed, tanks, fugitive GHG emissions (for SRGHG package, if applicable) and emission release points (stacks) unless specifically exempted.

IMPORTANT: Once a facility is subject to 310 CMR 7.12, all emission units and processes at the facility shall be included in the Source Registration even if, individually, certain emission units and processes may not meet the applicability thresholds of 310 CMR 7.00. Emission units that are "insignificant activities" under 310 CMR 7.00: *Appendix C*(5)(i) need not be included

WHAT IF MY FACILITY IS ALSO REQUIRED TO REPORT GHG EMISSIONS?

- **Create a "Greenhouse Gas (GHG) Package**": If you are required to submit a GHG emissions report and your facility is required to submit Source Registration (SR) report **triennially** but this is NOT the year your SR is due, do not use the SRGHG package. Return to My eDEP. Find "Greenhouse Gas Package(GHG)" and click <Start Transaction>. Go to the GHG Website for instructions: https://www.mass.gov/guides/massdep-greenhouse-gas-emissions-reporting-program

- **Create a "SR and GHG Package"**: If you are required to submit a GHG emissions report and your facility is required to submit Source Registration (SR) report **triennially** and this is the year your SR is due, you will need to create a SRGHG package. If you did not create a SRGHG package, return to My eDEP. Find "SR and Greenhouse Gas (GHG)" and click <Start Transaction>

- **Create an "AQ Source Registration Package (SR)":** If you are only required to create a Source Registration Package and do not need to report GHG emissions, you need to use the SR Only package. If you did not create a SR package, return to My eDEP. Find "AQ Source Registration Package (SR)" and click <Start Transaction>

  NOTE: for facilities that also need to submit GHG emission annually, any changes to emission unit or fuel information OR adding new emission units in your SRGHG submittal, will also be available when you are required to create your GHG Only package.

WHAT IF MY FACILITY'S CLASSIFICATION CHANGED, DO I STILL REPORT?

If your facility met the annual filing criteria during any portion of the year of record, then it must report for that year of record. This applies even if the facility ceased to operate at some point during the year of record. If the facility can demonstrate that is was NOT subject to Source Registration during the year of record (e.g., the facility shutdown in the year prior to the year of record) then the facility usually does not have to file. You **MUST** contact the Help Desk or your MassDEP Regional Data Manager if you believe this applies to your facility.

For GHG emissions reporting: If your facility is subject to 310 CMR 7.75 and has not received an exemption under 310 CMR 7.75(3)(b), then you must submit a GHG emission report.

DO I HAVE TO REPORT IF I DID NOT RECEIVE A LETTER FROM MASSDEP?

If your facility meets the criteria for filing Source Registration, you must report regardless of whether you received a letter from MassDEP or not. If you think there is a mistake in the list, please contact the Help Desk or email baw.edep@state.mas.us with an explanation.

NOTE*: you may be directed by MassDEP to submit a Source Registration through communications other than the annual notice letters. For example, you may be directed to submit as part of an inspection, enforcement action, or permit. You must submit when so directed regardless of whether or not you receive one of the annual Source Registration notice letters.*

WHY CAN'T I LOGIN USING MY FACILITY'S TIN?

Sometimes the Tax Identification Number (TIN) we have on file is not correct – this is particularly common for facilities that have not yet filed in the new online system. In such cases, we have assigned a temporary TIN – this temporary TIN was included in the Reminder Letter mailed to the facility. Once you login with the temporary TIN, you must correct the TIN on the Facility Information form.

WHAT UNITS MUST BE SUBMITTED?

A complete package includes a report on ALL emission units, including idle units. Failing to report on an idle unit for two (2) years could trigger requirements of a new approval plan. Similarly, you must submit a timely report if an entire facility is idle.

If a unit has been permanently removed and not previously reported as being removed but is listed on the Overview Form as part of the facility please provide a decommissioning date for that unit. This notifies the Air Quality Program that the unit has been permanently removed. In some cases, such as when the removed unit affects a permit or approval plan, affects fees, or other reporting requirements, it may be necessary to notify your regional office that the unit has been removed.

For GHG emissions reporting:Please report GHG emissions for all stationary emission sources, as defined in 310 CMR 7.71

DO I NEED TO REPORT SMALL PORTABLE HEATING UNITS OR OTHER SMALL SOURCES?

No, small portable heating units, defined as those which have fuel tanks less than 10 gallons capacity, do not need to be reported. Similarly, other small units, or insignificant activities and their associated emissions do not need to be reported, such as bathroom and locker room ventilation, copying activities for internal office use, facility/building maintenance (including repainting, sandblasting, lawn maintenance, etc.). A complete list of these activities can be found in Appendix A: Definitions.

DO I REPORT TEMPORARY EMISSION UNITS?

Yes, in some cases. If an emission unit is a type that would be reported if it were a fixed or permanent unit, but it is a temporary or mobile unit (such as a temporary emergency generator or a temporary boiler mounted on a trailer), then it must be included in your Source Registration ***IF*** *it operated for 120 days or more during the year of record*. **Note** that if the temporary unit is very similar to other units at the facility, you should consider reporting it with one of the existing units on that unit's form (they would become a combined unit).

DO I NEED TO REPORT NONROAD ENGINES?

The only exception is a unit used for construction equipment – that is, a generator used only to power construction equipment does not need to be reported in Source Registration. Note, however, that a temporary generator used to replace or augment an existing unit at the facility (that is, it is used to power the facility's equipment) during construction would need to be reported.

HOW SHOULD NON-STATIONARY UNITS BE REPORTED?

Where an engine is not used to power a motor vehicle but is moved around to different locations at a facility, then the engine is defined as non-stationary engine and is subject to reporting under Source Registration. This is true if: (1) the engine is at the facility and operates for more than 120 days even if it moves around at the facility (i.e., the engine runs at the facility and is not a unit that operates off-site but is just stored at the facility); (2) is not construction equipment; and (3) is a type that would be reported on if fixed (e.g., not an insignificant activity). This is due to the broad definition of "emission unit" in 7.12(3)(a). This would also apply to non-stationary units that are not engines.

WHAT DO YOU ENTER INTO THE BASIS FIELDS FOR RESTRICTIONS IF YOU DON'T HAVE A PERMIT?

If a unit has a restriction that is based on a regulatory limit rather than a permit condition, then enter the regulatory citation (e.g., 310 CMR 7.X(XX) or 40 CFR Part 63, Subpart XX.XX). All emissions or throughput restrictions will have a basis.

WILL MASSDEP REVIEW WHAT I HAVE SUBMITTED?

Yes. We have automated Quality Assurance programs that search all of the submittals for missing, unusual or inconsistent data. In addition, MassDEP staff will also review individual packages in more detail from time to time.

If a problem is found, the owner/operator of the facility or the preparer may be contacted regarding mistakes or questionable data. Please check your work to avoid you or your client receiving a call from us. If you are reporting anything unusual (such as a reorganization of your emission units), it is good to explain this in the notes section.

NOTE: You must be able to access your submittal during an inspection of the facility by MassDEP.

BAW AQ OVERVIEW FORM

PURPOSE	To create or amend a Source Registration and/or Greenhouse Gas Package.
WHO MUST FILE THIS FORM?	This form must be completed by the owner/operator/preparer submitting their package.
HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?	Submit one form for the whole facility.
NOTE FOR REPEAT FILERS	Most of the information on this form will have been auto filled in by eDEP. You may check the boxes to identify what changes will be made to your package. The information in the emission unit (EU) name field displays your facility's existing data PRIOR to this package being submitted. Any changes made to the EU forms will not be displayed on this form until this package has been submitted.

A. CREATE A SOURCE REGISTRATION PACKAGE

1. Select existing or new facility:	
Existing Facilities	Used by existing facilities to create a package.
Check if you added emission units or stacks since your last report.	Provides the preparer the ability to create additional forms, by means of a check box, for any new units added since the previous submittal. Checking this box will create the "New Unit Creator Form (New Form Creator)". This will allow the preparer to add any of the following forms: Stack, Fuel Burning Device (AP1), Process (AP2), Incinerator (AP3), and/or Tank (AP4) Forms, as well as, a GHG-Only form if GHG emission reporting is required but this activity is not subject to SR emissions reporting; i.e. fugitive emissions for 1) Chillers & Stationary Air Conditioners or 2) Natural Gas Distribution System.
New Facilities	Used by new facilities to create a package. This will automatically create the "New Unit Creator Form (New Form Creator)" allowing the preparer to create the appropriate number of forms for the submittal.
Note concerning "New Unit Creator Form (New Form Creator)"	Once the "New Unit Creator Form (New Form Creator)" is validated, the appropriate types and number of forms are created. If it becomes necessary to create additional form(s) for overlooked unit(s) at a later time, any individual "new unit" forms (Stack, Fuel Burning Device, etc.) that have been previously validated will need to be re-validated. **NOTE**: it is better to overestimate the number of forms needed. Any unused new forms can be deleted on the <Transaction Overview page>.

B. AMEND A PACKAGE

It may become necessary to amend a previously submitted package for several reasons. Some examples of issues that may require amendments are: a typographical mistake while entering fuel usage (which impacts a specific emission unit and the total emissions summary); a typographical mistake while entering an allowable emissions restriction (which impacts a specific emission unit); a new emission unit was entirely overlooked (which impacts a specific emission unit and the total emissions summary); the facility contact has changed (which impacts the Facility Information form), or other reasons.

1. Check if you need to	Check the box if you need to correct or add to a previously submitted SR or SR/GHG Package,check the boxes in the list below to select the forms/units you wish to work on.

Emission unit name	DEP#	EU Category	Last Update

2. Facility Name	This will be pre-populated from the information on your BAW AQ Facility Information Form. **NOTE:** You cannot change the facility name on this form. To change the facility name you must contact your MassDEP Regional Office FMF Data Manager.
Number of Emission Units (points) Number of Physical stacks	This will be pre-populated based on existing active emission units and stack information in the MassDEP database **NOTE**: you cannot change the information on this form.
HOW TO AMEND A PREVIOUSLY SUBMITTED PACKAGE	First, in the Preform, (this form appears after selecting start transaction), you needed to identify the reporting year of your package. **NOTE**: The Reporting Year selected will be present in each form header of your package. On the Overview form, unselect Existing Facility and put a check mark by the units that you want to amend. Or if you need to add a unit, check the box under A.1 "check if you added emission units". The system is flexible enough that you only need to submit the forms you want to correct rather than the entire package again. **IMPORTANT**: Before amending your package for the current reporting year, email BAW.eDEP@state.ma.us to confirm that your submittal has been accepted by MassDEP.
Facility Information	This form is required. This box is automatically checked enabling updates to the facility mailing information, facility contact information, Certification Section, etc. to be amended
TES (Total Emissions Statement)	Checking this box enables the total facility emissions to be updated/validated. This form is required if this submittal contains any of the following forms that report emissions: Fuel Burning Device, Process, Incinerator, or GHG Only Form.
New Unit Creator Form (New Form Creator)	Checking the box "Check here to add new units" allows the creation of new forms for added units.
Emission Units	Checking a specific emission unit enables information for that unit, such as fuel usage, emission restrictions, SCC, etc., to be amended. Specific changes may require the TES form to be amended and validated.

.

Validate the form by selecting [Error Check]. This will create the package, or the specific areas that have been requested to be amended and take you to the <Transaction Overview page>. where you can begin preparing your submittal,

BAW AQ NEW UNIT CREATOR FORM (NEW FORM CREATOR)

PURPOSE	To create individual forms (Fuel Burning Device (AP1), Process (AP2), Incinerator (AP3), Tank (AP-4), and/or Stack, as well as, GHG-Only form if GHG emission reporting is required but this activity is not subject to SR emissions reporting; i.e. fugitive emissions for 1) Chillers & Stationary Air Conditioners or 2) Natural Gas Distribution System) for added emission units or stacks since your last submittal.
WHO MUST FILE THIS FORM?	This form must be completed by the owner/operator/preparer submitting their package for any emission units or stacks added since your last submittal.
NOTE TO NEW FACILITIES OR FIRST TIME SUBMITTERS	If you are a new facility, or this is your first submittal, you must complete a form for each emission unit and stack.

1. ENTER THE NUMBER OF NEW UNITS AND NEW STACKS TO ADD TO THIS PACKAGE

Fuel Burning Device (AP-1)	Entering a number here will add that number of Fuel Burning Device (AP-1) Emission Unit Forms for the number of new or replacement boilers, engines, furnaces, etc being added to the facility.
Process (AP-2)	Entering a number here will add that number of Process (AP-2) Emission Unit Forms for the number of new or replacement processes, which include coating and painting operations, being added to the facility.
Incinerator (AP-3)	Entering a number here will add that number of Incinerator (AP-3) Emission Unit Forms for the number of new or replacement incinerators being added to the facility. **NOTE:** This form is not for afterburners or other pollution control equipment.
Tank (AP-4)	Entering a number here will add that number of Tank (AP-4) Emission Unit Organic Material Storage Forms for the number of new or replacement tanks being added to the facility.
Stack	Entering a number here will add that number of Stack Forms for the number of new or replacement stacks being added to the facility.
GHG Only (found on SRGHG package)	Entering a number here will add that number of GHG Forms for the number of new or replacement GHG Only units being added to the facility. Within the SRGHG package, GHG Only forms are used for emission units that are NOT subject to Source Registration Reporting; i.e. 1) Chillers & Stationary Air Conditioners - Fugitive Emissions and/or 2) Natural Gas Distribution System - Fugitive Emissions. **IMPORTANT:** Once the "New Unit Creator Form (New Form Creator)" is validated, the appropriate type and number of forms are created. If it becomes necessary to create additional form(s) for overlooked unit(s) at a later time, any individual "new unit" forms that have been previously validated will need to be re-validated. It is better to overestimate the number of form needed. Any unused new forms can be deleted on the <Transaction Overview page>..

Validate the form by selecting [Error Check]. This will create the specified number of requested form and return you to the <Transaction Overview page>. where you can proceed to the next form.

BAW AQ FACILITY INFORMATION FORM

PURPOSE

This form provides contact and basic descriptive information about the facility.

WHO MUST FILE THIS FORM?

This form must be completed by the owner/operator/preparer submitting their package.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

Submit one form for the whole facility.

IN WHAT ORDER SHOULD I COMPLETE THIS PACKAGE?

Complete this form first because it contains information that will populate the other forms in the Source Registration Package.

NOTE: Although you will be filling in certification statement information at the end of the form, the statement will not be certified until the Responsible Official (RO) completes STEP 2 of the eDEP electronic filing process "Signature". That step happens after all of the required forms have been filled in and validated.

NOTE FOR REPEAT FILERS:

Most of the information on this form will have been auto-filled by eDEP based on your prior submittal. You may make changes to most fields.

A. FACILITY INFORMATION

HOW TO CHANGE LOCKED FIELDS?

Facility Name and street address: You must contact your Regional Facility Maintenance File (FMF) Data Manager to change the facility name and/or address.

The list of MassDEP regional offices and the FMF Data Manager's phone numbers can be found on the Source Registration Website: https://www.mass.gov/guides/massdep-source-registration under MassDEP Bureau of Air & Waste: Source Registration Contacts.

To access the website open another internet browser window and copy and paste the URL into the address line.

The Facility AQ Identifier is a permanent identifying number assigned by MassDEP to a particular location. If you believe this number is incorrect (e.g. it is not the facility's AQID number shown on prior source registrations) contact BAW.eDEP@state.ma.us

The MassDEP Account number / FMF Facility # is assigned by MassDEP. If you believe the number is wrong (e.g. it is different from the number shown on your bill or permit approvals) contact your Regional FMF Data Manager. You cannot change it. The list of MassDEP regional offices and the phone numbers of the data managers can be found on the Source Registration web page: https://www.mass.gov/guides/massdep-source-registration

1. Facility

a. Facility Name

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

NOTE: you cannot change the facility name: if you need to do so you must contact your Regional MassDEP FMF Data Manager.

b-h. Facility address information

Physical address for the facility (not mailing or corporate address, if different)

b. Facility Street Address Line 1 c. Facility Street Address Line 2 d. City/Town e. State	f. Zip Code g. Facility Phone Number h. Facility Fax Number

2. Mailing Address

Address where mail regarding the Source Registration and/or Greenhouse Gas notifications should be sent, if different from the street address above.

a-e Facility mailing information

Facility mailing information rather than corporate/owner information, if they are different:

a. Facility Mailing Address/PO Box Line 1 b. Facility Mailing Address/PO Box Line 2 c. City/Town	d. State e. Zip Code

3 Facility Type:

- Utility — Utility: Check this box if the facility is an utility facility, regardless of ownership (i.e. private, tribal, federal, state, local government)
- Private — Private: If the facility is an electrical utility facility, do not check this box, check the utility box
- Tribal — Tribal: If the facility is an electrical utility facility, do not check this box, check the utility box
- Federal Government — Federal: If the facility is an electrical utility facility, do not check this box, check the utility box
- State Government — State: If the facility is an electrical utility facility, do not check this box, check the utility box
- Local Government — Local Government: If the facility is an electrical utility facility, do not check this box, check the utility box

4. ORIS Facility Code

This only applies to large electrical utility facilities.

5. ID Numbers

These are assigned by MassDEP and cannot be changed.

a. DEP Account Number

This is the unique identification number, assigned by MassDEP, to represent your entire facility in its information management systems.

b. Facility AQ Identifier

This is the ID number, assigned by MassDEP, to identify your facility in MassDEP's computer system for storing this information.

6. Location

Latitude/Longitude (Lat/Long) Coordinates

a. Latitude

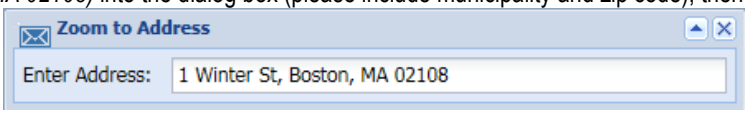
b. Longitude:

Valid Lat/long Ranges

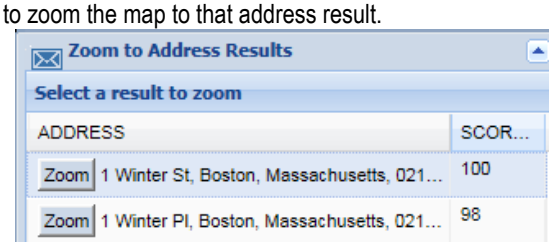
- Latitude: 42.9 – 41.2
- Longitude: West 73.5º – 69.8º (enter positive values only)

HOW TO FIND/VERIFY THE LATITUDE/LONGITUDE FOR YOUR FACILITY?

To find Lat/Long coordinates online:
[1] Go to MassDEP Online Map Viewer: http://maps.massgis.state.ma.us/images/dep/omv/wetviewer.htm
[2] In Map Tools, click on icon that looks like an envelope (zoom to address).
[3] A dialog box opens on the map. Enter a complete street address for your facility *(example: 1 Winter St Boston, MA 02108)* into the dialog box (please include municipality and zip code), then click **Submit**.



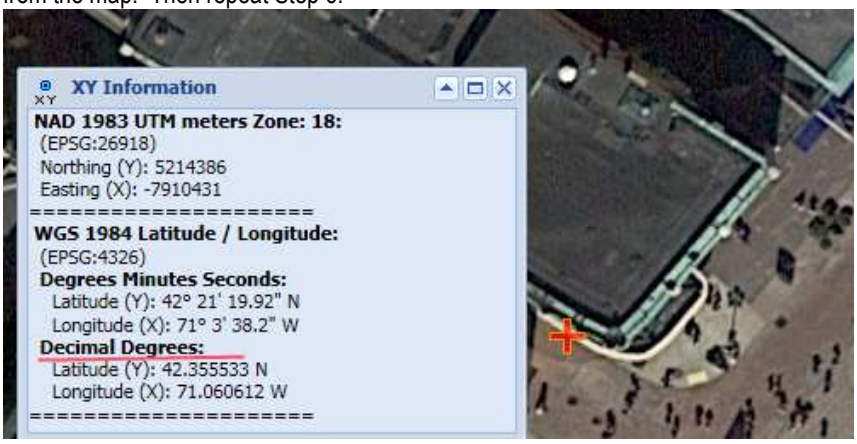
[4] A pop-up window will appear with the address search results and a score indicating locational quality. The higher the value the higher the confidence in locational accuracy. Click a **Zoom** button next to the address to zoom the map to that address result.



[5] An address marker will appear on the map indicating the estimated location of the address. To remove the marker from the map, click the **Clear** button in the lower right corner of the Zoom to Address window.

[6] In Map Tools, click on "xy" icon (XY Information), then click on the map where the front door of the facility.

[7] A pop-up window will appear with coordinate information for that location and an orange cross will be displayed at the point where the map was clicked. If the location of the front door does not appear accurate, use the **Clear** button in the lower right corner of the XY Information pop-up to clear XY markers from the map. Then repeat Step 6.



[8] From the XY Information pop-up window, using the **Decimal Degrees version** of the Lat (Y) / Long (X) coordinates enter (copy & paste) the values into their corresponding fields on the form

7. North American Industry classification code(s) NAICs	The six-digit code that an owner/operator uses to classify their facility, by the type(s) of products they produce. It can be found on your facility's Federal IRS forms. Your facility may be engaged in more than one line of business. You can list up to 4 different codes in the spaces provided. Enter your facility's Primary NAICS Code in field A.7.a.
HOW TO FIND NAICS CODES?	NAICS codes are six digit codes used to classify facilities by the types of products they produce. These are submitted on your Federal IRS forms. Additional information about NAICS codes can be found at the U.S. Census Bureau Website http://www.census.gov/epcd/www/naics.html.
8. Facility description	What is being produced and how it is being produced. *e.g. Screen printed tee shirts.*
9. Facility's normal hours of operation	
a. Start time b. End Time	Typical start and end times for the facility.
c. Continuous – 24x7x52	Check this box, if the facility typically operates twenty-four hours a day, seven days a week, and 52 weeks a year. If continuous is checked, all of the fields for the days of the week in question A.9.d will automatically become checked.
d. Which days is the facility open? • S(unday) • M(onday) • T(uesday) • W(ednesday) • T(hursday) • F(riday) • S(aturday	Check the days of the week that the facility is *typically* operating.
HOW TO COUNT THE NUMBER OF EMPLOYEES	The maximum number of employees that worked at the facility any time during the Year of Record. Include in this count only those employees who meet both of the following conditions: The employee worked at least 17 hours a week and more than 20 weeks per year.
10. Number Of Employees	Enter the number of employees
WHO IS THE OWNER?	The owner is the individual or entity which has the care, charge, or control of a facility that is reported on your Federal Employer Tax Identification Number.
11. Facility Owner	Name of corporation, partnership, etc. if separate from facility. If facility owner's address is the same as the facility's mailing address, check this box and the mailing address information will be filled in automatically; Report the facility information as reported on the Tax Identification Number (TIN) Form for your facility. TIN is also referred to as Federal Employee Identification Number (FEIN) or Employee Identification Number (EIN). Please contact your MassDEP Regional Office if the ownership of this facility has changed.

Name of corporation, partnership, etc. if separate from facility.

a. Owner or Corporation Name	g. Country
b. Mailing Address Line 1	h. Owner TIN (Taxpayer Identification Number)
c. Mailing Address Line 2	i. Owner Phone Number
d. City/Town	j. Extension
e. State	k. Owner Fax Number
f. Zip Code	l. Owner E-mail Address

12. Facility contact information contact

The name of the individual who should be contacted for further information about the facility information.

If contact name and/or address was listed previously, check appropriate box and the information you provided will be filled in automatically;

Otherwise provide the requested information:

a. Facility Contact First Name and Last Name	g. Country
b. Mailing Address Line 1	h. E-mail Address
c. Mailing Address Line 2	i. Phone Number
d. City/Town	j. Extension
e. State	k. Fax Number
f. Zip Code	

COUNTRY – FOREIGN OWNERS

If the facility owner has an address other than USA or Canada, please enter the facility's address in Q.11 and then put the correct owner address in the Notes field at the end of the form.

OWNER TIN –PLEASE CORRECT YOUR TIN

If this number is not the TIN of the facility owner, please enter the correct TIN – we will update our records before the next reporting cycle.

13. Air emissions information contact

The name of the individual who should be contacted for further information about the source registration form(s).

If contact name and/or address was listed previously, check appropriate box and the information you provided will be filled in automatically;

a. Air Emissions Contact First Name and Last Name	g. Country
b. Mailing Address Line 1	h. E-mail Address
c. Mailing Address Line 2	i. Phone Number
d. City/Town	j. Extension
e. State	k. Fax Number
f. Zip Code	

14. GHG emissions information contact (for SRGHG package)

The name of the individual who should be contacted for further information about greenhouse gas emissions .

If contact name and/or address was listed previously, check appropriate box and the information you provided will be filled in automatically;

NOTE: this section will not appear if the facility is only submitting a Source Registration package.

Otherwise provide the requested information:

a. GHG Emissions Contact First Name and Last Name	g. Country
b. Mailing Address Line 1	h. E-mail Address
c. Mailing Address Line 2	i. Phone Number
d. City/Town	j. Extension
e. State	k. Fax Number
f. Zip Code	

B. PREPARER

1. Contact information for preparer of this submittal

The name of the individual who should be contacted for further information about this submittal. If contact name or address were the same as one listed previously, check appropriate box and the information you provided will be filled in automatically;

Otherwise, provide the requested information:

a. Preparer Contact First Name and Last Name	g. Country
b. Mailing Address Line 1	h. E-mail Address
c. Mailing Address Line 2	i. Phone Number
d. City/Town	j. Extension
e. State	k. Fax Number
f. Zip Code	

C. NOTES AND ATTACHMENTS

1 Notes:

Information that will help MassDEP understand your submission. If an attachment will be associated with this form, identify any additional, explanatory material that you are choosing to submit

2. Attachments

Check this box if additional information will be included as an attachment. If the additional material can be sent electronically (20 MB document), check the box on the appropriate form. You will be prompted just before Step 2 for the attachment.

D. CERTIFICATION

NOTE: The certification statement won't be "signed" and certified until the second step of the eDEP reporting process: "2. Signature"

The RO completes the "Signature" step, and by so doing "signs" the certification statement. When that is done, you will be able to proceed to step 3 "Submit" t.

If you are not the RO you must "Share" the completed package with that individual so that they can complete the signature step. They will have to create a user ID and provide their 'nickname' to allow you to share the package with them.

SIGNATURE OF RESPONSIBLE OFFICIAL (RO), SIGNED UNDER PAINS AND PENALTIES OF

This Certification statement must be reviewed and signed under the pains and penalties of perjury by a RO at the location. If an agent has been designated to complete this form, the RO must review the forms and sign the certification statement.

PERJURY WITH SUBMISSION DATE

CAUTION: In order to be considered a "RO" an individual must meet the criteria listed in Appendix A: Definitions or see below.

eDEP will insert the signature and date when the form has been signed electronically.

WHO IS A RESPONSIBLE OFFICIAL?

*For a *Sole Proprietorship*: The RO is the sole proprietor.

*For a *Partnership:* The RO is a general partner with the authority to bind the partnership.

*For *a Corporation or a non-profit corporation:* The RO is a corporate official with authority to bind the corporation such as a:

1) President,
2) Secretary,
3) Treasurer,
4) Vice president of the corporation in charge of a business function, or
5) Any other person who performs similar policymaking or decision-making functions of the corporation.

*For a *Municipality or other public agency:* The RO is any one of the following individuals:

(1) A principal executive officer or
(2) A ranking elected official who is empowered to enter into contracts on.

WHAT IF YOU ARE NOT A RESPONSIBLE OFFICIAL?

When a preparer is not a RO, he or she can complete and validate the forms but cannot sign or submit the package. Instead, the preparer **must return** to the <Transaction Overview page>.and "share**"** the completed package with a RO who in turn completes the Signature phase (signs the package) and submits it to MassDEP.

HOW DO I SHARE THIS PACKAGE?

To share your package:

1. From the <Transaction Overview page>., select Share Transaction.
2. On the Share Submittal page, select the Add button
3. When Add button selected, enter the Responsible Official's nickname in the "Share With" field, for "Role" select Editor&Signer (this allows the RO to edit, sign & submit the package), and include an end date for sharing the submittal.
4. Select the Add button again at the bottom of the page
5. The RO's first and last name with the role will appear in the Shared With field.
6. Once you have confirmed the RO contact information is correct, select the back button to return to the Transaction Overview page.

NOTE: a "RO", must register with eDEP before the preparer can share the package.

1. Responsible Official (RO) information:

a. Print First Name
b. Print Last Name
c. Title
d. Phone Number
e. E-mail Address

Validate the form by selecting [Error Check]: the system will identify and require correction of any mistakes before it will accept the form and return you to the <Transaction Overview page>. From there, you can move on to the next form.

BAW AQ EMISSION UNIT –INSTRUCTIONS: FUEL BURNING DEVICE (AP-1)

PURPOSE

This form describes equipment, fuel use, and associated air pollution emissions at the facility during the calendar year being reported from all combustion processes, except waste incineration and air pollution control equipment "combustion devices", such as flares or afterburners.

WHEN IS THIS FORM APPLICABLE?

This form applies to any fuel burning emission units at your facility excluding:

- Waste incineration and their auxiliary burners; reported as an Incinerator (AP-3) ;
- Process heaters, dryers, ovens usually reported as a Process (AP2), and
- Air pollution control equipment reported on the appropriate form for the units controlled.

Source Registration reporting applies to any owner/operator of a facility if such facility meets any of the criteria in 310 CMR 7.12(1)(a)1-11

1. Has a facility-wide maximum energy input capacity in BTU/hour from fuel utilization facilities equal to or greater than the following size thresholds:
   a. All Fuels 40,000,000;
   b. Residual Fuel Oil 10,000,000;
   c. Solid Fuel 3,000,000;
   d. Used Oil Fuel 3,000,000; or
   e. Landfill Gas 3,000,000.
2. Has a maximum energy input capacity in Btu/hour from any fuel utilization facility emission unit that combusts natural gas, propane, butane, or distillate oil equal to or greater than the 10,000,000 Btu/hour.
7. Is or contains a stationary reciprocating internal combustion engine (except for emergency or standby engines) with a maximum energy input capacity of 3,000,000 Btu per hour or greater (burning any fuel).

NOTE: Once a facility is subject to 310 CMR 7.12, all emission units and processes at the facility shall be included in the Source Registration even if, individually, certain emission units and processes may not meet the applicability thresholds of 310 CMR 7.00.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

Submit one form for each boiler, furnace, internal combustion engine *(e.g., diesels or turbines),* or other combustion unit. You may combine reporting for more than one fuel burning unit on a single form. (see combined units for further guidance). You must include any fuel utilization units added or decommissioned since your last submittal.

CAUTION: Once your facility has exceeded any threshold for Source Registration, you must report on all sources that release any air contaminants at your facility. No sources that release any air contaminants may be excluded from Source Registration, except those listed as "Insignificant Activities" under 310 CMR 7 Appendix C(5)(i). This includes units that are idle – you must report on all idle combustion units at the facility whenever you submit a Source Registration.

CAUTION: FOR FILERS WITH NEW COMBUSTION EMISSION UNITS SINCE THEIR LAST SUBMITTAL

You must create a new emission unit form for any new emission unit. If you have not already created the new emission unit (when first opening your source registration package), you must either:
1) Under Transaction Overview, open the first form labeled <AQ Source Registration Package> or < AQ Source Registration & Greenhouse Gas Package>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under Transaction Overview, select <New Unit Form Creator (New Form Creator)>;
- Choose the appropriate form and enter the number of new units;
- Validate the form by selecting [Error Check];
- Follow subsequent instructions.

----Or----

2) You must create a new eDEP partial AQ Source Registration package for that emission unit. Once you have submitted the package you are working on:

- Return to "Forms", "Air & Climate",";
- Select your package using "Start Transaction;
- In Preform, if correction is to a prior reporting year submittal, change the reporting year using the drop down list;
- In Overview Form: unselect Existing Facility and put a check mark by the units that you want to amend. Or if you need to add a unit, check the box under A.1 "check if you added emission units"; ;
- Follow subsequent instructions pertaining to the New Unit Form Creator (New Form Creator).

IMPORTANT: Before amending your package for the current reporting year, email BAW.eDEP@state.ma.us to confirm that your submittal has been accepted by MassDEP.

CAUTION: If you realize in the midst of completing this package that you need to create additional forms, DO NOT return to the Overview Form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 validated forms.

The best way to add emission units AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

CAUTION: REGARDING THE ORDER IN WHICH YOU COMPLETE YOUR FORMS

If this unit's emissions release point is a new "vertical release point" (stack). You must create and complete a BAW AQ Stack form for that new stack prior to completing this form. The stack drop down-menu (A.13) will not contain the new stack and you will be unable to validate this form and will be forced to Save and then Exit this form. You will have to return to complete it after validating the new stack for the replacement stack.

A. EQUIPMENT DESCRIPTION

NOTE: In general the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS)was not historically stored in Air Quality database. That data will not appear on the electronic forms until it has been submitted in this format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.
TIP: If you obtained a plan approval for the emission unit(s) you are reporting on you will have received two documents from MassDEP: 1) a plan approval letter and 2) a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. Facility Identifiers

The name and identifying numbers of the facility that you are reporting.

a. Facility Name

This will be pre-populated from the information on your BAW AQ Facility Information Form.

b. DEP Account Number

c. Facility AQ Identifier

NOTE: You cannot change the facility name on this form. To change the facility name you must contact your MassDEP Regional Office FMF Data Manager.

How is a flare reported?

When a flare is a control device for a process emission unit, is should be reported as such on the AP-2 Form for that process unit. If this unit was previously reported as an incinerator on an AP-3 form, please do the following:

1. report the flare on the Process (AP-2) form that it controls,
2. note in Section C: Notes on the Process (AP-2) form that you are reporting the flare on the Process (AP-2) form rather than the Incinerator (AP-3) form, and
3. enter a decommission date in the Incinerator (AP-3) form (causing it to be removed in future submittals) and enter 0 for all throughputs and emissions.

EXCEPTION: Flares at landfills should be reported on a Fuel Burning Device (AP-1) form.

How should ovens and/or dryers be reported?

Ovens and dryers should be reported on one form only. If the oven or dryer has no emissions other than those from fuel combustion (the oven or dryer is used to drive off water and produces water vapor only), then Fuel Burning Device form (AP-1) should be used. This will allow the auto calculation feature to be utilized, if available.

However, if other emissions are present, such as solvents that are baked off, then the oven or dryer should be reported on Process form (AP-2).

CAN I CHANGE THE RESPONSES TO THE EMISSION UNIT IDENTIFIER FIELDS?

eDEP allows you to change the name (2.a) and give your own number (2.b) to each emission unit. MassDEP keeps track of the units by the DEP number (2.c), and therefore you cannot change it.

2. Emission unit identifiers	If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it. If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it.
a. Facility's choice of emission unit name- edit as needed.	A unique name of your choice that will allow you to recognize this unit on future reports
b. Facility's emission unit number / code – edit as needed.	A unique number or code of your choice that will allow you to recognize this unit on future reports. Example: Boiler #1, Emergency Generator #2, Fire Pump #3 etc.
c. DEP emission unit # -	This is a unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports If this is a new Emission Unit, the field is blank and locked – MassDEP will assign this number. If this is an existing Emission Unit, the information will be pre-populated for existing emission units.
d. ORIS id # – for large electrical utilities only	This information will be populated from the BAW AQ Facility Information form.
e. Combined units- enter number of individual units	Total number of individual units combined on this form.
COMBINED UNIT HELP TEXT	1. Fuel burning units (except Incinerators) can be combined as one emission unit IF EACH INDIVIDUAL UNIT is of the same type AND uses the same fuel(s) AND is below the following thresholds: Distillate oil -- 10 MBTU per hour or 72 gal per hour; Residual oil – 5 MBTU per hour or 32 gal per hour; Natural gas – 10 MBTU per hour or 100 Therms per hour; Solid fuel – 3 MBTU per hour; Used oil fuel –3 MBTU per hour or 19 gal per hour; Landfill gas – 3 MBTU per hour or 180,000 cf per hour 2. Process related equipment can be combined as one emission unit IF: Similar pieces of equipment that are used interchangeably to create the same product may be reported on one form as a combined emission unit; OR Similar pieces of equipment may be combined as one emission unit IF EACH INDIVIDUAL UNIT has the same applicable requirements AND is below the following reporting thresholds: Particulate matter – 2 tons per year; Organic material – 10 tons per year; Lead – 0.5 tons per year; Hazardous air pollutants – 10 tons of any individual HAP or 25 tons of total HAPs 3. Incinerators can NOT be combined.

WHAT ARE COMBINED UNITS AND WHEN CAN INDIVIDUAL UNIT OPERATIONS BE REPORTED AS COMBINED UNITS?

Fuel burning units can be combined as one emission unit and reported on one Fuel Burning Device (AP1) or Process (AP2) form. This is to make it easier to report large numbers of small units. The number of units in a combined unit must be entered in the "combined units" field.

Combustion units may be combined subject to certain restrictions below.
Restrictions on Combined Units Each individual unit within a combined unit must:

1. be of the same general type (not necessarily identical); including the use of same general type of air pollution control (APC) devices (not necessarily identical), if applicable.
   NOTE: Only list one of the APC devices in Question 14.
2. use the same fuel(s);
3. be subject to the same regulatory restrictions;
4. be below the following maximum input thresholds:
   Distillate oil -- 10 MMBtu / hour or 72 gal / hour;
   Residual oil – 10 MMBtu / hour or 64 gal / hour;
   Natural gas – 10 MMBtu / hour or 100 Therms / hour;
   Solid fuel – 3 MMBtu / hour;
   Used oil fuel – 3 MMBtu / hour or 19 gal / hour;
   Landfill gas – 3 MMBtu / hour or 6,000 cf / hour
5. AND the total heat input of all units in the combined unit does not exceed 40 MMBtu/hour.

HOW DO YOU ENTER DATA FOR COMBINED UNITS?

When entering data for combined units use these guidelines:

- Manufacturer/Model No – use the most common manufacturer/model or enter "combined".
- Installation Date – enter the install date for the oldest of the individual units.
- Permit Date – enter the most recent permit number and date for the units.
- Max capacity / potential – enter the sum of the maximum capacities of all of the individual units as the maximum capacity for the combined unit.
- Decommission date – do not decommission until the last individual unit is gone; if you need to add or subtract units from the combined unit, then increase or decrease the value in the Combined Units field to reflect the change and explain in the Notes field.
- Air Pollution Controls: enter one of the controls in Question A.14. In Section C: Notes field identify which emission unit is associated with this specific device. Enter the remaining APC devices and associate it with the appropriate emission unit in Section C: Notes. Include: APC device type, manufacturer, model number, Facility's ID for this Device, installation date, pollutant(s) and percent efficiencies.
- Explain in Section C: Notes field which units have been combined (list them) and any issues or oddities about the combined unit. Include the locations of the combined units if they are not in the same building at the facility.

NOTE: For each individual unit that has been combined on this form, enter in Section C: Notes the following information: manufacturer, model number, max input ratings-MMBtu, if applicable, installation date, APC devices, if applicable (include: APC device type, manufacturer, model number, Facility's ID for this Device, installation date, pollutant(s) and percent efficiencies), and location of units if the units are not located together

f. Is GHG emissions reporting required for this emission unit? (for SRGHG package)	A GHG emission reporting is required for all combustion units. A "Yes" response is present and this field is locked. **NOTE**: If Section B contains a fuel, then GHG emissions' reporting is **ALWAYS** required for this unit. If this unit also has multiple raw materials or finished products, a similar question is present in Section B to prevent GHG emissions reporting for any raw materials or finished products that do not have GHG emissions.
3. Emission unit installation and decommission dates	Provide the requested dates in the appropriate lines. If the unit was installed many years ago and you do not know the exact date, use your best approximation.
a. Installation dates – estimate if unknown (mm/dd/yyyy)	The date on which the unit became operational. Do not leave blank: Estimate if unknown.
b. Decommission dates – If applicable (mm/dd/yyyy)	Complete only if the unit was shut down permanently or replaced any time before December 31st of the year of record.
DELETE A UNIT HELP TEXT	Enter a decommission date in 3.b IF the unit is being permanently taken out of service. For fuel burning devices or Incinerators, if the equipment is not removed, MassDEP considers a unit as permanently taken out of service if the fuel lines are cut or the burner head has been removed.
HOW / WHEN TO DELETE A UNIT?	Enter a decommission date in 3.b if the unit is being **permanently taken out of service**. If the decommissioned unit operated in the year of record, the emissions from that unit must be included in this package. Therefore units "decommissioned" in this package will remain on the list of emission units for this year of record. They will NOT appear on the NEXT year of record package. For Fuel Burning Devices (including those associated with Process equipment), if the equipment is not removed, MassDEP considers a unit as permanently taken out of service if the fuel lines are cut or the burner head has been removed. **NOTE:** If you decommissioned a unit prior to the year of record (and are decommissioning it in this package) you must enter zero for the maximum hourly fuel rate, annual fuel usage, actual emissions, and potential emissions. Failing to enter zero for the maximum firing rate will cause the form to calculate non-zero potential emissions, which cause your facility wide PTE to be incorrect on the TES. **NOTE:** In cases where you have combined units, and took one (or more) out of service DO NOT enter a decommission date. Simply change the number of combined units in the combined unit's field. Do not decommission the EU unless ALL of the combined units are taken out of service.

4. Emission unit replacement

a. Is this unit replacing another emission unit?

Check the appropriate box, yes or no. If Yes, then complete 4.b. Otherwise, continue on to Question 5.

b. DEP's emission unit number and facility unit name.

Choose from the drop-down menu. It is populated with the emission units you decommissioned in this and previous submittals for this year of record.

HOW TO BE SURE THE UNIT BEING REPLACED APPEARS IN THIS MENU?

Line A.4.b. "DEP's emission unit number and facility's name for emission unit" is a mandatory field when the "yes" box is checked. However, the unit being replaced **will not appear as a choice** on the drop-down menu **until it is decommissioned**. You will not be able to complete and validate this form for a replacement unit until you have first entered a decommission date and completed and validated the form for the unit it is replacing. If this unit is replacing another unit that has not been "decommissioned", you must 1) save and exit this form, 2) open the form for the unit being replaced, 3) enter the decommission date, 4) complete and validate the form by selecting [Error Check] before you can complete this form.

WHAT IF ONE EMISSION UNIT IS REPLACING MORE THAN ONE UNIT?

If one new emission unit is replacing several units, pick one of the units being replaced on the drop-down menu and note the others in Section C Notes.

5. Equipment

EPA Unit Type Code

Choose from drop-down menu.

NOTE: Use EPA Unit Type Code: "OTHER COMBUSTION" for roof-top units, air make-up units, all heaters (i.e. space heaters, water heaters, building heater, etc.) EXCEPT if the the heater is used as part of a process then use EPA Unit Type Code: "PROCESS HEATER". The complete list of EPA Unit Type Code can be found on the SR website: **References You Will Need**

EPA unit type code help text

Unit Type Code is a field required by US EPA for the National Emissions Inventory. Please select the most appropriate category from the drop menu. (The complete list of EPA Unit Type Codes can be found on the SR website: **References You Will Need**.) If none are close for your unit, choose one of the "Other…" or "Unclassified" type codes and provide additional information in field A.5.a Other EPA Unit Type (describe). This field allows for 50 characters.

a. Type:

This field will be locked and should be the same response that is present in the EPA Unit Type Code field, except when the EPA Unit Type Code is OTHER COMBUSTION OR UNCLASSIFIED. When one of these responses is present in the EPA Unit Type Code field then Type field is unlocked to allow for a description of the equipment type; this field allows for 50 characters.

a1 If engine, is this an emergency generator?

If EPA Unit Type Code is RECIPROCATING IC ENGINE, a response is required to this field. If EPA Unit Type Code is not RECIPROCATING IC ENGINE, skip to question 5.b

EMERGENCY GENERATOR HELP TEXT

When EU is identified as an emergency generator, updates to additional fields will be needed. Remember if you have a permit with restrictions in usage -- be sure to enter that restriction in B.1.h or i. Also, you may calculate your "Potential emissions" and "Max Allowed Emissions-Annual" in Section B.3 based on the restriction in usage.

HOW TO RECORD RESTRICTIONS ON EMERGENCY ENGINES?

The 300 hour operating restriction for emergency engines was removed from MassDEP regulations effective March 9, 2018. The restrictions for emergency engines reported in a Source Registration will now vary between facilities.

Owners of emergency engines that have plan approvals that limit operation to 300 hours per year should continue to report that restriction on their Source Registration. Such owners may apply to MassDEP for an administrative amendment of the plan approval to remove the 300 hours limit. Owners can also choose to keep the 300 hour restriction in their permit if they so desire and continue reporting this on their Source Registration. Those without a specific permit condition for 300 hours need to remove the restriction from their next Source Registration (question B.1.h Annual usage restriction (for this fuel)).

If a facility prefers to calculate their potential to emit for their emergency generators at less than maximum capacity uncontrolled, then they may use the following assumptions. A September 6, 1995 EPA memo (https://www.epa.gov/sites/production/files/2015-08/documents/emgen.pdf) states that "The EPA believes that 500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be expected to operate under worst-case conditions. Alternative estimates can be made on a case-by-case basis where justified by the source owner or permitting authority (for example, if historical data on local power outages indicate that a larger or smaller number would be appropriate)." MassDEP agrees with EPA's guidance for calculating the potential to emit for an emergency engine (i.e., assume 500 hours of engine operation unless there are site-specific reasons that warrant a different estimate).

Important: Facilities whose actual emissions can fit within a 25% or 50% cap should investigate registering a cap through the new ePLACE Portal – it's easy and you can find out more here: Facility Emissions Cap

If an emergency generator, please give the number of hours of operation during the reporting year for each category of operation:

a2 Emergency use	Enter the number of hours of emergency operation during the reporting year
a3. Non emergency use	Enter the number of hours of operation for purposes other than emergencies, maintenance, or readiness testing during the reporting year
a4. Maintenance and readiness testing	Enter the number of hours of operation for only maintenance and readiness testing during the reporting year
WHAT TO DO IF DATA UNKNOWN OR NOT AVAILABLE?	Do not leave blank: if date or numeric field – estimate; for other fields enter UNKNOWN, if unknown.
b. Manufacturer	Firm that built the unit, information can be usually found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown. Provide the requested information for the combustion unit.
c. Model number	Information can be found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown. Provide the requested information for the entire combustion unit.

d. Maximum input rating MMBtu/hr	Maximum rated capacity regardless of permit limitations. Information can be found on metal nameplate on unit. Do not leave blank. **Tip:** The manufacturer's maximum input rating is located on a metal nameplate on the unit. It is usually expressed in Btu per hour or gallons per hour for engines. If the unit is not an engine and burning oil, to convert the value from gallons to Btu use the appropriate Oil Heat Values found in Table C.1.3-2. Identify the appropriate Heat Value BTU per gallon based on the Fuel Type and Sulfur Content % by weight found in the chart. Remember to check that the maximum input rating is in **Million Btu** per hour (MMBtu/hr).
e. Number of burners	Provide the requested information for the entire combustion unit.
f. Type of burner	Check the appropriate box. Provide a description if checked "other". Rotary Traveling grate Air atomizer Mech. Atomizer Hand fired Steam atomizer Other: specify "other" burner type
g. Burner manufacturer	Provide the requested information for the burners.
h. Burner model number	Do not leave blank: Estimate if unknown.
i. Burner installation date (mm/dd/yyyy)	The date on which the unit became operational. Do not leave blank: Estimate if unknown
What if the emission unit has more than one MassDEP approval?	Cite the most recent plan approval that includes specific requirements applicable to this emission unit. Do not cite an approval that sets a general requirement for the facility as a whole, unless it also establishes specific conditions for this emission unit. Approvals that apply facility-wide are cited on the TES form. Similarly do not cite your most recent Air Operating Permit if you have one unless a more stringent limit is established in the operating permit for the emission unit. Usually the Air Operating Permit is a compilation of requirements included in other plan approvals or applicable regulations. **NOTE:** A particular plan approval may be cited more than once in the package or on a form. For example, a plan approval that includes specific requirements for more than one emission unit will be cited on the form for each emission unit it covers. Similarly if a plan approval specifies conditions for the emission unit and for the monitor, raw material, fuel, and/or air pollution control device it will be cited on each applicable question on the emission unit form.
6. DEP Air Quality Approvals	If a plan approval is required: Write the number for the plan approval that allowed the installation of the emission unit. This number is found on the letter sent by MassDEP that informed you that they approved the unit. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.
a. Most recent approval number	Most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") number applicable to this unit, from MassDEP plan approval letter.

b. DEP approval date (mm/dd/yyyy)	Date of most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") applicable to this unit, from MassDEP plan approval letter listed in Question 6.a.
7. Is this unit exempt under 310 CMR 7.02 Exemptions from Plan Approval?	Check the appropriate box.
8. If exempt from Plan Approval, indicate reason why (cite a specific MassDEP AQ Regulation)	If Question 7 is yes, then a response is required; if no, then skip to Question 9. Select your response from the drop down list
9. Additional reporting requirements	Check the appropriate boxes to report on the existence of any reporting requirements other than source registration for this emission unit and the frequency of that reporting.
a. Are there other routine air quality reporting requirements for this emission unit?	If yes, specify reporting frequency in 9.b. If no, skip to Question 9.c.
b. Reporting frequency – check all that apply:	Monthly, Quarterly, Semi-annual, Annual, RES (Include Operating Permit and Plan Approval reports, but not exceedance reporting)
c. Is this unit subject to (check all that apply):	NESHAP, NSPS, MACT
10. Hours of operation for the emission unit:	Report on typical operation.
a. Check if typically continuously operated - 24 x 7 x 52	If checked, then these questions will auto-fill with the following responses: ➢ 10.b: 24 ➢ 10.c: 7 ➢ 10.d: 52 ➢ 10.e: Q1; Q2; Q3; Q4: 25 in all four quarters ➢ 11.a: 24 ➢ 11.b: 7 ➢ 11.c: 22
b. Number of hours per day	Typical operation Acceptable range: 0-24
c. Number of days per week	Typical operation Acceptable range: 0-7
d. Number of weeks per year	Actual operation Acceptable range: 0-52

e. Percent of time emission unit is operated each calendar quarter:

Sum of Q1+Q2=Q3+Q4 must = 100% (or 0%, if the unit was not operational for any quarter).

Actual percent of total annual operations that occurred in each season (e.g. 40% in Q1, 30% in Q2, 20% in Q3 and 10% in Q4) unit operated.

Q1 is January – March
Q2 is April – June
Q3 is July – September
Q4 is October - December

11. Ozone season schedule – May 1 through September 30:

Actual operation during this period.

IMPORTANT: If you are using eDEP's auto-calculation feature to calculate your Ozone Season Emissions, these fields must be updated.

a. Ozone season hours per day

Typical operation
Acceptable range: 0-24

b. Ozone seasons days per week

Typical operation
Acceptable range: 0-7

c. Weeks operated in ozone season

Typical operation
Acceptable range: 0-22

12. Emissions release point

Select the appropriate type of non-stack release point OR physical stack (release point). If Non-Stack Release Point, skip to Question 14.

Non-Stack Release Points:		**Physical Stacks**
Fugitive	Horizontal vent	Vertical
Eng Exhaust	Downward facing vent	Vertical with rain cap/sleeve
Vertical stack/vent less than 10ft		

What is a release point?

The Emission Release Point is the physical structure through which the emissions leave the facility and reach the ambient air. In eDEP, **only vertical release points are considered "stacks**" with assigned DEP and Facility Stack Numbers and an STACK form.

What is the difference between stacks and non-stacks?

If the unit has a physical stack, you must link the unit to that stack in Question A.13.

NOTE: If you have installed a new stack, it will not populate the drop-down menu unless you first complete and validate an STACK Form prior to opening this form. To complete the STACK Form, "SAVE" AND "EXIT" thisform. Open, complete, and validate the STACK Form of the new stack, and then return to this form.

What about unusual exhausts, such as short vertical vents?

NOTE: Some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall. This type of release point does not require a Stack form – Select vertical stack/vent less than 10ft in the Non-Stack Release Point group. .

13. Link this unit to a physical stack (if applicable) - Pick from the list.

Facility's stack identifier (from the BAW Stack form) – to change stack name, use the Stack form.
If the stack for this unit is not listed, save and exit this form now and complete a new Stack form **before** completing this form.

CAUTION: If this unit's emissions release point is a new stack, you must have created and completed a Stack form for that new stack, prior to completing this form. If you do not have the stack information, you will be unable to validate this form; and will be forced to save and exit this form. Once you have created, completed, and validated the new Stack Form, then you may return to complete this form.

NOTE: If the emission release point in Question 12 is vertical or vertical rain cap/sleeve, then this is a required field.

14. Are there air pollution control (APC) devices on this emission unit?

Check the appropriate yes or no box.
If no, skip to question 15.

How do I add a new APC?

If yes and no devices are present for this emission unit, select "Add New Control Device" button. OR if an existing device is not displayed, scroll to the end of question 14 and select "Add New Control Device" button.

When "Add New Control Device" button is selected, the form will reload with blank fields. Answer questions a through i. Once the information for the device has been added, select Update OR if you decide not to add a new device, select Cancel.

How are my existing APCs displayed?

NOTE: if the MassDEP database has active APC(s) for this emission unit, all the devices will be displayed in this section; the response will auto-fill with Yes and the field is locked. Confirm the information present for each device.

How do I revise an existing APC?

If the device information needs to be revised, select Edit found on the top right of the device that needs updating. Once the corrections have been made to the device, select Update OR if you do not to keep the corrections or decide not to make any changes, select Cancel.

What if my APC is used by other EUs?

If other emission units use the same air pollution control equipment, also report this information on the appropriate forms for those units.

Are Low Nox Burners considered control devices?

No – they are part of your equipment and should not be logged as separate control devices. If you have low NOx burners you should use emission factors that take into account their lower emissions. You should also mention in the notes that the unit incorporates low NOx burners. You can find such emission factors in EPA's emission factor database at: https://www.epa.gov/chief

How to delete an air pollution control device?	Delete an air pollution control (APC) device by entering a date in Decommission Date (A.14.h) field. Use this when you are removing the device permanently.
How to replace an air pollution control device?	If the APC was replaced in kind with a new model, enter the new installation date and replace the information on lines a-i, as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the APC equipment automatically.
What to do if you don't know the date?	Provide your best approximation of the date if you do not know it. Do not leave blank.
a – e. Air pollution control device (description) ** - required fields	a. Type ** (Use the Drop-down Menu) b. Manufacturer ** c. Model Number ** d. Facility's ID for this Device. ** (the unique number assigned by the facility for the APC equipment) e. Installation Date ** (mm/dd/yyyy): The date on which the unit became operational.
f – h. Air pollution control equipment dates and approval numbers:	f. MassDEP approval number (most recent) g. MassDEP approval date (mm/dd/yyyy) **NOTE:** Not all air pollution control devices require plan approvals h. Decommission date (mm/dd/yyyy) Enter a date here only if the air pollution control device is being permanently removed and not replaced.
i. Percent overall efficiency – enter for all pollutants that the device was designed to control: ** - required fields	** The *Percent Overall Efficiency* calculated which equals the APC equipment's Capture Efficiency (the percentage of the emissions that reach the air pollution control unit) multiplied by the APC equipment's *Control Efficiency* (the percentage of the emissions that are removed from the air stream by the Air Pollution Control Equipment.) • If you have stack-testing data on control efficiency: Use that information. • If you do not have stack-testing data: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range. PM10 PM2.5 SO2 CO VOC NO2 NH3 HOC HYC HG PB Other: List any substances not already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation. **NOTE**: Only one "Other" is available for each APC device,
What is the % overall efficiency?	The % overall efficiency for a device equals its ("% capture efficiency" X "% control efficiency"). **This is critical for the automatic emissions calculations.** This information can be found in the plan approval application, MassDEP's approval for the device and/or in the manufacturer's specification for the device.

15. Is there monitoring equipment on this emission unit?	Answer Yes or No, as appropriate. If no, skip to the questions in Section B. Fuels and Emissions **NOTE**: if the MassDEP database has active monitors for this emission unit, all the equipment will be displayed in this section; the response will auto-fill with Yes and the field is locked. Confirm the information present for each device and update as needed **NOTE:** Report on each monitor that is on the release point for this emission unit in the separate columns provided. **NOTE:** If other emission units use the same release point, also report this information on the form for those units.
Do I need to include Fireye or other Flame monitors?	Fireyes, or any other brand of flame monitors, are not monitors that must be reported on an Fuel Burning device (AP-1) form.
How to delete a monitor?	Delete a monitor by entering a date in Decommission Date (A.15.h). Use this when you are removing the monitor permanently.
How to replace a monitor?	If the monitor was replaced in kind with a new model, enter the new installation date and replace the information on lines b-i as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the monitor equipment automatically.
a. Monitor type:	Check the appropriate box for the type of monitoring device. Check only one for each monitor (use another column if there are other types of monitors on the release point.) • CEMS • Opacity • Other: If other is checked then Describe "other" is required
How do I use CEM data?	If you use CEMs to determine annual emissions, report the CEMS emissions value in Section B.3 Emissions on this form. For each pollutant where the Calculation Method in Section B.3 Emissions is identified as CEMS, then that pollutant also needs to be identified as a montored pollutant in Question A.15.l
How do I use Part 75 reported values?	If your facility is subject to the annual emissions reporting under EPA's regulation 40 CFR 75, you must report the same value that you reported to EPA. See Section B.3 Emissions below. **IMPORTANT:** If your facility is subject to the reporting requirements of 40 CFR 75, see also questions A.15.d, A.15.e, and A.15.h, B.3 Actual for year of record, B.4 Ozone season emissions or D.2 Ozone season emissions for additional information.
b. Manufacturer: c. Model number:	The name of the manufacturer of the monitoring equipment attached to the stack and the model number assigned by the manufacturer.
d. Monitor ID #:	The unique ID that the owner/operator of the facility assigned to the monitoring device. **NOTE:** For facilities subject to the reporting requirements of **40 CFR 75**: use 3-digit monitoring system ID as your monitor ID number
e. Installation date:	The date on which the unit became operational. Do not leave blank: Estimate if unknown. **NOTE**: For facilities subject to the reporting requirements of **40 CFR 75**: use the "First Date System Reported Data" as the installation date.

f. DEP approval #:	MassDEP approval number (most recent) from your permit or plan approval.
g. DEP approval date:	MassDEP approval date (mm/dd/yyyy)
h. Decommission date:	Enter a date here only if the monitor is being permanently removed and not replaced (mm/dd/yyyy). **NOTE** For facilities subject to the reporting requirements of **40 CFR 75**: use the "Last Date System Reported Data" as the decommission date.
i. Recorder?	Whether or not this device is attached to the monitor. Yes or No Check box
j. Audible alarm?	Yes or No Check box
k. Data System?	Whether or not a data system that continuously logs monitoring data for future review is attached to the monitor. Yes or No Check box
What is a "data system"?	A data system continuously captures monitoring data for future review and analysis.
l. Monitored pollutants:	Check the contaminants that are monitored by the monitoring device: PM10 PM2.5 SO2 CO VOC NO2 NH3 Mercury Oxygen CO2 H2S HCL Opacity CH4 NO2 SF6 Refrigerants-CO2e Other: List any substances not already listed on the form that you are required to monitor per your plan approval, operating permit, or applicable regulation. **NOTE**: Only one "Other" is available for each monitor.

B. FUELS AND EMISSIONS (SECTION B PARENT FORM)

NOTE: In general, the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in Air Quality database. That data will not appear on the electronic forms until it has been submitted in this format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

1. Fuel Name / Characteristics:	Your choice of a unique name for this fuel.
DEP Fuel #:	This is a unique number assigned by MassDEP that allows MassDEP to recognize this fuel associated with this emission unit on future reports. If this is a new Fuel, the field is blank and locked – MassDEP will assign this number. If this is an existing Fuel, the information will be pre-populated for existing fuels associated with this emission unit.
Can I change the DEP fuel identifier?	This ID number is a MassDEP assigned number and cannot be changed

Number of fuels for this unit (previous records):	This field identifies the number of existing fuels that are associated with this EU. This information will be provided by the system. For new emission units: This question is not applicable.
How does eDEP handle multiple fuels?	In eDEP, a separate Section B form is automatically created for each additional fuel on record based on the "Number of fuels for this unit (previous records)". Before checking the box to make a change, please note the following: 1) If you need to add a new fuel and "Number of fuels for this unit…." is greater than 1, wait to see the other fuels before checking this box, or 2) If you ceased using this fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly. **NOTE**: "Add a New Fuel" and "Delete this fuel" are present in all Section B forms..
Is GHG emissions reporting required for this fuel? (for SRGHG package)	In the Fuel Burning Device (AP1) form, this field will auto-fill with a Yes response and the field will be locked. If Yes, then complete Section B. **NOTE**: all fuels associated with a fuel burning device are required to report GHG emissions. The response to this field should be Yes and the field will be locked.
Add a New Fuel:	Check the box if you need to add a fuel that you did not previously report (eDEP will add a blank Section B form to this Fuel Burning Device Form when you successfully validate it.) Any additional fuels will automatically appear when you error check this form so you do NOT need to check this field to make additional fuels appear if they have been reported on in a previous submittal. You can see the number of fuels already existing for this unit in the field: "Number of fuels for this unit (previous records)". Use this check box only for NEW fuels for this unit which you have never reported before.
Number of Additional Fuels:	Enter the number of new fuels you need to add for this emission unit.
When to not check "Add a new fuel" box	Any additional fuels will automatically appear when you error check this form so you do not need to check this field to make additional fuels appear if they have been reported on already in a previous submittal. You can see the number of fuels already existing for this unit in the field: "Number of fuels for this unit (previous records)". This check box is only for NEW fuels which you have never reported before.
Delete this fuel:	Check the box if you stopped using this fuel in this emission unit. You must still report for the year of record even if amount is "0" – the fuel will be removed from the unit for the next report cycle. **NOTE**: If you ceased using this fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly. **NOTE**: If the response to A.3.b contains a decommission date (i.e., the emission unit is decommissioned), you do not need to select "delete this fuel".

a. Source Classification Code (SCC)

The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (https://www.epa.gov/chief) contains the codes for each type of process, as well as emission factors that can, in certain circumstances, be used to calculate emissions for each unit.

SCC Description

If the SCC is pre-populated, the SCC Description will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the SCC Description when the form is validated.

How does eDEP use Source Classification Codes (SCC)?

SCCs are standard codes EPA uses to identify different operations and their associated emissions factors, if available. The SCC you select is used to supply the emission factors for the automatic emissions calculation feature included in the eDEP system. The SCC also identifies the *Units per hour* which are used for your response to B.1.e: *Maximum hourly fuel rate for all firing burners,* B.2.b: *Annual usage, and B.3 in pounds per unit (*Emission Factor Units). The list of SCC valid in eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration

If the SCC listed on the form **is wrong**, enter the correct code.
If the form will **not accept the SCC** you are entering, contact MassDEP at BAW.eDEP@state.ma.us.

What SCC should be used for a residential boilers/water heater at a commercial/ institutional facility?

Use the following SCC Codes if the unit is less than 10 million Btu (MMBtu)

Residual Oil (No. 6 Oil)	10300403
Distillate Oil (No. 2 Oil)	10300503
Natural Gas	10300603
Other fuels	same family of SCC Codes
Other unit sizes	same family of SCC Codes

Are there any SCC Codes that should not be utilized on Fuel Burning Device (AP-1) form?

Fuel Burning Device Form (AP-1) is for combustion units and the auto calculation feature is an attribute specific to this form and relies on combustion SCCs as the basis for selecting emission factors. SCC Codes that are not for combustion units should not be used on this form, especially when using the auto calculation feature. This form will not validate non-combustion SCC Codes if the auto calculation feature is selected. Therefore, if non-combustion SCC Codes are to be used, you must calculate your own emissions.

You can identify combustion SCC from the "category" field in the "List of Valid Source Classification Codes (SCCs)" posted on the SR Web Page.

b. Type of fuel :

This response is determined based on the SCC. If the SCC is pre-populated, the fuel type will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the fuel type when the form is validated.

NOTE: If multiple types of fuel are used in this emission unit you must check the "Add a New Fuel" check box to add additional Section B forms for each fuel used. Once you successfully validate the current form the system will generate a blank Section B which will be found under this form as listed on the <Transaction Overview page>.

c. Sulfur content for oils and coal:
(Acceptable Range 0 – 2.2)

The percentage of sulfur by weight for oil and coal, only.
TIP: This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.

d. Ash Content for oils and coal (Acceptable Range 0 – 10)	The percentage of ash content by weight for oil and coal, only. **TIP:** This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.
e. Maximum hourly fuel rate for all firing burners:	The maximum fuel that all burners in this emission unit can fire in one hour, and the units of measurement from the drop-down menu (*e.g., gallons per hour, tons per hour, million cubic feet per hour, etc.)* is based *on* the chosen SCC Code.
Amount	**IMPORTANT**: You may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the firing rate units in 1000 gallons/hr then 72 gallons/hr would be entered as 0.072 1000 gallons/hr.
Units per hour	This response is determined based on the SCC. If the SCC is pre-populated, the Units per hour will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units per hour when the form is validated.
What is the definition of maximum hourly fuel rate for all firing burners?	The maximum rate is the rate at which the equipment **can operate,** assuming operations 24 hours a day, 7 days a week, irrespective of any regulatory restrictions.
f. Do you have fuel or usage restrictions?	These would have been expressed in a regulation, the plan approval you received from MassDEP for this emission unit or one that applies to several emission units. Check the appropriate yes or no box. If No, then skip to Question 2.
What if I have multiple unit fuel restrictions and multiple approvals?	If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well. Cite the most recent fuel use restriction applicable to the fuel as it is used in this emission unit. The most recent fuel use restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole. If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies.
g. DEP approval number for fuel restrictions: most recent for this fuel.	Obtain this from your plan approval letter. Cite either plan approval or regulation.
What if the restriction is mentioned in multiple approvals?	Enter the most recent approval number for the restriction.

HOW TO RECORD RESTRICTIONS ON EMERGENCY ENGINES?

The 300 hour operating restriction for emergency engines was removed from MassDEP regulations effective March 9, 2018. The restrictions for emergency engines reported in a Source Registration will now vary between facilities.

Owners of emergency engines that have plan approvals that limit operation to 300 hours per year should continue to report that restriction on their Source Registration. Such owners may apply to MassDEP for an administrative amendment of the plan approval to remove the 300 hours limit. Owners can also choose to keep the 300 hour restriction in their permit if they so desire and continue reporting this on their Source Registration.

Those without a specific permit condition for 300 hours need to remove the restriction from their next Source Registration (question B.1.h Annual usage restriction (for this fuel)).

If a facility prefers to calculate their potential to emit for their emergency generators at less than maximum capacity uncontrolled, then they may use the following assumptions. A September 6, 1995 EPA memo (https://www.epa.gov/sites/production/files/2015-08/documents/emgen.pdf) states that "The EPA believes that 500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be expected to operate under worst-case conditions. Alternative estimates can be made on a case-by-case basis where justified by the source owner or permitting authority (for example, if historical data on local power outages indicate that a larger or smaller number would be appropriate)." MassDEP agrees with EPA's guidance for calculating the potential to emit for an emergency engine (i.e., assume 500 hours of engine operation unless there are site-specific reasons that warrant a different estimate).

Important: Facilities whose actual emissions can fit within a 25% or 50% cap should investigate registering a cap through the new ePLACE Portal – it's easy and you can find out more here: Facility Emissions Cap

h. Annual usage restriction (amount or hours) for this fuel:

Quantity

Units

Provide the maximum amount of fuel you are allowed to use in a year per your permit and the units of measurement from the drop down list, or the maximum amount of time you are allowed to use the unit in a year per your permit and the unit of measurement. Obtain this from your plan approval letter or regulation.

Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us

What if the restriction applies to multiple units?

If a restriction applies to multiple units then enter that same quantity here and on the forms for each unit to which it applies.

i. Short term fuel usage restriction (amount or hours) for this fuel:

Quantity:

Units:

Per:

Provide the maximum amount of fuel or time you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter or regulation.

Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us

Check the appropriate box for the time period: Month, Week, Day or Hour.

2. Annual usage:

a. Amount –year of record	The actual amount of fuel used in this emission unit during the calendar year being reported Enter "0" if fuel not used in the year of record. **IMPORTANT** - Remember you may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the firing rate units in 1000 gallons then 72 gallons would be entered as 0.072 1000 gallons.
b. Units	This response is determined based on the SCC. If the SCC is pre-populated, the Units will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units when the form is validated.
UNITS HELP TEXT	Units MUST match the units specified for the SCC. If the units for your data do not match the units for the SCC, you need to convert your values to units that match the SCC or select a different SCC.
c. Total annual usage for prior year of record	This information will be provided by the system based on your last submittal. For new emission units: This section is not applicable **TIP:** Compare the annual usage from prior year of record to the current year's usage as a check. If they are orders of magnitude off, check the units.

B. SOURCE REGISTRATION EMISSIONS (PARENT FORM)

3. Total emissions for this fuel **only** in tons per year:	Provide the following information for all pollutants emitted by the emission unit for this fuel only PM10-FIL PM2.5-FIL PM-CON SO2 PB VOC NH3 CO NO2 Specify other pollutant
CALCULATIONS: READ FIRST	The form will automatically calculate the actual and potential emissions unless you check a box to manually enter emissions for each specific pollutant. The form will calculate emissions from your annual throughput, control efficiency you entered when the emission unit is equipped with air pollution control equipment and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box).
Why you may want to calculate your own emissions values?	The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

When is NH3 emissions required?

NH3 emissions is required if APC Device is SNCR (SELECTIVE NONCATALYTIC REDUCTION) OR SCR (SELECTIVE CATALYTIC REDUCTION)

PM Filterable vs. PM Condensable

The auto-calculation feature of the Fuel Burning Device Form has always used emission factors for filterable PM10 and PM2.5. MassDEP also reports PM emissions to EPA as filterable. Therefore, if you choose (or must) calculate your own emissions, **YOU SHOULD REPORT ONLY FILTERABLE PM10 AND PM2.5**.

Do NOT add in condensable emissions. Do not use emission factors for primary PM (e.g., PM2.5-PRI) which includes both filterable and condensable emissions. EPA generally labels emission factors for filterable PM as -FIL (e.g., PM2.5-FIL) whereas primary PM emissions factors are labeled –PRI (e.g., PM2.5-PRI).

Calculate condensable emissions separately

Actual (in Tons) for previous year :

This information will be provided by the system.
For new emission units: This section is not applicable.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit during the year covered by the report (the year of record). Emissions need to be calculated for each fuel; the sum of each pollutant's emissions is used to calculate the emission unit's total emissions. eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.

Actual (in Tons) for year of record

Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box.

NOTE: In many cases AP-42 or FIRE emission factors found in EPA's website (https://www.epa.gov/chief) can be used to estimate actual emissions.

CAUTION: The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

NOTE: For facilities that also report under 40 CFR 75: If the unit reports SO2 or NOx under 40 CFR 75 monitoring provisions, on an annual basis, then the total emissions for all fuels reported here should equal that reported under 40 CFR 75.

IMPORTANT: If your facility is subject to the reporting requirements of 40 CFR 75, see also questions A.15.d, A.15.e, and A.15.h, B.3 Actual for year of record, B.4 Ozone season emissions or D.2 Ozone season emissions for additional information.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on this form.

IMPORTANT: If you use CEMS data for your actual emissions, you must provide the CEMs equipment information in question A.15 and identify "Continuous Emission Monitoring System (CEMs)" for Calculation Method.

How do I use Part 75 reported values?

If your large facility is subject to the annual emissions reporting *for SO2 and NO2* under EPA's regulation 40 CFR Part 75, you MUST report the SAME value here as reported to EPA through the Clean Air Markets Division.

Potential Emissions (in Tons)

Potential Emissions are the uncontrolled maximum emissions assuming the emission unit operates at maximum capacity 24 hours per day, seven days a week, 52 weeks a year (8760 hours per year).

You may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

ENTER "0" if the unit was decommissioned prior to this year of record because the unit did not represent potential emissions during the year of record.

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.

What are potential emissions?

The emissions resulting from the maximum operation of the equipment irrespective of any regulatory restrictions. **(8760 hrs X Max Firing Rate X Emission Factor)**

NEW: you may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.

Emission factor	Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination. For a list emission factors used by eDEP see: https://www.mass.gov/guides/massdep-source-registration. If you choose to calculate your own emissions, you must enter the emission factor that you used.
in pounds per unit (EF Units):	NEW - If you are calculating the emissions yourself, the EF units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected must match the unit present in the response to B.1.e and B.2.b.
What are emission factors (EF)?	Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC. The displayed emission factor is the EPA default emission factor BEFORE the application of the ash or sulfur percent in the calculation AND BEFORE the application of the percent overall efficiency for each pollutant based on your APC devices(s). Additional AP-42/FIRE emission factors are found in EPA's website (https://www.epa.gov/chief) **CAUTION:** The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

Calculation Method

NEW: If the system is calculating the actual and potential emissions for the pollutant, use "USEPA Emission Factor (pre-control) plus Control Efficiency"

If you are calculating the actual and potential emissions for the pollutant yourself, you can choose from the following in a dropdown list:

DESCRIPTION
Continuous Emission Monitoring System
Engineering Judgment
Manufacturer Specification
Material Balance
Other Emission Factor (pre-control) plus Control Efficiency
S/L/T Emission Factor (pre-control) plus Control Efficiency
Site-Specific Emission Factor (no Control Efficiency used)
Site-Specific Emission Factor (pre-control) plus Control Efficiency
Stack Test (no Control Efficiency used)
Stack Test (pre-control) plus Control Efficiency
Trade Group Emission Factor (no Control Efficiency used)
Trade Group Emission Factor (pre-control) plus Control Efficiency
Vendor Emission Factor (no Control Efficiency used)
Vendor Emission Factor (pre-control) plus Control Efficiency

Maximum allowed emissions (in Tons) - annual:

Maximum allowed emissions (in Tons) - short term:

Provide this information if there is a plan approval or a regulation for this fuel type (as opposed to for the emission unit as a whole).

Short term period (or MMBtu)

Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list

When to enter maximum allowed emissions?

Complete the "maximum allowed emissions" fields if there is an annual or short-term emission limitation **applicable to the fuel** expressed **in either a MassDEP approval or a regulation**. Be sure to enter the approval number or regulation under "Basis" below.

NOTE: If you calculated your potential emissions using controls and/or restrictions (rather than using the eDEP's auto-calculation feature or entering max capacity uncontrolled for potential), you MUST also enter a "maximum allowed emissions – annual" and the values for potential and maximum allowed annual emissions must be the same.

Basis- DEP approval number or regulation:	This field is required if maximum allowed emissions values are present**.** Provide either the regulatory citation if the emission unit was installed through a permit by rule or the plan approval number. If a plan approval is not required: Cite the regulation under which the equipment was installed. **NOTE:** Some emission units will not have plan approvals because: 4. they are below the threshold for which a plan approval or permit is required; 5. they were installed before the effective date of the regulation; or 6. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption. If a plan approval established emission limits for the pollutant, write the approval number. This number is found on the letter sent by MassDEP. If a regulation established emission limits for the pollutant, cite the regulation.
4. Ozone season emissions – May 1 through September 30:	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation (Questions A.11a through A.11.c) and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at B.4.a. and B.4.b.
a. Typical day VOC emissions – pounds per day	The system will calculate this information based on data you supplied on the form
b. Typical day NOx emissions – pounds per day	
	NOTE1: If you have more than one raw material/finished product/fuel for this emission unit, you will be required to complete the ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your fuels in Section B. **NOTE2**: In the SRGHG package, when only one raw material/finished product/fuel is present for this emission unit, this question is will be found after the GHG emissions.
Check to enter your own values	**NOTE:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.
What if I have more than one fuel?	**NOTE:** If you have more than 1 fuel, this space for the ozone season emissions on the "parent" form is invisible – you will be provided with a space for entering ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your fuels in Section B.

NOTE for Section B parent form: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections. For Section B parent form, you must continue to Section C before you can error check your form.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

B. GREENHOUSE GAS EMISSIONS (PARENT FORM) (IN SR/GHG PACKAGE)

This section is not present in the SR Only package.
For facilities required to report Greenhouse Gas (GHG) emissions, all emission units that burn fuel are required to report GHG emissions.

4. Total GHG emissions for this fuel only in tons per year:

Provide the following information for all pollutants emitted by the emission unit for this fuel only

CO_2	CH_4	N_2O
CO_2e-CO_2	CO_2e-CH_4	CO_2e-N_2O

SF_6	Refrigerants-CO_2e
CO_2e-SF_6	CO_2e-Refrigerants

Other GHG Pollutant
CO_2e- Other GHG Pollutant

CALCULATIONS: READ FIRST

The form will automatically calculate the actual emissions unless you check a box to manually enter emissions for each specific pollutant.

The form will automatically calculate the Carbon Dioxide Equivalent (CO_2e) for each specific pollutant and the Total CO_2e based on the actual emissions values; manual calculating of these values is not an option.

Why you may want to calculate your own emissions values?

The form will calculate emissions from your annual throughput and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box).

The EPA emission factors are generic and conservative – they may overestimate your emissions. Because they are generic, the EPA emission factors are not applicable in all situations. They may overstate emissions for an emission unit. Please see Appendix C for more guidance on calculating your own emissions.

Actual (in Tons) for previous year - eDEP only:

For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit during the year covered by the report (the year of record). Emissions need to be calculated for each fuel; then the sum of each pollutant's emissions is used to calculate the emission unit's total emissions. eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.

Actual (in Tons) for year of record	Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. Then if the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero
What are emission factors?	Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC. If you choose to calculate your own emissions, you must enter the emission factor that you used. The EPA emission factors used by eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration. Because they are generic, the EPA emission factors are not applicable in all situations. They may overstate emissions for facilities See Appendix C for more information about using emissions factors to calculate emissions.
Emission factor (EF) in pounds per unit (EF units):	Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination. For a list emission factors used by eDEP see: https://www.mass.gov/guides/massdep-source-registration. If you choose to calculate your own emissions, you must enter the emission factor that you used. If you are calculating the emissions yourself, the EF units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected must match the unit present in the response to B.2.b.
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions?	Neither SF6 nor Refrg-CO2e require a response in the fields Emission factor (EF) and in pounds per unit. These fields should auto-fill blank and be locked.
How do I use CEMs data?	If you use CEMs to determine annual emissions, report the CEMS emissions value on this form. **IMPORTANT**: If you use CEMS to determine annual emissions, you must provide the CEMs equipment information in question A.15 and identify "GHG-CEMS" for Calculation Method.

Calculation Method	If the system is calculating the actual emissions for the pollutant, use GHG-EPA EF: EPA GHG Emission Factor If you are calculating the actual emissions for the pollutant yourself, you can choose from the following in a dropdown list:

CODE	DESCRIPTION
GHG-CEMS	Continuous Emission Monitoring System Data
GHG-User EF	User Provided GHG Emission Factor
GHG-MatlBalance	Emissions Based on Material Balance
GHG-TCR EF	General Reporting Protocol EF[1]

NOTE: For SF6, the Calculation Method should auto-fill with GHG-MatlBalance and the field will be locked.

Specify General Reporting Protocol EF	If you select GHG-TCR EF from the Calculation Method dropdown list, then you need to select the type of Default Emission Factor from this drop down list.
CO2e for previous year	For repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	Using the Global Warming Potential values stored in our system, the form will automatically calculate the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; all values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero
Total CO2e emissions	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) based on the calculated CO2e of each pollutant where their actual emissions value is greater than zero.
CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) from the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

[1] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

5. Ozone season emissions – May 1 through September 30:	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation (Questions A.11a through A.11.c) and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at B.5.a. and B.5.b.
a. Typical day VOC emissions – pounds per day	The system will calculate this information based on data you supplied on the form
b. Typical day NOx emissions – pounds per day	
	NOTE: If you have more than one raw material/finished product/fuel for this emission unit, you will be required to complete the ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your fuels in Section B.
Check to enter your own values	**NOTE:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.
What if I have more than one fuel?	**NOTE:** If you have more than 1 fuel, this space for the ozone season emissions on the "parent" form is invisible – you will be provided with a space for entering ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your fuels in Section B.

C. NOTES AND ATTACHMENTS (FOUND ON PARENT FORM ONLY)

1 Notes:	Information that will help MassDEP understand your submission. . If an attachment will be associated with this form, identify any additional, explanatory material that you are choosing to submit
2. Attachments	This section is to provide any additional information for any of your responses for this EU, including any child forms. If you are including a document, identify any explanatory material the preparer is choosing to submit along with this form. If the material can be sent electronically, check the box for the appropriate form. Check this box if additional information will be included as an attachment. If the additional material can be sent electronically (20 MB document), check the box on the appropriate form. You will be prompted just before Step 2 for the attachment.

NOTE for Section B parent form: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections. For Section B parent form, you must continue to Section C before you can error check your form.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

B. FUELS AND EMISSIONS (SECTION B CHILD FORM)

NOTE: In general, the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in Air Quality database. That data will not appear on the electronic forms until it has been submitted in this format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

1. Fuel Name / Characteristics:	Your choice of a unique name for this fuel.
DEP Fuel #:	This is a unique number assigned by MassDEP that allows MassDEP to recognize this fuel associated with this emission unit on future reports. If this is a new Fuel, the field is blank and locked – MassDEP will assign this number. If this is an existing Fuel, the information will be pre-populated for existing fuels associated with this emission unit.
Can I change the DEP fuel identifier?	This ID number is a MassDEP assigned number and cannot be changed

How does eDEP handle multiple fuels?

In eDEP, a separate Section B form is automatically created for each additional fuel on record based on the "Number of fuels for this unit (previous records)". Before checking the box to make a change, please note the following:
1) If you need to add a new fuel and "Number of fuels for this unit…." is greater than 1, wait to see the other fuels before checking this box, or
2) If you ceased using this fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly.

NOTE: "Add a New Fuel" and "Delete this fuel" are present in all Section B forms..

Is GHG emissions reporting required for this fuel? (for SRGHG package)

In the Fuel Burning Device (AP1) form, this field will auto-fill with a Yes response and the field will be locked. If Yes, then complete Section B.

NOTE: all fuels associated with a fuel burning device are required to report GHG emissions. The response to this field should be Yes and the field will be locked.

Delete this fuel:

Check the box if you stopped using this fuel in this emission unit. You must still report for the year of record even if amount is "0" – the fuel will be removed from the unit for the next report cycle.

NOTE: If you ceased using this fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly.

NOTE: If the response to A.3.b contains a decommission date (i.e., the emission unit is decommissioned), you do not need to select "delete this fuel".

a. Source Classification Code (SCC)

The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (https://www.epa.gov/chief) contains the codes for each type of process, as well as emission factors that can, in certain circumstances, be used to calculate emissions for each unit.

SCC Description

If the SCC is pre-populated, the SCC Description will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the SCC Description when the form is validated.

How does eDEP use Source Classification Codes (SCC)?

SCCs are standard codes EPA uses to identify different operations and their associated emissions factors, if available. The SCC you select is used to supply the emission factors for the automatic emissions calculation feature included in the eDEP system. The SCC also identifies the *Units per hour* which are used for your response to B.1.e: *Maximum hourly fuel rate for all firing burners,* B.2.b: *Annual usage, and B.3 in pounds per unit (*Emission Factor Units). The list of SCC valid in eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration

If the SCC listed on the form **is wrong**, enter the correct code.
If the form will **not accept the SCC** you are entering, contact MassDEP at BAW.eDEP@state.ma.us.

What SCC should be used for a residential boilers/water heater at a commercial/ institutional facility?

Use the following SCC Codes if the unit: is less than 10 million Btu (MMBtu)

Residual Oil (No. 6 Oil)	10300403
Distillate Oil (No. 2 Oil)	10300503
Natural Gas	10300603
Other fuels	same family of SCC Codes
Other unit sizes	same family of SCC Codes

Are there any SCC Codes that should not be utilized on Fuel Burning Device (AP-1) form?

Fuel Burning Device Form (AP-1) is for combustion units and the auto calculation feature is an attribute specific to this form and relies on combustion SCCs as the basis for selecting emission factors. SCC Codes that are not for combustion units should not be used on this form, especially when using the auto calculation feature. This form will not validate non-combustion SCC Codes if the auto calculation feature is selected. Therefore, if non-combustion SCC Codes are to be used, you must calculate your own emissions.

You can identify combustion SCC from the "category" field in the "List of Valid Source Classification Codes (SCCs)" posted on the SR Web Page.

b. Type of fuel :

This response is determined based on the SCC. If the SCC is pre-populated, the fuel type will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the fuel type when the form is validated.

NOTE: If multiple types of fuel are used in this emission unit you must check the "Add a New Fuel" check box to add additional Section B forms for each fuel used. Once you successfully validate the parent form the system will generate a blank Section B which will be found under this form as listed on the <Transaction Overview page>.

c. Sulfur content for oils and coal: (Acceptable Range 0 – 2.2)

The percentage of sulfur by weight for oil and coal, only.
TIP: This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.

d. Ash Content for oils and coal (Acceptable Range 0 – 10)

The percentage of ash content by weight for oil and coal, only.
TIP: This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.

e. Maximum hourly fuel rate for all firing burners:

The maximum fuel that all burners in this emission unit can fire in one hour, and the units of measurement from the drop-down menu (*e.g., gallons per hour, tons per hour, million cubic feet per hour, etc.)* is based *on* the chosen SCC Code.

Amount

IMPORTANT: You may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the firing rate units in 1000 gallons/hr then 72 gallons/hr would be entered as 0.072 1000 gallons/hr.

Units per hour

This response is determined based on the SCC. If the SCC is pre-populated, the Units per hour will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units per hour when the form is validated.

What is the definition of maximum hourly fuel rate for all firing burners?

The maximum rate is the rate at which the equipment **can operate,** assuming operations 24 hours a day, 7 days a week, irrespective of any regulatory restrictions.

f. Do you have fuel or usage restrictions?

These would have been expressed in a regulation, the plan approval you received from MassDEP for this emission unit or one that applies to several emission units. Check the appropriate yes or no box. If No, then skip to Question 2.

If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well.
Cite the most recent fuel use restriction applicable to the fuel as it is used in this emission unit. The most recent fuel use restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.

What if I have multiple unit fuel restrictions and multiple approvals?

If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies.

g. DEP approval number for fuel restrictions: most recent for this fuel.

Obtain this from your plan approval letter.
Cite either plan approval or regulation.

What if the restriction is mentioned in multiple approvals?

Enter the most recent approval number for the restriction.

How to record restrictions on emergency engines?

The 300 hour operating restriction for emergency engines was removed from MassDEP regulations effective March 9, 2018. The restrictions for emergency engines reported in a Source Registration will now vary between facilities.

Owners of emergency engines that have plan approvals that limit operation to 300 hours per year should continue to report that restriction on their Source Registration. Such owners may apply to MassDEP for an administrative amendment of the plan approval to remove the 300 hours limit. Owners can also choose to keep the 300 hour restriction in their permit if they so desire and continue reporting this on their Source Registration.

Those without a specific permit condition for 300 hours need to remove the restriction from their next Source Registration (question B.1.h Annual usage restriction (for this fuel)).

If a facility prefers to calculate their potential to emit for their emergency generators at less than maximum capacity uncontrolled, then they may use the following assumptions. A September 6, 1995 EPA memo (https://www.epa.gov/sites/production/files/2015-08/documents/emgen.pdf) states that "The EPA believes that 500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be expected to operate under worst-case conditions. Alternative estimates can be made on a case-by-case basis where justified by the source owner or permitting authority (for example, if historical data on local power outages indicate that a larger or smaller number would be appropriate)." MassDEP agrees with EPA's guidance for calculating the potential to emit for an emergency engine (i.e., assume 500 hours of engine operation unless there are site-specific reasons that warrant a different estimate).

Important: Facilities whose actual emissions can fit within a 25% or 50% cap should investigate registering a cap through the new ePLACE Portal – it's easy and you can find out more here: Facility Emissions Cap

h. Annual usage restriction (amount or hours) for this fuel:	Provide the maximum amount of fuel you are allowed to use in a year per your permit and the units of measurement from the drop down list, or the maximum amount of time you are allowed to use the unit in a year per your permit and the unit of measurement. Obtain this from your plan approval letter or regulation.
Quantity	
Units	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
What if the restriction applies to multiple units?	If a restriction applies to multiple units then enter that same quantity here and on the forms for each unit to which it applies.
i. Short term fuel usage restriction (amount or hours) for this fuel:	Provide the maximum amount of fuel or time you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter or regulation.
Quantity:	
Units:	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
Per:	Check the appropriate box for the time period: Month, Week, Day or Hour.
2. Annual usage:	
a. Amount –year of record	The actual amount of fuel used in this emission unit during the calendar year being reported Enter "0" if fuel not used in the year of record. **IMPORTANT** - Remember you may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the firing rate units in 1000 gallons then 72 gallons would be entered as 0.072 1000 gallons.
b. Units	This response is determined based on the SCC. If the SCC is pre-populated, the Units will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units when the form is validated.
UNITS HELP TEXT	Units MUST match the units specified for the SCC. If the units for your data do not match the units for the SCC, you need to convert your values to units that match the SCC or select a different SCC.
c. Total annual usage for prior year of record	This information will be provided by the system based on your last submittal. For new emission units: This section is not applicable **TIP:** Compare the annual usage from prior year of record to the current year's usage as a check. If they are orders of magnitude off, check the units.

B. SOURCE REGISTRATION EMISSIONS (SECTION B CHILD FORM)

3. Total emissions for this fuel **only** in tons per year:	Provide the following information for all pollutants emitted by the emission unit for this fuel only PM10-FIL PM2.5-FIL PM-CON SO2 PB VOC NH3 CO NO2 Specify other pollutant

CALCULATIONS: READ FIRST

The form will automatically calculate the actual and potential emissions unless you check a box to manually enter emissions for each specific pollutant.

The form will calculate emissions from your annual throughput, control efficiency you entered when the emission unit is equipped with air pollution control equipment and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box).

Why you may want to calculate your own emissions values?

The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

When is NH3 emissions required?

NH3 emissions is required if APC Device is SNCR (SELECTIVE NONCATALYTIC REDUCTION) OR SCR (SELECTIVE CATALYTIC REDUCTION)

PM Filterable vs. PM Condensable

The auto-calculation feature of the Fuel Burning Device Form has always used emission factors for filterable PM10 and PM2.5. MassDEP also reports PM emissions to EPA as filterable. Therefore, if you choose (or must) calculate your own emissions, **YOU SHOULD REPORT ONLY FILTERABLE PM10 AND PM2.5**.

Do NOT add in condensable emissions. Do not use emission factors for primary PM (e.g., PM2.5-PRI) which includes both filterable and condensable emissions. EPA generally labels emission factors for filterable PM as -FIL (e.g., PM2.5-FIL) whereas primary PM emissions factors are labeled –PRI (e.g., PM2.5-PRI).

Calculate condensable emissions separately

Actual (in Tons) for previous year :

This information will be provided by the system.
For new emission units: This section is not applicable.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit during the year covered by the report (the year of record). Emissions need to be calculated for each fuel; the sum of each pollutant's emissions is used to calculate the emission unit's total emissions. eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.

Actual (in Tons) for year of record	Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box. **NOTE:** In many cases AP-42 or FIRE emission factors found in EPA's website (https://www.epa.gov/chief) can be used to estimate actual emissions. **CAUTION:** The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions. **NOTE:** For facilities that also report under 40 CFR 75: If the unit reports SO2 or NOx under 40 CFR 75 monitoring provisions, on an annual basis, then the total emissions for all fuels reported here should equal that reported under 40 CFR 75. **IMPORTANT:** If your facility is subject to the reporting requirements of 40 CFR 75, see also questions A.15.d, A.15.e, and A.15.h, B.3 Actual for year of record, B.4 Ozone season emissions or D.2 Ozone season emissions for additional information.
How do I use CEMs data?	If you use CEMs to determine annual emissions, report the CEMS emissions value on this form. **IMPORTANT**: If you use CEMS data for your actual emissions, you must provide the CEMs equipment information in question A.15 and identify "Continuous Emission Monitoring System (CEMs)" for Calculation Method.
How do I use Part 75 reported values?	If your large facility is subject to the annual emissions reporting *for SO2 and NO2* under EPA's regulation 40 CFR Part 75, you MUST report the SAME value here as reported to EPA through the Clean Air Markets Division.

Potential Emissions (in Tons)

Potential Emissions are the uncontrolled maximum emissions assuming the emission unit operates at maximum capacity 24 hours per day, seven days a week, 52 weeks a year (8760 hours per year).

You may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

ENTER "0" if the unit was decommissioned prior to this year of record because the unit did not represent potential emissions during the year of record.

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field “maximum allowed emissions – annual” with this same value.

What are potential emissions?

The emissions resulting from the maximum operation of the equipment irrespective of any regulatory restrictions. **(8760 hrs X Max Firing Rate X Emission Factor)**

NEW: you may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field “maximum allowed emissions – annual” with this same value.

Emission factor

Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination. For a list emission factors used by eDEP see: https://www.mass.gov/guides/massdep-source-registration.

If you choose to calculate your own emissions, you must enter the emission factor that you used.

In pounds per unit (EF Units):

NEW - If you are calculating the emissions yourself, the EF units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected must match the unit present in the response to B.1.e and B.2.b.

What are emission factors (EF)?

Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC. The displayed emission factor is the EPA default emission factor BEFORE the application of the ash or sulfur percent in the calculation AND BEFORE the application of the percent overall efficiency for each pollutant based on your APC devices(s).

If you choose to calculate your own emissions, you must enter the emission factor that you used. The EPA emission factors used by eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration.

CAUTION: The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

Calculation Method

NEW: If the system is calculating the actual and potential emissions for the pollutant, use "USEPA Emission Factor (pre-control) plus Control Efficiency"

If you are calculating the actual and potential emissions for the pollutant yourself, you can choose from the following in a dropdown list:

DESCRIPTION
Continuous Emission Monitoring System
Engineering Judgment
Manufacturer Specification
Material Balance
Other Emission Factor (pre-control) plus Control Efficiency
S/L/T Emission Factor (pre-control) plus Control Efficiency
Site-Specific Emission Factor (no Control Efficiency used)
Site-Specific Emission Factor (pre-control) plus Control Efficiency
Stack Test (no Control Efficiency used)
Stack Test (pre-control) plus Control Efficiency
Trade Group Emission Factor (no Control Efficiency used)
Trade Group Emission Factor (pre-control) plus Control Efficiency
Vendor Emission Factor (no Control Efficiency used)
Vendor Emission Factor (pre-control) plus Control Efficiency

Maximum allowed emissions (in Tons) - annual:	
Maximum allowed emissions (in Tons) - short term:	Provide this information if there is a plan approval or a regulation for this fuel type (as opposed to for the emission unit as a whole).
Short term period (or MMBtu)	Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list
When to enter maximum allowed emissions?	Complete the "maximum allowed emissions" fields if there is an annual or short-term emission limitation **applicable to the fuel** expressed **in either a MassDEP approval or a regulation**. Be sure to enter the approval number or regulation under "Basis" below. **NOTE**: If you calculated your potential emissions using controls and/or restrictions (rather than using the eDEP's auto-calculation feature or entering max capacity uncontrolled for potential), you MUST also enter a "maximum allowed emissions – annual" and the values for potential and maximum allowed annual emissions must be the same.
Basis- DEP approval number or regulation:	This field is required if maximum allowed emissions values are present**.** Provide either the regulatory citation if the emission unit was installed through a permit by rule or the plan approval number. If a plan approval is not required: Cite the regulation under which the equipment was installed. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption. If a plan approval established emission limits for the pollutant, write the approval number. This number is found on the letter sent by MassDEP. If a regulation established emission limits for the pollutant, cite the regulation.

NOTE for Section B in SR package: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections. For Section B parent form, you must continue to Section C before you can error check your form.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

B. GREENHOUSE GAS EMISSIONS (IN SR/GHG PACKAGE) SECTION B CHILD FORM

	This section is not present in the SR Only package. For facilities required to report Greenhouse Gas (GHG) emissions, all emission units that burn fuel are required to report GHG emissions.
4. Total GHG emissions for this fuel only in tons per year:	Provide the following information for all pollutants emitted by the emission unit for this fuel only

	CO2 CH4 N2O CO2e-CO2 CO2e-CH4 CO2e-N2O SF6 Refrigerants-CO2e CO2e-SF6 CO2e-Refrigerants Other GHG Pollutant CO2e- Other GHG Pollutant
CALCULATIONS: READ FIRST	The form will automatically calculate the actual emissions from your annual throughput and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box). The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.
Why you may want to calculate your own emissions values?	The GHG emissions should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Please see Appendix C for more guidance on calculating your own emissions
Actual (in Tons) for previous year - eDEP only:	For repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
What are "actual emissions"?	Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit during the year covered by the report (the year of record). Emissions need to be calculated for each fuel; then the sum of each pollutant's emissions is used to calculate the emission unit's total emissions. eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.
Actual (in Tons) for year of record	Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. Then if the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero

What are emission factors?	Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC. If you choose to calculate your own emissions, you must enter the emission factor that you used. The EPA emission factors used by eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration. Because they are generic, the EPA emission factors are not applicable in all situations. They may overstate emissions for facilities See Appendix C for more information about using emissions factors to calculate emissions.
Emission factor (EF)	Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination. For a list emission factors used by eDEP see: https://www.mass.gov/guides/massdep-source-registration. If you choose to calculate your own emissions, you must enter the emission factor that you used.
in pounds per unit (EF units):	If you are calculating the emissions yourself, the EF units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected must match the unit present in the response to B.2.b.
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions?	Neither SF6 nor Refrg-CO2e require a response in the fields Emission factor (EF) and in pounds per unit. These fields should auto-fill blank and be locked.
How do I use CEMs data?	If you use CEMs to determine annual emissions, report the CEMS emissions value on this form. **IMPORTANT**: If you use CEMS to determine annual emissions, you must provide the CEMs equipment information in question A.15 and identify “GHG-CEMS” for Calculation Method.

Calculation Method

If the system is calculating the actual emissions for the pollutant, use GHG-EPA EF: EPA GHG Emission Factor

If you are calculating the actual emissions for the pollutant yourself, you can choose from the following in a dropdown list:

CODE	DESCRIPTION
GHG-CEMS	Continuous Emission Monitoring System Data
GHG-User EF	User Provided GHG Emission Factor
GHG-MatlBalance	Emissions Based on Material Balance
GHG-TCR EF	General Reporting Protocol EF[2]

NOTE: For SF6, the Calculation Method should auto-fill with GHG-MatlBalance and the field will be locked.

Specify General Reporting Protocol EF

If you select GHG-TCR EF from the Calculation Method dropdown list, then you need to select the type of Default Emission Factor from this drop down list.

CO2e for previous year

For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

CO2e for year of record

Using the Global Warming Potential values stored in our system, the form will automatically calculate the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

NOTE: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; all values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero

Total CO2e emissions

The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) based on the calculated CO2e of each pollutant where their actual emissions value is greater than zero.

CO2e for previous year

This information will be provided by the system.
For new emission units: This section is not applicable.

CO2e for year of record

The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) from the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

[2] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

NOTE for Section B child forms: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections. For Section B parent form, you must continue to Section C before you can error check your form.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

D. TOTAL EMISSIONS FOR EMISSION UNIT (SEPARATE CHILD FORM)

The actual, potential and, if applicable, permitted emissions from this unit for each listed air contaminant during the calendar year being reported. This form only appears if more than one Section B is present for the emission unit

NOTE: manual calculating of actual and potential emissions is not an option.

1. Total Emissions for this emission unit in tons per year

Calculations: This form automatically calculates this emission unit's total actual and potential emissions (if you have correctly provided all of the emissions for each fuel in each Section B). Return to Section B forms if you need to correct those numbers.

PM10-FIL	PM2.5-FIL	PM-CON	SO2	PB
VOC	NH3	CO	NO2	

What are total emissions for this emission unit?

This form automatically calculates the total actual and potential emissions of each pollutant from this emission unit. It calculates these values from the data you entered in Section B: Emissions for each fuel.

Please enter any emission limits that apply to the unit as a whole (regardless of fuel) under "Permitted" below.

Actual (in Tons) for previous year

The actual emissions for the prior year reported
For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

Actual (in Tons) Emissions

The actual emissions for the calendar year being reported
This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

Potential emissions (in Tons)

This information will be calculated by the system and is the potential to emit from all fuels (Section Bs).

Maximum allowed emissions (in Tons) – annual	These questions only apply if this emission unit is subject to a plan approval or permit or regulation that restricts operations or emissions, regardless of fuel. If the restriction is fuel-specific, it should be entered in the appropriate fuel's Section B. Maximum annual emissions allowed pursuant to your permit or plan approval or regulatory restriction. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.
Maximum allowed emissions (in Tons) - short term Short term period:	Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list
Basis – DEP approval number or regulation:	Provide either the plan approval or regulation establishing the emission limits for this EU as a whole. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption. If a plan approval established emission limits for the pollutant associated with this EU , write the approval number. This number is found on the letter sent by MassDEP. If a regulation established emission limits for the pollutant, cite the regulation
When do I complete the "allowable" emission fields?	Complete the "allowable" field if there is an annual or a short-term **emission limitation applicable to the emission unit as a whole** expressed in either a MassDEP approval or a regulation. Be sure to enter the approval number or regulation under "Basis".
What if a restriction applies to multiple units?	If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies. Make a note in Section C that it applies to multiple units and describe the restriction.

2. Ozone season schedule - May 1 through September 30:	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation (Questions A.11a through A.11.c) and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at D2a. and D2b.
a. Typical day VOC emissions – pounds per day	
	The system will calculate this information on the basis of data you supplied on the form.
b. Typical day NOx emissions – pounds per day	
How do I use Part 75 reported values?	**NOTE:** for facilities subject to the reporting requirements of **40 CFR 75**: You **must calculate** your ozone emissions according to the following formula, and overwrite the pre-populated estimate with the result of your calculation: [Actual Ozone Season NOx emissions reported under 40 CFR 75 in tons/day] / [Actual number of days operated during the ozone season] **IMPORTANT:** If your facility is subject to the reporting requirements of 40 CFR 75, see also questions A.15.d, A.15.e, and A.15.h, B.3 Actual for year of record, B.4 Ozone season emissions or D.2 Ozone season emissions for additional information.
Check to enter your own values	**NOTE:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.

NOTE for Section D in SR package: You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the next form you see listed under the form you were just working on.

D. GHG EMISSIONS REPORTING (IN SR/GHG PACKAGE)

	This section is not present in the SR Only package. For facilities required to report Greenhouse Gas (GHG) emissions, the form automatically calculates the total actual emissions, total carbon dioxide equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.
3. Total GHG Emissions for this emission unit in tons per year	Calculations: This form automatically calculates this emission unit's total actual emissions (if you have correctly provided all of the emissions for each fuel in each Section B). Return to Section B forms if you need to correct those numbers. CO2 CH4 N2O CO2e-CO2 CO2e-CH4 CO2e-N2O SF6 Refrigerants-CO2e CO2e-SF6 CO2e-Refrigerants
What are total emissions for this emission unit?	This form automatically calculates the total actual emissions, total carbon dioxide equivalent (CO2e) for each specific pollutant and the Total CO2e from this emission unit. It calculates these values from the data you entered in Section B: Emissions for each fuel.

Actual (in Tons) for previous year	The actual emissions for the prior year reported For repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
Actual (in Tons) Emissions	The actual emissions for the calendar year being reported This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).
CO2e for previous year (in Tons)	The actual emissions for the prior year reported For repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record (in Tons)	The CO2e for each specific pollutant for the calendar year being reported This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

Total CO2e emissions

CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The Total Carbon Dioxide Equivalent (CO2e) for the calendar year being reported This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

NOTE for Section D in SRGHG package: You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the next form you see listed under the form you were just working on.

BAW AQ EMISSION UNIT –INSTRUCTIONS: PROCESS (AP-2)

PURPOSE

This form describes equipment (emission unit), processes, "fuel use" in the form of fuel, raw material or finished product, and associated air pollution emissions at the facility during the calendar year being reported from non-combustion related production processes.

NOTE: in SRGHG Package, a EU where GHG emission reporting is required but this information is not subject to SR emissions reporting; i.e. fugitive emissions from the natural gas distribution system; see GHG-ONLY form.

WHEN IS THIS FORM APPLICABLE?

This form applies to all emission units at your facility that release any air contaminants, including but not limited to the pollutants listed below, from any process EXCEPT:

- Combustion units are generally reported on a Fuel Burning Device form EXCEPT where the combustion is part of a process unit's function, such as an oven for curing paint on part; in such a case the oven is reported as a Process with the combustion fuel use and emissions reported as one segment (Section B) and paint curing material use and emissions reported as separate segment (Section B) on this Process form);
- Waste incineration (reported on the Incinerator (AP-3) form),
- GHG-Only where GHG emission reporting is required but this information is not subject to SR emissions reporting; reported as GHG-ONLY; i.e. fugitive emissions for 1) Chillers & Stationary Air Conditioners or 2) Natural Gas Distribution System
- Insignificant activities (See definition in 310 CMR 7.00 Appendix C(5)(i).)

Source Registration reporting applies to any owner/operator of a facility if such facility meets any of the criteria in 310 CMR 7.12(1)(a)1-11

3. Has non-combustion federal potential[3] to emit (facility-wide) equal to or greater than:

a.	Particulate Matter	two tons per year;
b.	Oxides of Sulfur	2.5 tons per year;
c.	Organic Material	ten tons per year;
d.	Nitrogen Dioxide	4.4 tons per year; or
e.	Hazardous Air Pollutants	ten tons of any individual HAP per year or 25 tons of total HAPs per year

NOTE: Once a facility is subject to 310 CMR 7.12, all emission units and processes at the facility sha be included in the Source Registration even if, individually, certain emission units and processes may not meet the applicability thresholds of 310 CMR 7.00.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

Submit one form for each process emission unit, including those that you have added or decommissioned since your last submittal.

An emission unit is any unit operation that releases an air contaminant. Any particular production line is a series of unit operations: activities or processes used to produce a product. A unit operation is generally a piece of equipment or a step in the production process. Identical pieces of equipment that are used interchangeably to create the same product may be reported on one form.

For example, if the facility has three different coating operations, one Process (AP-2) Form is required for each. However, two coating lines using the same equipment (including air pollution control devices) and raw materials, operated in tandem to produce the same product, can be considered one emission unit and combined on one Process (AP-2) Form.

[3] Non-combustion potential emissions excludes emissions from motor vehicles, incinerators and products of combustion from fuel utilization facilities.

TIP: See AP-42 (https://www.epa.gov/chief) for a list of the various operations and the air contaminants they release.

CAUTION: Once your facility has exceeded any threshold for Source Registration, you must report on all sources that release any air contaminants at your facility. No sources that release any air contaminants may be excluded from Source Registration, except those listed as "Insignificant Activities" under 310 CMR 7 Appendix C(5)(i). This includes units that are idle – you must report on all idle combustion units at the facility whenever you submit a Source Registration.

CAUTION: FOR FILERS WITH NEW PROCESS EMISSION UNIT SINCE THEIR LAST SUBMITTAL

You must create a new emission unit form for any new emission unit. If you have not already created the new emission unit (when first opening your source registration package), you must either:
1) Under Transaction Overview, open the first form labeled <AQ Source Registration Package> or < AQ Source Registration & Greenhouse Gas Package>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under Transaction Overview, select <New Unit Form Creator (New Form Creator)>;
- Choose the appropriate form and enter the number of new units
- Validate the form by selecting [Error Check]
- Follow subsequent instructions

----or----

2) You must create a new eDEP AQ Source Registration partial package for that emission unit. Once you have submitted the package you are working on:

- Return to "Forms", "Air & Climate",",
- Select your package using "Start Transaction ;
- In Preform, if correction is to a prior reporting year submittal, change the reporting year using the drop down list;
- In Overview Form, unselect Existing Facility and put a check mark by the units that you want to amend. Or if you need to add a unit, check the box under A.1 "check if you added emission units;"
- Follow subsequent instructions pertaining to the New Unit Form Creator (New Form Creator).

IMPORTANT: Before amending your package for the current reporting year, email BAW.eDEP@state.ma.us to confirm that your submittal has been accepted by MassDEP.

CAUTION: If you realize in the midst of completing this package that you need to create additional forms, DO NOT return to this Overview Form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you must open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 validated forms.

The best way to add emission units or stacks AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

CAUTION: REGARDING THE ORDER IN WHICH YOU COMPLETE YOUR FORMS

If this unit's emissions release point is a new "vertical release point" (stack). : You must create and complete a BAW AQ Stack form for the new stack prior to completing this form. The stack drop down-menu (A.13) will not contain the new stack and you will be unable to validate this form and will be forced to Save and then Exit this form You will have to return to complete it after validating the new stack for the replacement stack.

A. PROCESS DESCRIPTION

NOTE: In general the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in Air Quality database That data will not appear on the electronic form until it has been submitted in this new format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.
TIP: If you obtained a plan approval for the emission unit(s) you are reporting on you will have received two documents from MassDEP: 1) a plan approval letter and 2) a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. Facility Identifiers

a. Facility name

b. DEP account number

c. Facility AQ identifier –

The name and identifying numbers of the facility that you are reporting.
This will be pre-populated from the information on your BAW AQ Facility Information Form.

NOTE: You cannot change your facility's name on this form. To change it you must contact your MassDEP Regional Office FMF Data Manager.

How should ovens and/or dryers be reported?

Ovens and dryers should be reported on one form only. If the oven or dryer has no emissions other than those from fuel combustion (the oven or dryer is used to drive off water and produces water vapor only), then Fuel Burning Device Form (AP-1) should be used. This will allow the auto calculation feature to be utilized, if available.

However, if other emissions are present, such as solvents that are baked off, then the oven or dryer should be reported on Process (AP-2) form.

The combustion emissions should be reported as one material throughput (segment), and the material being baked off as a separate material throughput (segment). Use a fuel combustion SCC for the fuel segment, this will allow the auto calculation feature to be utilized, if available. .

IMPORTANT: If you have an oven or dryer that is currently coded to a Fuel Burning Device (AP-1) form that needs to be recoded to a Process (AP-2) form, contact the Help Desk so that they can change the forms for you prior to your continued work on this form.

DO I NEED TO REPORT NONROAD ENGINES?

The only exception is a unit used for construction equipment – that is, a generator used only to power construction equipment does not need to be reported in Source Registration. Note, however, that a temporary generator used to replace or augment an existing unit at the facility (that is, it is used to power the facility's equipment) during construction would need to be reported.

HOW SHOULD NON-STATIONARY UNITS BE REPORTED?

Where an engine is not used to power a motor vehicle but is moved around to different locations at a facility, then the engine is defined as non-stationary engine and is subject to reporting under Source Registration. This is true if: (1) the engine is at the facility and operates for more than 120 days even if it moves around at the facility (i.e., the engine runs at the facility and is not a unit that operates off-site but is just stored at the facility); (2) is not construction equipment; and (3) is a type that would be reported on if fixed (e.g., not an insignificant activity). This is due to the broad definition of "emission unit" in 7.12(3)(a). This would also apply to non-stationary units that are not engines.

How do I report emissions from fuel use of a thermal oxidizer?

If you have a thermal oxidizer on an emission unit that emits VOCs, you also need to report the emissions from the thermal oxidizer as fuel. To do this, add another segment or "raw material" (Section B) to the Process (AP-2) form for the unit to report emissions from the thermal oxidizer's fuel combustion. After you check "Add Raw Material" and validate, another Section B will be generated on which you can enter the natural gas combustion emissions. You will need to enter a fuel combustion SCC for the fuel segment, this will allow the auto calculation feature to be utilized, if available.

How is a flare reported?

When a flare is a control device for a process emission unit, is should be reported as such on the AP-2 Form for that process unit. If this unit was previously reported as an incinerator on an AP-3 form, please do the following:

1. report the flare on the Process (AP-2) form that it controls,
2. note in Section C: Notes on the Process (AP-2) form that you are reporting the flare on the Process (AP-2) form rather than the Incinerator (AP-3) form, and
3. enter a decommission date in the Incinerator (AP-3) form (causing it to be removed in future submittals) and enter 0 for all throughputs and emissions.

EXCEPTION: Flares at landfills should be reported on a Fuel Burning Device (AP-1) form.

2. Emission Unit Identifiers

If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it.
If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it.

a. Facility's choice of emission unit name

A unique name of your choice that will allow you to recognize this unit on future reports.

b. Facility's emission unit number / code

A unique number or code of your choice that will allow you to recognize this unit on future reports. *Example: Degreaser #1, Coater#3*

c. DEP emission unit # -

This is a unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports.
If this is a new Emission Unit, the field is blank and locked – MassDEP will assign this number.
If this is an existing Emission Unit, the information will be pre-populated for existing emission units.

CAN I CHANGE THE RESPONSES TO THE EMISSION UNIT IDENTIFIER FIELDS?

eDEP allows you to change the name (2.a) and give your own number (2.b) to each emission unit. MassDEP keeps track of the units by the DEP number (2.c), and therefore you cannot change it.

d. Combined units- enter number of individual units

Total number of individual units combined on this form.

COMBINED UNIT HELP TEXT

1. Fuel burning units (except Incinerators) can be combined as one emission unit IF EACH INDIVIDUAL UNIT is of the same type AND uses the same fuel(s) AND is below the following thresholds: Distillate oil -- 10 MBTU per hour or 72 gal per hour; Residual oil – 5 MBTU per hour or 32 gal per hour; Natural gas – 10 MBTU per hour or 100 Therms per hour; Solid fuel – 3 MBTU per hour; Used oil fuel –3 MBTU per hour or 19 gal per hour; Landfill gas – 3 MBTU per hour or 180,000 cf per hour

2. Process related equipment can be combined as one emission unit IF: Similar pieces of equipment that are used interchangeably to create the same product may be reported on one form as a combined emission unit; OR Similar pieces of equipment may be combined as one emission unit IF EACH INDIVIDUAL UNIT has the same applicable requirements AND is below the following reporting thresholds: Particulate matter – 2 tons per year; Organic material – 10 tons per year; Lead – 0.5 tons per year; Hazardous air pollutants – 10 tons of any individual HAP or 25 tons of total HAPs

3. Incinerators can NOT be combined.

WHAT ARE COMBINED UNITS AND WHEN CAN INDIVIDUAL UNIT OPERATIONS BE REPORTED AS COMBINED UNITS?

Similar pieces of equipment that are used interchangeably to create the same product may be reported on one form as a combined emission unit.

Restrictions on Combined Units Each individual unit within a combined unit must:

1. be of the same general type (not necessarily identical)
2. have the same type of air pollution controls;
   NOTE: Only list one of the same type of APC devices in Question 14.
3. be subject to the same regulatory restrictions
4. individually be below the reporting thresholds in 310 CMR 7.12 (1)(a)(2) (https://www.mass.gov/regulations/310-CMR-700-air-pollution-control) shown below.

Has non-combustion federal potential to emit (facility-wide) equal to or greater than:

Contaminant	**Threshold**
Particulate Matter	2 tons per year
Oxides of Sulfur	2.5 tons per year
Organic Material	10 tons per year
Nitrogen Dioxide	4.4 tons per year
Hazardous Air Pollutants	10 tons of any individual HAP 25 tons of total HAPs

NOTE: Once a facility is subject to 310 CMR 7.12, all emission units and processes at the facility shall be included in the Source Registration even if, individually, certain emission units and processes may not meet the applicability thresholds of 310 CMR 7.00.

HOW DO YOU ENTER DATA FOR COMBINED UNITS?

When entering data for combined units use these guidelines:

- Manufacturer/Model No – use the most common manufacturer/model or enter “combined”.
- Installation Date – enter the install date for the oldest of the individual units.
- Permit Date – enter the most recent permit number and date for the units.
- Max capacity / potential – enter the sum of the maximum capacities of all of the individual units as the maximum capacity for the combined unit.
- Decommission date – do not decommission until the last individual unit is gone; if you need to add or subtract units from the combined unit, then increase or decrease the value

in the Combined Units field to reflect the change and explain in the Notes field.

- Air Pollution Controls: enter one of the controls in Question A.14. In Section C: Notes field identify which emission unit is associated with this specific device. Enter the remaining APC devices and associate it with the appropriate emission unit in Section C: Notes. Include: APC device type, manufacturer, model number, Facility's ID for this Device, installation date, pollutant(s) and percent efficiencies.
- Explain in Section C: Notes field list the units that have been combined any issues or oddities about the combined unit. Include the locations of the combined units if they are not in the same building at the facility.

NOTE: For each individual unit that has been combined on this form, enter in Section C: Notes the following information: manufacturer, model number, max input ratings-MMBtu, if applicable, installation date, APC devices, if applicable (include: APC device type, manufacturer, model number, Facility's ID for this Device, installation date, pollutant(s) and percent efficiencies), and location of units if the units are not located together

e. Is GHG emissions reporting required for this emission unit? (for SRGHG package)

This question is only present in SRGHG package; it is not present in the SR Only package. If GHG emissions' reporting is not required for this emission unit, check No. If No is checked, then only SR emissions reporting will be required for this emission unit.

NOTE: If Section B contains a fuel, then GHG emissions' reporting is **ALWAYS** required for this unit. If this unit also has multiple raw materials or finished products, a similar question is present in Section B to prevent GHG emissions reporting for any raw materials or finished products that do not have GHG emissions.

3. Emission unit installation and decommission dates

Provide the requested dates in the appropriate lines. If the unit was installed many years ago and you do not know the exact date, use your best approximation.

a. Installation dates – estimate if unknown (mm/dd/yyyy)

The date on which the unit became operational. Do not leave blank: Estimate if unknown.

b. Decommission dates – If applicable (mm/dd/yyyy)

Complete only if the unit was shut down permanently or replaced any time before December 31st of the year of record.

DELETE A UNIT HELP TEXT

HOW / WHEN TO DELETE A UNIT?

Enter a decommission date in 3.b IF the unit is being permanently taken out of service. For fuel burning devices or Incinerators, if the equipment is not removed, MassDEP considers a unit as permanently taken out of service if the fuel lines are cut or the burner head has been removed.

Enter a decommission date in 3.b if the unit is being **permanently taken out of service**. If the decommissioned unit operated in the year of record, the emissions from that unit must be included in this package. Therefore units "decommissioned" in this package will remain on the list of emission units for this year of record. They will NOT appear on the NEXT year of record package.

NOTE: If you decommissioned a unit prior to the year of record (and you are decommissioning it in this package) you must enter zero for the maximum hourly fuel rate, annual fuel usage, actual emissions, and potential emissions. Failing to enter zeros will cause the form to add non-zero potential emissions to the facility wide PTE on the TES.

NOTE: In cases where you have combined units, and took one (or more) out of service DO NOT enter a decommission date. Simply change the number of combined units in the combined unit's field. Do not decommission the EU unless ALL of the combined units are taken out of service.

4. Emission unit replacement

a. Is this unit replacing another emission unit**?**	Check the appropriate box: yes or no. If yes, then complete 4.b. Otherwise, continue on to Question 5.
b. DEP's emission unit number and facility unit name.	Choose from the drop-down menu. It is populated with the emission units you decommissioned in this and previous submittals for this year of record.
HOW TO BE SURE THE UNIT BEING REPLACED APPEARS IN THIS MENU?	Line A.4.b "DEP's emission unit number and facility's name for emission unit" is a mandatory fields when the "yes" box is checked. However the unit being replaced **will not appear as a choice** on the drop-down menu **until it is decommissioned**. You will not be able to complete and validate the AP form for a replacement unit until you have first entered a decommission date and completed and validated the AP form for the unit it is replacing. If this unit is replacing another unit that has not been "decommissioned", you must: 1) save and exit this AP-2 form, 2) open the AP-2 form for the unit being replaced, 3) enter the decommission date, and 4) complete and validate the form by selecting [Error Check] - before you can complete this AP-2 Form.
WHAT IF ONE EMISSION UNIT IS REPLACING MORE THAN ONE UNIT?	If one new emission unit is replacing several units, pick one of the units being replaced on the drop-down menu and note the others in Section C Notes and Attachments.
5. Equipment	
a. Type:	
EPA Unit Type Code	Choose from drop-down menu. **NOTE**: Use EPA Unit Type Code. The complete list of EPA Unit Type Codes can be found on the SR website: **References You Will Need**
EPA unit type code help text	Unit Type Code is a field required by US EPA for the National Emissions Inventory. Please select the most appropriate category from the drop menu. (The complete list of EPA Unit Type Code can be found on the SR website: **References You Will Need**.) If none are close for your unit, choose one of the "Other…" or "Unclassified" type codes and provide additional information in field A.5.a Other EPA Unit Type (describe). This field allows for 50 characters.
EPA Unit Type (describe):	This field will be locked and should be the same response that is present in the EPA Unit Type Code field, except when the EPA Unit Type Code is OTHER OR UNCLASSIFIED. When one of these responses is present in the EPA Unit Type Code field then Type field is unlocked to allow for a description of the equipment type; this field allows for 50 characters.
WHAT TO DO IF DATA UNKNOWN OR NOT AVAILABLE?	Do not leave blank: if date or numeric field – estimate; for other fields enter UNKNOWN, if unknown.
b. Manufacturer	Firm that built the unit, information can be usually found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown. Provide the requested information for the combustion unit.
c. Model number	Information can be found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown. Provide the requested information for the entire combustion unit.

d. Maximum input rating MMBtu/hr (required, if the process unit burns fuel)	**NEW**: **A response is required** if EPA Unit Type Code is a PROCESS HEATER; KILN; CALCINER; DRYER: DIRECT-FIRED OR UNKNOWN IF DIRECT OR INDIRECT OR INDIRECT-FIRED; FLARE; or OTHER COMBUSTION. Maximum rated capacity regardless of permit limitations. Information can be found on metal nameplate on unit. **Tip:** The manufacturer's maximum input rating is located on a metal nameplate on the unit. It is usually expressed in Btu per hour. If the unit is not an engine and burning oil, to convert the value from gallons to Btu use the appropriate Oil Heat Values found in Table C.1.3-2. Identify the appropriate Heat Value BTU per gallon based on the Fuel Type and Sulfur Content % by weight found in the chart. Remember to check that the maximum input rating is in **Million Btu** per hour (MMBtu/hr).
WHAT IF THE EMISSION UNIT HAS MORE THAN ONE MASSDEP APPROVAL?	Cite the most recent plan approval that includes specific requirements applicable to this emission unit. Do not cite an approval that sets a general requirement for the facility as a whole, unless it also establishes specific conditions for this emission unit. Approvals that apply facility-wide are cited on the TES form. Similarly do not cite your most recent Air Operating Permit if you have one unless a more stringent limit is established in the operating permit for the emission unit. Usually the Air Operating Permit is a compilation of requirements included in other plan approvals or applicable regulations. **NOTE:** A particular plan approval may be cited more than once in the package or on a form. For example, a plan approval that includes specific requirements for more than one emission unit will be cited on the form for each emission unit it covers. Similarly if a plan approval specifies conditions for the emission unit and for the monitor, raw material, fuel, and/or air pollution control device, it will be cited on each applicable question on the emission unit form.
6. DEP Air Quality Approvals	If a plan approval is required: Write the number for the plan approval that allowed the installation of the emission unit. This number is found on the letter sent by MassDEP that informed you that they approved the unit. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.
a. Most recent approval number	Most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") number applicable to this unit, from MassDEP plan approval letter.
b. DEP approval date (mm/dd/yyyy)	Date of most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") applicable to this unit, from MassDEP plan approval letter listed in Question 6.a.
7. Is this unit exempt under CMR 7.02 Exemptions from Plan Approval?	Check the appropriate box.
8. If exempt from Plan Approval, indicate reason why (cite specific MassDEP AQ Regulation)	If Queston 7 is answered yes, then a response is required; if no, then skip to Question 9. Select your response from the drop down list
9. Additional reporting requirements	Check the appropriate boxes to report on the existence of any reporting requirements other than source registration for this emission unit and the frequency of that reporting.
a. Are there other routine air quality reporting requirements for this	If yes, specify reporting frequency in Question 9.b. If no, skip to Question 9.c.

emission unit?	
b. Reporting frequency – check all that apply:	Monthly, Quarterly, Semi-annual, Annual, RES (Include Operating Permit and Plan Approval reports, but not exceedance reporting)
c. Is this unit subject to -check all that apply:	NESHAP, NSPS, MACT
10. Hours of operation for the emission unit:	Report on typical operation.
a. Check if typically continuously operated - 24 x 7 x 52	If checked, then these questions will auto-fill with the following responses: ➢ 10.b: 24 ➢ 10.c: 7 ➢ 10.d: 52 ➢ 10.e: Q1; Q2; Q3; Q4: 25 in all four quarters ➢ 11.a: 24 ➢ 11.b: 7 ➢ 11.c: 22
b. Number of hours per day	Typical operation Acceptable range: 0-24
c. Number of days per week	Typical operation Acceptable range: 0-7
d. Number of weeks per year	Actual operation Acceptable range: 0-52
e. Percent of time emission unit is operated each calendar quarter:	Actual percent of total annual operations that occurred in each season (e.g. 40% in Q1, 30% in Q2, 20% in Q3 and 10% in Q4) unit operated.
Sum of Q1+Q2=Q3+Q4 must = 100% (or 0%, if the unit was not operational for any quarter).	Q1 is January – March Q2 is April – June Q3 is July – September Q4 is October - December
11. Ozone season schedule – May 1 through September 30:	Actual operation during this period. **IMPORTANT**: If you are using eDEP's auto-calculation feature to calculate your Ozone Season Emissions, these fields must be updated.
a. Ozone season hours per day	Typical operation Acceptable range: 0-24
b. Ozone seasons days per week	Typical operation Acceptable range: 0-7
c. Weeks operated in ozone season	Typical operation Acceptable range: 0-22

12. Emissions release point

Select the appropriate type of non-stack release point OR physical stack (release point). If Non-Stack release point, skip to Question 14.

Non-Stack Release Points:		**Physical Stacks**:
Fugitive	Horizontal vent	Vertical
Gooseneck	Downward facing vent	Vertical with rain cap/sleeve
Vertical stack/vent less than 10ft		

WHAT ARE RELEASE POINTS?

The Emission Release Point is the physical structure through which the emissions leave the facility and reach the ambient air. In eDEP, **only vertical release points are considered "stacks"** with assigned DEP and Facility stack numbers and an STACK form.

If the unit has a physical stack, you must link the unit to that stack in Question A.13.

WHAT IS THE DIFFERENCE BETWEEN STACKS AND NON-STACKS?

NOTE: If you have installed a new stack, it will not populate the dropdown menu unless you first complete and validate a STACK Form prior to opening this form. To complete the -STACK Form, "SAVE" and "EXIT" this form. Open, complete, and validate the STACK Form of the new stack, and then return to this form.

WHAT ABOUT UNUSUAL EXHAUSTS, SUCH AS SHORT VERTICAL VENTS?

NOTE: Some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall. This type of release point does not require a Stack form – Select vertical stack/vent less than 10ft in the Non-Stack release point group.

13. Link this emission unit to a physical stack (if applicable) – pick from the list:

Facility's stack identifier (from Stack Form) – to change stack name use the Stack Form.
If the stack for this unit is not listed, save and exit this form now and complete a new Stack Form **before** completing this form.

CAUTION: If this unit's emissions release point is a new stack, you must have created and completed a Stack Form for that new stack, prior to completing this form. If you do not have the stack information, you will be unable to validate this form; and will be forced to save and exit this form. Once you have created, completed, and validated the new stack form, then you may return to complete this form.

NOTE: If the emission release point in Question 12 is vertical or vertical rain cap/sleeve, then this is a required field.

14. Are there air pollution control (APC) devices on this emission unit?

Check the appropriate yes or no box.
If no, skip to question 15.

How do I add a new APC?

If yes and no devices are present for this emission unit, select "Add New Control Device" button. OR if an existing device is not displayed, scroll to the end of question 14 and select "Add New Control Device" button.
When "Add New Control Device" button is selected, the form will reload with blank fields. Answer questions a through i. Once the information for the device has been added, select Update OR if you decide not to add a new device, select Cancel.

How are my existing APCs displayed?

NOTE: if the MassDEP database has active APC(s) for this emission unit, all the devices will be displayed in this section; the response will auto-fill with Yes and the field is locked. Confirm the information present for each device.

How do I revise an existing APC?

If the device information needs to be revised, select Edit found on the top right of the device that needs updating. Once the corrections have been made to the device, select Update OR if you do not to keep the corrections or decide not to make any changes, select Cancel.

What if my APC is used by other EUs?

NOTE: If other emission units use the same air pollution control equipment, also report this information on the appropriate forms for those units.

How to delete an air pollution control device?

Delete an air pollution control (APC) device by entering a date in Decommission Date (A.14.h) field. Use this when you are removing the device permanently.

How to replace an air pollution control device?

If the APC device was replaced in kind with a new model, enter the new installation date and replace the information on lines a-i, as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the APC equipment automatically.

a – e. Air pollution control device (description)
** - required fields

a. Type ** (Use the Drop-down Menu)

b. Manufacturer **

c. Model Number **

d. Facility's ID for this Device. ** (the unique number assigned by the facility for the APC equipment)

e. Installation Date ** (mm/dd/yyyy): The date on which the unit became operational.

f – h. Air pollution control equipment dates and approval numbers:

f. MassDEP approval number (most recent)
g. MassDEP approval date (mm/dd/yyyy)
NOTE: Not all air pollution control devices require plan approvals
h. Decommission date (mm/dd/yyyy) Enter a date here only if the air pollution control device is being permanently removed and not replaced.

What to do if you don't know the date?

Provide your best approximation of the date if you do not know it.
Do not leave blank.

How do I report my flare as control device?

When a flare is a control device for a process emission unit, is should be reported as such on the Process (AP-2) form for that process unit. If this unit was previously reported as an incinerator on an AP-3 form, please do the following:

1. report the flare on the Process (AP-2) form that it controls,
2. note in Section C: Notes on the Process (AP-2) form that you are reporting the flare on the Process (AP-2) form rather than the Incinerator (AP-3) form, and
3. enter a decommission date in the Incinerator (AP-3) form (causing it to be removed in future submittals) and enter 0 for all throughputs and emissions.

EXCEPTION: Flares at landfills should be reported on a Fuel Burning Device (AP-1) form.

i. Percent overall efficiency – enter for all pollutants that the device was designed to control:
** - required fields

** The *Percent Overall Efficiency* calculated which equals the APC equipment's Capture Efficiency (the percentage of the emissions that reach the air pollution control unit) multiplied by the APC equipment's *Control Efficiency* (the percentage of the emissions that are removed from the air stream by the Air Pollution Control Equipment.)

- If you have stack-testing data on control efficiency: Use that information.
- If you do not have stack-testing data: Use the manufacturers suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

PM10	PM2.5	SO2	CO	VOC	NO2
NH3	HOC	HYC	HG	PB	

Other: List any substances not already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.
NOTE: Only one "Other" is available for each APC device,

What is the % overall efficiency?

The % overall efficiency for a device equals its ("% capture efficiency" X "% control efficiency"). This is critical for the automatic emissions calculations (**NOTE**: auto-calc function is only available for fuel burning portion of the process unit**).** This information can be found in the plan approval

application, MassDEP's approval for the device and/or in the manufacturer's specification for the device.

15. Is there monitoring equipment on this emission unit or its related control device?

Answer Yes or No as appropriate, If no, skip to the questions in Section B. Fuels and Emissions.

NOTE: if the MassDEP database has active monitors for this emission unit, all the equipment will be displayed in this section; the response will auto-fill with Yes and the field is locked. Confirm the information present for each device and update as needed

NOTE: Report on each monitor that is on the release point for this emission unit in the separate columns provided.

NOTE: If other emission units use the same release point, also report this information on the appropriate forms for those units.

How to delete a monitor?

Delete a monitor by entering a date in Decommission Date (A.15.h). Use this when you are removing the monitor permanently.

How to replace a monitor?

If the monitor was replaced in kind with a new model, enter the new installation date and replace the information on lines b-i as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the monitor equipment automatically.

a. Monitor type:

Check the appropriate box for the type of monitoring device. Check only one for each monitor (use another column if there are other types of monitors on the release point.)

- CEMS
- Opacity
- Fuel flow meter
- Time recorder
- Temperature recorder
- Pressure
- Other: If other is checked then Describe "other" is required

How do I use CEM data?

If you use CEMs to determine annual emissions, report the CEMS emissions value in Section B.3 Emissions on this form. For each pollutant where the Calculation Method in Section B.3 Emissions is identified as CEMS, then that pollutant also needs to be identified as a montored pollutant in Question A.15.l

b. Manufacturer:

c. Model number:

The name of the manufacturer of the monitoring equipment attached to the stack and the model number assigned by the manufacturer.

d. Monitor ID #:

The unique ID number/name that the facility has assigned to this piece of monitoring equipment.

e. Installation date:

The date on which the unit became operational. Do not leave blank. Estimate if unknown.

f. DEP approval #:

MassDEP approval number (most recent) from your permit or plan approval.

g. DEP approval date: (mm/dd/yyyy)

(mm/dd/yyyy)

h. Decommission date:

Enter a date here only if the monitor is being permanently removed and not just replaced. (mm/dd/yyyy)

Whether or not this device are attached to the monitor.

i. Recorder?

Yes or No check box

j. Audible alarm?

Yes or No check box

k. Data System?

Whether or not a data system that continuously logs monitoring data for future review is attached to the monitor.
Yes or No check box

What is a "data system"?

A data system continuously captures monitoring data for future review and analysis.

l. Monitored pollutants:

Check all contaminants that are measured by the monitoring unit

PM10	PM2.5	SO2	CO	VOC	NO2	NH3
Mercury	Oxygen	CO2	H2S	HCL	Opacity	CH4
NO2	SF6	Refrigerants-CO2e				

Other: List any substances not already listed on the form that you are required to monitor per your plan approval, operating permit, or applicable regulation.
NOTE: Only one "Other" is available for each monitor.

B. FUELS AND EMISSIONS FOR RAW MATERIALS / FINISHED PRODUCTS/ FUELS (SECTION B PARENT FORM)

NOTE: In general, the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in the Air Quality database. That data will not appear on the electronic forms until it has been submitted in this new format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

NOTE: Section B of this form must be completed for each raw material, finished product or fuel that can emit air contaminants used in this emission unit.

Special rules for organic compounds

If an organic compound is used in an emission unit:	Submit:
To manufacture another chemical or to make a formulation	One Section B for each individual organic compound used in this emission unit.
As a formulation (e.g., to paint, print, or otherwise coat a product)	One Section B is required for EACH FORMULATION used in this emission unit.
As a solvent thinner or to clean the formulation from the processing equipment	One Section B is required for each separate solvent thinner used in this emission unit. (**NOTE** this information used to be reported with a formulation)
For degreasing	One Section B is required for EACH degreasing formulation used in the emission unit.

CAUTION: If the same raw material is used or product is produced in more than one emission unit, and you were unable to combine them on one Process (AP-2) form, then this material/product needs to be reported on the individual emission unit's Process (AP-2) forms.

How does eDEP handle multiple raw materials or finished products?

In eDEP, a separate Section B form is automatically created for each raw material or finished product on record for this emission unit based on the "Number of fuels for this unit (previous records)". Before checking the box at the right to make a change, please note the following:
1) If you need to add a new raw material or finished product or fuel and "Number of fuels for this unit…." is greater than 1, wait to see the other fuels before checking this box, or
2) If you ceased using or making a specific raw material or finished product or fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly.

NOTE: If the response to A.3.b contains a decommission date (i.e., the emission unit is decommissioned), you do not need to select "delete this fuel".
.

Add a New material/product/fuel	Check the box if you need to add a material/product/fuel that you did not report on previously (eDEP will add a blank Section B form to your package when you validate this form). Any additional material/product/fuels will automatically appear when you error check this form so you do NOT need to check this field to make additional forms appear if they have been reported on in a previous submittal. You can see the number of fuels already existing for this unit in the field: "Number of fuels for this unit (previous records)". Use this check box only for NEW material/product/fuel for this unit which you have never reported before.
Number of Additional Fuels:	Enter the number of new fuels you need to add for this emission unit.
WHEN TO NOT CHECK "ADD A NEW FUEL" BOX	Any additional fuels will automatically appear when you error check this form so you do not need to check this field to make additional fuels appear if they have been reported on already in a previous submittal. You can see the number of fuels already existing for this unit in the field: "Number of fuels for this unit (previous records)". This check box is only for NEW fuels which you have never reported before.
Delete this material/product/fuel:	Check the box if you stopped using this material or fuel or making this product in this emission unit permanently. You must still report data for this year of record even if amount is "0" – the material/product/fuel will be removed in the next report cycle. **NOTE**: If you ceased using this material/product/fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active material/product/fuel to function properly.
1. Operation Description	
Is GHG emissions reporting required for this raw material, finished product or fuel? (in SRGHG package)	This question is only present in SRGHG package. If GHG emissions' reporting is not required for this raw material or finished product, check No. Only SR emissions reporting will be required for this Section B. **NOTE**: If fuel, GHG emissions' reporting is always required.
a. Raw material, finished product, or fuel name:	This response is determined based on the SCC. If the SCC is pre-populated, the Raw material, finished product, or fuel name will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Raw material, finished product, or fuel name when the form is validated. If this response is not a fuel, you can revise the response by selecting from the drop down list.
EPA material type code help text	Material Type Code is a field required by US EPA for the National Emissions Inventory. In most cases, your SCC response will autofill this field but if the response is not appropriate, you can change the response by selecting from this list. (The complete list of EPA Material Type Codes can be found on the SR website: **References You Will Need**.)
Number of segments for this unit (previous records):	This field identifies the number of existing segments that are associated with this EU. This information will be provided by the system. For new emission units: This question is not applicable.
Is this fuel, waste, or raw material/finished product an input, output or fuel?	Check the appropriate box: input, output or fuel. **NOTE1**: when the response to A.5 EPA Unit Type Code is a PROCESS HEATER; KILN; CALCINER; DRYER: DIRECT-FIRED OR UNKNOWN IF DIRECT OR INDIRECT OR INDIRECT-FIRED; FLARE; or OTHER COMBUSTION, then a Fuel response is required for one Section B. **NOTE2**: Raw Material would be considered an **Input**; finished product would be considered an **Output**, and the "material" used in a fuel burning device would be considered **Fuel**. However,

if you use a "fuel" as part of your process operation (and not associated with combustion equipment), this "fuel" would be considered an **Input** or if the "fuel" is being stored and you are required to report breathing loss and/or transfer loss, then this "fuel" would be considered an **Output**.

For example: Using a coating line with natural gas dryers, depending on how you reported the coating operation, the coating(s) used (i.e. ink, paint, dye) would be considered an **Input** and the material that is coated (i.e. fabric, metal parts, cardboard, etc.) would be considered an **Output.** The natural gas used by the dryer would be considered a **Fuel**.

NOTE3: If this information is inaccurate, please contact us at BAW.eDEP@state.ma.us

DEP #

NOTE: The DEP number given here cannot be edited. It corresponds to the old SSEIS segment number and is how MassDEP tracks the raw material/product for this emission unit.

Can I change the DEP fuel identifier?

This ID number is a MassDEP assigned number and cannot be changed

c. Process description:

Write a brief description of the process in which the raw material is used or finished product is created or fuel is burned. *(e.g., Cleaning – degreasing*)

d. Source Classification Code (SCC)

The SCC is a code for the type of unit operation or production process. EPA's AP-42 (https://www.epa.gov/chief) contains the codes for each type of process, as well as, emission factors that can, in certain circumstances, be used to calculate emissions from each unit process.

SCC Description

The system will automatically fill in the code description.
If the SCC is pre-populated, the SCC Description will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the SCC Description when the form is validated.

What SCC should be used to report SF6 emissions? (for SR/GHG package)

Use the following SCC Codes:

- 31306502: Industrial Processes - Electrical Equipment - Semiconductor Manufacturing - Cleaning Process: Plasma Process: Specify Gas Used
- 31306510: Industrial Processes - Electrical Equipment - Semiconductor Manufacturing - Chemical Vapor Deposition: General: Specify Gas Used
- 31306520: Industrial Processes - Electrical Equipment - Semiconductor Manufacturing - Diffusion Process: Deposition Operation: Specify Gas Used
- 31306531: Industrial Processes - Electrical Equipment - Semiconductor Manufacturing - Etching Process: Plasma/Reactive Ion: Specify Gas Used

How does eDEP use Source Classification Codes (SCC)?

SCCs are standard codes EPA uses to identify different operations and the associated emissions factors , if available. The SCC identified the raw material/finished product name or fuel type. The SCC also identifies the *Units per hour* which are used for your response to B.1.e: *Maximum hourly* process rate for material/product/fuel, B.1.g: Total actual raw material, finished product or fuel for year of record: *and the B.3 Emission Factor Units.* The list of SCC valid in eDEP can be found at https://www.mass.gov/guides/massdep-source-registration

If the SCC listed on the form **is wrong,** enter the correct code.
If the form will **not accept the SCC** you are entering, contact MassDEP at BAW.eDEP@state.ma.us.

e. Maximum process rate for material/product:

The maximum rate at which raw materials/finished products/fuels can be used in the emission unit, expressed in measurable units *(e.g., pounds of material per hour or gallons per hour)*, is based *on*

	the chosen SCC Code
Amount	**IMPORTANT:** You may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the firing rate units in 1000 gallons/hr then 72 gallons/hr would be entered as 0.072 1000 gallons/hr when you select an SCC code for liquid material depending on the SCC units.
Units per hour	This response is determined based on the SCC. If the SCC is pre-populated, the Units per hour will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units per hour when the form is validated.
What is the definition of maximum process rate?	The maximum rate is the rate at which the equipment **can operate,** assuming operations 24 hours a day, 7 days a week, irrespective of any regulatory restrictions.
f. If organic material, give weight % of: VOC, HOC, HYC VOC, HOC, HYC	Determine the weight percentage separately for each category of organic compound. The MSDS provided by your supplier will list the individual chemicals in the formulation. Total **weight** percentage of: Volatile Organic Compounds (VOCs) in the formulation Halogenated Organic Compounds (HOCs) in the formulation Hydrocarbons (HYCs) in the formulation Calculate the weight percentage for each category by summing the weight percent of each individual chemical in the formulation that is in each category.
What is the weight percentage of VOC, HOC, HYC?	**TIP:** The MSDS provided by your supplier will list the individual chemicals in the formulation. **NOTE:** Some formulations will contain a mixture of VOCs, HOCs, and/or HYCs. Others will just contain one of the categories. Do not confuse WEIGHT percentage with VOLUME percentage. WEIGHT percentage is calculated as follows: 100 X (The weight of the HOCs, VOCs or HYCs in the formulation) / (the total weight of the formulation).
and If fuel is an oil, give percent by weight of Sulfur content (Acceptable Range 0 – 2.2)	**NEW**: The percentage of sulfur by weight for oil, only. **TIP:** This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.
g. Total actual raw material used or finished product produced for year of record:	
Amount	How much of the raw material was used or product was produced or fuel burned during the calendar year being reported and the unit of measure used. Enter "0" if not used/produced/burned in the year of record.
Units	This response is determined based on the SCC. If the SCC is pre-populated, the Units will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units when the form is validated. .
Amount Prior year Units prior year	This information will be provided by the system based on your last submittal. For new emission units: This information is not applicable.

h. Do you have raw material or finished product or fuel restrictions?	These would have been expressed in a regulation, the plan approval you received from MassDEP for this emission unit or one that applies to several emission units. Check the appropriate yes or no box. If No, then skip to Question B.1.l. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.
What if there are multiple raw material or finished product or fuel restrictions?	If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well. Cite the most recent raw material use or finished product restriction applicable to the raw material use or finished product associated with this emission unit. The most recent raw material or finished product restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.
What if a restriction applies to multiple units?	If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies. Enter the most recent approval number for the restriction.
i. DEP approval number for restrictions:	Only complete if a plan approval is required: State the approval number for the plan approval that allowed the installation of the emission unit. This number is found on the plan approval letter sent by MassDEP. Cite either plan approval or regulation.
j. Short term raw material/finished product/fuel restriction– if none, leave blank:	
Quantity(amount or hours):	Provide the maximum amount of raw material/finished product, you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter or regulation..
Units:	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
Per:	Check the appropriate box for the time period: Month, Week, Day or Hour.
k. Annual material/finished product or fuel restriction – if none, leave blank:	
Quantity (amount or hours):	Provide the maximum amount of raw material/finished product, you are allowed to use in a year per your permit, and the units of measurement from the drop-down menu. Obtain this from your plan approval letter or regulation
Units:	If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us.
l. Indicate which air pollution control devices from Section A, Question 14 control this material/product/fuel by listing the facility-designated control device ID # for each unit that applies:	Select the ID for the APC Device from the drop-down menu that is use to control this specific material/product/fuel. **IMPORTANT** Do not select the same control more than once. **NOTE**: if three controls are listed in A.14 and only one of these controls apply to this material/product/fuel, select this control here.
Check here if ALL air pollution	

control devices on the unit apply to this material/product/fuel	Use the check box if all air pollution control devices on the unit apply to this material/product/fuel.
What to do if your new control device does not show up in the drop-down menu?	Validate the form by selecting [Error Check]. If you have added or amended the air pollution control device(s) associated with this raw material/finished product/fuel, you must first validate the form to populate the drop-down menu with the new control device. Once you have successfully validated the form, the added or amended air pollution control device(s) will be in the drop-down menu.

B. SOURCE REGISTRATION EMISSIONS (SECTION B PARENT FORM)

2. Total emissions for this raw material/product – tons per year:	Provide the following information for all pollutants emitted by the emission unit.
What are total emissions for this material/finished product?	This section records the total actual, unrestricted potential and permitted (allowable) emissions for the year covered by this report (the year of record) of each pollutant that is attributed to this raw material or finished product for the emission unit(s) reported on this AP-2. Please see the Appendix C for detailed information on calculating emissions. PM10-FIL PM2.5-FIL PM-CON SO2 PB VOC NH3 CO NO2 Specify other pollutant
Calculations: Read First	The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.
When is NH3 emissions required?	NH3 emissions is required if APC Device is SNCR (SELECTIVE NONCATALYTIC REDUCTION) OR SCR (SELECTIVE CATALYTIC REDUCTION)
PM FILTERABLE VS. PM CONDENSABLE	MassDEP reports PM emissions to EPA as filterable. Therefore, if you calculate your own emissions, **YOU SHOULD REPORT ONLY FILTERABLE PM10 AND PM2.5**. Do NOT add in condensable emissions. Do not use emission factors for primary PM (e.g., PM2.5-PRI) which includes both filterable and condensable emissions. EPA generally labels emission factors for filterable PM as -FIL (e.g., PM2.5-FIL) whereas primary PM emissions factors are labeled –PRI (e.g., PM2.5-PRI). Calculate condensable emissions separately
Actual for previous year	This information will be provided by the system. For a new emission unit: This information is not applicable.
What are "actual emissions"?	Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit associated with each raw material/finished product/fuel during the year covered by the report (the year of record). For Process (AP-2) forms, eDEP will not auto-calculate the actual emissions.

Please see Appendix C for more detailed information on calculating actual emissions.

Actual for year of record:

Calculate this information. The actual emissions for the calendar year being reported. **You must calculate your Actual Emissions**. (see Appendix C: Example Calculations.)

NOTE: In many cases, AP-42/FIRE emission factors found in EPA's website (https://www.epa.gov/chief) can be used to estimate actual emissions.

CAUTION: The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on this form.

IMPORTANT: If you use CEMS data for your actual emissions, you must provide the CEMs equipment information in question A.15 and identify "Continuous Emission Monitoring System (CEMs)" for Calculation Method.

Potential Emissions (in Tons)

Calculate this information. (See Appendix C: Example Calculations.)

The definition of Potential Emissions in 310 CMR 7.00 takes into account the restrictions of a plan source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. If you have a restriction that meets one of these conditions for this emission unit AND raw material/finished product/fuel, you may list that pollutant's potential emissions number here AND in the next section. However, if this emission unit AND raw material/finished product/fuel does not have a restriction, the number entered here should be based on maximum uncontrolled emissions

Potential emissions are the maximum uncontrolled emissions assuming the emission unit operates at maximum capacity 24 hours per day, 7 days a week, 52 weeks a year (8760 hours per year)..

You may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design ***only if*** *the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of de minim is sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).*

ENTER "0" if the unit was decommissioned prior to this year of record because the unit did not represent potential emissions during the year of record.

IMPORTANT*: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.*

What are potential emissions?

The emissions resulting from the maximum operation of the equipment irrespective of any regulatory restrictions. **(8760 hrs X Max Firing Rate X Emission Factor)**

NEW: you may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.

Emission factor:

Provide this information.

NOTE: In many cases, AP-42/FIRE emission factors found in EPA's website (https://www.epa.gov/chief) can be used to estimate actual emissions.

in pounds per unit (EF Units):

NEW - If you are calculating the emissions yourself, the Emission factor units must match the chosen SCC. The unit selected must match the unit present in the response to B.1.e and B.1.g.

What are emission factors (EF)?

Emissions factors are the **amount of pollution generated per unit of operation,** uncontrolled based on the SCC. For example, for coating operations, the emission factor is often expressed as lb emitted per gallon of coating applied. Therefore, total tons of emissions per year are obtained by the formula [**EF in lb/ raw material] x [raw material/finished product/fuel usage] / [2000 lb per ton**] **= TPY of emissions.**

When you calculate your own emissions, you must enter the emission factor that you used. The EPA emission factors used by eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration .

CAUTION: The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

Appendix C provides more information about using emissions factors to calculate emissions.

Calculation Method

NEW: If the system is calculating the actual and potential emissions for the pollutant, use "USEPA Emission Factor (pre-control) plus Control Efficiency"

If you are calculating the actual and potential emissions for the pollutant yourself, you can choose from the following in a dropdown list:

DESCRIPTION
Continuous Emission Monitoring System
Engineering Judgment
Manufacturer Specification
Material Balance
Other Emission Factor (pre-control) plus Control Efficiency
S/L/T Emission Factor (pre-control) plus Control Efficiency
Site-Specific Emission Factor (no Control Efficiency used)
Site-Specific Emission Factor (pre-control) plus Control Efficiency
Stack Test (no Control Efficiency used)
Stack Test (pre-control) plus Control Efficiency
Trade Group Emission Factor (no Control Efficiency used)
Trade Group Emission Factor (pre-control) plus Control Efficiency
Vendor Emission Factor (no Control Efficiency used)
Vendor Emission Factor (pre-control) plus Control Efficiency

Maximum allowed emissions – annual:

Provide this information if there is a plan approval or a regulation for this raw material /product (as opposed to for the emission unit as a whole.)

Maximum allowed emissions - short term:

Short term period

Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list

When to enter maximum allowed emissions?

Complete the "maximum allowed emissions" fields if there is an annual or short-term emission limitation **applicable to the raw material/finished product/fuel** expressed **in either a MassDEP approval or a regulation**. Be sure to enter the approval number or regulation under "Basis" below.

NOTE: If you calculated your potential emissions using controls and/or restrictions (rather than using the eDEP calculation feature or entering max capacity uncontrolled for potential), you MUST also enter a "maximum allowed emissions – annual" and the values for potential and maximum allowed annual emissions must be the same.

Basis- DEP approval number or regulation:

This field is required if maximum allowed emissions values are present**.** Provide either the regulatory citation if the emission unit was installed through a permit by rule or the plan approval number. If a plan approval is not required: Cite the regulation under which the equipment was installed.

NOTE: Some emission units will not have plan approvals because:

1. they are below the threshold for which a plan approval or permit is required;
2. they were installed before the effective date of the regulation; or
3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.

	If a plan approval established emission limits for the pollutant, write the approval number t. This number is found on the letter sent by MassDEP. If a regulation established emission limits for the pollutant, cite the regulation.
4. Ozone season emissions – May 1 through September 30:	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation (Questions A.11a through A.11.c) and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at B.3.a. and B.3.b.
a. Typical day VOC emissions – pounds per day b. Typical day NOx emissions – pounds per day	The system will calculate this information based on data you supplied on the form **NOTE1:** If you have more than one raw material/finished product/fuel for this emission unit, you will be required to complete the ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your material/ product/fuel in Section B. **NOTE2**: In the SRGHG package, when only one raw material/finished product/fuel is present for this emission unit, this question is will be found after the GHG emissions.
Check to enter your own values	**NOTE:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes
What if I have more than one raw material/finished product/fuel?	**NOTE:** If you have more than 1 raw material/finished product/fuel, this space for the ozone season emissions on the "parent" form is invisible – you will be provided with a space for entering ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your raw materials/finished products/fuels for this unit.

NOTE for Section B parent form: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections. For Section B parent form, you must continue to Section C before you can error check your form.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

B. GREENHOUSE GAS EMISSIONS (IN SR/GHG PACKAGE) (SECTION B PARENT FORM)

This section is not present in the SR Only package.
For facilities required to report Greenhouse Gas (GHG) emissions, all emission units that burn fuel are required to report GHG emissions.

3. Total GHG emissions for this fuel only in tons per year:

Provide the following information for all pollutants emitted by the emission unit for this material/product/fuel only

CO2	CH4	N2O	SF6	Refrigerants-CO2e
CO2e-CO2	CO2e-CH4	CO2e-N2O	CO2e-SF6	CO2e-Refrigerants

Other GHG Pollutant
CO2e- Other GHG Pollutant

CALCULATIONS: READ FIRST

The form will automatically calculate the actual emissions from your annual throughput and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box).

The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.

Why you may want to calculate your own emissions values?

The GHG emissions should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Please see Appendix C for more guidance on calculating your own emissions

Actual (in Tons) for previous year:

This information will be provided by the system.
For new emission units: This section is not applicable.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit associated with each fuel during the year covered by the report (the year of record). eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.

Actual (in Tons) for year of record

Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box.

NOTE: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the actual emissions amount is less than 0.0001, the amount is changed to zero

What are emission factors?

Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC. The displayed emission factor is the EPA default emission factor BEFORE the application of the ash or sulfur percent in the calculation.

If you choose to calculate your own emissions, you must enter the emission factor that you used. The EPA emission factors used by eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration.

Because they are generic, the EPA SCC emission factors are not applicable in all situations. They may overstate emissions for facilities

See Appendix C for more information about using emissions factors to calculate emissions.

Emission factor

Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination.

in pounds per unit: (EF Units)

If you are calculating the emissions yourself, the Emission factor units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected should match the unit present in the response to B.1.e and B.2.b.

What EF and EF units should be used to report SF6 and Refrg-CO2e emissions?

Neither SF6 nor Refrg-CO2e require a response in the fields Emission factor (EF) and in pounds per unit. These fields should auto-fill blank and be locked.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on this form.

IMPORTANT: If you use CEMS to determine annual emissions, you must provide the CEMs equipment information in question A.15 and identify “GHG-CEMS” for Calculation Method.

Calculation Method	If the system is calculating the actual emissions for the pollutant, use GHG-EPA EF: EPA GHG Emission Factor If you are calculating the actual emissions for the pollutant yourself, you can choose from the following in a dropdown list:

CODE	DESCRIPTION
GHG-CEMS	Continuous Emission Monitoring System Data
GHG-User EF	User Provided GHG Emission Factor
GHG-MatlBalance	Emissions Based on Material Balance
GHG-TCR EF	General Reporting Protocol EF[4]

NOTE: For SF6, the Calculation Method should auto-fill with GHG-MatlBalance and the field will be locked.

Specify General Reporting Protocol EF	If you select GHG-TCR EF from the Calculation Method dropdown list, then you need to select the type of Default Emission Factor from this drop down list.
CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the actual emissions amount is less than 0.0001, the amount is changed to zero
Total CO2e emissions	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) based on the calculated CO2e of each pollutant where their actual emissions value is greater than zero.
CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) from the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

NOTE for Section B parent form: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections. For Section B parent form, you must continue to Section C before you can error check your form.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

[4] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

C. Notes and Attachments (found on parent form only)

1 Notes:

Information that will help DEP understand your submission. . If an attachment will be associated with this form, identify any additional, explanatory material that you are choosing to submit

2. Attachments

This section is to provide any additional information for any of your responses for this EU, including any child forms. If you are including a document, identify any explanatory material the facility is choosing to submit along with this form.

If the material can be sent electronically, check the box for the appropriate form.
Check this box if additional information will be included as an attachment. If the additional material can be sent electronically (20 MB document), check the box on the appropriate form. You will be prompted just before Step 2 for the attachment.

B. FUELS AND EMISSIONS FOR RAW MATERIALS / FINISHED PRODUCTS/ FUELS (SECTION B CHILD FORM)

NOTE: In general, the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in the Air Quality database. That data will not appear on the electronic forms until it has been submitted in this new format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

NOTE: Section B of this form must be completed for each raw material, finished product or fuel that can emit air contaminants used in this emission unit.

How does eDEP handle multiple raw materials or finished products?

In eDEP, a separate Section B form is automatically created for each raw material or finished product on record for this emission unit based on the "Number of fuels for this unit (previous records)". Before checking the box at the right to make a change, please note the following:
1) If you need to add a new raw material or finished product or fuel and "Number of fuels for this unit…." is greater than 1, wait to see the other fuels before checking this box, or
2) If you ceased using or making a specific raw material or finished product or fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly.

NOTE: If the response to A.3.b contains a decommission date (i.e., the emission unit is decommissioned), you do not need to select "delete this fuel".
.

Delete this material/product/fuel:

Check the box if you stopped using this material or fuel or making this product in this emission unit permanently. You must still report data for this year of record even if amount is "0" – the material/product/fuel will be removed in the next report cycle. **NOTE**: If you ceased using this material/product/fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active material/product/fuel to function properly.

1. Operation Description

a. Raw material, finished product, or fuel name:

This response is determined based on the SCC. If the SCC is pre-populated, the Raw material, finished product, or fuel name will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Raw material, finished product, or fuel name when the form is validated. If this response is not a fuel, you can revise the response by selecting from the drop down list.

EPA material type code help text

Material Type Code is a field required by US EPA for the National Emissions Inventory. In most cases, your SCC response will autofill this field but if the response is not appropriate, you can change the response by selecting from this list. (The complete list of EPA Material Type Codes can be found on the SR website: **References You Will Need**.)

Is this fuel, waste, or raw material/finished product an input, output or fuel?	Check the appropriate box: input, output or fuel. **NOTE1**: when the response to A.5 EPA Unit Type Code is a PROCESS HEATER; KILN; CALCINER; DRYER: DIRECT-FIRED OR UNKNOWN IF DIRECT OR INDIRECT OR INDIRECT-FIRED; FLARE; or OTHER COMBUSTION, then a Fuel response is required for one Section B. **NOTE2**: Raw Material would be considered an **Input**; finished product would be considered an **Output**, and the "material" used in a fuel burning device would be considered **Fuel**. However, if you use a "fuel" as part of your process operation (and not associated with combustion equipment), this "fuel" would be considered an **Input** or if the "fuel" is being stored and you are required to report breathing loss and/or transfer loss, then this "fuel" would be considered an **Output**. **For example**: Using a coating line with natural gas dryers, depending on how you reported the coating operation, the coating(s) used (i.e. ink, paint, dye) would be considered an **Input** and the material that is coated (i.e. fabric, metal parts, cardboard, etc.) would be considered an **Output.** The natural gas used by the dryer would be considered a **Fuel**. **NOTE3**: If this information is inaccurate, please contact us at BAW.eDEP@state.ma.us
DEP #	**NOTE**: The DEP number given here cannot be edited. It corresponds to the old SSEIS segment number and is how MassDEP tracks the raw material/product for this emission unit.
Can I change the DEP fuel identifier?	This ID number is a MassDEP assigned number and cannot be changed
c. Process description:	Write a brief description of the process in which the raw material is used or finished product is created or fuel is burned. *(e.g., Cleaning – degreasing*)
d. Source Classification Code (SCC)	The SCC is a code for the type of unit operation or production process. EPA's AP-42 (https://www.epa.gov/chief) contains the codes for each type of process, as well as, emission factors that can, in certain circumstances, be used to calculate emissions from each unit process.
SCC Description	The system will automatically fill in the code description. If the SCC is pre-populated, the SCC Description will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the SCC Description when the form is validated.
What SCC should be used to report SF6 emissions? (for SR/GHG package)	Use the following SCC Codes: • 31306502: Industrial Processes - Electrical Equipment - Semiconductor Manufacturing - Cleaning Process: Plasma Process: Specify Gas Used • 31306510: Industrial Processes - Electrical Equipment - Semiconductor Manufacturing - Chemical Vapor Deposition: General: Specify Gas Used • 31306520: Industrial Processes - Electrical Equipment - Semiconductor Manufacturing - Diffusion Process: Deposition Operation: Specify Gas Used • 31306531: Industrial Processes - Electrical Equipment - Semiconductor Manufacturing - Etching Process: Plasma/Reactive Ion: Specify Gas Used

How does eDEP use Source Classification Codes (SCC)?

SCCs are standard codes EPA uses to identify different operations and the associated emissions factors , if available. The SCC identified the raw material/finished product name or fuel type. The SCC also identifies the *Units per hour* which are used for your response to B.1.e: *Maximum hourly* process rate for material/product/fuel, B.1.g: Total actual raw material, finished product or fuel for year of record: *and the B.3 Emission Factor Units.* The list of SCC valid in eDEP can be found at https://www.mass.gov/guides/massdep-source-registration

If the SCC listed on the form **is wrong,** enter the correct code.
If the form will **not accept the SCC** you are entering, contact MassDEP at BAW.eDEP@state.ma.us.

f. If organic material, give weight % of: VOC, HOC, HYC

VOC,
HOC,
HYC

Determine the weight percentage separately for each category of organic compound. The MSDS provided by your supplier will list the individual chemicals in the formulation.
Total **weight** percentage of:

Volatile Organic Compounds (VOCs) in the formulation
Halogenated Organic Compounds (HOCs) in the formulation
Hydrocarbons (HYCs) in the formulation

Calculate the weight percentage for each category by summing the weight percent of each individual chemical in the formulation that is in each category.

TIP: The MSDS provided by your supplier will list the individual chemicals in the formulation.

What is the weight percentage of VOC, HOC, HYC?

NOTE: Some formulations will contain a mixture of VOCs, HOCs, and/or HYCs. Others will just contain one of the categories.

Do not confuse WEIGHT percentage with VOLUME percentage. WEIGHT percentage is calculated as follows: 100 X (The weight of the HOCs, VOCs or HYCs in the formulation) / (the total weight of the formulation).

and If fuel is an oil, give percent by weight of Sulfur content (Acceptable Range 0 – 2.2)

NEW: The percentage of sulfur by weight for oil, only.
TIP: This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.

g. Total actual raw material used or finished product produced for year of record:

Amount

How much of the raw material was used or product was produced or fuel burned during the calendar year being reported and the unit of measure used. Enter "0" if not used/produced/burned in the year of record.

Units

This response is determined based on the SCC. If the SCC is pre-populated, the Units will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units when the form is validated. .

Amount Prior year
Units prior year

This information will be provided by the system based on your last submittal. For new emission units: This information is not applicable.

h. Do you have raw material or finished product or fuel restrictions?	These would have been expressed in a regulation, the plan approval you received from MassDEP for this emission unit or one that applies to several emission units. Check the appropriate yes or no box. If No, then skip to Question B.1.l. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.
What if there are multiple raw material or finished product or fuel restrictions?	If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well. Cite the most recent raw material use or finished product restriction applicable to the raw material use or finished product associated with this emission unit. The most recent raw material or finished product restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.
What if a restriction applies to multiple units?	If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies. Enter the most recent approval number for the restriction.
i. DEP approval number for restrictions:	Only complete if a plan approval is required: State the approval number for the plan approval that allowed the installation of the emission unit. This number is found on the plan approval letter sent by MassDEP. Cite either plan approval or regulation.
j. Short term raw material/finished product/fuel restriction– if none, leave blank:	
Quantity(amount or hours):	Provide the maximum amount of raw material/finished product, you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter or regulation..
Units:	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
Per:	Check the appropriate box for the time period: Month, Week, Day or Hour.
k. Annual material/finished product or fuel restriction – if none, leave blank:	
Quantity (amount or hours):	Provide the maximum amount of raw material/finished product, you are allowed to use in a year per your permit, and the units of measurement from the drop-down menu. Obtain this from your plan approval letter or regulation
Units:	If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us.

I. Indicate which air pollution control devices from Section A, Question 14 control this material/product/fuel by listing the facility-designated control device ID # for each unit that applies:	Select the ID for the APC Device from the drop-down menu that is use to control this specific material/product/fuel. **IMPORTANT** Do not select the same control more than once. **NOTE**: if three controls are listed in A.14 and only one of these controls apply to this material/product/fuel, select this control here.
Check here if ALL air pollution control devices on the unit apply to this material/product/fuel	Use the check box if all air pollution control devices on the unit apply to this material/product/fuel.
What to do if your new control device does not show up in the drop-down menu?	Validate the form by selecting [Error Check]. If you have added or amended the air pollution control device(s) associated with this raw material/finished product/fuel, you must first validate the form to populate the drop-down menu with the new control device. Once you have successfully validated the form, the added or amended air pollution control device(s) will be in the drop-down menu.

B. SOURCE REGISTRATION EMISSIONS (SECTION B CHILD FORM)

2. Total emissions for this raw material/product – tons per year:	Provide the following information for all pollutants emitted by the emission unit.
What are total emissions for this material/finished product?	This section records the total actual, unrestricted potential and permitted (allowable) emissions for the year covered by this report (the year of record) of each pollutant that is attributed to this raw material or finished product for the emission unit(s) reported on this AP-2. Please see the Appendix C for detailed information on calculating emissions. PM10-FIL PM2.5-FIL PM-CON SO2 PB VOC NH3 CO NO2 Specify other pollutant
Calculations: Read First	The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.
When is NH3 emissions required?	NH3 emissions is required if APC Device is SNCR (SELECTIVE NONCATALYTIC REDUCTION) OR SCR (SELECTIVE CATALYTIC REDUCTION)

PM FILTERABLE VS. PM CONDENSABLE

MassDEP reports PM emissions to EPA as filterable. Therefore, if you calculate your own emissions, **YOU SHOULD REPORT ONLY FILTERABLE PM10 AND PM2.5**.

Do NOT add in condensable emissions. Do not use emission factors for primary PM (e.g., PM2.5-PRI) which includes both filterable and condensable emissions. EPA generally labels emission factors for filterable PM as -FIL (e.g., PM2.5-FIL) whereas primary PM emissions factors are labeled –PRI (e.g., PM2.5-PRI).

Calculate condensable emissions separately

Actual for previous year

This information will be provided by the system.
For a new emission unit: This information is not applicable.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit associated with each raw material/finished product/fuel during the year covered by the report (the year of record). For Process (AP-2) forms, eDEP will not auto-calculate the actual emissions. Please see Appendix C for more detailed information on calculating actual emissions.

Actual for year of record:

Calculate this information. The actual emissions for the calendar year being reported. **You must calculate your Actual Emissions**. (see Appendix C: Example Calculations.)

NOTE: In many cases, AP-42/FIRE emission factors found in EPA's website (https://www.epa.gov/chief) can be used to estimate actual emissions.

CAUTION: The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on this form.

IMPORTANT: If you use CEMS data for your actual emissions, you must provide the CEMs equipment information in question A.15 and identify "Continuous Emission Monitoring System (CEMs)" for Calculation Method.

Potential Emissions (in Tons)

Calculate this information. (See Appendix C: Example Calculations.)

The definition of Potential Emissions in 310 CMR 7.00 takes into account the restrictions of a plan source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. If you have a restriction that meets one of these conditions for this emission unit AND raw material/finished product/fuel, you may list that pollutant's potential emissions number here AND in the next section. However, if this emission unit AND raw material/finished product/fuel does not have a restriction, the number entered here should be based on maximum uncontrolled emissions

Potential emissions are the maximum uncontrolled emissions assuming the emission unit operates at maximum capacity 24 hours per day, 7 days a week, 52 weeks a year (8760 hours per year)..

You may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design ***only if*** *the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of de minim is sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).*

ENTER "0" if the unit was decommissioned prior to this year of record because the unit did not represent potential emissions during the year of record.

IMPORTANT*: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.*

What are potential emissions?

The emissions resulting from the maximum operation of the equipment irrespective of any regulatory restrictions. **(8760 hrs X Max Firing Rate X Emission Factor)**

NEW: you may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.

Emission factor:

Provide this information.

NOTE: In many cases, AP-42/FIRE emission factors found in EPA's website (https://www.epa.gov/chief) can be used to estimate actual emissions.

in pounds per unit (EF Units):

NEW - If you are calculating the emissions yourself, the Emission factor units must match the chosen SCC. The unit selected must match the unit present in the response to B.1.e and B.1.g.

What are emission factors (EF)?

Emissions factors are the **amount of pollution generated per unit of operation,** uncontrolled based on the SCC. For example, for coating operations, the emission factor is often expressed as lb emitted per gallon of coating applied. Therefore, total tons of emissions per year are obtained by the formula [**EF in lb/ raw material] x [raw material/finished product/fuel usage] / [2000 lb per ton**] **= TPY of emissions.**

When you calculate your own emissions, you must enter the emission factor that you used. The EPA emission factors used by eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration .

CAUTION: The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

Appendix C provides more information about using emissions factors to calculate emissions.

Calculation Method

NEW: If the system is calculating the actual and potential emissions for the pollutant, use "USEPA Emission Factor (pre-control) plus Control Efficiency"

If you are calculating the actual and potential emissions for the pollutant yourself, you can choose from the following in a dropdown list:

DESCRIPTION
Continuous Emission Monitoring System
Engineering Judgment
Manufacturer Specification
Material Balance
Other Emission Factor (pre-control) plus Control Efficiency
S/L/T Emission Factor (pre-control) plus Control Efficiency
Site-Specific Emission Factor (no Control Efficiency used)
Site-Specific Emission Factor (pre-control) plus Control Efficiency
Stack Test (no Control Efficiency used)
Stack Test (pre-control) plus Control Efficiency
Trade Group Emission Factor (no Control Efficiency used)
Trade Group Emission Factor (pre-control) plus Control Efficiency
Vendor Emission Factor (no Control Efficiency used)
Vendor Emission Factor (pre-control) plus Control Efficiency

Maximum allowed emissions – annual:	Provide this information if there is a plan approval or a regulation for this raw material /product (as opposed to for the emission unit as a whole.)
Maximum allowed emissions - short term:	
Short term period	Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list
When to enter maximum allowed emissions?	Complete the "maximum allowed emissions" fields if there is an annual or short-term emission limitation **applicable to the raw material/finished product/fuel** expressed **in either a MassDEP approval or a regulation**. Be sure to enter the approval number or regulation under "Basis" below. **NOTE**: If you calculated your potential emissions using controls and/or restrictions (rather than using the eDEP calculation feature or entering max capacity uncontrolled for potential), you MUST also enter a "maximum allowed emissions – annual" and the values for potential and maximum allowed annual emissions must be the same.
Basis- DEP approval number or regulation:	This field is required if maximum allowed emissions values are present**.** Provide either the regulatory citation if the emission unit was installed through a permit by rule or the plan approval number. If a plan approval is not required: Cite the regulation under which the equipment was installed. **NOTE:** Some emission units will not have plan approvals because: 4. they are below the threshold for which a plan approval or permit is required; 5. they were installed before the effective date of the regulation; or 6. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption. If a plan approval established emission limits for the pollutant, write the approval number t. This number is found on the letter sent by MassDEP. If a regulation established emission limits for the pollutant, cite the regulation.

NOTE for Section B child form: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections. For Section B parent form, you must continue to Section C before you can error check your form.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

B. GREENHOUSE GAS EMISSIONS (IN SR/GHG PACKAGE) (SECTION B CHILD FORM)

This section is not present in the SR Only package.
For facilities required to report Greenhouse Gas (GHG) emissions, all emission units that burn fuel are required to report GHG emissions.

3. Total GHG emissions for this fuel only in tons per year:	Provide the following information for all pollutants emitted by the emission unit for this material/product/fuel only CO2 CH4 N2O SF6 Refrigerants-CO2e CO2e-CO2 CO2e-CH4 CO2e-N2O CO2e-SF6 CO2e-Refrigerants Other GHG Pollutant CO2e- Other GHG Pollutant
CALCULATIONS: READ FIRST	The form will automatically calculate the actual emissions from your annual throughput and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box). The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.
Why you may want to calculate your own emissions values?	The GHG emissions should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Please see Appendix C for more guidance on calculating your own emissions
Actual (in Tons) for previous year:	This information will be provided by the system. For new emission units: This section is not applicable.
What are "actual emissions"?	Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit associated with each fuel during the year covered by the report (the year of record). eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.
Actual (in Tons) for year of record	Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the actual emissions amount is less than 0.0001, the amount is changed to zero

What are emission factors?

Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC. The displayed emission factor is the EPA default emission factor BEFORE the application of the ash or sulfur percent in the calculation.

If you choose to calculate your own emissions, you must enter the emission factor that you used. The EPA emission factors used by eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration.

Because they are generic, the EPA SCC emission factors are not applicable in all situations. They may overstate emissions for facilities

See Appendix C for more information about using emissions factors to calculate emissions.

Emission factor

Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination.

in pounds per unit: (EF Units)

If you are calculating the emissions yourself, the Emission factor units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected should match the unit present in the response to B.1.e and B.2.b.

What EF and EF units should be used to report SF6 and Refrg-CO2e emissions?

Neither SF6 nor Refrg-CO2e require a response in the fields Emission factor (EF) and in pounds per unit. These fields should auto-fill blank and be locked.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on this form.

IMPORTANT: If you use CEMS to determine annual emissions, you must provide the CEMs equipment information in question A.15 and identify “GHG-CEMS” for Calculation Method.

Calculation Method	If the system is calculating the actual emissions for the pollutant, use GHG-EPA EF: EPA GHG Emission Factor If you are calculating the actual emissions for the pollutant yourself, you can choose from the following in a dropdown list:

CODE	DESCRIPTION
GHG-CEMS	Continuous Emission Monitoring System Data
GHG-User EF	User Provided GHG Emission Factor
GHG-MatlBalance	Emissions Based on Material Balance
GHG-TCR EF	General Reporting Protocol EF[5]

NOTE: For SF6, the Calculation Method should auto-fill with GHG-MatlBalance and the field will be locked.

Specify General Reporting Protocol EF	If you select GHG-TCR EF from the Calculation Method dropdown list, then you need to select the type of Default Emission Factor from this drop down list.
CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the actual emissions amount is less than 0.0001, the amount is changed to zero
Total CO2e emissions	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) based on the calculated CO2e of each pollutant where their actual emissions value is greater than zero.
CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) from the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

NOTE for Section B child form: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections. For Section B parent form, you must continue to Section C before you can error check your form.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

[5] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

D. TOTAL EMISSIONS FOR EMISSION UNIT (SEPARATE CHILD FORM)

The actual, potential and, if applicable, permitted emissions from this unit for each listed air contaminant during the calendar year being reported. This form only appears if more than one Section B is present for the emission unit

NOTE: manual calculating of actual and potential emissions is not an option.

1. Total Emissions for this emission unit in tons per year

Calculations: This form automatically calculates this emission unit's total actual and potential emissions (if you have correctly provided all of the emissions for each fuel in each Section B). Return to Section B forms if you need to correct those numbers.

PM10-FIL	PM2.5-FIL	PM-CON	SO2	PB
VOC	NH3	CO	NO2	

What are total emissions for this emission unit?

This form automatically calculates the total actual and potential emissions of each pollutant from this emission unit. It calculates these values from the data you entered in Section B: Emissions for each fuel.

Please enter any emission limits that apply to the unit as a whole (regardless of fuel) under "Permitted" below.

Actual (in Tons) for previous year

The actual emissions for the prior year reported
For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

Actual (in Tons) Emissions

The actual emissions for the calendar year being reported
This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

Potential emissions (in Tons)

This information will be calculated by the system and is the potential to emit from all fuels (Section Bs).

Maximum allowed emissions (in Tons) – annual

These questions only apply if this emission unit is subject to a plan approval or permit or regulation that restricts operations or emissions, regardless of fuel. If the restriction is fuel-specific, it should be entered in the appropriate fuel's Section B.

Maximum annual emissions allowed pursuant to your permit or plan approval or regulatory restriction.

NOTE: Some emission units will not have plan approvals because:

1. they are below the threshold for which a plan approval or permit is required;
2. they were installed before the effective date of the regulation; or
3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.

Maximum allowed emissions (in Tons) - short term

Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list

Short term period:

Basis – DEP approval number or regulation:	Provide either the plan approval or regulation establishing the emission limits for this EU as a whole. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption. If a plan approval established emission limits for the pollutant associated with this EU , write the approval number. This number is found on the letter sent by MassDEP. If a regulation established emission limits for the pollutant, cite the regulation
When do I complete the "allowable" emission fields?	Complete the "allowable" field if there is an annual or a short-term **emission limitation applicable to the emission unit as a whole** expressed in either a MassDEP approval or a regulation. Be sure to enter the approval number or regulation under "Basis".
What if a restriction applies to multiple units?	If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies. Make a note in Section C that it applies to multiple units and describe the restriction.
2. Ozone season schedule - May 1 through September 30:	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation (Questions A.11a through A.11.c) and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at D2a. and D2b.
a. Typical day VOC emissions – pounds per day b. Typical day NOx emissions – pounds per day	The system will calculate this information on the basis of data you supplied on the form.
Check to enter your own values	**NOTE:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.

You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the next form you see listed under the form you were just working on.

D. GHG EMISSIONS REPORTING (IN SR/GHG PACKAGE)

The form automatically calculates the total actual emissions, total carbon dioxide equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.

3. Total GHG Emissions for this emission unit in tons per year	Calculations: This form automatically calculates this emission unit's total actual emissions (if you have correctly provided all of the emissions for each fuel in each Section B). Return to Section B forms if you need to correct those numbers.

CO2	CH4	N2O	SF6	Refrigerants-CO2e
CO2e-CO2	CO2e-CH4	CO2e-N2O	CO2e-SF6	CO2e-Refrigerants

What are total emissions for this emission unit?	This form automatically calculates the total actual emissions, total carbon dioxide equivalent (CO2e) for each specific pollutant and the Total CO2e from this emission unit. It calculates these values from the data you entered in Section B: Emissions for each fuel.
Actual (in Tons) for previous year	The actual emissions for the prior year reported For repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
Actual (in Tons) Emissions	The actual emissions for the calendar year being reported This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).
CO2e for previous year (in Tons)	The actual emissions for the prior year reported For repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
CO2e year (in Tons)	The CO2e for each specific pollutant for the calendar year being reported This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

Total CO2e emissions

CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The Total Carbon Dioxide Equivalent (CO2e) for the calendar year being reported This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the next form you see listed under the form you were just working on.

BAW AQ EMISSION UNIT –INSTRUCTIONS: INCINERATOR (AP-3)

PURPOSE

This form provides MassDEP with information about the equipment, processes, and associated air pollution emissions during the calendar year being reported from the incineration of waste such as solid waste, municipal waste, medical waste, sludge, and other combustible waste materials.

WHEN IS THIS FORM APPLICABLE?

This form applies to any waste incineration emission units and their auxiliary burners at your facility excluding air pollution control equipment reported on the appropriate form for the units controlled (e.g., flares or thermal oxidizers).

NOTE that you must report on any idle units with each submittal.

NOTE: You do not complete a Fuel Burning Device form for an incineration emission unit.

Source Registration reporting applies to any owner/operator of a facility if such facility meets any of the criteria in 310 CMR 7.12(1)(a)1-11

4. Is or contains a hazardous waste incinerator, regardless of size.
5. Is or contains an incinerator with the capacity to reduce 50 pounds per hour or more of waste.

NOTE: Once a facility is subject to 310 CMR 7.12, all emission units and processes at the facility shall be included in the Source Registration even if, individually, certain emission units and processes may not meet the applicability thresholds of 310 CMR 7.00.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

One form is required for each incinerator unit, including those that you have added or decommissioned since your last submittal

NOTE: You may NOT combine reporting for more than one incinerator on a single form.

CAUTION: FOR FILERS WITH NEW INCINERATOR EMISSIONS UNITS SINCE THEIR LAST SUBMITTAL

You must create a new emission unit form for any new emission unit. If you have not already created the new emissions unit, prior to submitting your complete source registration (when first opening your source registration package), you must either:

1)) Under Transaction Overview, open the first form labeled <AQ Source Registration Package> or <AQ Source Registration & Greenhouse Gas Package>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under Transaction Overview, select <New Unit Form Creator (New Form Creator)>;
- Choose the appropriate form and enter the number of new units;
- Validate the form by selecting [Error Check]Error Check;
- Follow subsequent instructions.

----or----

2) You must create a new eDEP partial AQ Source Registration package for that emission unit. Once you have submitted the package you are working on:

- Return to “Start New” Forms”; “Air & Climate”;
- Select your package using “Start Transaction;
- In Preform, if correction is to a prior reporting year submittal, change the reporting year using the drop down list;
- In Overview Form, unselect Existing Facility and put a check mark by the units that you want to amend. Or if you need to add a unit, check the box under A.1 “check if you added emission units“;
- Follow subsequent instructions pertaining to the New Unit Form Creator (New Form Creator).

IMPORTANT: Before amending your package for the current reporting year, email BAW.eDEP@state.ma.us to confirm that your submittal has been accepted by MassDEP.

CAUTION: If you realize in the midst of completing this package that you need to create additional forms, DO NOT return to this Overview form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you must open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 validated forms.

The best way to add emission units or stacks AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

CAUTION: REGARDING THE ORDER IN WHICH YOU COMPLETE YOUR FORMS

If this unit's emissions release point is a new "vertical release point" (stack). You must create and complete a BAW AQ Stack form for that new stack prior to filling out completing this form. The stack drop down-menu (A.13) will not contain the new stack and you will be unable to validate this form and will be forced to Save and then Exit this form. You will have to return to complete it after validating the new stack for the replacement stack.

A. EMISSION UNIT—INCINERATOR INFORMATION

NOTE: In general the information requested below will be pre-populated from MassDEP's electronic database. However, certain data submitted to MassDEP in a different format (i.e. via the Climate Registry Information System (CRIS) was not historically stored electronically. That data will not appear on the electronic forms until it has been submitted in this format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

TIP: If you obtained a plan approval for the emission unit(s) you are reporting you will have received two documents from MassDEP: a plan approval letter and a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. Facility Identifiers

The name and identifying numbers of the facility that you are reporting.

a. Facility Name

b. DEP Account number

c. Facility AQ Identifier

This will be pre-populated from the information on your BAW AQ Facility Information Form.

NOTE: You cannot change the facility name on this form. To change the facility name you must contact your MassDEP Regional Office FMF Data Manager.

? CAN I CHANGE THE RESPONSES TO THE EMISSION UNIT IDENTIFIER FIELDS?

eDEP allows you to change the name (2.a) and give your own number (2.b) to each emission unit. MassDEP keeps track of the units by the DEP number (2.c), and therefore you cannot change this field.

2. Emission unit identifiers

If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it.
If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it.

a. Facility's choice of emission unit name- edit as needed.

A unique name of your choice that will allow you to recognize this unit on future reports

b. Facility's emission unit number / code – edit as needed.

A unique number or code of your choice that will allow you to recognize this unit on future reports. Example: INCINERATOR #1+WASTE HEAT BOILER, MUNICIPAL WASTE COMBUSTOR, PATHOLOGICAL INCINERATOR, etc.

How is a flare reported?

When a flare is a control device for a process emission unit, is should be reported as such on the AP-2 Form for that process unit. If this unit was previously reported as an incinerator on an AP-3 form, please do the following:

1. report the flare on the Process (AP-2) form that it controls,
2. note in Section C: Notes on the Process (AP-2) form that you are reporting the flare on the Process (AP-2) form rather than the Incinerator (AP-3) form, and
3. enter a decommission date in the Incinerator (AP-3) form (causing it to be removed in future submittals) and enter 0 for all throughputs and emissions.

EXCEPTION: Flares at landfills should be reported on a Fuel Burning Device (AP-1) form.

c. DEP emission unit #

This is a unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports
If this is a new Emission Unit, the field is blank and locked – MassDEP will assign this number.
If this is an existing Emission Unit, the information will be pre-populated for existing emission units.

d. Is GHG emissions reporting required for this emission unit?

A GHG emission reporting is required for all combustion units. A "Yes" response is present and this field is locked.

NOTE: The auxiliary burners use fuel; therefore a "Yes" response is present and this field is locked

3. Emission unit installation and decommission dates

Provide the requested dates in the appropriate lines. If the unit was installed many years ago and you do not know the exact date, use your best approximation.

a. Installation dates – estimate if unknown (mm/dd/yyyy)

The date on which the unit became operational. Do not leave blank: Estimate if unknown.

b. Decommission dates – If applicable (mm/dd/yyyy)

Complete only if the unit was shut down permanently or replaced any time before December 31st of the year of record.

DELETE A UNIT HELP TEXT

Enter a decommission date in 3.b IF the unit is being permanently taken out of service. For fuel burning devices or Incinerators, if the equipment is not removed, MassDEP considers a unit as permanently taken out of service if the fuel lines are cut or the burner head has been removed.

HOW / WHEN TO DELETE A UNIT?

Enter a decommission date in 3.b IF the unit is being **permanently taken out of service**. For Fuel Burning Devices (including those associated with Process equipment) or Incinerators, if the equipment is not removed, MassDEP considers a unit as permanently taken out of service if the fuel lines are cut or the burner head has been removed.

If the decommissioned unit operated in the year of record, the emissions from that unit must be included. Therefore units "decommissioned" in this package will remain on the list of emission units for this year of record. They will NOT appear on the NEXT package however.

NOTE: If you decommissioned a unit prior to the year of record (and are decommissioning it in this package) you must enter zero for the maximum input rating (MMBtu/hr), annual fuel usage, and actual emissions.

4. Emission unit replacement

a. Is this unit replacing another emission unit?	Check the appropriate box, yes or no. If Yes, then complete 4.b. Otherwise, continue on to Question 5.
b. DEP's emission unit number and facility unit name.	Choose from the drop-down menu. It is populated with the emission units you decommissioned in this and previous submittals for this year of record.
HOW TO BE SURE THE UNIT BEING REPLACED APPEARS IN THIS MENU?	Line A.4.b. "DEP's emission unit number and facility's name for emission unit" are mandatory fields when the "yes" box is checked. However the unit being replaced **will not appear as a choice** on the drop down menu **until it is decommissioned**. You will not be able to complete and error check the form for a replacement unit until you have first entered a decommission date and completed an error check of the form for the unit it is replacing. If this unit is replacing another unit that has NOT been "decommissioned", you must 1) save and exit this form, 2) open the form for the unit being replaced, 3) enter the decommission date, 4) complete the error check for the form for the decommissioned unit before you can complete the form for the unit it is replacing.
WHAT IF ONE EMISSION UNIT IS REPLACING MORE THAN ONE UNIT?	If one new emission unit is replacing several units, pick one of the units being replaced from the drop-down menu and note the others in Section C Notes and Attachments

5. Incinerator description:

a. Type:	Choose the incinerator type from the drop down list: Commercial, Cremation-Animal, Cremation-Human Industrial, Medical, Metal Recovery Municipal, Sludge
b. Manufacturer	Firm that built the unit, information can be usually found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown.
c. Model number	Information can be found on metal nameplate on unit. Do not leave blank: enter unknown if unknown
d. Maximum operating capacity:	Maximum rated capacity regardless of permit limitations, information can be found on metal nameplate on unit. Do not leave blank: estimate if unknown
Amount In units of: pounds OR tons of waste per hour	Enter the maximum rated capacity regardless of permit limitations. Do not leave blank: estimate if unknown. **Tip:** The manufacturer's maximum input rating may be located on a metal nameplate on the unit. .
WHAT TO DO IF DATA UNKNOWN OR NOT AVAILABLE?	Do not leave blank: if date or numeric field – estimate; for other fields enter UNKNOWN, if unknown.
e. Pounds of steam per hour	Required if response to question A.5.a equals Municipal or Sludge.

f. MMBtu per hour	Enter the approximate MMBtu per hour of the waste stream to the incinerator. The waste stream includes the fuel and the material being incinerated.
g. Charging rate restriction (for batch units only):	
Amount In units of: pounds OR tons of waste per hour	If the facility is a batch unit and it has a restriction imposed through a plan approval, enter the maximum charging rate per hour and the units.
h. Heat recovery:	Check yes if the incinerator engages in this practice, no if not.
i. Number of hearths:	Enter the total number of hearths for this emissions unit.
j. Total hearth area: (in square feet)	Total Square Feet of all the hearths in this emission unit.
k. Automatic feeder?	Check yes if the incinerator has this equipment, no if it does not.
WHAT IF THE EMISSION UNIT HAS MORE THAN ONE DEP APPROVAL?	Cite the most recent plan approval that includes specific requirements applicable to this emission unit. Do not cite an approval that sets a general requirement for the facility as a whole, unless it also establishes specific conditions for this emission unit. Approvals that apply facility-wide are cited on the AP-TES form. Similarly do not cite your most recent Air Operating Permit if you have one unless a more stringent limit is established in the operating permit for the emission unit. Usually the Air Operating Permit is a compilation of requirements included in other plan approvals or applicable regulations. **NOTE:** A particular plan approval may be cited more than once in the package or on a form. For example, a plan approval that includes specific requirements for more than one emission unit will be cited on the AP form for each emission unit it covers. Similarly if a plan approval specifies conditions for the emission unit and for the monitor, raw material, fuel, and/or air pollution control device it will be cited on each applicable question on the emission unit form.
6. DEP Air Quality Approvals	Write the number for the plan approval that allowed the installation of the incinerator. This number is found on the letter sent by MassDEP that informed you that they approved the unit.
a. Most recent approval number	Most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") number applicable to this unit, from MassDEP plan approval letter.
b. DEP approval date (mm/dd/yyyy)	Date of most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") applicable to this unit, from MassDEP plan approval letter listed in Question 3.a.

7. Additional reporting requirements	Check the appropriate boxes to report on the existence of any reporting requirements other than source registration for this emissions unit and the frequency of that reporting.
a. Are there other routine air quality reporting requirements for this emission unit?	If yes, specify reporting frequency in 7.b. If no, skip to Question 7.c.
b. Reporting frequency – check all that apply:	Monthly, Quarterly, Semi-annual, Annual, RES (Include Operating Permit and Plan Approval reports, but not exceedance reporting)
c. Is this unit subject to (check all that apply):	NESHAP, NSPS, MACT
8. Hours of operation for the emission unit:	Report on typical operation.
a. Check if typically continuously operated - 24 x 7 x 52	If checked, then these questions will auto-fill with the following responses: ➢ 8.b: 24 ➢ 8.c: 7 ➢ 8.d: 52 ➢ 8.e: Q1; Q2; Q3; Q4: 25 in all four quarters ➢ 9.a: 24 ➢ 9.b: 7 ➢ 9.c: 22
b. Number of hours per day	Typical operation Acceptable range: 0-24
c. Number of days per week	Typical operation Acceptable range: 0-7
d. Number of weeks per year	Actual operation Acceptable range: 0-52
e. Percent of time emissions unit is operated each calendar quarter: Sum of Q1+Q2=Q3+Q4 must = 100% (or 0%, if the unit was not operational for any quarter).	Actual percent of total annual operations that occurred in each season (e.g. 40% in Q1, 30% in Q2, 20% in Q3 and 10% in Q4) unit operated Q1 is January – March Q2 is April –June Q3 is July – September Q4 is October - December
9. Ozone season schedule – May 1 through September 30:	Actual operation during this period. **IMPORTANT**: If you are using eDEP's auto-calculation feature to calculate your Ozone Season Emissions, these fields MUST be updated.

a. Ozone season hours per day	Typical operation Acceptable range: 0-24
b. Ozone seasons days per week	Typical operation Acceptable range: 0-7
c. Weeks operated in ozone season	Typical operation Acceptable range: 0-22
10. Emissions release point	Select the appropriate type of non-stack release point OR physical stack (or release point). If Non-Stack Release Point, skip to Question 12.

Non-Stack Release Points:		**Physical Stacks**
Fugitive	Horizontal vent	Vertical
Gooseneck	Downward facing vent	Vertical with rain cap/sleeve
Vertical stack/vent less than 10ft		

What is a release point?

The Emission Release Point is the physical structure through which the emissions leave the facility and reach the ambient air. In eDEP, **only vertical release points are considered "stacks**" with assigned DEP and Facility Stack Numbers and an STACK form.

What is the difference between stacks and non-stacks?

If the unit has a physical stack, you must link the unit to that stack in question A.11.

NOTE: If you have installed a new stack, it will not populate the drop-down menu unless you first complete and validate an STACK Form prior to opening this form. To complete the STACK Form, "SAVE" AND "EXIT" this form. Open, complete, and validate the STACK Form of the new stack, and then return to this form.

What about unusual exhausts, such as short vertical vents?

NOTE: Some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall. This type of release point does not require a Stack form – Select vertical stack/vent less than 10ft in the Non-Stack Release Point group.

11. Link this unit to a physical stack (if applicable) - Pick from the list.

Facility's stack identifier from Stack form – to change stack name use the Stack form.
If the stack for this unit is not listed, save and exit this form now and complete a new Stack form **before** completing this form.

CAUTION: If this unit's emissions release point is a new stack, you must have created and completed a Stack form for that new stack, prior to completing this form. If you do not have the stack information, you will be unable to validate this form; and will be forced to save and exit this form. Once you have created, completed, and validated the new Stack Form, then you may return to complete this form.

NOTE: If the emission release point in Question A.10 is vertical or vertical rain cap/sleeve, then this is a required field.

12. Are there air pollution control (APC) devices on this emissions unit?	Check the appropriate yes or no box. If no, skip to question 13.
How do I add a new APC?	If yes and no devices are present for this emission unit, select "Add New Control Device" button. OR if an existing device is not displayed, scroll to the end of question 12 and select "Add New Control Device" button. When "Add New Control Device" button is selected, the form will reload with blank fields. Answer questions a through i. Once the information for the device has been added, select Update OR if you decide not to add a new device, select Cancel.
How are my existing APCs displayed?	**NOTE**: if the MassDEP database has active APC(s) for this emission unit, all the devices will be displayed in this section; the response will auto-fill with Yes and the field is locked. Confirm the information present for each device.
How do I revise an existing APC?	If the device information needs to be revised, select Edit found on the top right of the device that needs updating. Once the corrections have been made to the device, select Update OR if you do not to keep the corrections or decide not to make any changes, select Cancel.
What if my APC is used by other EUs?	**NOTE:** If other emissions units use the same air pollution control equipment, also report this information on the appropriate forms for those units.
How to delete an air pollution control device?	Delete an air pollution control (APC) device by entering a date in Decommission Date (A.12.h) field. Use this when you are removing the device permanently.
How to replace an air pollution control device?	If the APC device was replaced in kind with a new model, enter the new installation date and replace the information on lines a-i, as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the APC equipment automatically.
a – e. Air pollution control device (description) ** - required fields	a. Type ** (Use the Drop-down Menu) b. Manufacturer ** c. Model Number ** d. Facility's ID for this Device. ** (the unique number assigned by the facility for the APC equipment) e. Installation Date ** (mm/dd/yyyy): The date on which the unit became operational.
f – h. Air pollution control equipment dates and approval numbers:	f. MassDEP approval number (most recent) g. MassDEP approval date (mm/dd/yyyy) **NOTE:** Not all air pollution control devices require plan approvals h. Decommission date (mm/dd/yyyy) Enter a date here only if the air pollution control device is being permanently removed and not replaced.
What to do if you don't know the date?	Provide your best approximation of the date if you do not know it. Do not leave blank.

How do I report my flare as control device?

When a flare is a control device for a process emission unit, is should be reported as such on the Process (AP-2) form for that process unit. If this unit was previously reported as an incinerator on an AP-3 form, please do the following:

1. report the flare on the Process (AP-2) form that it controls,
2. note in Section C: Notes on the Process (AP-2) form that you are reporting the flare on the Process (AP-2) form rather than the Incinerator (AP-3) form, and
3. enter a decommission date in the Incinerator (AP-3) form (causing it to be removed in future submittals) and enter 0 for all throughputs and emissions.

EXCEPTION: Flares at landfills should be reported on a Fuel Burning Device (AP-1) form.

i. Percent overall efficiency – enter for all pollutants that the device was designed to control:

** - required fields

** The *Percent Overall Efficiency* calculated which equals the APC equipment's Capture Efficiency (the percentage of the emissions that reach the air pollution control unit) multiplied by the APC equipment's *Control Efficiency* (the percentage of the emissions that are removed from the air stream by the Air Pollution Control Equipment.)

- If you have stack-testing data on control efficiency: Use that information.
- If you do not have stack-testing data: Use the manufacturers suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

PM10 PM2.5 SO2 CO VOC NO2
NH3 HOC HYC HG PB

Other: List any substances not already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.
NOTE: Only one "Other" is available for each APC device,

What is the % overall efficiency?

The % overall efficiency for a device equals its ("% capture efficiency" X "% control efficiency"). This is critical for the automatic emissions calculations This information can be found in the plan approval application, MassDEP's approval for the device and/or in the manufacturer's specification for the device.

13. Is there monitoring equipment on this emissions unit or its related control device?

Answer Yes or No as appropriate, If no, skip to the questions in Section B. Fuels and Emissions.

NOTE: if the MassDEP database has active monitors for this emission unit, all the equipment will be displayed in this section; the response will auto-fill with Yes and the field is locked. Confirm the information present for each device and update as needed

NOTE: Report on each monitor that is on the release point for this emissions unit in the separate columns provided.

NOTE: If other emissions units use the same release point, also report this information on the appropriate forms for those units.

How to delete a monitor?

Delete a monitor by entering a date in Decommission Date (A.13.h). Use this when you are removing the monitor permanently.

How to replace a monitor?

If the monitor was replaced in kind with a new model, enter the new installation date and replace the information on lines b-i as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the monitor equipment automatically.

a. Monitor type:

Check the appropriate box for the type of monitoring device. Check only one for each monitor (use another column if there are other types of monitors on the release point.)

- CEMS
- Opacity
- Fuel flow meter
- Time recorder
- Temperature recorder
- Pressure
- Other: If other is checked then Describe "other" is required

How do I use CEM data?

If you use CEMs to determine annual emissions, report the CEMS emissions value in Section B.3 Emissions on this form. For each pollutant where the Calculation Method in Section B.3 Emissions is identified as CEMS, then that pollutant also needs to be identified as a montored pollutant in Question A.13.l

b. Manufacturer:
c. Model number:

The name of the manufacturer of the monitoring equipment attached to the stack and the model number assigned by the manufacturer.

d. Monitor ID #:

The unique ID number/name that the facility has assigned to this piece of monitoring equipment.

e. Installation date:

The date on which the unit became operational. Do not leave blank. Estimate if unknown.

f. DEP approval #:
g. DEP approval date: (mm/dd/yyyy)

MassDEP approval number (most recent) from your permit or plan approval.

h. Decommission date:

Enter a date here only if the monitor is being permanently removed and not just replaced. (mm/dd/yyyy)

i. Recorder?

Whether or not this device are attached to the monitor.

Yes or No check box

j. Audible alarm?

Yes or No check box

k. Data System?

Whether or not a data system that continuously logs monitoring data for future review is attached to the monitor.
Yes or No check box

What is a "data system"?

A data system continuously captures monitoring data for future review and analysis.

l. Monitored pollutants:

Check all contaminants that are measured by the monitoring unit

PM10	PM2.5	SO2	CO	VOC	NO2	NH3
Mercury	Oxygen	CO2	H2S	HCL	Opacity	CH4
NO2	SF6	Refrigerants-CO2e				

Other: List any substances not already listed on the form that you are required to monitor per your plan approval, operating permit, or applicable regulation.
NOTE: Only one "Other" is available for each monitor.

B. FUELS AND EMISSIONS (PARENT FORM: DEP FUEL #1)

NOTE: In general, the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in Air Quality database. That data will not appear on the electronic forms until it has been submitted in this format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

1. Waste Type Description:

Is GHG emissions reporting required for this fuel, waste or raw material/finished product? (in SRGHG package)

Check the appropriate box, yes or no. If Yes, then complete Section B. Otherwise, validate this form; no GHG emissions' reporting is required for this Section B. However, SR emissions reporting is still required.

NOTE: if the response is Fuel for question "Is this fuel, waste, or raw material/finished product an input, output or fuel?", then the response to this question is Yes.

Is this fuel, waste, or raw material/finished product an input, output or fuel?

Check the appropriate box: input, output or fuel.

NOTE: Raw Material (or incinerator waste) would be considered an **Input**; finished product would be considered an **Output**, and the "material" used in a fuel burning device would be considered **Fuel**. However, if you use a "fuel" as part of your process operation (and not associated with combustion equipment), this "fuel" would be considered an **Input** or if the "fuel" is being stored and you are required to report breathing loss and/or transfer loss, then this "fuel" would be considered an **Output**.

For example: Using a coating line with natural gas dryers, depending on how you reported the coating operation, the coating(s) used (i.e. ink, paint, dye) would be considered an **Input** and the material that is coated (i.e. fabric, metal parts, cardboard, etc.) would be considered an **Output.** The natural gas used by the dryer would be considered a **Fuel**.

NOTE: If this information is inaccurate, please contact us at BAW.eDEP@state.ma.us

Add a New Fuel:

IMPORTANT For an Incinerator, the check box is locked if the response is 3 to the question – "Number of fuels for this unit (previous records)". Facility is allowed to add a new secondary chamber fuel to the EU if Number of fuels for this unit (previous records): 2.

NOTE: If this is a new AP3 Parent Form, ("parent" form includes Section A), then "Add a New Fuel" must be checked so facility can report primary chamber information (including GHG emissions) as Fuel #2 and report secondary chamber information (including GHG emissions) as Fuel #3.

When to not check "Add a new fuel" box

Any additional fuels will automatically appear when you error check this form so you do not need to check this field to make additional fuels appear if they have been reported on already in a previous submittal. You can see the number of fuels already existing for this unit in the field: "Number of fuels for this unit (previous records)". This check box is only for NEW fuels which you have never reported before.

Delete this fuel:

IMPORTANT: For an Incinerator, this field is locked. If the type of waste has changed, you must change the SCC in Question B.1.a to reflect the waste type or change the waste type by selecting a different response from the drop down list of waste types in question B.1.b.

For an incinerator, you MUST decommission the emission unit by entering a response to A.3.b.

Number of fuels for this unit (previous records):

This field identifies the number of existing fuels that are associated with this EU.

This information will be provided by the system.
For new emission units: This question is not applicable.

How does eDEP handle multiple fuels?

In eDEP, a separate Section B form is automatically created for each additional fuel/material/product on record based on the "Number of fuels for this unit (previous records)". Before checking the box at the right to make a change, please note the following:
1) If you need to add a new fuel and "Number of fuels for this unit…." is greater than 1, wait to see the other fuels before checking this box, or
2) If you ceased using this fuel and "Number of fuels for this unit…." is 1, do not check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly.

NOTE: "Add a New Fuel" and "Delete this fuel" are present in all Section B forms

1. DEP Fuel #:

This is a unique number assigned by MassDEP that allows the system to recognize this fuel associated with this emission unit on future reports.

If this is a new Fuel, the field is blank and locked – MassDEP will assign this number.
If this is an existing Fuel, the information will be pre-populated for existing fuels associated with this emission unit.

Can I change the DEP fuel identifier?

This ID number is a MassDEP assigned number and cannot be changed

a. Source Classification Code (SCC)

The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (https://www.epa.gov/chief) contains the codes for each type of process, as well as, emission factors that can, in certain circumstances, be used to calculate emissions for each unit.

SCC Description

If the SCC is pre-populated, the SCC Description will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the SCC Description when the form is validated.

How does eDEP use Source Classification Codes (SCC)?

SCC are standard codes EPA uses to identify different operations/activities and their associated emissions factors, if available. The SCC you select will be used to supply the emission factors for the automatic emissions calculation feature included in the eDEP system and to help analyze the data. The SCC also identifies the Units per hour which are used for your response to B.2.b: Annual usage, and the B.3 Emission Factor Units (in pounds per unit). The list of SCC's used in eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration

If the SCC listed on the form is wrong, enter the correct code.
If the form will not accept the SCC you are entering, contact MassDEP at BAW.eDEP@state.ma.us

b. Fuel/Material/Waste Type:

If this is a new Emission Unit, the field is blank. Choose your response from one of the values present in the drop down list of incinerator waste types: BODY, LIQUID WASTE; MEDICAL WASTE; METAL, REFUSE; REFUSE DERIVED FUEL; SLUDGE, SOLID WASTE OR VOCS

NOTE: For an incinerator, if the response is not "Fuel" to question B.1: *Is this fuel, waste, or raw material/finished product an input, output or fuel?,* then a drop down list of incinerator waste types is available to choose from if the SCC value for this field is not an appropriate response.

EPA material type code help text

Material Type Code is a field required by US EPA for the National Emissions Inventory. In most cases, your SCC response will autofill this field but if the response is not appropriate, you can change the response by selecting from this list. (The complete list of EPA Material Type Codes can be found on the SR website: **References You Will Need**.)

c. Do you have fuel or usage restrictions?	These would have been expressed in a regulation, the plan approval you received from MassDEP for this emission unit or one that applies to several emission units. Check the appropriate yes or no box. If No, then skip to Question B.2. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.
What if there are multiple raw material or finished product or fuel restrictions?	If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well. Cite the most recent raw material use or finished product restriction applicable to the raw material use or finished product associated with this emission unit. The most recent raw material or finished product restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.
What if a restriction applies to multiple units?	If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies. Enter the most recent approval number for the restriction.
d. DEP approval number for restrictions:	Only complete if a plan approval is required: State the approval number for the plan approval that allowed the installation of the emission unit. This number is found on the plan approval letter sent by MassDEP. Cite either plan approval or regulation.
e. Annual material/finished product or fuel restriction – if none, leave blank:	
Quantity (amount or hours):	Provide the maximum amount of raw material/finished product, you are allowed to use in a year per your permit, and the units of measurement from the drop-down menu. Obtain this from your plan approval letter or regulation
Units:	If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us.
f. Short term raw material/finished product/fuel restriction– if none, leave blank:	
Quantity(amount or hours):	Provide the maximum amount of raw material/finished product, you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter or regulation..
Units:	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
Per:	Check the appropriate box for the time period: Month, Week, Day or Hour.

2. Annual usage:

a. Total actual amount used for year of record	The actual amount of fuels/materials/products used in this emission unit during the calendar year being reported. Enter "0" if fuels/materials/products was not used in the year of record. **IMPORTANT** - Remember you may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the units in 1000 gallons then 72 gallons would be entered as 0.072 1000 gallons.
b. Units	This response is determined based on the SCC. If the SCC is pre-populated, the Units will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the Units when the form is validated.
Units help text	Units MUST match the units specified for the SCC. If the units for your data do not match the units for the SCC, you need to convert your values to units that match the SCC or select a different SCC.
Prior year (Annual usage)	This information will be provided by the system based on your last submittal. For new emission units: This question is not applicable **TIP:** Compare the annual usage from prior year of record to the current year's usage as a check. If they are orders of magnitude off, check the units.

B. SOURCE REGISTRATION EMISSIONS (PARENT FORM: DEP FUEL #1)

Provide the following information for all pollutants emitted by the emission unit.

3. Total emissions for this waste type only – tons per year:

What are total emissions for this material/finished product?	This section records the total actual, unrestricted potential and permitted (allowable) emissions for the year covered by this report (the year of record) of each pollutant that is attributed to this raw material or finished product for the emission unit(s) reported on this AP-2. Please see the Appendix C for detailed information on calculating emissions. PM10-FIL PM2.5-FIL PM-CON SO2 PB VOC NH3 CO NO2 Specify other pollutant
CALCULATIONS: READ FIRST	The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.
When is NH3 emissions required?	NH3 emissions is required if APC Device is SNCR (SELECTIVE NONCATALYTIC REDUCTION) OR SCR (SELECTIVE CATALYTIC REDUCTION)

PM FILTERABLE VS. PM CONDENSABLE

MassDEP reports PM emissions to EPA as filterable. Therefore, if you calculate your own emissions, **YOU SHOULD REPORT ONLY FILTERABLE PM10 AND PM2.5**.

Do NOT add in condensable emissions. Do not use emission factors for primary PM (e.g., PM2.5-PRI) which includes both filterable and condensable emissions. EPA generally labels emission factors for filterable PM as -FIL (e.g., PM2.5-FIL) whereas primary PM emissions factors are labeled –PRI (e.g., PM2.5-PRI).

Calculate condensable emissions separately

Actual for previous year

This information will be provided by the system.
For a new emission unit: This information is not applicable.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit associated with each raw material/finished product/fuel during the year covered by the report (the year of record). For Process (AP-2) forms, eDEP will not auto-calculate the actual emissions. Please see Appendix C for more detailed information on calculating actual emissions.

Actual for year of record:

Calculate this information. The actual emissions for the calendar year being reported. **You must calculate your Actual Emissions**. (see Appendix C: Example Calculations.)

NOTE: In many cases, AP-42/FIRE emission factors found in EPA's website (http://www.epa.gov/ttn/chief/efpac/index.html) can be used to estimate actual emissions.

CAUTION: The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on this form.

IMPORTANT: If you use CEMS data for your actual emissions, you must provide the CEMs equipment information in question A.15 and identify "Continuous Emission Monitoring System (CEMs)" for Calculation Method.

Potential Emissions (in Tons)

Calculate this information. (See Appendix C: Example Calculations.)

The definition of Potential Emissions in 310 CMR 7.00 takes into account the restrictions of a plan source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. If you have a restriction that meets one of these conditions for this emission unit AND raw material/finished product/fuel, you may list that pollutant's potential emissions number here AND in the next section. However, if this emission unit AND raw material/finished product/fuel does not have a restriction, the number entered here should be based on maximum uncontrolled emissions

Potential emissions are the maximum uncontrolled emissions assuming the emission unit operates at maximum capacity 24 hours per day, 7 days a week, 52 weeks a year (8760 hours per year)..

NEW *You may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design* ***only if*** *the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of de minim is sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).*

ENTER "0" if the unit was decommissioned prior to this year of record because the unit did not represent potential emissions during the year of record.

IMPORTANT*: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.*

What are potential emissions?

The emissions resulting from the maximum operation of the equipment irrespective of any regulatory restrictions. **(8760 hrs X Max Firing Rate X Emission Factor)**

NEW: you may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.

Emission factor:

Provide this information.
NOTE: In many cases, AP-42/FIRE emission factors found in EPA's website (https://www.epa.gov/chief) can be used to estimate actual emissions.

in pounds per unit (EF Units):

NEW - If you are calculating the emissions yourself, the Emission factor units must match the chosen SCC. The unit selected must match the unit present in the response to B.1.e and B.1.g.

What are emission factors (EF)?

Emissions factors are the **amount of pollution generated per unit of operation,** uncontrolled based on the SCC. For example, for coating operations, the emission factor is often expressed as lb emitted per gallon of coating applied. Therefore, total tons of emissions per year are obtained by the formula [**EF in lb/ raw material] x [raw material/finished product/fuel usage] / [2000 lb per ton**] **= TPY of emissions.**

When you calculate your own emissions, you must enter the emission factor that you used. .

CAUTION: The emissions in Source Registration should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Ordinarily, permit limits should not be used to estimate actual emissions. See Appendix C for guidance on calculating your own emissions.

Calculation Method

NEW: If the system is calculating the actual and potential emissions for the pollutant, use "USEPA Emission Factor (pre-control) plus Control Efficiency"

If you are calculating the actual and potential emissions for the pollutant yourself, you can choose from the following in a dropdown list:

DESCRIPTION
Continuous Emission Monitoring System
Engineering Judgment
Manufacturer Specification
Material Balance
Other Emission Factor (pre-control) plus Control Efficiency
S/L/T Emission Factor (pre-control) plus Control Efficiency
Site-Specific Emission Factor (no Control Efficiency used)
Site-Specific Emission Factor (pre-control) plus Control Efficiency
Stack Test (no Control Efficiency used)
Stack Test (pre-control) plus Control Efficiency
Trade Group Emission Factor (no Control Efficiency used)
Trade Group Emission Factor (pre-control) plus Control Efficiency
Vendor Emission Factor (no Control Efficiency used)
Vendor Emission Factor (pre-control) plus Control Efficiency

When to enter maximum allowed emissions?

Complete the "maximum allowed emissions" fields if there is an annual or short-term emission limitation **applicable to the raw material/finished product/fuel** expressed **in either a MassDEP approval or a regulation**. Be sure to enter the approval number or regulation under "Basis" below.

NOTE: If you calculated your potential emissions using controls and/or restrictions (rather than using the eDEP calculation feature or entering max capacity uncontrolled for potential), you MUST also enter a "maximum allowed emissions – annual" and the values for potential and maximum allowed annual emissions must be the same.

Maximum allowed emissions – annual:	Provide this information if there is a plan approval or a regulation for this raw material /product (as opposed to for the emission unit as a whole.)
Maximum allowed emissions - short term: Short term period	Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list
Basis- DEP approval number or regulation:	This field is required if maximum allowed emissions values are present**.** Provide either the regulatory citation if the emission unit was installed through a permit by rule or the plan approval number. If a plan approval is not required: Cite the regulation under which the equipment was installed. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption. If a plan approval established emission limits for the pollutant, write the approval number t. This number is found on the letter sent by MassDEP. If a regulation established emission limits for the pollutant, cite the regulation.
3. Ozone season emissions – May 1 through September 30:	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation (Questions A.11a through A.11.c) and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at B.3.a. and B.3.b. **NOTE**: In the SRGHG package, this question will be present in Section D Child Form.
a. Typical day VOC emissions – pounds per day b. Typical day NOx emissions – pounds per day	The system will calculate this information based on data you supplied on the form **NOTE1:** If you have more than one raw material/finished product/fuel for this emission unit, you will be required to complete the ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your material/ product/fuel in Section B. **NOTE2**: In the SRGHG package, when only one raw material/finished product/fuel is present for this emission unit, this question is will be found after the GHG emissions.
Check to enter your own values	**NOTE:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes

What if I have more than one raw material/finished product/fuel?

NOTE: If you have more than 1 raw material/finished product/fuel, this space for the ozone season emissions on the "parent" form is invisible – you will be provided with a space for entering ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your raw materials/finished products/fuels for this unit.

NOTE: You must click [Error Check] now to move on to the next part of the form or to create additional Section B's and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>l. To continue your work on this emission unit, click on the <AQ AP3 Section B (or Section D) form> you see listed under the form, you were just working on.

B. GREENHOUSE GAS EMISSIONS (PARENT FORM: DEP FUEL #1) IN SRGHG PACKAGE

4. Total GHG emissions for this fuel only in tons per year:

Provide the following information for all pollutants emitted by the emission unit for this fuel only

CO2	CH4	N2O	SF6	Refrigerants-CO2e
CO2e-CO2	CO2e-CH4	CO2e-N2O	CO2e-SF6	CO2e-Refrigerants

Other GHG Pollutant
CO2e- Other GHG Pollutant

CALCULATIONS: READ FIRST

The form will automatically calculate the actual emissions from your annual throughput and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box).

The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.

Why you may want to calculate your own emissions values?

The GHG emissions should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Please see Appendix C for more guidance on calculating your own emissions

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant (gas) emitted by the emission unit during the year covered by the report (the year of record). eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant.

NOTE: Please see Appendix C for more detailed information on calculating actual emissions.

Actual (in Tons) for previous year

For repeat filers: This information will be provided by the system.
For new emission units: This question is not applicable.

Actual (in Tons) for year of record

Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box.

NOTE: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; all values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. Then if the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero

What are emission factors?

Emissions factors are the amount of pollution (gas) generated per unit of operation. For fuels, total tons of emissions are obtained by **multiplying [EF in #/fuel unit] x [fuel usage/year] x [conversion to tons (1 Ton/2000#)] = Tons per year (TPY) of emissions.**

If you allow eDEP to calculate your emissions, this field will be auto-filled with EPA's default emission factors, if available, based on the SCC chosen for this emission unit and fuel combination. If you choose to calculate your own emissions, you must enter the emission factor that you used and select the Calculation Method from the drop down list.

Because they are generic, EPA's emission factors are not the best choice in all situations. They may overstate emissions for facilities. See Appendix C for more information about using emissions factors to calculate emissions.

Emission factor (EF)

Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC chosen for this emission unit and fuel combination.

What EF and EF units should be used to report SF6 and Refrg-CO2e emissions?

Neither SF6 nor Refrg-CO2e require a response in the fields Emission factor (EF) and in pounds per unit. These fields should auto-fill blank and be locked.

in pounds per unit (EF units):

If you are calculating the emissions yourself, the EF units, listed in pounds per unit, must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected should match the unit present in the response to B.2.b.

Calculation Method

If the system is calculating the actual emissions for the pollutant, use GHG-EPA EF: EPA GHG Emission Factor.

If you are calculating the actual emissions for the pollutant yourself, you must choose from the following in a drop down list:

CODE	DESCRIPTION
GHG-CEMS	Continuous Emission Monitoring System Data
GHG-User EF	User Provided GHG Emission Factor
GHG-MatlBalance	Emissions Based on Material Balance
GHG-TCR EF	General Reporting Protocol EF[6]

NOTE: For SF6, the Calculation Method should auto-fill with GHG-MatlBalance and the field will be locked.

Specify General Reporting Protocol EF

If you select GHG-TCR EF from the Calculation Method drop down list, then you need to select the type of Default Emission Factor from this drop down list.

[6] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

CO2e for previous year	For repeat filers: This information will be provided by the system. For new emission units: This question is not applicable.
CO2e for year of record	Using the Global Warming Potential values stored in our system, the form will automatically calculate the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; all values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero
Total CO2e emissions	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) based on the calculated CO2e of each pollutant where their actual emissions value is greater than zero.
CO2e for previous year	This information will be provided by the system. For new emission units: This question is not applicable.
CO2e for year of record	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) from the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

C. NOTES AND ATTACHMENTS (FOUND ON PARENT FORM ONLY)

1 Notes:	Information that will help DEP understand your submission. . If an attachment will be associated with this form, identify any additional, explanatory material that you are choosing to submit This section is to provide any additional information for any of your responses for this EU, including any child forms. If you are including a document, identify any explanatory material the facility is choosing to submit along with this form.
2. Attachments	If the material can be sent electronically, check the box for the appropriate form. Check this box if additional information will be included as an attachment. If the additional material can be sent electronically (20 MB document), check the box on the appropriate form. You will be prompted just before Step 2 for the attachment.

NOTE: You must click [Error Check] now to move on to the next part of the form or to create additional Section B's and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>I. To continue your work on this emission unit, click on the <AQ AP3 Section B (or Section D) form> you see listed under the form, you were just working on.

B. FUELS AND EMISSIONS (SECTION B CHILD FORMS: (DEP FUEL# 2) PRIMARY CHAMBER INFORMATION)

	NOTE: In general, the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in Air Quality database. That data will not appear on the electronic forms until it has been submitted in this format. With certain exceptions, which will be noted, the preparer can edit any information listed below.
Is GHG emissions reporting required for this fuel, waste or raw material/finished product? (in SRGHG package)	Check the appropriate box, yes or no. If Yes, then complete Section B. Otherwise, validate this form; no GHG emissions' reporting is required for this Section B. **NOTE**: if the response is Fuel for question "Is this fuel, waste, or raw material/finished product an input, output or fuel?", then the response to this question is Yes.

Is this fuel, waste, or raw material/finished product an input, output or fuel?	Check the appropriate box: input, output or fuel. **NOTE**: Raw Material (or incinerator waste) would be considered an **Input**; finished product would be considered an **Output**, and the "material" used in a fuel burning device would be considered **Fuel**. However, if you use a "fuel" as part of your process operation (and not associated with combustion equipment), this "fuel" would be considered an **Input** or if the "fuel" is being stored and you are required to report breathing loss and/or transfer loss, then this "fuel" would be considered an **Output**. **For example**: Using a coating line with natural gas dryers, depending on how you reported the coating operation, the coating(s) used (i.e. ink, paint, dye) would be considered an **Input** and the material that is coated (i.e. fabric, metal parts, cardboard, etc.) would be considered an **Output.** The natural gas used by the dryer would be considered a **Fuel**. **NOTE**: If this information is inaccurate, please contact us at BAW.eDEP@state.ma.us
1. DEP Fuel #:	This is a unique number assigned by MassDEP that allows the system to recognize this fuel associated with this emission unit on future reports. If this is a new Fuel, the field is blank and locked – MassDEP will assign this number. If this is an existing Fuel, the information will be pre-populated for existing fuels associated with this emission unit.
Can I change the DEP fuel identifier?	This ID number is a MassDEP assigned number and cannot be changed
a. Source Classification Code (SCC)	The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (https://www.epa.gov/chief) contains the codes for each type of process, as well as, emission factors that can, in certain circumstances, be used to calculate emissions for each unit.
SCC Description	If the SCC is pre-populated, the SCC Description will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the SCC Description when the form is validated.
How does eDEP use Source Classification Codes (SCC)?	SCC are standard codes EPA uses to identify different operations/activities and their associated emissions factors, if available. The SCC you select will be used to supply the emission factors for the automatic emissions calculation feature included in the eDEP system and to help analyze the data. The SCC also identifies the Units per hour which are used for your response to B.2.b: Annual usage, and the B.3 Emission Factor Units (in pounds per unit). The list of SCC's used in eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration If the SCC listed on the form is wrong, enter the correct code. If the form will not accept the SCC you are entering, contact MassDEP at BAW.eDEP@state.ma.us
b. Fuel/Material/Waste Type:	This response is determined based on the SCC. If the SCC is pre-populated, the fuel type will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the fuel type when the form is validated.

d. Is this a Primary chamber auxiliary burner?	Check the appropriate box, yes or no. If Yes, then this Section B information is associated with the primary chamber auxiliary burner. If No, then this Section B information is associated with the secondary auxiliary burner **NOTE**: This field is only present on the Section B Child Forms. **NOTE**: for an existing Incinerator, DEP Fuel#2 is associated with the primary auxiliary burner and DEP Fuel#3 is associated with the secondary auxiliary burner. **IMPORTANT**: If the chamber is not identified correctly, contact MassDEP at BAW.eDEP@state.ma.us
Temperature - degrees in Fahrenheit	Put the actual and permitted maximum operating temperature on the "Upper" lines and the minimum operating and permitted temperature on the "Lower" lines for both the primary and secondary chambers. **Primary Chamber**
a. Operating range	Lower Upper
b. Permitted range:	Lower Upper
Retention time in seconds	Put the actual and permitted maximum operating retention times in seconds on the "Upper" lines and the minimum operating and permitted retention times on the "Lower" lines for both the primary and secondary chambers. **NOTE**: this question is only associated with the Secondary Chamber.
Chamber auxiliary burner	
a. Type of burner:	Check the appropriate box, provide a description if other. Rotary Traveling grate Air atomizer Mech. Atomizer Hand fired Steam atomizer Other: specify "other" burner type
b. Burner manufacturer	Firm that built the unit, information can be usually found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown.
c. Burner model number	Information can be found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown.
d. Maximum rating MMBtu/hr	Maximum rated capacity regardless of permit limitations. Information can be found on metal nameplate on unit. Do not leave blank. **Tip:** The manufacturer's maximum input rating is located on a metal nameplate on the unit. It is usually expressed in Btu per hour or gallons per hour for engines. If the unit is not an engine and burning oil, to convert the value from gallons to Btu use the appropriate Oil Heat Values found in Table C.1.3-2. Identify the appropriate Heat Value BTU per gallon based on the Fuel Type and Sulfur Content % by weight found in the chart. Remember to check that the maximum input rating is in **Million Btu** per hour (MMBtu/hr).
e. Sulfur content for oils (Acceptable Range 0 – 2.2):	The percentage of sulfur by weight for oil, only. **TIP:** This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.

f. Maximum hourly fuel rate for all firing burners:	The maximum fuel that all burners in this emission unit can fire in one hour, and the units of measurement from the drop-down menu (*e.g., gallons per hour, tons per hour, million cubic feet per hour, etc.)* is based *on* the chosen SCC Code.
Amount	**IMPORTANT**: You may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the firing rate units in 1000 gallons/hr then 72 gallons/hr would be entered as 0.072 1000 gallons/hr.
Units per hour	This response is determined based on the SCC. If the SCC is pre-populated, the Units per hour will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units per hour when the form is validated.
g. Do you have fuel or usage restrictions?	These would have been expressed in a regulation, the plan approval you received from MassDEP for this emission unit or one that applies to several emission units. Check the appropriate yes or no box. If No, then skip to Question 23. If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well. Cite the most recent fuel use restriction applicable to the fuel as it is used in this emission unit. The most recent fuel use restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.
h. DEP approval number for fuel restrictions: most recent for this fuel.	Obtain this from your plan approval letter. Cite either plan approval or regulation.
What if the restriction is mentioned in multiple approvals?	Enter the most recent approval number for the restriction.
i. Annual usage restriction for this fuel: Quantity	Provide the maximum amount of fuel you are allowed to use in a year per your permit and the units of measurement from the drop down list, or the maximum amount of time you are allowed to use the unit in a year per your permit and the unit of measurement. Obtain this from your plan approval letter or regulation.
Units	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
What if the restriction applies to multiple units?	If a restriction applies to multiple units then enter that same quantity here and on the forms for each other unit to which it applies.
j. Short term fuel usage restriction for this fuel: Quantity:	Provide the maximum amount of fuel or time you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter or regulation.
Units:	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
Per:	Check the appropriate box for the time period: Month, Week, Day or Hour.

2. Annual usage:

a. Total actual amount used for year of record	The actual amount of fuels/materials/products used in this emission unit during the calendar year being reported. Enter "0" if fuels/materials/products was not used in the year of record. **IMPORTANT** - Remember you may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the units in 1000 gallons then 72 gallons would be entered as 0.072 1000 gallons.
b. Units	This response is determined based on the SCC. If the SCC is pre-populated, the Units will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the Units when the form is validated.
Units help text	Units MUST match the units specified for the SCC. If the units for your data do not match the units for the SCC, you need to convert your values to units that match the SCC or select a different SCC.
Prior year (Annual usage)	This information will be provided by the system based on your last submittal. For new emission units: This question is not applicable **TIP:** Compare the annual usage from prior year of record to the current year's usage as a check. If they are orders of magnitude off, check the units.

NOTE: You must click [Error Check] to move on to the next form in your package. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this package, click on the next form you want to work on or click [Next] found at the end of the <Transaction Overview page>.

B. GREENHOUSE GAS EMISSIONS (DEP FUEL# 2) PRIMARY CHAMBER (IN SRGHG PACKAGE)

3. Total emissions for this fuel only in tons per year:	Provide the following information for all pollutants emitted by the emission unit for this fuel only CO2 CH4 N2O SF6 Refrigerants-CO2e CO2e-CO2 CO2e-CH4 CO2e-N2O CO2e-SF6 CO2e-Refrigerants Other GHG Pollutant CO2e- Other GHG Pollutant

CALCULATIONS: READ FIRST	The form will automatically calculate the actual emissions from your annual throughput and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box). The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.
Why you may want to calculate your own emissions values?	The GHG emissions should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Please see Appendix C for more guidance on calculating your own emissions
Actual (in Tons) for previous year - eDEP only:	For repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
What are "actual emissions"?	Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit during the year covered by the report (the year of record). Emissions need to be calculated for each fuel; then the sum of each pollutant's emissions is used to calculate the emission unit's total emissions. eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.
Actual (in Tons) for year of record	Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. Then if the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero
What are emission factors?	Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC. If you choose to calculate your own emissions, you must enter the emission factor that you used. Because they are generic, the EPA emission factors are not applicable in all situations. They may overstate emissions for facilities See Appendix C for more information about using emissions factors to calculate emissions.
Emission factor (EF)	Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination.
in pounds per unit (EF units):	If you are calculating the emissions yourself, the EF units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected must match the unit present in the response to B.2.b.

What EF and EF units should be used to report SF6 and Refrg-CO2e emissions?

Neither SF6 nor Refrg-CO2e require a response in the fields Emission factor (EF) and in pounds per unit. These fields should auto-fill blank and be locked.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on this form.

IMPORTANT: If you use CEMS to determine annual emissions, you must provide the CEMs equipment information in question A.15 and identify "GHG-CEMS" for Calculation Method.

Calculation Method

If the system is calculating the actual emissions for the pollutant, use GHG-EPA EF: EPA GHG Emission Factor

If you are calculating the actual emissions for the pollutant yourself, you can choose from the following in a dropdown list:

CODE	DESCRIPTION
GHG-CEMS	Continuous Emission Monitoring System Data
GHG-User EF	User Provided GHG Emission Factor
GHG-MatlBalance	Emissions Based on Material Balance
GHG-TCR EF	General Reporting Protocol EF[7]

NOTE: For SF6, the Calculation Method should auto-fill with GHG-MatlBalance and the field will be locked.

Specify General Reporting Protocol EF

If you select GHG-TCR EF from the Calculation Method dropdown list, then you need to select the type of Default Emission Factor from this drop down list.

CO2e for previous year

For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

CO2e for year of record

Using the Global Warming Potential values stored in our system, the form will automatically calculate the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

NOTE: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; all values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero

[7] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

4 Total CO2e emissions	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) based on the calculated CO2e of each pollutant where their actual emissions value is greater than zero.
CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) from the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

You must click [Error Check] to move on to the next form in your package. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this package, click on the next form you want to work on or click [Next] found at the end of the <Transaction Overview page>.

B. FUELS AND EMISSIONS (SECTION B CHILD FORMS: (DEP FUEL# 3) SECONDARY CHAMBER INFORMATION)

	NOTE: In general, the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in Air Quality database. That data will not appear on the electronic forms until it has been submitted in this format. With certain exceptions, which will be noted, the preparer can edit any information listed below.
Is GHG emissions reporting required for this fuel, waste or raw material/finished product? (in SRGHG Package)	Check the appropriate box, yes or no. If Yes, then complete Section B. Otherwise, validate this form; no GHG emissions' reporting is required for this Section B. **NOTE**: if the response is Fuel for question "Is this fuel, waste, or raw material/finished product an input, output or fuel?", then the response to this question is Yes.
Is this fuel, waste, or raw material/finished product an input, output or fuel?	Check the appropriate box: input, output or fuel. **NOTE**: Raw Material (or incinerator waste) would be considered an **Input**; finished product would be considered an **Output**, and the "material" used in a fuel burning device would be considered **Fuel**. However, if you use a "fuel" as part of your process operation (and not associated with combustion equipment), this "fuel" would be considered an **Input** or if the "fuel" is being stored and you are required to report breathing loss and/or transfer loss, then this "fuel" would be considered an **Output**. **For example**: Using a coating line with natural gas dryers, depending on how you reported the coating operation, the coating(s) used (i.e. ink, paint, dye) would be considered an **Input** and the material that is coated (i.e. fabric, metal parts, cardboard, etc.) would be considered an **Output.** The natural gas used by the dryer would be considered a **Fuel**. **NOTE**: If this information is inaccurate, please contact us at BAW.eDEP@state.ma.us
1. DEP Fuel #:	This is a unique number assigned by MassDEP that allows the system to recognize this fuel associated with this emission unit on future reports. If this is a new Fuel, the field is blank and locked – MassDEP will assign this number. If this is an existing Fuel, the information will be pre-populated for existing fuels associated with this emission unit.

Can I change the DEP fuel identifier?	This ID number is a MassDEP assigned number and cannot be changed
a. Source Classification Code (SCC)	The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (https://www.epa.gov/chief) contains the codes for each type of process, as well as, emission factors that can, in certain circumstances, be used to calculate emissions for each unit.
SCC Description	If the SCC is pre-populated, the SCC Description will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the SCC Description when the form is validated.
How does eDEP use Source Classification Codes (SCC)?	SCC are standard codes EPA uses to identify different operations/activities and their associated emissions factors, if available. The SCC you select will be used to supply the emission factors for the automatic emissions calculation feature included in the eDEP system and to help analyze the data. The SCC also identifies the Units per hour which are used for your response to B.2.b: Annual usage, and the B.3 Emission Factor Units (in pounds per unit). The list of SCC's used in eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration If the SCC listed on the form is wrong, enter the correct code. If the form will not accept the SCC you are entering, contact MassDEP at BAW.eDEP@state.ma.us
b. Fuel/Material/Waste Type:	This response is determined based on the SCC. If the SCC is pre-populated, the fuel type will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the fuel type when the form is validated.
d. Is this a Primary chamber auxiliary burner?	Check the appropriate box, yes or no. If Yes, then this Section B information is associated with the primary chamber auxiliary burner. If No, then this Section B information is associated with the secondary auxiliary burner **NOTE**: This field is only present on the Section B Child Forms. **NOTE**: for an existing Incinerator, DEP Fuel#2 is associated with the primary auxiliary burner and DEP Fuel#3 is associated with the secondary auxiliary burner. **IMPORTANT**: If the chamber is not identified correctly, contact MassDEP at BAW.eDEP@state.ma.us
Temperature - degrees in Fahrenheit	Put the actual and permitted maximum operating temperature on the "Upper" lines and the minimum operating and permitted temperature on the "Lower" lines for both the primary and secondary chambers.

	Secondary Chamber	
a. Operating range	Lower	Upper
b. Permitted range:	Lower	Upper

Retention time in seconds	Put the actual and permitted maximum operating retention times in seconds on the "Upper" lines and the minimum operating and permitted retention times on the "Lower" lines for both the primary and secondary chambers.

	Secondary Chamber	
a. Operating range	Lower	Upper
b. Permitted range:	Lower	Upper

Chamber auxiliary burner

a. Type of burner:	Check the appropriate box, provide a description if other. Rotary Traveling grate Air atomizer Mech. Atomizer Hand fired Steam atomizer Other: specify "other" burner type
b. Burner manufacturer	Firm that built the unit, information can be usually found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown.
c. Burner model number	Information can be found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown.
d. Maximum rating MMBtu/hr	Maximum rated capacity regardless of permit limitations. Information can be found on metal nameplate on unit. Do not leave blank. **Tip:** The manufacturer's maximum input rating is located on a metal nameplate on the unit. It is usually expressed in Btu per hour or gallons per hour for engines. If the unit is not an engine and burning oil, to convert the value from gallons to Btu use the appropriate Oil Heat Values found in Table C.1.3-2. Identify the appropriate Heat Value BTU per gallon based on the Fuel Type and Sulfur Content % by weight found in the chart. Remember to check that the maximum input rating is in **Million Btu** per hour (MMBtu/hr).
e. Sulfur content for oils (Acceptable Range 0 – 2.2):	The percentage of sulfur by weight for oil, only. **TIP:** This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.
f. Maximum hourly fuel rate for all firing burners:	The maximum fuel that all burners in this emission unit can fire in one hour, and the units of measurement from the drop-down menu (*e.g., gallons per hour, tons per hour, million cubic feet per hour, etc.)* is based *on* the chosen SCC Code.
Amount	**IMPORTANT**: You may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the firing rate units in 1000 gallons/hr then 72 gallons/hr would be entered as 0.072 1000 gallons/hr.
Units per hour	This response is determined based on the SCC. If the SCC is pre-populated, the Units per hour will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units per hour when the form is validated.
g. Do you have fuel or usage restrictions?	These would have been expressed in a regulation, the plan approval you received from MassDEP for this emission unit or one that applies to several emission units. Check the appropriate yes or no box. If No, then skip to Question 23. If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well. Cite the most recent fuel use restriction applicable to the fuel as it is used in this emission unit. The most recent fuel use restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.

h. DEP approval number for fuel restrictions: most recent for this fuel.	Obtain this from your plan approval letter. Cite either plan approval or regulation.
What if the restriction is mentioned in multiple approvals?	Enter the most recent approval number for the restriction.
i. Annual usage restriction for this fuel: Quantity	Provide the maximum amount of fuel you are allowed to use in a year per your permit and the units of measurement from the drop down list, or the maximum amount of time you are allowed to use the unit in a year per your permit and the unit of measurement. Obtain this from your plan approval letter or regulation.
Units	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
What if the restriction applies to multiple units?	If a restriction applies to multiple units then enter that same quantity here and on the forms for each other unit to which it applies.
j. Short term fuel usage restriction for this fuel: Quantity:	Provide the maximum amount of fuel or time you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter or regulation.
Units:	Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email BAW.eDEP@state.ma.us
Per:	Check the appropriate box for the time period: Month, Week, Day or Hour.
2. Annual usage:	
a. Total actual amount used for year of record	The actual amount of fuels/materials/products used in this emission unit during the calendar year being reported. Enter "0" if fuels/materials/products was not used in the year of record. **IMPORTANT** - Remember you may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the units in 1000 gallons then 72 gallons would be entered as 0.072 1000 gallons.
b. Units **Units help text**	This response is determined based on the SCC. If the SCC is pre-populated, the Units will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the Units when the form is validated. Units MUST match the units specified for the SCC. If the units for your data do not match the units for the SCC, you need to convert your values to units that match the SCC or select a different SCC
Prior year (Annual usage)	This information will be provided by the system based on your last submittal. For new emission units: This question is not applicable **TIP:** Compare the annual usage from prior year of record to the current year's usage as a check. If they are orders of magnitude off, check the units.

You must click [Error Check] to move on to the next form in your package. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this package, click on the next form you want to work on or click [Next] found at the end of the <Transaction Overview page>.

B. GREENHOUSE GAS EMISSIONS (DEP FUEL# 3) SECONDARY CHAMBER (IN SRGHG PACKAGE)

3. Total GHG emissions for this fuel only in tons per year:

Provide the following information for all pollutants emitted by the emission unit for this fuel only

CO2	CH4	N2O	SF6	Refrigerants-CO2e
CO2e-CO2	CO2e-CH4	CO2e-N2O	CO2e-SF6	CO2e-Refrigerants

Other GHG Pollutant
CO2e- Other GHG Pollutant

CALCULATIONS: READ FIRST

The form will automatically calculate the actual emissions from your annual throughput and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box).

The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.

Why you may want to calculate your own emissions values?

The GHG emissions should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Please see Appendix C for more guidance on calculating your own emissions

Actual (in Tons) for previous year - eDEP only:

For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit during the year covered by the report (the year of record). Emissions need to be calculated for each fuel; then the sum of each pollutant's emissions is used to calculate the emission unit's total emissions. eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.

Actual (in Tons) for year of record

Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box.

NOTE: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. Then if the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero

What are emission factors?

Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC.

If you choose to calculate your own emissions, you must enter the emission factor that you used.

Because they are generic, the EPA emission factors are not applicable in all situations. They may overstate emissions for facilities

See Appendix C for more information about using emissions factors to calculate emissions.

Emission factor (EF)

Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination.

in pounds per unit (EF units):

If you are calculating the emissions yourself, the EF units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected must match the unit present in the response to B.2.b.

What EF and EF units should be used to report SF6 and Refrg-CO2e emissions?

Neither SF6 nor Refrg-CO2e require a response in the fields Emission factor (EF) and in pounds per unit. These fields should auto-fill blank and be locked.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on this form.

IMPORTANT: If you use CEMS to determine annual emissions, you must provide the CEMs equipment information in question A.15 and identify "GHG-CEMS" for Calculation Method.

Calculation Method

If the system is calculating the actual emissions for the pollutant, use GHG-EPA EF: EPA GHG Emission Factor

If you are calculating the actual emissions for the pollutant yourself, you can choose from the following in a dropdown list:

CODE	DESCRIPTION
GHG-CEMS	Continuous Emission Monitoring System Data
GHG-User EF	User Provided GHG Emission Factor
GHG-MatlBalance	Emissions Based on Material Balance
GHG-TCR EF	General Reporting Protocol EF[8]

NOTE: For SF6, the Calculation Method should auto-fill with GHG-MatlBalance and the field will be locked.

Specify General Reporting Protocol EF

If you select GHG-TCR EF from the Calculation Method dropdown list, then you need to select the type of Default Emission Factor from this drop down list.

[8] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

CO2e for previous year	For repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	Using the Global Warming Potential values stored in our system, the form will automatically calculate the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; all values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero
4 Total CO2e emissions	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) based on the calculated CO2e of each pollutant where their actual emissions value is greater than zero.
CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) from the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

You must click [Error Check] to move on to the next form in your package. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this package, click on the next form you want to work on or click [Next] found at the end of the <Transaction Overview page>.

D. TOTAL EMISSIONS FOR EMISSION UNIT (SEPARATE CHILD FORM) (IN SRGHG PACKAGE)

	The actual, potential, and, if applicable, permitted emissions from this unit for each listed air contaminant during the calendar year being reported. **NOTE**: manual calculating of actual and potential emissions is not an option.
1. Total Emissions for this emission unit in tons per year:	Calculations: This form automatically calculates this unit's total actual and potential emissions (using the information you provided for each raw material/finished product/fuel in each Section B). Return to Section B if you need to correct those numbers. PM10-FIL PM2.5-FIL PM-CON SO2 PB VOC NH3 CO NO2
What are total emissions for this emission unit?	This form automatically calculates the total actual and potential emissions of each pollutant from this emission unit. It calculates these values from the data you entered in Section B: Emissions for each raw material/finished product/fuel. Please enter any emission limits that apply to the unit as a whole (regardless of raw material/finished product/fuel) under "Allowable" below.

Actual (in Tons) for previous year	The actual emissions for the prior year reported For repeat filers: This information will be provided by the system. For new emission units: This information is not applicable.
Actual (in Tons) Emissions	The actual emissions for the calendar year being reported. For repeat filers: this information will be provided by the system and is the sum of the emissions from each raw material/finished product/fuel (from each Section B).
Potential emissions (in Tons):	This information will be calculated by the system and is the potential from all raw material/finished product/fuels (Section Bs).
Maximum allowed emissions (in Tons) – annual	These questions only apply if this entire emission unit is subject to a plan approval or permit or regulation that restricts operations or emissions, regardless of raw material/finished product/fuel. If the restriction is raw material-specific/product-specific, it should be entered in that raw material's/product's Section B. Maximum annual emissions allowed pursuant to your permit or plan approval or regulatory restriction. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption.
Maximum allowed emissions (in Tons)) - short term	Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list
Short term period:	Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list.
Basis – DEP approval number or regulation:	Provide either the plan approval or regulation establishing the emission limits for this EU as a whole. **NOTE:** Some emission units will not have plan approvals because: 1. they are below the threshold for which a plan approval or permit is required; 2. they were installed before the effective date of the regulation; or 3. they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03: U Plan Approval Exemption. If a plan approval established emission limits for the pollutant associated with this EU ,: write the approval number This number is found on the letter sent by MassDEP If a regulation established emission limits for the pollutant, cite the regulation

When do I complete the "allowable" emission fields?

Complete the "allowable" field if there is an annual or a short-term **emission limitation applicable to the emission unit as a whole** expressed in either a MassDEP approval or a regulation. Be sure to enter the approval number or regulation under "Basis".

What if a restriction applies to multiple units?

If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies. Make a note in Section C that it applies to multiple units and describe the restriction.

2. Ozone season schedule - May 1 through September 30:

Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation (Questions A.11a through A.11.c) and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at D.2a. and D.2b.

a. Typical day VOC emissions – pounds per day

The system will calculate this information on the basis of data you supplied on the form.

b. Typical day NOx emissions – pounds per day

Check to enter your own values

NOTE: The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.

3. Total GHG Emissions for this emission unit in tons per year

Calculations: This form automatically calculates this emission unit's total actual emissions (if you have correctly provided all of the emissions for each fuel in each Section B). Return to Section B forms if you need to correct those numbers.

CO2	CH4	N2O	SF6	Refrigerants-CO2e
CO2e-CO2	CO2e-CH4	CO2e-N2O	CO2e-SF6	CO2e-Refrigerants

What are total emissions for this emission unit?

This form automatically calculates the total actual emissions, total carbon dioxide equivalent (CO2e) for each specific pollutant and the Total CO2e from this emission unit. It calculates these values from the data you entered in Section B: Emissions for each fuel.

Actual (in Tons) for previous year

The actual emissions for the prior year reported
For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

Actual (in Tons) Emissions

The actual emissions for the calendar year being reported
This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

CO2e for previous year (in Tons)

The actual emissions for the prior year reported
For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

CO2e for year of record (in Tons)

The CO2e for each specific pollutant for the calendar year being reported
This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

Total CO2e emissions

CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The Total Carbon Dioxide Equivalent (CO2e) for the calendar year being reported This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

You must click [Error Check] to move on to the next form in your package. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this package, click on the next form you want to work on or click [Next] found at the end of the <Transaction Overview page>.

BAW GHG FORM EMISSION UNIT INSTRUCTIONS: GHG-ONLY (FOR SRGHG PACKAGE)

PURPOSE

The "**GHG-ONLY**" version of the GHG Form describes equipment (emission unit), "fuel use" in the form of raw material or finished product, and associated air pollution emissions at the facility during the calendar year being reported for GHG emissions equipment, except for any emission units (EUs) that are subject to SR emissions reporting: i.e. Fuel Burning Devices, Process or Incinerators.

NOTE: MassDEP no longer requires reporting of GHG emissions from motor vehicles or refrigerant leaks from cooling equipment.

WHEN IS THIS FORM APPLICABLE?

The "**GHG-ONLY**" version of the GHG Form applies in instances where reporting of fugitive GHG emissions from the natural gas distribution system is required, but the activity type is not subject to SR emissions reporting. In this situation, the response in Question A.2.f: Emission Unit Category is "**GHG-ONLY**". If you are also subject to SR Reporting and use GHG-ONLY, then your SRGHG Package will also contain a GHG Form.

For Question B1.a Source Classification Code (SCC) use the following new code to report your "GHG Only" emissions:

- 99999999 - GHG Source Categories - Unspecified Technology - Natural Gas Distribution System - Fugitive Emissions

---

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

Submit one form for each GHG emission unit. You must include any GHG emission units added or decommissioned since your last submittal.

CAUTION: FOR FILERS WITH NEW GHG EMISSION UNIT SINCE THEIR LAST SUBMITTAL

You must create a new emission unit form for any new emission unit. If you have not already created the new emission unit (when first opening your source registration package), you must either:
1) Under Transaction Overview, open the first form labeled <Greenhouse Gas (GHG) Package>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under Transaction Overview, select <New Unit Form Creator (New Form Creator)>;
- Choose the appropriate form and enter the number of new units;
- Validate the form by selecting [Error Check];
- Follow subsequent instructions.

----Or----

2) You must create a new eDEP partial Greenhouse Gas (GHG) package for that emission unit. Once you have submitted the package you are working on:

- Return to Forms"; "Air & Climate";
- Select your package using "Start Transaction;
- In Preform, if correction is to a prior reporting year submittal, change the reporting year using the drop down list;
- In Overview Form, unselect Existing Facility and put a check mark by the units that you want to amend. Or if you need to add a unit, check the box under A.1 "check if you added emission units";
- Follow subsequent instructions pertaining to the New Unit Form Creator (New Form Creator).

IMPORTANT: Before amending your package for the current reporting year, email BAW.eDEP@state.ma.us to confirm that your submittal has been accepted by MassDEP.

CAUTION: If you realize in the midst of completing this package that you need to create additional forms, DO NOT return to the Overview form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with numerous validated forms.

The best way to add emission units AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

A. EQUIPMENT DESCRIPTION

NOTE: In general the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. via the Climate Registry Information System (CRIS) was not historically stored in the Air Quality database. That data will not appear on the electronic forms until it has been submitted in this new format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

1. Facility Identifiers

a. Facility Name

b. DEP Account number

c. Facility AQ Identifier

The name and identifying numbers of the facility or plant that you are reporting.
This will be pre-populated from the information on your BAW AQ Facility Information Form.

NOTE: You cannot change the facility name on this form. To change the facility name you must contact your MassDEP Regional Office FMF Data Manager.

CAN I CHANGE THE RESPONSES TO THE EMISSION UNIT IDENTIFIER FIELDS?

eDEP allows you to change the name (2.a) and give your own number (2.b) to each emission unit. MassDEP keeps track of the units by the DEP number (2.c), and therefore you cannot change it.

2. Emission unit identifiers

If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it.
If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it.

a. Facility's choice of emission unit name- edit as needed.

A unique name of your choice that will allow you to recognize this unit on future reports

b. Facility's emission unit number / code – edit as needed.

A unique number or code of your choice that will allow you to recognize this unit on future reports.
Example: Natural gas pipeline

c. DEP emission unit # -

If this is a new Emission Unit, the field is blank and locked – MassDEP will assign this number.

If this is an existing Emission Unit, the information will be pre-populated for existing emission unit. This is a unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports.

d. ORIS id # – for large electrical utilities only

This information will be populated from the BAW AQ Facility Information form.

e. Combined units- enter number of individual units	Total number of individual units combined on this form. **NOTE**: For the GHG Form do not combine emission units. List each of the fugitive emission units for Natural Gas Distribution System, individually.
f. Emission Unit Category	For the GHG form (in the SRGHG package), the response is autofilled with "GHG-ONLY" and the field is locked.
g. Is GHG emissions reporting required for this emission unit?	A GHG emission reporting is required for the GHG form. A "Yes" response is present and this field is locked. **NOTE**: This question will only be present in the SR/GHG package; it won't be present in the SR Only package.
WHAT ARE COMBINED UNITS AND WHEN CAN EQUIPMENT BE COMBINED AS ONE EMISSION UNIT?	**GHG-Only** can **NOT** be combined
3. Emission unit installation and decommission dates	Provide the requested dates in the appropriate lines. If the unit was installed many years ago and you do not know the exact date, use your best approximation.
a. Installation dates – estimate if unknown (mm/dd/yyyy)	The date on which the unit became operational. Do not leave blank: Estimate if unknown.
b. Decommission dates – If applicable (mm/dd/yyyy)	Complete only if the unit was shut down permanently or replaced any time before December 31st of the year of record.
HOW / WHEN TO DELETE A UNIT?	Enter a decommission date in 3.b if the unit is being **permanently taken out of service**. If the decommissioned unit operated in the year of record, the emissions from that unit must be included in this package. Therefore units "decommissioned" in this package will remain on the list of emission units for this year of record. They will NOT appear on the NEXT year of record package. **NOTE:** If you decommissioned a unit prior to the year of record (and are decommissioning it in this package) you must enter zero for the maximum hourly fuel rate, annual fuel usage, actual emissions, and potential emissions. Failing to enter zero for the maximum firing rate on this AP1 will cause the form to calculate non-zero potential emissions, which cause your facility wide PTE to be incorrect on the AP-TES. **NOTE:** In cases where you have combined units, and took one (or more) out of service DO NOT enter a decommission date. Simply change the number of combined units in the combined units field. Do not decommission the EU unless ALL of the combined units are taken out of service.

4. Emission unit replacement	Check the appropriate box, yes or no. If Yes, then complete 4.b. Otherwise, continue on to Question 5.
a. Is this unit replacing another emission unit?	Choose from the drop-down menu. It is populated with the emission units you decommissioned in this and previous submittals for this year of record.
b. DEP's emission unit number and facility unit name.	
HOW TO BE SURE THE UNIT BEING REPLACED APPEARS IN THIS MENU?	Line A.4.b. " DEP's emission unit number and facility's name for emission unit" is a mandatory field when the "yes" box is checked. However, the unit being replaced **will not appear as a choice** on the drop-down menu **until it is decommissioned**. You will not be able to complete and validate this form for a replacement unit until you have first entered a decommission date and completed and validated the form for the unit it is replacing. If this unit is replacing another unit that has not been "decommissioned", you must 1) save and exit this form, 2) open the form for the unit being replaced, 3) enter the decommission date, 4) complete and validate the form by selecting [Error Check] before you can complete this form.
WHAT IF ONE EMISSION UNIT IS REPLACING MORE THAN ONE UNIT?	If one new emission unit is replacing several units, pick one of the units being replaced on the drop-down menu and note the others in Section C Notes.
5. Equipment	
a. Type:	
EPA Unit Type Code	Choose from drop-down menu. **NOTE**: Use EPA Unit Type Code. The complete list of EPA Unit Type Codes can be found on the SR website: **References You Will Need**
EPA unit type code help text	Unit Type Code is a field required by US EPA for the National Emissions Inventory. Please select the most appropriate category from the drop menu. (The complete list of EPA Unit Type Code can be found on the SR website: **References You Will Need**.) If none are close for your unit, choose one of the "Other…" or "Unclassified" type codes and provide additional information in field A.5.a Other EPA Unit Type (describe). This field allows for 50 characters.
EPA Unit Type (describe):	This field will be locked and should be the same response that is present in the EPA Unit Type Code field, except when the EPA Unit Type Code is OTHER COMBUSTION OR UNCLASSIFIED. When one of these responses is present in the EPA Unit Type Code field then Type field is unlocked to allow for a description of the equipment type; this field allows for 50 characters.
WHAT TO DO IF DATA UNKNOWN OR NOT AVAILABLE?	Do not leave blank: if date or numeric field – estimate; for other fields enter UNKNOWN, if unknown.
b. Manufacturer	Firm that built the unit, information can be usually found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown. Provide the requested information for the combustion unit.
c. Model number	Information can be found on metal nameplate on unit. Do not leave blank: enter UNKNOWN, if unknown. Provide the requested information for the entire combustion unit.

d. Maximum input rating MMBtu/hr	Maximum rated capacity regardless of permit limitations. Information can be found on metal nameplate on unit. Do not leave blank. **Tip:** The manufacturer's maximum input rating is located on a metal nameplate on the unit. It is usually expressed in Btu per hour or gallons per hour for engines. If the unit is not an engine and burning oil, to convert the value from gallons to Btu use the appropriate Oil Heat Values found in Table C.1.3-2. Identify the appropriate Heat Value BTU per gallon based on the Fuel Type and Sulfur Content % by weight found in the chart. Remember to check that the maximum input rating is in **Million Btu** per hour (MMBtu/hr).

B. FUELS AND EMISSIONS (FOR PARENT AND SECTION B CHILD FORMS)

	NOTE: In general, the information requested below will be pre-populated from MassDEP's Air Quality database. However, certain data submitted to MassDEP in a different format (i.e. CRIS) was not historically stored in Air Quality database. That data will not appear on the electronic forms until it has been submitted in this format. With certain exceptions, which will be noted, the preparer can edit any information listed below.
Is GHG emissions reporting required for this fuel,waste or raw material/finished product?	If GHG emissions' reporting is not required for this raw material or finished product, check No. **NOTE**: If fuel, GHG emissions' reporting is always required.
Is material/product/fuel an input or output or fuel?	Raw Material would be considered an **Input**; finished product would be considered an **Output**, and the "material" used in a fuel burning device would be considered **Fuel**. However, if you use a "fuel" as part of your process operation (and not associated with combustion equipment), this "fuel" would be considered an **Input** or if the "fuel" is being stored and you are required to report breathing loss and/or transfer loss, then this "fuel" would be considered an **Output**. **Example**: Using a coating line with natural gas dryers, depending on how you reported the coating operation, the coating(s) used (i.e. ink, paint, dye) would be considered an **Input** and the material that is coated (i.e. fabric, metal parts, cardboard, etc.) would be considered an **Output.** The natural gas used by the dryer would be considered a **Fuel**.
How does eDEP handle multiple fuels?	In eDEP, a separate Section B form is automatically created for each additional fuel on record based on the "Number of fuels for this unit (previous records)". Before checking the box at the right to make a change, please note the following: 1) If you need to add a new fuel and "Number of fuels for this unit…." is greater than 1, wait to see the other fuels before checking this box, or 2) If you ceased using this fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly. **NOTE**: If the response to A.3.b contains a decommission date (i.e., the emission unit is decommissioned), you do not need to select "delete this fuel".
Add a New Fuel:	Check the box if you need to add a fuel that you did not previously report (eDEP will add a blank Section B form to this Fuel Burning Device Form when you successfully validate it.) Any additional fuels will automatically appear when you error check this form so you do NOT need to check this field to make additional fuels appear if they have been reported on in a previous submittal. You can see the number of fuels already existing for this unit in the field: "Number of fuels for this unit (previous records)". Use this check box only for NEW fuels for this unit which you have never reported before.

Delete this fuel:	Check the box if you stopped using this fuel in this emission unit. You must still report for the year of record even if amount is "0" – the fuel will be removed from the unit for the next report cycle. **NOTE**: If you ceased using this fuel and "Number of fuels for this unit…." is 1, do NOT check "delete this fuel" unless you also check "Add a new fuel"; this form requires one active fuel to function properly.
1. Process Description	A brief description of the process and the types of activities performed by equipment in the emission unit *(e.g., Cleaning – degreasing*) Write a brief description of the process in which the raw material is used or finished product is created.
DEP Fuel #:	This is a unique number assigned by MassDEP that allows MassDEP to recognize this fuel associated with this emission unit on future reports. If this is a new Fuel, the field is blank and locked – MassDEP will assign this number. If this is an existing Fuel, the information will be pre-populated for existing fuels associated with this emission unit.
a. Source Classification Code (SCC) SCC Description	The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (https://www.epa.gov/chief) contains the codes for each type of process, as well as emission factors that can, in certain circumstances, be used to calculate emissions for each unit. If the SCC is pre-populated, the SCC Description will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the SCC Description when the form is validated.
How does eDEP use Source Classification Codes (SCC)?	SCCs are standard codes EPA uses to identify different operations and the associated emissions factors. The SCC you select is used to supply the emission factors for the automatic emissions calculation feature included in the eDEP system. The SCC also identifies the *Units per hour* which are used for your response to B.1.e: *Maximum hourly fuel rate for all firing burners,* B.2.b: *Annual usage, and the B.3 Emission Factor Units* The list of SCC valid in eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration If the SCC listed on the form **is wrong**, enter the correct code. If the form will **not accept the SCC** you are entering, contact MassDEP at BAW.eDEP@state.ma.us.
What SCC should be used to report emissions from a natural gas distribution system?	Use the following SCC Code: • 99999999 - GHG Source Categories - Unspecified Technology - Natural Gas Distribution System - Fugitive Emissions
b. Fuel/Material/Waste Type::	This response is determined based on the SCC. If the SCC is pre-populated, this response will also be pre-populated. If you add or changed the SCC, the system will automatically fill in the Fuel Type or Raw Material/Finished Product Name or Waste Type when the form is validated. **NOTE:** If multiple types of fuel are used in this emission unit you must check the "Add a New Fuel" check box to add additional Section B forms for each fuel used. Once you successfully validate the current form the system will generate a blank Section B which will be found under this form as listed on the <Transaction Overview page>.
c. Fuel/Process Description:	

2. Total actual used for year of record Amount Units per hour	Enter the amount of Fuel Type or Raw Material/Finished Product Name or Waste Type used in this emission unit during the calendar year being reported. Enter zero "0" if not used in the year of record. **IMPORTANT**: You may need to convert the Amount so that the value is expressed for the units associated with the chosen SCC. For example, if the chosen SCC expresses the firing rate units in 1000 gallons/hr then 72 gallons/hr would be entered as 0.072 1000 gallons/hr. If the SCC is pre-populated, the Units per hour will also be pre-populated. If you added or changed the SCC, the system will automatically fill in the Units per hour when the form is validated.
Prior year (Amount and Units)	This information will be provided by the system based on your last submittal. For new emission units: This section is not applicable **TIP:** Compare the annual usage from prior year of record to the current year's usage as a check. If they are orders of magnitude off, check the units.
3. Total GHG emissions for this fuel only in tons per year:	Provide the following information for all pollutants emitted by the emission unit for this fuel only CO2 CH4 N2O SF6 Refrigerants-CO2e CO2e-CO2 CO2e-CH4 CO2e-N2O CO2e-SF6 CO2e-Refrigerants Other GHG Pollutant CO2e- Other GHG Pollutant
Calculations: Read First	The form will automatically calculate the actual emissions from your annual throughput and EPA default emission factors. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box). The form will automatically calculate the Carbon Dioxide Equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.
Why you may want to calculate your own emissions values?	The GHG emissions should be as accurate as possible, neither under- or overestimated. Please use engineering judgement to select the best information available for calculating your facility's emissions. The best information comes from CEMS, then from stack testing. If neither of these are available, use equipment-specific emission factors from the manufacturer (where such manufacturer's numbers represent actual performance rather than an emission limit the unit is guaranteed to meet) or EPA factors when unit-specific data is not available. Please see Appendix C for more guidance on calculating your own emissions
Actual (in Tons) for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
What are "actual emissions"?	Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit associated with each fuel during the year covered by the report (the year of record). eDEP will calculate the actual emissions for each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.

Actual (in Tons) for year of record	Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box. **NOTE**: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; All values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero
What EF and EF units should be used to report SF6 and Refrg-CO2e emissions?	Neither SF6 nor Refrg-CO2e require a response in the fields Emission factor (EF) and in pounds per unit. These fields should auto-fill blank and be locked.
Emission factor	Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination.
in pounds per unit (EF units):	**NEW** - If you are calculating the emissions yourself, the Emission factor units must match the chosen SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. The unit selected must match the unit present in the response to B.2.
What are emission factors?	Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions per year are obtained by the formula [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **=** tons per year (**TPY) of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors, uncontrolled, based on the SCC. If you choose to calculate your own emissions, you must enter the emission factor that you used. The EPA emission factors used by eDEP can be found at: https://www.mass.gov/guides/massdep-source-registration. Because they are generic, the EPA SCC emission factors are not applicable in all situations. They may overstate emissions for facilities. See Appendix C for more information about using emissions factors to calculate emissions.

Calculation Method

If the system is calculating the actual emissions for the pollutant, use GHG-EF: EPA GHG Emission Factor

If you are calculating the actual emissions for the pollutant yourself, you can choose from the following in a dropdown list:

CODE	DESCRIPTION
GHG-CEMS	Continuous Emission Monitoring System Data
GHG-User EF	User Provided GHG Emission Factor
GHG-MatlBalance	Emissions Based on Material Balance
GHG-TCR EF	General Reporting Protocol EF[9]

NOTE: For SF6, the Calculation Method should auto-fill with GHG-MatlBalance and the field will be locked.

Specify General Reporting Protocol EF

If you select GHG-TCR EF from the Calculation Method dropdown list, then you need to select the type of Default Emission Factor from this drop down list.

CO2e for previous year

For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

CO2e for year of record

Using the Global Warming Potential values stored in our system, the form will automatically calculate the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

NOTE: although actual emissions that are less than 0.0001 are rounded to zero, when the form is validated; all values greater than or equal to zero are used to calculate the CO2e amount for each pollutant. In the validation process, the CO2e value is calculated. If the *Actual (in Tons) for year of record* is less than 0.0001, this value is changed to zero

4 Total CO2e emissions

CO2e for previous year

This information will be provided by the system.
For new emission units: This section is not applicable.

CO2e for year of record

The form will automatically calculate the Total Carbon Dioxide Equivalent (CO2e) from the Carbon Dioxide Equivalent (CO2e) of each pollutant where the actual emissions value is greater than zero.

[9] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

C. NOTES

This section is to provide any additional information for any of your responses for this EU, including any child forms.

NOTE: You must click [Error Check] now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emission Unit. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the <Greenhouse Gas (Fuel#.....) or GHGSecD (Total Emissions) form> you see listed under the form you were just working on.

D. TOTAL GHG EMISSIONS FOR EMISSION UNIT (SEPARATE CHILD FORM)

This form is displayed only when an emission unit has multiple Section B child forms. The form automatically calculates the total actual emissions, total carbon dioxide equivalent (CO2e) for each specific pollutant and the Total CO2e based on the actual emissions values; manual calculating of these values is not an option.

1. Total GHG Emissions for this emission unit in tons per year

Calculations: This form automatically calculates this emission unit's total actual emissions (if you have correctly provided all of the emissions for each fuel in each Section B). Return to Section B forms if you need to correct those numbers.

CO2	CH4	N2O	SF6	Refrigerants-CO2e
CO2e-CO2	CO2e-CH4	CO2e-N2O	CO2e-SF6	CO2e-Refrigerants

What are total emissions for this emission unit?

This form automatically calculates the total actual emissions, total carbon dioxide equivalent (CO2e) for each specific pollutant and the Total CO2e from this emission unit. It calculates these values from the data you entered in Section B: Emissions for each fuel.

Actual (in Tons) for previous year

The actual emissions for the prior year reported
For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

Actual (in Tons) Emissions

The actual emissions for the calendar year being reported
This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

CO2e for previous year (in Tons)

The actual emissions for the prior year reported
For repeat filers: This information will be provided by the system.
For new emission units: This section is not applicable.

CO2e year (in Tons)

The CO2e for each specific pollutant for the calendar year being reported
This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

2 Total CO2e emissions

CO2e for previous year	This information will be provided by the system. For new emission units: This section is not applicable.
CO2e for year of record	The Total Carbon Dioxide Equivalent (CO2e) for the calendar year being reported This information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).

BAW AQ EU – ORGANIC MATERIAL STORAGE INSTRUCTIONS: TANK (AP-4)

PURPOSE

This form summarizes the storage tanks used and the organic materials stored or transferred for the calendar year being reported.

WHEN IS THIS FORM APPLICABLE?

This form applies if you store organic material at your facility in any below- or above-ground storage that is 500 gallons or larger.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

One form must be completed for each above or underground storage tank containing "Organic Material" with a capacity equal to or greater than 500 gallons. This includes waste tanks containing organic material that will be used as feed stock for a process or alternate fuel for a combustion unit

WHEN DOES A TANK NEED TO BE REPORTED?

You must complete a Tank (AP-4) Form for each tank with a capacity equal to or greater than 500 gallons; however, tanks may be combined if the combined capacity of the tanks does not exceed 50,000 gallons, they are of the same construction, and store the same material. Therefore, you cannot combine aboveground storage tanks (ASTs) with underground storage tanks (USTs). Combined ASTs require a separate AP-4 Form from USTs.

DO WASTE TANKS NEED TO BE REPORTED?

For the majority of waste tanks, these tanks do not need to be reported. It is not the intent of the Source Registration program to capture wastewater that may contain some organic material or waste tanks that contain some oil that will be disposed/treated off-site. However, waste tanks containing organic material that will be used as feed stock for a process or alternate fuel for a combustion unit must be reported on an AP-4 Form.

DO I NEED TO REPORT EMISSIONS FROM TANKS (BREATHING/STANDING, DRAWDOWN, AND TRANSFER LOSSES)?

If a single tank is equal to or greater than 40,000 gallons, then it will necessary to report the tanks emissions (**breathing losses and transfer losses**) if the vapor pressure is 1.5 psia or greater. It is also required to report tank emissions from all tanks with a capacity equal to or greater than 1 million gallons. The emissions from these tanks must be reported on Process (AP-2) Form. The emissions from tanks can be reported as an additional segment on the AP-2 Form that reports the emissions resulting from the transfer operations (tank loading equipment). Report **breathing/standing** losses separately from **drawdown** losses (separate segments). All tank losses can be reported combined (as one segment for breathing loss and one segment for drawdown loss) or each tank can be reported individually for clarity. Provide the TANKS model input parameters in the notes or as an attachment.

HOW DO I REPORT LUBE OIL TANKS?

Lube oil tanks, whether they are part of a closed loop system (which incorporates a lube oil waste tank) or not, do not have to be reported as part of the Source Registration.

IS THERE A DE MINIMIS CONCENTRATION OF ORGANIC MATTER BELOW WHICH A FORM IS NOT REQUIRED FOR A TANK?

No – however the objective of the Tank form is to gather data on tanks storing fuel or materials or products. It is not intended to capture wastewater that may contain some organic material. So a waste oil tank must be reported where that oil will be a feed stock or fuel, but a waste oil or waste water tank which contains some oil that will be disposed of off-site need not be reported.

CAUTION FOR FILERS WITH NEW STORAGE TANKS SINCE THEIR LAST SUBMITTAL

You must create a new emission unit form for any new emission unit. If you have not already created the new emission unit, prior to submitting your complete source registration (when first opening your source registration package), you must either:

1) Under Transaction Overview, open the first form labeled <AQ Source Registration Package> or < AQ Source Registration & Greenhouse Gas Package>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under Transaction Overview, select <New Unit Form Creator (New Form Creator)>;
- Choose the appropriate form and enter the number of new units;
- Validate the form by selecting [Error Check];
- Follow subsequent instructions.

----Or----

2) You must create a new eDEP partial AQ Source Registration package for that emission unit. Once you have submitted the package you are working on:

- Return to "Forms", "Air & Climate",;
- Select your package using "Start Transaction";
- In Overview Form: B.1: Amend a Source Registration;
- Select "Check here to add new units";
- Follow subsequent instructions.

IMPORTANT: Before amending your package for the current reporting year, email BAW.eDEP@state.ma.us to confirm that your submittal has been accepted by MassDEP.

CAUTION: If you realize in the midst of completing this package that you need to create additional forms, DO NOT return to the Overview form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you must open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 validated forms.

The best way to add emission units or stacks AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

A. EQUIPMENT DESCRIPTION

TIP: If you obtained a plan approval for the emission unit(s) you are reporting, you will have received two documents from MassDEP: a plan approval letter and a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. Facility Identifiers

The name and identifying numbers of the facility that is reporting.

a. Facility Name
b. DEP Account number
c. Facility AQ Identifier

These will be pre-populated from the information on your BAW AQ Facility Information Form.

2. Emission Unit Identifiers

If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it. If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it.

a. Facility's choice of emission unit name

A unique name of your choice that will allow you to recognize this tank on future reports; Example: Methyl Ethyl Ketone Tank #1.

b. Facility's emission unit number / code	Your choice of unique number for this tank For an existing emission unit: The information will be pre-populated, but you can change it.
CAN I CHANGE THE RESPONSES TO THE EMISSION UNIT IDENTIFIER FIELDS?	eDEP allows you to change the name (2.a) and give your own number (2.b) to each tank. MassDEP keeps track of the units by the DEP number (2.c), and therefore you cannot change MassDEP number.
c. DEP emission unit #	This number is a unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports. If this is a new Emission Unit the field is blank and locked – MassDEP will assign this number. If this is an existing Emission Unit, the information will be pre-populated.
d. Combined Units – enter number of individual units	Enter total number of individual units combined on this form.
WHAT IS A COMBINED UNIT?	Storage containers can be combined into one unit for the purpose of Source Registration. Tanks can be combined if the combined capacity does not exceed 50,000 gallons, they are the same construction, and store the same material(s). Do not combine above ground with below ground tanks – use separate Tank (AP4) forms for each type. **NOTE**: if a single tank is 40,000 gallons or larger, you may need to report emissions for the tank – see question above. **NOTE**: Tanks containing wastewater with organic material and waste organic material that will be disposed of off-site need not be reported in Source Registration.
3. Emission unit installation and decommission dates	Provide the requested dates in the appropriate lines. If the unit was installed many years ago and you do not know the exact date, use your best approximation.
a. Installation date – estimate if unknown (mm/dd/yyyy**)**	The date on which the unit became operational. Do not leave blank. Estimate if unknown.
b. Decommission date (mm/dd/yyyy) – if applicable	Complete only if the unit was shut down permanently or replaced any time before December 31st of the year of record. Enter a decommission date in 3.b if the unit is being **permanently taken out of service**. If the decommissioned unit operated in the year of record, the emissions from that unit must be included in this package. Therefore units "decommissioned" in this package will remain on the list of emission units for this year of record. They will NOT appear on the NEXT year of record package.
HOW / WHEN TO DELETE A UNIT?	NOTE**:** If you decommissioned a unit prior to the year of record (and are decommissioning it in this package) you must enter zero for the Capacity, annual Throughput in gallons, and if reporting losses on the Process Form: maximum process rate, actual emissions, and potential emissions. Failing to enter zero for the maximum process rate will cause the form to add non-zero potential emissions to the facility wide PTE on the TES. NOTE: If this form tracks combined storage tanks, enter a Decommission Date ONLY when ALL of the storage tanks have been removed. If only a portion of the tanks have been removed, then just adjust the number in the Combined tanks field to reflect the current number of tanks.

4. Emission unit replacement

a. Is this unit replacing another emission unit?	Check the appropriate box, yes or no. If yes, then complete 4.b. Otherwise, continue on to Question 5.
b. DEP's emission unit number and facility unit name	Choose from the drop-down menu. It is populated with the emission units you decommissioned in this and previous submittals for this year of record.
HOW TO BE SURE THE UNIT BEING REPLACED APPEARS IN THIS MENU?	Line A.4.b. "DEP's emission unit number and facility's name for emission unit" are mandatory fields when the "yes" box is checked. However, the unit being replaced will not appear as a choice on the drop-down menu **until it is decommissioned**. You will not be able to complete and validate the form for a replacement unit until you have first entered a decommission date and completed and validated the form for the unit it is replacing. If this unit is replacing another unit that has NOT been "decommissioned", you must: 1) save and exit this form, 2) open the form for the unit being replaced, 3) enter the decommission date, and 4) complete and validate the form by selecting [Error Check] - before you can complete this form.
WHAT IF ONE EMISSION UNIT IS REPLACING MORE THAN ONE UNIT?	If one new tank is replacing several tanks, pick one of the units being replaced on the drop-down menu and note the others in Section B Notes.
5. Unit descriptions	Check the appropriate boxes, if other, describe.
a. Description	Above ground Below ground
b. Roof type	Floating roof Internal roof fixed Fixed Other - Describe
c. Height/Length – feet d. Diameter – feet e. Capacity – gallons	Enter tank dimensions in appropriate units.
HOW TO REPORT ON COMBINED UNITS?	If this is a combined unit, report the combined capacity of all of the tanks in Question 5e, and the total throughput for all the tanks in Questions 7g and 8g (if more than one liquid was stored). Enter the most common height and diameter in Questions 5c and 5d and most common construction type in Question 6. **NOTE**: In the comment section of the form, include the locations of the combined units if they are not in the same building at the facility.
6. Construction:	Check the appropriate box: Steel weld Other weld Rivet Fiberglass Gunite
7 – 8. Material stored and New material stored (enter new material if contents changed during year of record):	
a. Name of material	Write the name of the chemical or formulation.
b. CAS number if single chemical	If it is a chemical, include the CAS number. This can be found on the MSDS for the material.
c. SCC for standing / breathing	The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-4 (https://www.epa.gov/chief) contains the codes for each type of process as well as emission factors

loss	that can, in certain circumstances, be used to calculate emissions from each unit
d. SCC description	The system will automatically fill in the code description.
WHERE DO YOU FIND SOURCE CLASSIFICATION CODES (SCC)?	SCC are standard codes EPA uses to identify different operations and the associated emissions factors. The list of SCC valid in eDEP can be found at https://www.epa.gov/chief . If the SCC code listed on the form **is wrong**, enter the correct code. If the form will **not accept the SCC** you are entering, contact MassDEP at BAW.eDEP@state.ma.us. The list of SCC valid in eDEP can be found at https://www.mass.gov/guides/massdep-source-registration
e. Vapor pressure PSI at 25 C	This information can be found on the MSDS for the material. Vapor Pressure is listed on MSDS (at 25 C if possible, otherwise make note in Section B of the temperature at which the vapor pressure is reported.)
f. Temperature - ºFahrenheit	Average Storage Temperature
WHAT DO I ENTER FOR TEMPERATURE?	This field is intended to report the temperature at which the material is stored. If the tank is an underground tank, a default value of 55ºF may be used if the tank is not heated or cooled. If the tank is an aboveground tank, a default vale of 48ºF may be used if the tank is not heated or cooled. If the tank is inside a building, then the temperature at which the build is kept should be reported. Finally, if the tank is heated or cooled, the temperature of the contents should be reported.
g. Annual throughput in gallons	Total amount (in gallons) of the material added to the storage container during the calendar year being reported,.
h. RVP – **gasoline only**	Only provide this information for gasoline. Enter the Reid Vapor Pressure (RVP)
i. Total oxygen content in gallons - **gasoline only**	Only provide this information for gasoline. Obtain this from the MSDS.
j. Oxygenate name – **gasoline only**	Only provide this information for gasoline. Obtain this from the MSDS.
HOW DO I REPORT BLENDS OF GASOLINE?	If tank holds 2 blends of gasoline, enter RVP, oxygen content, and oxygenate data for one constituent in question 7 and the information for the other constituent blend in Question 8.
WHAT IF THERE ARE MORE THAN 2 CONTENTS DURING THE YEAR?	If there are more than 2 contents in a single reporting year, then report the 2 largest in Question 7 & 8. Give the substances and throughputs for the others in the Notes field in Section B.

B. NOTES AND ATTACHMENTS

1 Notes:	Information that will help DEP understand your submission. . If an attachment will be associated with this form, identify any additional, explanatory material that you are choosing to submit This section is to provide any additional information for any of your responses on this form. If you are including a document, identify any explanatory material the facility is choosing to submit along with this form.
2. Attachments	If the material can be sent electronically, check the box for the appropriate form. Check this box if additional information will be included as an attachment. If the additional material can be sent electronically (20 MB document), check the box on the appropriate form. You will be prompted just before Step 2 for the attachment.

NOTE: You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections. Once you have made all of the required corrections you will be returned to the <Transaction Overview page>.

BAW AQ INSTRUCTIONS: STACK

PURPOSE

This form describes the physical characteristics of the facility's stacks: vertical release points for air emissions.

WHEN IS THIS FORM APPLICABLE?

One Stack Form must be filed for each vertical air emission release point > 10 feet tall (i.e., height > 10 feet above the roof of the building).

NOTE: Downward facing vents, horizontal vents, goosenecks, and fugitive releases are not "stacks" and do not require a separate Stack Form. Also, some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall). This type of release point does not require a Stack Form – it is considered to be a Non-Stack release point. .

This form applies if your facility has a vertical stack, with or without a rain cap/sleeve. **Exclude** the following types of release points:

- Fugitive
- Horizontal
- Downward facing vent
- Gooseneck air pollution control
- Emergency Engine Exhaust
- Vertical stack/vent less than 10 feet (above the roof of the building)

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

Submit one form for each vertical release point at your facility. You need to include forms for any stacks that were decommissioned since your last submittal as well as any stacks that were added in that time period.

CAUTION: FOR FILERS WITH NEW STACKS (VERTICAL RELEASE POINTS) SINCE THEIR LAST SUBMITTAL

You must create a new stack form for any new stack. If you have not already created the new stack, prior to submitting your complete source registration (when first opening your source registration package), you must:

- Under Transaction Overview, open the first form labeled <AQ Source Registration Package> or < AQ Source Registration & Greenhouse Gas Package>;
- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under Transaction Overview, select <New Unit Form Creator (New Form Creator)>;
- Choose the appropriate form and enter the number of new units;
- Validate the form by selecting [Error Check];
- Follow subsequent instructions.

----Or----

2) You must create a new eDEP partial AQ Source Registration package for that emission unit. Once you have submitted the package you are working on:

- Return to "Forms", "Air & Climate";
- Select your package using "Start Transaction;
- In Preform, if correction is to a prior reporting year submittal, change the reporting year using the drop down list;
- In Overview Form, unselect Existing Facility and put a check mark by the units that you want to amend. Or if you need to add a unit, check the box under A.1 "check if you added emission units";
- Follow subsequent instructions pertaining to the New Unit Form Creator (New Form Creator).

IMPORTANT: Before amending your package for the current reporting year, email BAW.eDEP@state.ma.us to confirm that your submittal has been accepted by MassDEP.

CAUTION: If you realize in the midst of completing this package that you need to create additional forms, DO NOT return to the Overview Form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 validated forms.

The best way to add emission units AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

HOW DO I ENTER IN THE FORMS UNUSUAL EXHAUSTS, SUCH AS VERTICAL VENTS?

Some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall. This type of release point does not require a Stack form – it is considered to be a Non-Stack release point.

CAUTION: REGARDING THE ORDER IN WHICH YOU COMPLETE YOUR FORMS

If this unit's emissions release point is a new "vertical release point" (stack). You must create and complete a BAW AQ Stack Form for that new stack prior to completing a Fuel Burning Device, Process or Incinerator form. The stack drop down-menu present in these three forms will not contain the new stack and you will be unable to validate any of these forms and will be forced to Save and then Exit that form. You will have to return to complete it after validating the new stack for the replacement stack.

A. STACK DESCRIPTION

NOTE: In general the information requested below will be pre-populated from MassDEP's database.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

TIP: If you obtained a plan approval for the stack you are reporting you will have received two documents from MassDEP: a plan approval letter and a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. Facility Identifiers

The name and identifying numbers of the facility that you are reporting.

a. Facility Name
b. DEP Account number
c. Facility AQ Identifier

This will be pre-populated from the information on your BAW AQ Facility Information Form.

NOTE: You cannot change the facility name on this form. To change the facility's name you must contact your MassDEP Regional Office FMF Data Manager.

CAN I CHANGE THE RESPONSES TO THE STACK IDENTIFIER FIELDS?

eDEP allows you to change the name (A.2.a) and give your own number (A.2.b) to each stack. MassDEP keeps track of the stacks by the DEP number (A.2.c) and therefore you cannot change it.

2. Stack Identifiers:	If this is a new stack: Assign the stack a name/number in order to uniquely identify it. If this is an existing stack: Assign or change the stack name/number in order to uniquely identify it. If this is an existing stack, the information will be pre-populated but you may change it to better identify it for your records.
a. Facility's choice of stack name	A unique name of your choice that will allow you to recognize this stack on future reports.
b. Facility's stack number	A unique number or code of your choice that will allow you to recognize this stack on future reports. *Example: Boiler #1, Emergency Generator #2, Fire Pump #3 etc.*
c. DEP stack #	A unique number assigned by MassDEP that allows MassDEP to recognize the stack on future reports. If this is a new stack the field is locked – MassDEP will assign this number. If this is an existing stack, the information will be pre-filled for existing stacks. .
3. Stack type: Check the box	Vertical Vertical with rain cap/sleeve
3.b Combined stacks	Enter the number of stacks being combined on this form.
WHEN CAN STACKS BE COMBINED ON ONE FORM?	You may report multiple stacks on one stack form in the following situations: (1) When the units that emit through these stacks are combined -- for example, where several small boilers are combined and they each have their own stacks, then report all of those stacks on one Stack form and enter the number of stacks in the Combined Stacks field. Describe the particular situation in the Notes field of the Stack form. (2) When one unit has multiple stacks -- again, describe the configuration in the Stack form Notes field. (3) When there are several identical stacks at the facility. If the stacks are exactly identical, then they may be reported on one Stack form.
HOW SHOULD THE DATA BE REPORTED?	In (1) and (2) above, the data for the stacks may not be identical: In the name, indicate that the stacks are combined by using the word "combined". For dimensions, give the largest. For exit velocity and temperature, give the highest/lowest. If materials are not the same, describe in "other". Explain in Section C: Notes which stacks have been combined (list them) and any issues or oddities about the combined stack, include the locations of the combined stacks if they are not in the same building at the facility.
4. Dimensions:	Enter the stack dimensions
Height in feet above the ground	Valid range: 1 through 1300
Internal Diameter in feet	Valid range: 0.01 through 300
5. Gas exit velocity:	This is the range of speeds in feet per second with which the gas exits the stack.
Low end – feet per second	Valid range 0.06 through 1000

High end – feet per second	Valid range 0.06 through 1000
6. Exit temperature	This is the range of temperature in degrees Fahrenheit at which the gas exits the stack.
Low end – ° Fahrenheit	Valid range 50 through 4000
High end – ° Fahrenheit	Valid range 50 through 4000
7. Stack liner material:	Check the appropriate box, if other describe Metal Brick refractory Other: Describe "other "
8. Decommission date –if applicable (mm/dd/yyyy)	Complete only if the stack was permanently removed or replaced any time before December 31st of the year of record. Enter a decommission date in Question 8 if the stack was been **permanently removed**. If the decommissioned stack operated in the year of record, the emissions from that stack must be included in this package. Therefore stacks "decommissioned" in this package will remain on the list of stacks for this year of record. They will NOT appear on the NEXT year of record package.
WHEN / HOW TO DELETE (DECOMMISSION) A STACK?	Delete a stack when it is permanently taken out of service by entering a Decommission Date (A.8). You must complete the form for this year of record, but eDEP will know to remove it from your next year of record package. **NOTE:** Enter a Decommission Date ONLY when ALL of the stacks have been removed. If only a portion of the stacks have been removed, then just adjust the number in the Combined Stacks field to reflect the current number of stacks.

B. EMISSION UNITS ASSOCIATED WITH STACK

These fields are provided for information only. You cannot change them on this form.

They show which emission units are associated with this stack based on your facility's existing data PRIOR to this package being submitted. Any changes made to the EU forms will not be displayed here until this package has been submitted.

If you want to change these associations, you must do so on the appropriate emission unit form:

- Fuel Burning Device (AP1)
- Process (AP2)
- Incinerator (AP3)

Note: Any changes you make to these associations will not show up on this form until you have submitted your entire package to MassDEP.

C. NOTES AND ATTACHMENTS

1 Notes:	Information that will help MassDEP understand your submission. . If an attachment will be associated with this form, identify any additional, explanatory material that you are choosing to submit This section is to provide any additional information for any of your responses on this form. If you are including a document, identify any explanatory material the facility is choosing to submit along with this form.
2. Attachments	If the material can be sent electronically, check the box for the appropriate form. Check this box if additional information will be included as an attachment. If the additional material can be sent electronically (20 MB document), check the box on the appropriate form. You will be prompted just before Step 2 for the attachment.

NOTE: You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this emission unit, click on the next form you see listed under the form you were just working on.

BAW AQ TOTAL EMISSIONS STATEMENT (TES) INSTRUCTIONS & HAZARDOUS AIR POLLUTANT (HAP) LIST

PURPOSE	This summarizes the annual air pollution emissions for the facility.
WHO MUST FILE THIS FORM?	This form must be completed for each facility's package.
HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?	One form is necessary when the submittal contains a -form for an emission unit. If the submittal is only amending/correcting information on the Facility Information, Stack or Tank forms, the TES form is not necessary.
WHEN IS THIS FORM APPLICABLE?	This form applies to all filers except if the submittal is amending/correcting information on the Facility Information, Stack or Tank forms.
	This form applies to all filers except if the submittal is amending/correcting information on the Facility Information, Stack or Tank forms, the Total Emission Statement form is not necessary.
CAUTION: REGARDING THE ORDER IN WHICH YOU COMPLETE YOUR FORMS	The TES is the last form you should complete and validate in your package. Any changes made to the following forms: Fuel Burning (AP1), Process (AP2), Incinerator (AP3), and GHG Only (if submitting a SRGHG package) will REQUIRE the revalidation of your TES form.

A. ANNUAL TOTAL EMISSIONS STATEMENT

This form automatically calculates the facility's total actual and potential emissions based on the information you provided on Fuel Burning Device (AP1), Process (AP2), Incinerator (AP3), and GHG Only (if submitting a SRGHG package with EUs not required to report SR emissions) forms. If you need to correct your actual or potential emissions, return to the individual emission unit forms to correct those numbers.

1. Facility Identifiers	The name and identifying numbers of the facility that is reporting.
a. Facility Name b. DEP Account number c. Facility AQ Identifier	This will be pre-populated from the information on your Facility Information Form. **NOTE:** You cannot change the facility name on this form. To change your facility's name, you must contact your MassDEP Regional Office FMF Data Manager.
2. Total Emissions	This form calculates the facility's actual and potential emissions by adding the emissions data entered in the form for each emission unit. The results are displayed in the table below. **NOTE:** You must validate the forms for each emission unit before the results displayed below can be calculated. To enter Hazardous Air Pollutant (HAP) emissions, see Section D.

PM10-FIL	PM2.5-FIL	PM-CON	SO2	PB
VOC	NH3	CO	NO2	

HOW ARE TOTAL EMISSIONS CALCULATED?	When you open this form, eDEP sums the emission data from all of the emission units at this facility for which you have submitted data for the current year of record. **These fields are locked; you cannot edit these values**. The values displayed in the table will not **reflect total facility emissions until all emission units at your facility are updated for the current year of record**.
3. Facility-wide Emission Limits	Please enter facility-wide annual or short-term emission limits below, if any. To enter HAP restrictions, see Section D.
Total Emissions -	This form reports the total actual and potential facility-wide emissions for each contaminant (excluding 'other') you reported on the forms that you have filled out and validated for this year. (If you have not filled out and validated all of the required emission unit forms, the data on this form will understate your facility-wide emissions.) Contaminants include: PM10-FIL PM2.5-FIL PM-CON SO2 PB VOC NH3 CO NO2 **NOTE**: GHG emissions (if submitting a SRGHG package) will appear in Section B: Greenhouse Gas below
Actual for previous year	For repeat filers: This information will be provided by the system. For new emission units: This information is not applicable.
Actual for year of record Potential emissions at maximum capacity	The information will have been calculated automatically on the basis of the information you provided on the Fuel Burning Device (AP1), Process (AP2), and Incinerator (AP3) forms.
	NOTE: All fields associated with "facility-wide max allowed" information **are unlocked.**
Facility-wide max allowed (permitted) emissions-annual:	Provide this information if there is a plan approval or a regulation with a facility-wide restriction on emissions.
Facility-wide max allowed (permitted) emissions- short term: Short term period:	Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list **NOTE:** This applies to restrictions on emissions ONLY. Restrictions on fuel use, raw material use or products are reported in Question 4. **NOTE:** Only enter restrictions that apply to the entire facility. Many restrictions apply only to a particular emission unit. Those have already been reported on the emission unit's form.
Basis: DEP approval number or regulation:	Provide either the plan approval or regulation establishing the emission limits

WHEN DO I COMPLETE THE "MAX-ALLOWED" (PERMITTED) EMISSION FIELDS?	Complete the "maximum allowed emissions" fields if there is an annual or a short-term emission limitation applicable to the facility as a whole expressed in either a DEP approval or a regulation. Be sure to enter the approval number or regulation under "Basis". For example, a facility-wide emission limit from a plan approval such as 45 TPY of oxides of nitrogen, or 99 tons per year of particulate matter.
IF THE RESTRICTION IS MENTIONED IN MULTIPLE APPROVALS:	Enter the most recent approval number for the restriction.
4. If you have facility-wide fuel, raw materials, or product restrictions, complete the following:	Provide the requested information for each facility-wide restriction, otherwise leave blank DEP approval number (most recent) Amount of restriction Restriction units (e.g., gallons, tons) Per unit time (e.g. yr, mo, wk, day, hr) Description of fuel, raw material or product restricted. **NOTE:** Only enter restrictions that apply to the entire facility. Many restrictions apply only to particular emission units. Those have already been reported on the emission unit's forms.
WHEN DO I COMPLETE THE FACILITY-WIDE RESTRICTION FIELDS?	Complete Question 4 fields, if there is an annual or a short-term restriction (other than emissions), which applies to the whole facility. For example, a facility-wide limit from a plan approval for xxx gallons of fuel per month and xxxx gallons per year OR a limit on the hours of operation or a production limit.
IF THE RESTRICTION IS MENTIONED IN MULTIPLE APPROVALS:	Enter the most recent approval or regulation.

B. GREENHOUSE GAS (GHG) LIST (FOR SR ONLY PACKAGE)

WHAT ARE THE THRESHOLDS FOR REPORTING GREENHOUSE GASES?	There are no thresholds – if your facility, to the best of your knowledge, uses or emits any amount of these substances, check the appropriate box/es. **NOTE**: This does NOT include refrigeration equipment and other similar sealed systems (unless the facility services or manufactures such systems). This also does NOT include products of combustion.
Please indicate which – if any - of the following greenhouse gas chemicals are used and/or emitted by checking the appropriate box:	Use Emitted **Check the appropriate box(es) for each chemical.** Nitrous oxide N2O Hydrofluorocarbons (HFC's) Sulfur Hexafluoride (SF6) Perfluorocarbons (PFCs)

B. GREENHOUSE GAS (GHG) EMISSIONS (FOR SRGHG PACKAGE)

1. Total GHG Emissions:

The form automatically calculates the total actual emissions, totals for each individual GHG expressed as carbon dioxide equivalent (CO_2e), and the facility's total CO_2e by adding the emissions data entered in the form for each emission unit. You must validate the forms for each emission unit before the total values can be calculated.

CO_2	CH_4	N_2O	SF_6	Refrigerants-CO_2e
CO_2e-CO_2	CO_2e-CH_4	CO_2e-N_2O	CO_2e-SF_6	CO_2e-Refrigerants

Actual for previous year

For repeat filers: This information will be provided by the system.
For new emission units: This information is not applicable.

Actual for year of record

The information will have been calculated automatically on the basis of the information you provided on the Fuel Burning Device (AP1), Process (AP2), Incinerator (AP3), and GHG Only

CO_2e for previous year

For repeat filers: This information will be provided by the system.
For new emission units: This information is not applicable.

CO_2e for year of record

The information will have been calculated automatically on the basis of the information you provided on the Fuel Burning Device (AP1), Process (AP2), Incinerator (AP3), and GHG Only

2. Total CO_2e Emissions

Actual for previous year

For repeat filers: This information will be provided by the system.
For new emission units: This information is not applicable.

Actual for year of record

The information will have been calculated automatically on the basis of the information you provided on the Fuel Burning Device (AP1), Process (AP2), Incinerator (AP3), and GHG Only

C. HAZARDOUS AIR POLLUTANT (HAP) LIST

WHAT IS A HAP?

Hazardous Air Pollutants (HAPs) are those labeled as such by the US EPA under Section 112 of the Clean Air Act as listed in Section C of this form.

NOTE: for the purposes of this section (C), HAPs do not include products of combustion, components of a fuel, or materials used in a sealed system such as a condenser.

WHAT ARE THE THRESHOLDS FOR REPORTING HAPS IN THIS SECTION?

If you use 500 GALLONS or more OR use 1 TON or more OR emit more than 1 TON of any individual Hazardous Air Pollutant (HAP) listed per year, check the appropriate boxes. Do not include products of combustion, components of a fuel, or materials used in a sealed system such as a condenser when estimating your emissions of an individual HAP.

1. Does your facility use any of the Hazardous Air Pollutant chemicals regulated under Section 112 of the Clean Air Act listed below and on the following pages?

Check the appropriate yes or no box

If no, skip to Section D

If yes, place a check in the use box for all chemicals that you use and in the emit box for all chemicals that you emit.

Use Emitted

List of Hazardous Air Pollutants (HAP)

NOTE: In general you emit all chemicals that you use. If you emit a chemical you must, by definition also "use" it.

D. HAZARDOUS AIR POLLUTANT EMISSIONS

NOTE: for the purposes of this section (D), HAPs do not include products of combustion, or components of a fuel.

1. Does the facility have the potential to emit (PTE) 10 tons of any single listed Hazardous Air Pollutant (HAP)

Answer Yes or No as appropriate.

Potential emissions are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations.

See the Appendix C: Example Calculations.

CAUTION: Pay CLOSE attention to the "potential emissions" calculations, because potential emissions help to define the regulatory requirements to which your facility is subject.

For example,

- ✓ *If your facility-wide potential emissions exceed the major source thresholds for any air contaminant including HAPs, you are required to obtain an air operating permit pursuant to 310 CMR 7.00: Appendix C, or to restrict your emissions through a federally enforceable permit (RES) pursuant to (310 CMR 7.02(9)). Contact your MassDEP regional office if you exceed a major source threshold and you have not filed an application for an air operating permit or a RES. The names and addresses of the Regional Offices are listed in Appendix F.*
- ✓ *Similarly, if your potential emissions of Hazardous Air Pollutants (HAPS) exceed the applicable Maximum Achievable Control Technology (MACT) standard threshold (for most standards, this is a major source threshold) in 40 CFR Part 63 as of the substantive compliance date for that standard, EPA policy states that your facility would NOT be allowed to restrict your potential emissions below the applicable MACT threshold. Thus, according to EPA policy, unless you restrict your facility's potential emissions to under the threshold BEFORE the substantive compliance date, your facility would be required to comply with the MACT standard. Furthermore, as a consequence of being subject to a MACT standard, you would be required to obtain an operating permit for your facility, pursuant to 310 CMR 7 Appendix C. The list of MACT standards and their substantive compliance dates can be found in Appendix E.*

DO YOU NEED AN AIR OPERATING PERMIT?

If you answer yes to Questions 1 or 2, the facility exceeds the applicability thresholds for the federally mandated operating permit program. Contact your Regional MassDEP Permit section **for information.**

2. Does the facility have the potential to emit (PTE) a total of 25 tons of any combination of listed Hazardous Air Pollutants (HAPs)?

Answer Yes or No, as appropriate.

Please refer to the cautions about potential emissions in the Question D1 above.

ARE YOU SUBJECT TO TURA?

If you manufacture, process, or otherwise use more than 10,000 lbs of any one Toxics Use Reduction (TURA) chemical during the calendar year you may be subject to TURA reporting. Certain PBT chemicals have lower reporting thresholds. Visit the MassDEP TURA website at https://www.mass.gov/guides/massdep-toxics-use-reduction-program for more information.

3. Does the facility have a restriction on total HAPS?

Answer Yes or No, as appropriate.

You must answer Yes, if you have any restriction on any facility-wide or emission unit restriction on any HAP.

NOTE for Municipal Waste Combustors: Your facility has restrictions on certain HAPS. You must answer yes.

4. Are you required to report HAP emissions for any other reason? (e.g. a permit condition)	Answer Yes or No, as appropriate.
5. If you answered "yes" to any of the Questions 1 – 4 above, eDEP will generate additional pages in which you may enter those emissions.	If you answered no, proceed to E. Notes and Attachments. If you answered yes, proceed to E. Notes and Attachments. Validate the form by selecting [Error Check]: the system will identify and force you to correct any mistakes before it will "accept" the form and return you to the <Transaction Overview> page. Once this form is validated, the system will provide additional forms for entering HAP emissions. To continue your work on this form, click on the <TES HAP> form, you see listed under the form you just completed.

E. NOTES AND ATTACHMENTS

1 Notes:	Information that will help MassDEP understand your submission. . If an attachment will be associated with this form, identify any additional, explanatory material that you are choosing to submit
2. Attachments	This section is to provide any additional information for any of your responses on this form, including any child forms. If you are including a document, identify any explanatory material the facility is choosing to submit along with this form. If the material can be sent electronically, check the box for the appropriate form. Check this box if additional information will be included as an attachment. If the additional material can be sent electronically (20 MB document), check the box on the appropriate form. You will be prompted just before Step 2 for the attachment.

NOTE: You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this submittal, click on the next form you see listed under the form you were just working on.

NOTE: If HAP emissions' reporting is not required, you have completed the TES Form. See section: COMPLETION OF YOUR SUBMITTAL If HAP emissions' reporting is required, you must complete the forms for Section F and Section G

F. HAZARDOUS AIR POLLUTANT EMISSIONS

(YOU WILL FIND THIS SECTION IN A SEPARATE FORM UNDER THE TES FORM IF YOU NEED TO REPORT HAPS).

Emissions (in tons/year): Enter the actual and unrestricted potential emissions for your largest single HAP your facility emitted the most of for this year of record. Enter emissions for any additional HAPs, and then validate the form by selecting [Error Check]. Do not enter Total HAP emissions here. eDEP will present another form for Total HAPs after you validate this form.

Max Allowable Emissions (in tons per year): Enter only restrictions (limits) that apply to the entire facility. If there are no such restrictions, leave blank.

WHERE DO YOU ENTER TOTAL HAP EMISSIONS?	On the NEXT form, Section G. After you validate this form, eDEP will generate the HAP Total form, where you enter your facility-wide total HAP emissions and any FACILITY-WIDE restrictions.
WHICH HAPS MUST BE REPORTED?	If you answered YES to any of the Questions D1-D4, enter your individual HAP emissions for the year in the fields provided. If you need an additional HAP form, eDEP will generate the forms needed to enter the data. **NOTE**: You also need to report emission for any HAP for which you have an emissions restriction. This form reports your total actual and potential facility-wide HAPS emissions for this year, as well as, displays the HAP emissions reported on your previous submittal. There is a set of lines for 6 HAPS. If you have more HAPS then you must: 1. Fill in the information for the first six. 2. Click YES, in response to the question at the bottom of the form: "Do you have emissions to report for individual HAPs in addition to those above?" 3. Validate the form by selecting [Error Check] and correct any errors. 4. The system will generate an additional HAP emissions forms (you will be returned to the <Transaction Overview> page). 5. Complete and validate that form.
HAP name	Provide the HAP name
CAS # for individual HAPs, if applicable:	Write the CAS number, if the HAP is an individual chemical. This can be found on the MSDS for the material.
Actual for previous year	For repeat filers: This information will be provided by the system. For new HAPs: This section is not applicable.
Actual for year of record	Calculate and enter this information.

Potential Emissions (in Tons)

Calculate this information. (See Appendix C: Example Calculations.)

The definition of Potential Emissions in 310 CMR 7.00 takes into account the restrictions of a plan source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. If you have a restriction that meets one of these conditions for this emission unit AND raw material/finished product/fuel, you may list that pollutant's potential emissions number here AND in the next section. However, if this emission unit AND raw material/finished product/fuel does not have a restriction, the number entered here should be based on maximum uncontrolled emissions

Potential emissions are the maximum uncontrolled emissions assuming the emission unit operates at maximum capacity 24 hours per day, 7 days a week, 52 weeks a year (8760 hours per year)..

NEW *You may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design* ***only if*** *the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of de minim is sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).*

ENTER "0" if the unit was decommissioned prior to this year of record because the unit did not represent potential emissions during the year of record.

IMPORTANT: *For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.*

What are potential emissions?

The emissions resulting from the maximum operation of the equipment irrespective of any regulatory restrictions. **(8760 hrs X Max Firing Rate X Emission Factor)**

NEW: you may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.

Facility-wide permitted--annual: Facility-wide permitted---– short term: Short term period: Basis: DEP approval number or regulation:	Enter the requested information. Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list **NOTE:** This applies to facility-wide HAP restrictions ONLY. **NOTE:** Only enter restrictions that apply to the entire facility. Many restrictions apply only to particular emission units. Those should have already been reported on the emission unit form.

NOTE: You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. To continue your work on this submittal, click on the next form you see listed under the form you were just working on.

G. HAZARDOUS AIR POLLUTANT (HAP) EMISSIONS TOTAL

Total HAP Emissions (in tons/year): Enter the actual, potential, and permitted TOTAL HAP Emissions your facility emitted for this year of record. It also displays prior year total facility-wide HAP emissions

Max Allowable Emissions (in tons per year): Enter only restrictions (limits) that apply for TOTAL HAP Emissions to the entire facility. If there are no such restrictions, leave blank.

1. Total HAP Emissions	Enter your Total HAP emissions for the facility below. Please enter any facility-wide restrictions on Total HAPs below as well.
a. Actual for previous year	For repeat filers: This information will be provided by the system. For new facilities: This information is not applicable.
b. Actual for year of record	Calculate and enter this information.

c. Potential Emissions (in Tons)

Calculate this information. (See Appendix C: Example Calculations.)

The definition of Potential Emissions in 310 CMR 7.00 takes into account the restrictions of a plan source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. If you have a restriction that meets one of these conditions for this emission unit AND raw material/finished product/fuel, you may list that pollutant's potential emissions number here AND in the next section. However, if this emission unit AND raw material/finished product/fuel does not have a restriction, the number entered here should be based on maximum uncontrolled emissions

Potential emissions are the maximum uncontrolled emissions assuming the emission unit operates at maximum capacity 24 hours per day, 7 days a week, 52 weeks a year (8760 hours per year)..

NEW *You may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design* ***only if*** *the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of de minim is sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).*

ENTER "0" if the unit was decommissioned prior to this year of record because the unit did not represent potential emissions during the year of record.

IMPORTANT: *For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.*

What are potential emissions?

The emissions resulting from the maximum operation of the equipment irrespective of any regulatory restrictions. **(8760 hrs X Max Firing Rate X Emission Factor)**

NEW: you may apply controls and restrictions to calculation the potential emissions only under the following conditions (see 310 CMR 7.00 Definitions, potential emissions): any physical or operational limitation on the capacity of the unit to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design **only if** the limitation is specifically stated in the facility's or stationary source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations, or in the case of *de minim is* sources, in records established and maintained at the facility pursuant to 310 CMR 7.02(2)(b).

IMPORTANT: For each pollutant where your potential emission is based on controls and/or restrictions, you MUST also update the field "maximum allowed emissions – annual" with this same value.

d. Max allowed emissions (permitted) -annual:	Enter the requested information.
e. Max allowed emissions (permitted) – short term: f. Short term period:	Maximum short term emissions allowed pursuant to your permit or plan approval or regulatory restriction based on a short term period of day, hour, week, month or Million BTUS. Select the appropriate response from the drop down list **NOTE:** Only enter restrictions that apply to the entire facility. Many restrictions apply only to particular emission units. Those have already been reported on the emission unit forms **NOTE:** This applies to facility-wide HAP restrictions ONLY. Restrictions on fuel use, raw material use or products are reported in TES Form Section A Question 4.
g. Basis for max allowed emissions:	DEP approval number or regulation.

NOTE: You must click [Error Check] now to move on to the next form. The system will force you to make any necessary corrections

Once you have made all of the required corrections you will be returned to the <Transaction Overview page>. See section: COMPLETION OF YOUR SUBMITTAL

COMPLETION OF YOUR SUBMITTAL

RESPONSIBLE OFFICIAL'S (RO) SIGNATURE

Once the Total Emissions Statement (TES) Form has been validated, it will be necessary for the (RO) to electronically sign the document. In most cases, this will require the preparer to share the document with the RO.

SHARING A PACKAGE

The Share feature allows you to assign rights to edit, sign, or submit a package –

To share your package:

1. From the <Transaction Overview page>, select Share Transaction.
2. On the Share Submittal page, select the add button
3. When Add button selected, enter the Responsible Official's nickname in the "Share With" field, for "Role" select Editor&Signer (this allows the RO to edit, sign & submit the package), and include an end date for sharing the submittal.
4. Select the Add button again at the bottom of the page
5. The RO's first and last name with the role will appear in the Shared With field.
6. Once you have confirmed the RO contact information is correct, select the back button to return to the <Transaction Overview page>.

NOTE: In order for the RO to sign and submit the package, assign the role of Editor & Signer

ELECTRONICALLY SIGNING YOUR PACKAGE

To electronically sign the package, the RO will need to sign in using his own username and password. Once signed in, he can access source registration package from his home page. It should be a package with the status "Work in Progress". Once the "Active" package is opened, the RO will need to "click" on "Step 2 Acceptance (Signature)".

Once inside the Step 2 process, the RO needs to click on the checkbox "CERTIFICATION FOR ALL FORMS IN THIS PACKAGE." By checking this box, you are certifying that the information contained within the submittal is complete and correct to the best of your knowledge. The RO will then need to type his name in the appropriate area. The date should have pre-populated with the correct date; however, if not type in the correct date. The RO will then need to "Accept" the submittal.

SUBMITTING YOUR PACKAGE.

After accepting the submittal, the RO can proceed to Step 3 and submit the package by "clicking" on "Step 3 Submit".

This completes the reporting process.

PRINTING A COPY/SAVING AN ELECTRONIC COPY

There is only one job left to complete. Print out or electronically save a copy of the submittal so that it is readily accessible if it is ever necessary to reference the document. This can be done by "clicking" on the link "Download" found on your my eDEP page and following the instructions listed on that page. Because the documents are "processed to be printed" in the order the requests are received, it may take a while to complete this task. You can log out and sign back in at a later date to finish printing a copy, saving an electronic copy, or both.

IMPORTANT: You may be requested to present your emissions report during an inspection of your facility or at any other time upon request by MassDEP.

APPENDICES

SOURCE REGISTRATION and/or GREENHOUSE GAS PACKAGE

APPENDIX A: DEFINITIONS

ACTUAL EMISSIONS

Actual Emissions means the rate that an emission unit or facility discharges air contaminants into the ambient air. This can be calculated on a daily, weekly, monthly, ozone season, 12-month rolling, calendar year basis or other time period as determined by the requirements of the applicable regulation(s). Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or
combusted during the selected time period including the efficiency of pollution control equipment, if present.

AIR CONTAMINANT

AIR CONTAMINANT means any substance or man-made physical phenomenon in the ambient air space and includes, but is not limited to, dust, flyash, gas, fume, mist, odor, smoke, vapor, pollen, microorganism, radioactive material, radiation, heat, sound, any combination thereof, or any decay or reaction product thereof.

AREAS OF CRITICAL CONCERN

Towns for which there are more stringent emission fuel standards:

Adams
Amherst
Arlington
Athol
Attleboro
Auburn
Belmont
Boston
Boylston
Braintree
Brookline
Cambridge
Canton
Chelsea
Chicopee
Dalton
Dedham
East Longmeadow
Easthampton
Everett
Fall River
Fitchburg
Gardner
Grafton
Greenfield
Hadley
Haverhill
Holden
Holyoke
Lawrence
Lee
Leicester
Leominster
Longmeadow
Lowell
Ludlow
Lynn
Malden
Medford
Melrose
Millbury
Milton
Needham
New Bedford
Newburyport
Newton
North Adams
Northampton
Orange
Palmer
Peabody
Pittsfield
Quincy
Revere
Salem
Sandwich
Saugus
Shrewsbury
Somerset
Somerville
Southbridge
Springfield
Stoneham
Taunton
Wakefield
Waltham
Ware
Watertown
Webster
West Boylston
West Springfield
Westfield
Weymouth
Winchester
Winthrop
Woburn
Worcester

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

BACT means an emission limitation based on the maximum degree of reduction of any regulated air contaminant emitted from or which results from any regulated facility which the Department, on a case-by-case basis taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems and techniques for control of each such contaminant. The best available control technology determination shall not allow emissions in excess of any emission standard established under the New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants or under any other applicable section of 310 CMR 7.00, and may include a design feature, equipment specification, work practice, operating standard, or combination thereof.

CALCULATION METHOD TYPE

The method used to determine the Source Registration emissions.
The methods are assigned the following codes:

DESCRIPTION	
Continuous Emission Monitoring System	
Engineering Judgment	
Material Balance	
Stack Test (no Control Efficiency used)	
Manufacturer Specification	
Site-Specific Emission Factor (no Control Efficiency used)	
Vendor Emission Factor (no Control Efficiency used)	
Trade Group Emission Factor (no Control Efficiency used)	
Stack Test (pre-control) plus Control Efficiency	
USEPA Emission Factor (pre-control) plus Control Efficiency	Used for auto-calculation
S/L/T Emission Factor (pre-control) plus Control Efficiency	
Site-Specific Emission Factor (pre-control) plus Control Efficiency	
Vendor Emission Factor (pre-control) plus Control Efficiency	
Trade Group Emission Factor (pre-control) plus Control Efficiency	
Other Emission Factor (pre-control) plus Control Efficiency	

The method used to determine the Greenhouse Gas emissions.
The methods are assigned the following codes:

CODE	DESCRIPTION	
GHG-TCR EF	General Reporting Protocol EF[10]	
GHG-CEMS	Continuous Emission Monitoring System Data	
GHG-EPA EF	EPA GHG Emission Factor	Used for auto-calculation
GHG-MatlBalance	Emissions Based on Material Balance	
GHG-User EF	User Provided GHG Emission Factor	

CHEMICAL ABSTRACT SERVICE (CAS) NUMBER

The number assigned by the Chemical Abstract Service to each individual chemical compound.
NOTE: HOCs, HYCs, VOCs all are individual chemical compounds and have a CAS number. Formulations and fuels are mixtures of chemicals and do NOT have CAS numbers. The individual components of the formulation have CAS numbers however, and these numbers are listed on the MSDS for the formulation.

[10] The Climate Registry's General Reporting Protocol and emission factors are available on the TCR website (https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/)

CLEAN AIR ACT CHEMICAL (CAA CHEMICAL)	An air contaminant regulated by the Federal Clean Air Act. This includes criteria air pollutants, Hazardous Air Pollutants (HAP) pursuant to 42 U.S.C. 7401, Section 112 or any other substance regulated as a criteria pollutant, or any substance regulated pursuant to a New Source performance Standard (NSPS) under 40 CFR 60, or pursuant to a National Emission Standard for Hazardous Air Pollutants (NESHAPs) under 40 CFR 61 and 63.
COMBUSTION DEVICE	Combustion device means all equipment, including, but not limited to, thermal incinerators, catalytic incinerators, flares, boilers, and process heaters used for combustion of organic vapors. **NOTE**: For purposes of submitting a Source Registration package, any air pollution control device that uses fuel to operate is NOT listed as an individual emission unit. Instead it is identified as a control device in response to a question for the emission unit.
CRITERIA POLLUTANT	One of the following compounds regulated by the Federal Clean Air Act and 310 CMR 7.0: ozone (O3), PM10, sulfur oxides measured as sulfur dioxide (SO2), nitrogen dioxide (NO2), volatile organic compounds (VOC) as non-methane hydrocarbons, carbon monoxide (CO) or lead (Pb), or any other air contaminant for which national ambient air quality standards have been adopted.
EMISSION UNIT (EU)	Any individual piece of equipment from which any air contaminant is emitted to the ambient air space, *for example, an individual boiler, a single degreaser, etc.*
ENFORCEABLE LIMIT	An operating restriction in a federally enforceable permit, plan approval, or certification, or a state or federal air pollution control regulation.
FACILITY-WIDE POTENTIAL EMISSIONS:	Facility-wide potential emissions are the maximum emissions that a *facility* is legally allowed to release. Normally facility-wide potential emissions equal the sum of the potential emissions for each emission unit. However some facilities have enforceable limits that imposed facility-wide restrictions on their operating rates or emissions. In this case facility-wide potential emissions equal the facility- wide restrictions. *Examples include facilities with 25% or 50% Certifications pursuant to 310 CMR 7.02 (11). Facility-wide potential emissions of a contaminant for such facilities equal 25% of the major source threshold for that air contaminant or 50% of the major source threshold for that contaminant, respectively. See Major Source Thresholds for the thresholds for each air contaminant.*

FEDERALLY ENFORCEABLE

FEDERALLY ENFORCEABLE means all limitations and conditions which are enforceable by the Administrator, including but not limited to, those requirements developed pursuant to 40 CFR Part 60 (New Source Performance Standards), 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants), 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants for Source Catergories), 40 CFR Parts 72 through 80 (Acid Rain Program) and requirements within the Massachusetts State Implementation Plan. Federally enforceable requirements also include those requirements in operating permits issued either pursuant to 40 CFR Part 71 or under 310 CMR 7.00: *Appendix C*, (except those listed as state enforceable only) any permit requirements established pursuant to 40 CFR 52.21 (Prevention of significant deterioration of air quality), under plan approval requirements in either 310 CMR 7.02 or 7.00: *Appendix A*. Federally enforceable limitations and conditions can also be contained in either a permit restriction issued under 310 CMR 7.02(9), (10), (11) or equipment installed under 310 CMR 7.03, that has been made federally enforceable after the EPA has approved 310 CMR 7.02 and 7.03 into the Massachusetts SIP.

FEDERAL POTENTIAL EMISSIONS

FEDERAL POTENTIAL EMISSIONS or FEDERAL POTENTIAL TO EMIT means the maximum capacity of a stationary source to emit a regulated pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a regulated pollutant, including air pollution control equipment and restriction on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. To be federally enforceable, a limitation on any facility's capacity to emit a pollutant shall include testing, monitoring, and recordkeeping procedures sufficient to demonstrate compliance with the limitations. Examples of permit or SIP limitations generally considered federally enforceable are limitations on the allowable capacity of the equipment, requirements for the installation, operation and maintenance of pollution control equipment, limits on hours of operation, and restrictions on amounts of materials combusted, stored, or produced. To be federally enforceable, restrictions on operation, production, or emissions must be stated in terms of the shortest averaging time that can be used as a practical matter, *e.g.*, pounds per hour, or gallons per hour, and they must be tied to other enforceable operating restrictions at the source. General limitations on potential to emit, such as yearly limits (*e.g.*, in tons per year), by themselves, are not considered federally enforceable. The use of hourly, daily, weekly, or monthly rolling limits are generally acceptable. Any federally enforceable limitations or conditions must be enforceable as a practical matter, ensure continuous compliance with the restrictions, and include adequate testing, monitoring, and record keeping procedures sufficient to demonstrate compliance with the limitations or conditions of an applicable federally enforceable document described above. Fugitive emissions, to the extent quantifiable, are included in determining the potential to emit of a stationary source. Secondary emissions do not count in determining the potential to emit of a stationary source.

FEDERAL REGISTER (FR)

The Federal publication that lists notices of proposed and promulgated federal regulations.

FORMULATION

Any mixture containing an organic compound. A formulation is an organic material.
NOTE: A formulation will not have a CAS number, because it is a mixture. However, the CAS number and chemical characteristics of each organic compound chemical included in the mixture will be found on the MSDS for the formulation provided by the supplier.

GHG ONLY

When GHG emission reporting is required but this activity is not subject to SR emissions reporting; i.e. fugitive emissions for Natural Gas Distribution System.

GLOBAL WARMING POTENTIAL (GWP)

Global Warming Potential is a measure of the heat-trapping capacity of a given greenhouse gas relative to that of carbon dioxide. Carbon dioxide has a GWP of 1. The GWPs used in eDEP for GHG emission reporting are based on a 100-year time horizon from the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (AR4) (2007).
https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

HALOGENATED ORGANIC COMPOUND (HOC)

The following specific chemicals are reported as HOCs:

HALOGENATED ORGANIC COMPOUNDS (HOCs)

CAS #	Chemical Name
127184	Perchloroethylene (tetrachloroethylene)
75092	Methylene chloride (chloromethane)
75694	CFC-11 (trichlorofluoromethane)
75718	CFC-12 (dichlorodifluoromethane)
75456	CFC-22 (chlorodifluoromethane)
75467	FC-23 (trifluromethane)
76142	CFC-114 (dichlorotetrafluoroethane)
76153	CFC-115 (chloropentafluoroethane)

HAZARDOUS AIR POLLUTANT (HAP)

An air contaminant means an air contaminant designated by EPA under 42 U.S.C. 7412, as modified by EPA in 40 CFR Part 63, Subpart C (40 CFR 63.60 through 63.69).. HAPs are listed on the BAW AQ Total Emissions Statement (TES) & Hazardous Air Pollutants Form – Section C.

INSIGNIFICANT ACTIVITIES

Activities and their associated emissions that do not need to be reported in the source registration

1. Open burning conducted in accordance with the requirements of 310 CMR 7.07(2), (3)(a) and (3)(e);
2. Office activities and the equipment and implements used therein, such as typewriters, printers, and pens;
3. Interior maintenance activities and the equipment and supplies used therein, such as janitorial cleaning products and air fresheners; this does not include any cleaning of production equipment or activities regulated by 310 CMR 7.18;
4. Bathroom and locker room ventilation and maintenance;
5. Copying and duplication activities for internal use and for support of office activities at the facility;
6. The activities not regulated by 310 CMR 7.18 in maintenance shops, such as welding, gluing, soldering;
7. First aid or emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation;
8. Laundry operations that service uniforms or other clothing used at the facility that are not regulated by 310 CMR 7.18;
9. Architectural maintenance activities conducted to take care of the buildings and structures at the facility, including repainting, reroofing, and sandblasting;
10. Exterior maintenance activities conducted to take care of the grounds of the facility, including parking lots and lawn maintenance;
11. Food preparation to service facility cafeterias and dining rooms;
12. The use of portable space heaters which reasonably can be carried and relocated by an employee;
13. Liquid petroleum gas (LPG) or petroleum fuels used to power the facility's mobile equipment and not otherwise regulated by the Department;
14. Emergency vents not subject to the accidental release regulations.
15. Non-process related surface coating and painting which exclusively use nonrefillable aerosol cans;
16. Vacuum cleaning systems used exclusively for commercial or residential housekeeping;
17. Ventilating systems used exclusively for heating and cooling buildings, for the comfort of people living or working within the building serviced by said system, which EPA has determined need not be contained in an operating permit;
18. Ventilating and exhaust systems for laboratories, including hoods, used:
    a. by academic institutions for academic purposes.
    b. by hospitals and medical care facilities used for medical care purposes and medical research only.:
    c. by laboratories which perform laboratory scale activities as defined by OSHA, excluding commercial laboratories that provide laboratory services for third parties.
    d. by facilities for quality assurance and quality control testing and sampling activities.
19. surface coating and printing processes used exclusively for educational purposes in educational institution excluding those emission units regulated by 310 CMR 7.18; and
20. kilns or ventilating hoods for art or ceramic curricula at colleges, primary or secondary schools.

LOWEST ACHIEVABLE EMISSION RATE (LAER)

LAER means, for any source, the more stringent rate of emissions based on the following:

(a) The most stringent emissions limitation which is contained in any state SIP for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or

(b) The most stringent emissions limitation which is achieved in practice by such class or category of stationary source. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within a stationary source.

In no event shall LAER allow a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable pursuant to applicable New Source Performance Standards of 40 CFR Part 60.

MAJOR FACILITY THRESHOLD

The emission threshold for being classified as a major facility. An owner/operator of a facility with potential to emit (PTE) equal to or greater than those listed below, is required to apply for an Air Operating permit pursuant to 310 CMR Appendix C, or obtain a restriction of their facility's potential to emit (PTE) an air contaminant pursuant 310 CMR 7.02(9) or a 25%/50% Certification pursuant to 310 CMR 7.02(11).

Pollutant	Major Source Threshold in Tons per Year (TPY)
VOC	Potential to emit 50 TPY
NO_X	Potential to emit 50 TPY
SO_2	Potential to emit 100 TPY
PM10	Potential to emit 100 TPY
PM2.5	Potential to emit 100 TPY
CO	Potential to emit 100 TPY
HAPS	Potential to emit 10 TPY of any one HAP OR 25 TPY of all HAPs

MATERIAL SAFETY DATA SHEET (MSDS)

A fact sheet listing the chemical components and the chemical, physical, hazard, and toxic characteristics of any formulation or chemical compound. Chemical manufacturers are required to prepare MSDS sheets and ship them with each chemical product they sell.

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

NSPS means Standards of Performance for New Stationary Sources adopted by the U.S. Environmental Protection Agency and contained in 40 CFR 60, and subsequent revisions as specified in the Regulations. Any emission testing to be compared with NSPS must be conducted in accordance with applicable procedures as specified in 40 CFR 60, or by another method which has been demonstrated to the satisfaction of the Department as being equivalent.

NUMBERING STACKS, POINTS, AND SEGMENTS

MassDEP's computer system that stores source registration data, automatically assigns numbers to a facility's stacks, points (emission units) and segments (fuels, organic materials, and other raw materials used in the emission unit).

The numbers the database assigns are always sequential and are automatically updated if a point, stack or segment is added at the facility. As a result, the number assigned to a particular point, stack or segment will not change from year to year, if a facility alters its equipment or raw materials.

However segment numbering is a little different than point and stack numbering. Points and stacks are assigned a unique number: there is only one stack assigned the number "1", only one stack assigned the number "2" etc. Similarly, regardless of what stack the point is assigned to, there is only one point assigned the number "1", only one point assigned the number "2", etc. However, segment numbering happens WITHIN a point, so a given segment number can be repeated.

For example:

The facility above uses one degreasing chemical: "Clene-Sol"; three different paints in the "Roll Coater": "red paint", "green paint" and "blue paint"; and two paints in "Spray Coater B" "yellow paint" and the same "red paint" that is used in the "Roll Coater".

Point #1 "Degreaser" would have one segment, numbered in the following way:

Segment #1: "Clene-Sol"

Point #2 "Roll Coater" would have three segments, numbered in the following way

Segment #1: "red paint"

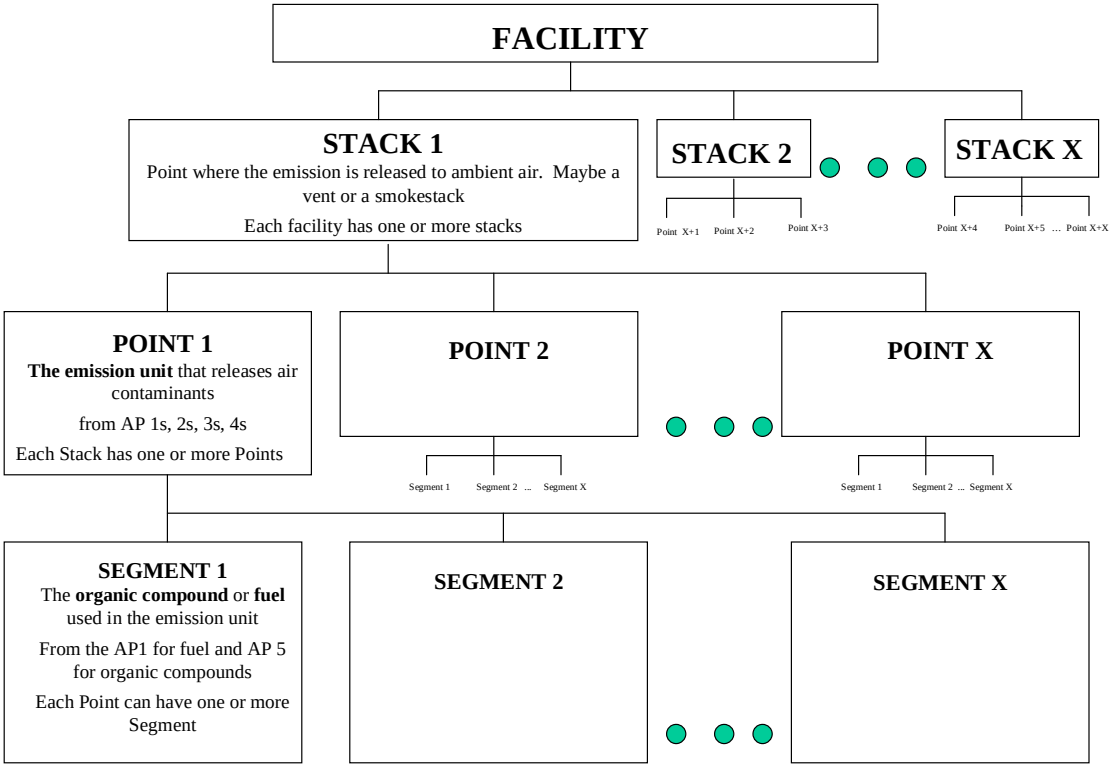
Segment #2: "green paint"

Segment #3: "blue paint"

Point #3 "Spray Coater B" would have two segments, numbered as follows:

Segment #1: "yellow paint"

ORGANIZATION OF FACILITY DATA ON THE COMPUTER PRINTOUT



Segment #2:"red paint"

NOTE: The example illustrates three important points.

1. Note that three different segments were assigned the number "1", and two different segments were assigned the number "2".
2. Note that even though the "red paint" is the exact same formulation, it still shows up as two different segments because it is used in two different emission units.
3. Note that even though the "red paint" is the exact same formulation, it can be assigned two different segment numbers. (It could just as easily have been assigned # 1 in both Point #2 and Point #3, however, because "red paint" was entered first when the data for Point #2 was entered into the database, and was entered second when the data for Point #3 was entered intothe database, "red paint" became Segment #1 in Point #2, and Segment #2 in Point #3.

ORGANIC COMPOUND

Any chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbonates, metallic carbides, and ammonium carbonates.
NOTE: VOCs, HOCs, and HYCs are all Organic materials.

ORGANIC MATERIAL

Any organic chemical compound or mixture that contains an organic chemical compound. A formulation is an organic material.
NOTE: All VOCs, HOCs, and HYCs and mixtures containing VOCs, HOCs, or HYCs are organic materials.

OZONE SEASON

The 153 days from May 1 to September 30 (approx 22 weeks).

PERMITTED EMISSIONS

The maximum emissions allowed under the terms of the applicable permit, plan approval, or regulation.

PERMITTED BY RULE

Plan Approval by Rule (310 CMR 7.02(2)(b)24) is defined as an emission unit listed in 310 CMR 7.03 provided that the emission unit fully conforms to the design, operation, maintenance, and record keeping requirements of 310 CMR 7.03.

POINT

An emission unit.

POLLUTANT

An air contaminant regulated by MassDEP

POTENTIAL EMISSIONS

Potential emissions are the estimated emissions at a site. Potential emissions determine your facility's regulatory status and classification. Potential emissions also make it possible to estimate the worst-case ambient air quality in order to make a conservative estimate of the facility's impact on ambient air quality. The Source Registration program utilizes two types of potential emissions: unrestricted potential emission and maximum allowable, or restricted, potential emissions.

UNRESTRICTED POTENTIAL EMISSIONS
The uncontrolled emissions estimated at a facility assuming the facility operates continuously at maximum capacity. The potential emissions equal the emissions that would result if the facility:

- ✓ Emitted air contaminants at the maximum emissions rate per unit of product produced or unit of raw material used,
- ✓ While operating at the maximum capacity,
- ✓ For the maximum number of hours per year possible (8760 hours per year).

MAXIMUM ALLOWABLE OR RESTRICTED POTENTIAL EMISSIONS
The maximum allowable emissions under the terms of a federally enforceable plan approval or permit, or, if no plan approval or permit is required, under the applicable regulations. The potential emissions equal the emissions that would result if the facility:

- ✓ Emitted air contaminants at the maximum allowable emissions rate per unit of product produced or unit of raw material used,
- ✓ While operating at the maximum allowable capacity,
- ✓ For the maximum allowable number of hours per year possible. (8760 hours per year).

GROUND RULES:

A) When determining the MAXIMUM ALLOWABLE EMISSIONS RATE of each air contaminant:

1. The maximum emissions or emission rate may be restricted under a federally enforceable limit contained in a plan approval (BWPAQ-01, 02 or 03), Restricted Emission Status (BWPAQ-09), other permit *(e.g., Prevention of Significant Deterioration (PSD)),* regulation *(e.g., restriction on the sulfur content of fuel in 310 CMR 7.05),* or in a state or federal air pollution control regulation. If your plan approval or the applicable regulation specifies a maximum emission rate, use that rate to calculate your potential emissions.

2. Assume that the facility ONLY uses the fuel, the coating, or other raw material that generates the most pollution per amount used.

   For example,

   - ✓ *If you are permitted to use natural gas and oil, assume you use nothing but natural gas when you calculate your potential NO_X emissions, and assume you use only oil when calculating your potential SO_2 emissions.*
   - ✓ *If you are permitted to use three different coatings, and one has a VOC of 5 pounds per*

gallon, another has a VOC content of 4 pounds per gallon and the third has a VOC content of 3 pounds per gallon, assume you only use the 5 pound per gallon formulation when calculating your potential VOC emissions.

3. Assume the facility operates any pollution control equipment required by a plan approval or a regulation in accordance with the terms of the plan approval or regulation.

   For example,

   - ✓ *The facility plan approval specifies that the facility will operate a bag house that removes TSP at 95% efficiency, and the facility generates 100 pounds of pollution per 1000 pound of product produced before it is controlled. The maximum emission rate used to calculate potential emissions would equal 5.0% of 100 or 5 pounds per 1000 pounds of product produced.*

   CAUTION: If the owner/operator of a facility has installed air pollution control equipment voluntarily, (that is, there is no regulatory or plan approval requirement to install and operate the equipment) then the pollution control equipment may NOT be considered when determining the facility's potential emissions. The pollution control equipment does not reduce a facility's potential emissions because the facility is legally allowed to operate without the control equipment.

B) When determining the MAXIMUM OPERATING RATE and MAXIMUM ALLOWABLE HOURS OF OPERATION:

The maximum operating rate may be restricted under an enforceable limit contained in a plan approval (BWPAQ-01, 02 or 03), Restricted Emission Status (BWP AQ-09), other permit *(e.g., Prevention of Significant Deterioration (PSD))*, regulation *(e.g., restriction on the hours of operation of an emergency generator in 310 CMR 7.02)* or in a state or federal air pollution control regulation. These restrictions may be expressed as:

- ✓ Allowable capacity of the equipment
- ✓ Limits on the hours of operation
- ✓ Limits on the pounds or gallons of materials used

If such a restriction exists, use that restriction when calculating the maximum allowable or restricted potential emissions.

If the facility is NOT restricted by permit or regulation:

- ✓ The maximum operating rate is the maximum rate at which the equipment can be operated *(e.g., the maximum firing rate of a boiler)*
- ✓ The maximum hours of operation are 8760 *(i.e., [24 hours per day] x [365 days per year])*.

C) When a PERMIT OR PLAN APPROVAL RESTRICTION APPLIES TO SEVERAL EMISSION UNITS but not the whole facility, you may divide that usage among the emission units, as you wish for purposes of this inventory. Please note that you have done so in the comment section of the form.

For example,

A facility has three boilers. Normally boilers 1 and 2 operate and boiler 3 is held in standby mode. The three boilers are restricted to burning 40,000 gallons of oil per month based on a 12 month rolling average. For purposes of completing this form, the facility may assume the fuel would be burned in equal amounts in boilers 1 and 2 for determining potential emissions. Alternatively, they may use any other formula to apportion the potential emissions to the different emission units.

NOTE: Apportioning the maximum allowed emissions among the emission units that share a restriction does NOT place a further restriction on your operating flexibility.

D) A facility may also have additional restrictions that LIMIT FACILITY-WIDE EMISSIONS. Facility-

wide potential emission equal the facility-wide limit imposed on the facility.

For example,

- ✓ *If your facility has filed a certification form with the department pursuant to 310 CMR 7.02 (50% or 25% emission cap notification) potential emissions from your facility would equal 50% of the major threshold for the pollutants if your facility holds a 50% certification. Potential emissions would equal 25% of the threshold if your facility holds a 25% certification unless the facility has more stringent emission limits under plan approval(s).*

REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT)

RACT means the lowest emission limitation that a particular facility is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

RESPONSIBLE OFFICIAL (RO)

IF THE FACILITY HAS THIS TYPE OF OWNERSHIP:	THE RO MUST BE:
Sole proprietorship	The sole proprietor
Partnership	A general partner with the authority to bind the partnership
Corporation or a non-profit corporation	A corporate official with authority to bind the corporation such as a: ✓ President, ✓ Secretary, ✓ Treasurer, ✓ Vice president of the corporation in charge of a business function, ✓ Any other person who performs similar policymaking or decision-making functions of the corporation.
Municipality or other public agency	A principal executive officer A ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.

SEGMENT

The fuel, organic material, or other raw material that is used in an emission unit, and whose use results in the release of air contaminants.

STACK

The stack is a vertical air emission release point whose height is greater than 10 feet above the roof of the building.

NOTE: Downward facing vents, horizontal vents, goosenecks, and fugitive releases are not "stacks". Also, some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall). For purposes of Source registration Reporting, this type of release point is not considered a stack.

VOLATILE ORGANIC COMPOUND (VOC)

VOLATILE ORGANIC COMPOUND is any compound of carbon that participates in atmospheric photochemical reactions. For the purpose of determining compliance, VOC is measured by the applicable reference test methods specified in 40 CFR 60. 310 CMR 7.00: VOLATILE ORGANIC COMPOUND includes all organic compounds EXCEPT the following:

CAS Number	Chemical Name
67641	acetone,
124685	AMP (2-amino-2-methyl-1-propanol)
506876	ammonium carbonate,
540885	t-butyl acetate
630080	carbon monoxide,
124389	carbon dioxide,
463796	carbonic acid, N/A metallic carbides or carbonates,
616386	dimethyl carbonate,
N/A	metallic carbides or carbonates,
74828	methane,
74840	ethane,
79209	methyl acetate,
71556	methyl chloroform (1,1,1-trichloroethane),
107313	methyl formate
75092	methylene chloride, (dichloromethane),
98566	parachlorobenzotrifluoride (PCBTF),
127184	perchloroethylene (tetrachloroethylene),
108327	propylene carbonate,
75694	CFC-11 (trichlorofluoromethane),
75718	CFC-12 (dichlorodifluoromethane),
75456	CFC-22 (chlorodifluoromethane),
76131	CFC-113 (trichlorotrifluoroethane),
76142	CFC-114 (dichlorotetrafluoroethane),
76153	CFC-115 (chloropentafluoroethane),
593704	HCFC-31 (chlorofluoromethane),
306832	HCFC-123 (2,2-dichloro-1,1,1-trifluoroethane),
354234	HCFC-123a (1,2-dichloro-1,1,2-trifluoroethane),
2837890	HCFC-124 (2-chloro-1,1,1,2-tetrafluoroethane),
1717006	HCFC-141b (1,1-dichloro-1-fluoroethane),
75683	HCFC-142b (1-chloro-1,1-difluoroethane),
1615754	HCFC-151a (1-chloro-1-fluoroethane),
422560	HCFC-225ca (3,3-dichloro-1,1,1,2,2-pentafluoropropane),
507551	HCFC-225cb (1,3-dichloro-1,1,2,2,3-pentafluoropropane),
75467	HFC-23 (trifluoromethane),
75105	HFC-32 (difluoromethane),
354336	HFC-125 (pentafluoroethane),
359353	HFC-134 (1,1,2,2-tetrafluoroethane),
811972	HFC-134a (1,1,1,2-tetrafluoroethane),
27987060	HFC-143a (1,1,1-trifluoroethane),
75376	HFC-152a (1,1-difluoroethane),
353366	HFC-161 (ethylfluoride),
690391	HFC-236fa (1,1,1,3,3,3-hexafluoropropane),
679867	HFC-245ca (1,1,2,2,3-pentafluoropropane),
24270664	HFC-245ea (1,1,2,3,3-pentafluoropropane),
431312	HFC-245eb (1,1,1,2,3-pentafluoropropane),
460731	HFC-245fa (1,1,1,3,3-pentafluoropropane),
431630	HFC-236ea (1,1,1,2,3,3-hexafluoropropane),
431890	HFC-227ea (1,1,1,2,3,3,3-heptafluoropropane)
406586	HFC-365mfc (1,1,1,3,3-pentafluorobutane),
138495428	HFC 43-10mee (1,1,1,2,3,4,4,5,5,5-decafluoropentane),
1691174	HFE-134 (HCF2OCF2H),
78522471	HFE-236cal2 (HCF2OCF2OCF2H),

188690780	HFE-338pcc13 (HCF2OCF2CF2OCF2H),
188690779	H-Galden 1040X or H-Galden ZT 130 (or 150 or 180), (HCF2OCF2OCF2CF2OCF2H),
375031	HFE-7000 or n-C3F7OCH3 (1,1,1,2,2,3,3-heptafluoro-3-methoxypropane),
163702076	HFE-7100 or C4F9OCH3 (1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane),
163702087	(CF3)2CFCF2OCH3 (2-(difluoromethoxymethyl)-1,1,1,2,3,3,3- hepta-fluoropropane),
163702054	HFE-7200 or C4F9OC2H5 (1-ethoxy-1,1,2,2,3,3,4,4,4- nonafluorobutane),
163702065	(CF3)2CFCF2OC2H5 (2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3- hepta-fluoropropane),
297730939	HFE-7500 or HFE-s702 or T-7145 or L-15381 (3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane),
754121	HFO-1234yf (2,3,3,3-tetrafluoropropene),
29118249	HFO-1234ze (trans-1,3,3,3-tetrafluoropropene),
N/A	Cyclic, branched, or linear, completely fluorinated alkanes,
N/A	Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,
N/A	Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations,
N/A	Cyclic, branched, or linear, completely methylated siloxanes,
102687650	SolsticeTM 1233zd(E) (trans-1-chloro-3,3,3-trifluoroprop-1-ene),
N/A	Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

APPENDIX B: LIST OF ACRONYMS

ACRONYM	DEFINITIONS / EXPLANATIONS / COMMENTS
AP- 42	Reference to manual containing emission factors (https://www.epa.gov/chief)
APCE	Air Pollution Control Equipment
AQ	Air Quality
AQCR	Air Quality Control Region
BACT	Best Achievable Control Technology
BAW	Bureau of Air & Waste
BTU or Btu	British Thermal Unit - a measure of energy
BAW AQ 01	Limited Plan Approval permit application
BAW AQ 02	Non-Major Comprehensive Plan Approval permit application
BAW AQ 03	Major Comprehensive Plan Approval permit application
BAW AQ 09	Restricted Emission Status Plan Approval permit application
BAW AQ CAA- HAPS	CAA List of hazardous air pollutants by chemical name with CAS#
BAW AQ Form	Air Pollution reporting form or permit/plan approval application
CAA	Clean Air Act
CAS	Chemical Abstract Service
CFC(s)	Chlorofluorocarbons - Class I ODC
CFR	Code of Federal Regulation
CF	Cubic Feet
CMR	Code of Massachusetts Regulations
CO	Carbon Monoxide
CPA	Comprehensive Plan Approval
DEP	Department of Environmental Protection - Massachusetts
DEQE	Department of Environmental Quality Engineering, now MassDEP
EF	Emission Factor
ENF	Environmental Notification Form
EPA	Environmental Protection Agency - Federal
EPCRA	Emergency Planning and Community Right-to-Know Act
EU	Emission Unit
FC(s)	Fluorocarbons
FIL	Filterable
FIP	Federal Implementation Plan
FPS	Feet per Second
FR	Federal Register
FT	Feet
FUE	Fuel Utilization Equipment
FUF	Fuel Utilization Facility
GHG	Greenhouse Gas
GWP	Global Warming Potential
HAP	Hazardous Air Pollutants
HCFC	Hydrochlorofluorocarbons - Class II ODS
HVLP	High Volume Low Pressure
HOC	Halogenated Organic Compounds
HYC	Hydrocarbons
ID	Identification
LAER	Lowest Achievable Emission Rate
LBS	Pounds
LCON	Code for the Regional Office
LPA	Limited Plan Approval
MACT	Maximum Achievable Control Technology
MassDEP	Massachusetts Department of Environmental Protection (DEP)
MMBtu	Million British Thermal Units
MMCF	Million Cubic Feet

MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NESHAPS	National Emission Standard for Hazardous Air Pollutants
NH3	Ammonia
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides - "knocks"
NSPS	New Source Performance Standard
ODS	Ozone Depleting Substances
OP	Operating Permit (310 CMR 7.00 (Appendix C))
PB	Chemical abbreviation for Lead
PCBTF	Parachlorobenzotrifluoride
PM	Particulate Matter
PM10	Particulate Matter, 10 microns or smaller
PM2.5	Particulate Matter, 2.5 microns or smaller
PPM	Parts per Million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RCRA	Resource Conservation and Recovery Act: program that establishes hazardous waste management rules
REC	Recorder
RES	Restricted Emission Status (310 CMR 7.02(9))
RVP	Reid Vapor Pressure (for gasoline)
SCC	Source Classification Code
SEG	Segment
SIC	Standard Industrial Classification
SIP	State Implementation Plan -- the federally approved regulations, permits and programs that implement the Federal Clean Air Act in the State.
SNAP	Significant New Alternative Policy
SO2	Sulfur Dioxide – chemical abbreviation
SOX	Sulfur Oxides - "socks"
SR	Source Registration
SRGHG	Source Registration and Greenhouse Gas
TPY	Tons per Year
TSP	Total Suspended Particulates
TURA	Toxics Use Reduction Act
USGS	United States Geological Survey
VMS	Volatile Methyl Siloxanes
VOC(S)	Volatile Organic Compounds
WGT	Weight
YR	Year

APPENDIX C: CALCULATIONS

SECTION C.1: ESTIMATING EMISSIONS

SECTION C.1.1: BASIC METHODOLOGY

Apply the formula below to calculate actual and potential emissions

ACTUAL EMISSIONS for ALL facilities are determined by substituting the actual amount of raw material used for the maximum possible hours per year and the maximum capacity as follows:

> ACTUAL EMISSIONS = [APPROPRIATE EMISSION FACTOR] x [ACTUAL RAW MATERIALS USED or ACTUAL HOURS OF OPERATION] x [percent of EMISSIONS NOT CONTROLLED BY AIR POLLUTION CONTROL EQUIPMENT REQUIRED PURSUANT TO A PLAN APPROVAL OR REGULATION]

POTENTIAL EMISSIONS are determined from the following equation:

- IF your facility does NOT have an operating restriction

  POTENTIAL EMISSIONS = [EMISSION FACTOR] x [MAXIMUM CAPACITY] x [8760 hours of operation per year]

  NOTE: 8760 hours per year = (365 days per year) x (24 hours per day)

Example Calculations: Formulas and Example calculations for Process Emissions are provided in Section C.1.2 below. Section C.1.3 has formulas, emission factors, and sample calculations for fuel utilization facilities.

SECTION C.1.2: EXAMPLE CALCULATIONS FOR PROCESS EMISSIONS (FOR SR EMISSIONS REPORTING)

This section is divided into two parts:

- Section C.1.2.1 Example Calculations for Coating Operations Using VOC Coatings
- Section C.1.2.2 Example Calculations for Other Process Emissions.

TABLE C.1.2-1 Wood Products Surface Coating Paint Spray Booth	
EMISSION UNIT DESCRIPTION:	MAXIMUM CAPACITY & EQUIPMENT DESIGN: -Spray gun: 3.0 gallons per hour -Paint: The paint with the highest VOC concentration AS APPLIED contains 5.5 pounds of VOC per gallon **NOTE ON "AS APPLIED":** When calculating VOC emissions, you need to include the VOCs in the coating as purchased as well as any solvents you add to thin it. Thus the MSDS may say that the paint had 5 pounds of VOCs per gallon, but the as applied number is 5.5 lbs. per gallon because of added solvents. You also need to include any solvents you used to clean the production equipment. The paint with the highest solids concentration has 3.5 pounds of solids per gallon of paint -90% overspray ACTUAL OPERATIONS: 5678 gallons of paint as applied (paint plus solvent thinner) used
POLLUTANT	EXAMPLE CALCULATIONS
VOC POTENTIAL EMISSIONS	[3.0 gallons of paint & thinner applied per hour] x [5.5 pounds of VOC per gallon of applied paint] x [8760 hours per year] x [1 ton / 2000 pounds] = *72.3 tons VOC year* *The emission factor for VOCs = All of the VOCs in the applied paint and solvent thinners become VOC emissions Alternatively you can use the formula: [{(Gallons of paint used AS PURCHASED per hour) X (pounds of VOC per gallon AS PURCHASED)} + {(gallons of paint thinner applied per hour) X (pounds of VOC per gallon of paint thinner)}] x [8760 hours per year] x [1 ton / 2000 pounds] = *tons VOC per year*
ACTUAL EMISSIONS	[5678 gallons of as applied paint used] x [5.5 pounds of VOC per gallon] x [1ton / 2000 lbs.] = *15.6 tons* You can also use the alternative formula: [{Gallons of paint used (as purchased)} x {pounds of VOC per gallon (as purchased)}] + [{gallons of solvent thinner used} x {pounds of VOC per gallon of solvent thinner}]
PARTICULATE (TSP) POTENTIAL EMISSIONS	[3.0 gallons of paint (as applied) per hour] x [3.5 pounds of solids per gallon (as applied)] x [0.90 (the weight fraction of the paint that is over sprayed)] x [8760 hours per year] x [1 ton / 2000 pounds] = *41.4 tons* * The emission factor for spray painting equals the amount of solids in the paint as applied multiplied by the weight fraction of the paint that is over sprayed.
ACTUAL EMMISIONS	[5678 gallons of paint used] x [3.5 pounds of solids per gallon] x [0.90 (the weight fraction of the paint that is over sprayed] x [1ton / 2000 lbs.] = *8.9 tons*

TABLE C.1.2-3: **Formulas For "Other Process Emissions":** **NOTE: You must obtain the applicable emission factors from stack testing, your permit or plan approval for emission units, the applicable regulations, or, if no other information is available, from EPA's AP-42/FIRE Emission Factors** https://www.epa.gov/chief	
POTENTIAL EMISSIONS	[Maximum processing capacity in lbs. per hour] x [Emission Factor (lbs. of contaminant emitted per lb. of raw material processed] x [8760 hours of operation per year] x 1 ton/ 2000 lbs. = tons of contaminant emitted per year.
ACTUAL CONTAMINANT EMISSIONS	[Actual pounds of raw material processed in lbs.] X [Emission factor in lbs. of contaminant per pound of raw material processed] x [1 ton / 2000 lbs. = tons of contaminant emissions

SECTION C.1.3: FORMULAS AND SAMPLE CALCULATIONS FOR FUEL UTILIZATION FACILITIES

This section is divided into three parts:

- ✓ Section C.1.3.1: Formulas for Estimating Emissions from Fuel Utilization Facilities using Emission Factors
- ✓ Section C.1.3.2: Example Calculations for a Boiler

Section C.1.3.1: Formulas for Estimating Emissions from Fuel Utilization Facilities using Emission Factors

Table C.1.3-1 presents formulas using emissions factors to estimate potential emissions from fuel utilization facilities. There is separate formula for each criteria pollutant, and for when enforceable operating limits exist, and for when they do not exist.

CAUTION ON USING EMISSION FACTORS: There are various sources for emission factors. When calculating potential emissions you MUST use the emission factors developed through stack testing data or if your facility has never been required to conduct a stack test for the emission unit, the emissions limit established as part of your permit or plan approval, emission limits your facility is subject to pursuant to regulations or, if none of the former conditions exist, emission factors from EPA's FIRE Database or AP-42 Emission factors. **NOTE** that the FIRE database is mostly based on the AP-42 Sections and is an easier tool for looking up emission factors. For the most up-to-date FIRE emission factors, please see EPA's website at https://www.epa.gov/chief .

TABLE C.1.3-1

Formulas for calculating Potential and Actual Emissions from Fuel Utilization Facilities using Emission Factors

Air Contaminant	Formula for Estimating Emissions
PARTICULATE MATTER, PM10 and PM2.5	
POTENTIAL EMISSIONS	[EMISSION FACTOR (in lbs. of TSP, PM10 or PM2.5 per 1000 gallons of fuel)] x [% S in the fuel*] x [Maximum rated gallons of fuel per hour / 1000 gallons of fuel] x [8760 hours per year] x [1 ton / 2000 lbs.] = Tons of TSP, PM10 or PM2.5 per year **NOTE**: Particulate emissions can also be calculated from the lbs. of particulate generated per million BTU (MMBtu) heat release potential of the fuel. The example calculations in Table C.1.3-3 below use this method. The formula is: [EMISSION FACTOR (in lbs. of TSP, PM10 or PM2.5 per MMBtu)] x [(BTU's per gallon of fuel**) / 1,000,000 BTU's] x [maximum rated or maximum allowable gallons of fuel per hour] x [maximum allowed or 8760 hours of operation per year] x [1 ton / 2000 lbs.] = Tons of TSP, PM10 or PM2.5 per year. *% S in fuel can be found in fuel analysis **BTU's per gallon of fuel can be found in Table C.1.3-2
ACTUAL EMISSIONS	[EMISSION FACTOR (in lbs. of TSP, PM10 or PM2.5 per 1000 gallons of fuel)] x [% S in the fuel*] x [gallons of fuel used during the year / 1000] x [1 ton / 2000 lbs.] = Tons of TSP, PM10 or PM2.5 per year or [EMISSION FACTOR (in lbs. of TSP, PM10 or PM2.5 per MMBtu)] x [(BTU's per gallon of fuel**) / 1,000,000 BTU's] x [gallons of fuel used during the year] x [1 ton / 2000 lbs.] = Tons of TSP, PM10 or PM2.5 per year

TABLE C.1.3-1 Formulas for calculating Potential and Actual Emissions from Fuel Utilization Facilities using Emission Factors	
Air Contaminant	**Formula for Estimating Emissions**
SOx POTENTIAL EMISSIONS	[EMISSION FACTOR for 1000 gallons of fuel] x [% S in the fuel*] x [Maximum rated gallons of fuel per hour / 1000] x [8760 hours per year] x [1 ton / 2000 lbs.] = Tons of SO_X per year **NOTE**: $S0_X$ emissions can also be calculated from the lbs. of sulfur in the fuel per million BTU (MBTU) heat release potential of the fuel. The example calculations in Table C.1.3-3 below use this method. The formula is: [Lbs. S in the fuel per MMBtu] x [2 (the lbs. of $S0_X$ emitted per lb. of Sulfur in the fuel] x [(BTU's per gallon of fuel**) / 1,000,000 BTU's] x [maximum rated or maximum allowable gallons of fuel per hour] x [maximum allowed or 8760 hours of operation per year] x [1 ton / 2000 lbs.] = Tons of SOx per year *% S in fuel can be found in fuel analysis **BTU's per gallon of fuel can be found in Table C.1.3-2
SOx ACTUAL EMISSIONS	EMISSION FACTOR (in lbs. per 1000 gallons of fuel)] x [% S in the fuel] x [gallons of fuel used during the year / 1000] x [1 ton / 2000 lbs.] = Tons of SOX per year Or [EMISSION FACTOR (in lbs. S in the fuel per MMBtu)] x [2 (the lbs. of $S0_X$ emitted per lb. of Sulfur in the fuel] x [(BTU's per gallon of fuel) / 1,000,000 BTU's] x [gallons of fuel used during the year] x [1 ton / 2000 lbs.] = Tons of SO_X per year
NOx, VOC, CO, PB, NH3 POTENTIAL EMISSIONS	[EMISSION FACTOR (in lbs. Per 1000 gallons)] x [Maximum rated gallons of fuel per hour / 1000] x [8760 hours per year] x [1 ton / 2000 lbs.] = Tons of Contaminant per year
ACTUAL EMISSIONS	[EMISSION FACTOR] x [gallons of fuel used during the year / 1000] x [1 ton / 2000 lbs.] = Tons of Contaminant per year

Section C.1.3-2 Oil Heat Values

TABLE C.1.3-2 Oil Heat Values			
FUEL TYPE	**SULFUR CONTENT % by weight**	**(S) lbs. per million MMBTU**	**HEAT VALUE BTU per gallon**
NO. 6	1% 2.2% 0.5%	0.55 1.21 0.28	147,000 150,000 142,000
NO. 4 or 5	0.5%	0.28	142,000
NO. 5	1%	0.55	147,000
NO. 1 or 2	0.3%	.17	140,000

TABLE C.1.3-3 Example Calculations For A BOILER	

EMISSION UNIT DESCRIPTION:	• Over 3 MMBtu per hour heat input capacity
	  • Particulate emission factor of 0.15 lb. per MMBtu
	  • 1% Sulfur in fuel
	  • Residual Oil # 6 fuel
	• 2 boilers each with a maximum capacity of 23 gallons per hour
	• Maximum possible fuel use: (2 boilers x 23 gallons per hour x 8760 hours per year = 402,960 gallon per year
	• Residual Oil # 6 therefore 147,000 BTU per gallon heat value (from Table C.1.3-2)
	• 1% sulfur content therefore 0.55 lbs. of sulfur per million BTU heat release potential (from Table C.1.3-2).
	• Actual fuel use = 123,456 gallons

POTENTIAL PARTICULATE EMISSIONS	[0.15 lbs. particulate per MMBtu] x [23 gallons of fuel per hour x 2 boilers x 8760 hours per year of fuel] x [147,000 BTU per gallon of fuel / 1,000,0000 BTU] x [1 ton / 2000 lbs.] = *4.4 tons particulates per year*
POTENTIAL PM10 EMISSIONS	[7.18 lbs. PM10 per 1000 gallons of fuel] x [1 (percent S in fuel)] x [23 gallons of fuel per hour x 2 boilers x 8760 hours per year of fuel] x [1 ton / 2000 lbs.] = *1.57 tons PM10 per year*
POTENTIAL SO_X EMISSIONS	[0.55 lbs. S in fuel per MMBtu] x[2 lbs SO_2 per lb S] x [23 gallons of fuel per hour x 2 boilers] x 8760 hours per year] x [147,000 BTU per gallon of fuel / gal] x [1 ton / 2000 lbs.] = *32.6 Tons SO_X per year*
POTENTIAL NO_X EMISSIONS	[55.0 lbs. NO_X per 1000 gallons of fuel] x [23 gallons of fuel per hour x 2 boilers / 1000 gallons of fuel] x [8760 hour per year] x [1 ton / 2000 lbs.) = *11.08 tons NO_X per year*
POTENTIAL VOC EMISSIONS	[1.13lbs. VOC per 1000 gallons of fuel] x [23 gallons of fuel per hour x 2 boilers / 1000 gallons of fuel] x [8760 hours per year] x [1 ton / 2000 lbs.] = *0.23 tons of VOC per year*
POTENTIAL CO EMISSIONS	[5.0 lbs. CO per 1000 gallons of fuel] x [23 gallons of fuel per hour x 2 boilers / 1000 gallons of fuel] x [8760 hours per year] x [1 ton / 2000 lbs.] = *1.01 tons of CO per year*
POTENTIAL LEAD EMISSIONS	[0.0042 lbs. Lead per 1000 gallons of fuel] x [23 gallons of fuel per hour x 2 boilers / 1000 gallons of fuel] x [8760 hours per year] x [1 ton / 2000 lbs.] = *0.000846 tons of Lead per year*

TABLE C.1.3-3 Example Calculations For A BOILER	

EMISSION UNIT DESCRIPTION:	• Over 3 MMBtu per hour heat input capacity
	  • Particulate emission factor of 0.15 lb. per MMBtu
	  • 1% Sulfur in fuel
	  • Residual Oil # 6 fuel
	• 2 boilers each with a maximum capacity of 23 gallons per hour
	• Maximum possible fuel use: (2 boilers x 23 gallons per hour x 8760 hours per year = 402,960 gallon per year
	• Residual Oil # 6 therefore 147,000 BTU per gallon heat value (from Table C.1.3-2)
	• 1% sulfur content therefore 0.55 lbs. of sulfur per million BTU heat release potential (from Table C.1.3-2).
	• Actual fuel use = 123,456 gallons

ACTUAL EMISSIONS	To utilize the above calculation in determining ACTUAL emissions, substitute "ACTUAL GALLONS BURNED per year / 1000" for "[gallons per hour x # of boilers / 1000] x [8760 hours per year]"
ACTUAL EMISSIONS PARTICULATE	[0.15 lbs. particulate per MMBtu] x [123,456 gallons of fuel per year] x [147,000 BTU per gallon / 1,000,0000 BTU] x [1 ton / 2000 lbs.] = *1.4 tons particulates per year*
ACTUAL EMISSIONS PM10	[0.8lbs. PM10 per 1000 gallons of fuel] x [1 (%S in the fuel)] x (123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *0.5 tons PM10 per year*
Actual Emissions PM2.5	[4.67lbs PM2.5 per 1000 gallons of fuel] x [1.12 (1%S in the fuel)+.37) x (123,456 gallons of fuel used / 1000 gallons of fuel] x (1 ton/2000 lbs)= *0.43 tons PM2.5 per year*
ACTUAL EMISSIONS SO_X	[0.55 lbs. S per MMBtu x [2 (lbs. of $SO_{X\ per}$ lb. of S in fuel)] x [147,000 BTU per gallon of fuel / 1,000,0000 BTU] x [123,456 gallons of fuel used] x [1 ton / 2000 lbs.] = *10 tons SO_X per year*
ACTUAL EMISSIONS NO_X	[55.0 lbs. NO_X. per 1000 gallons of fuel] x (123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *3.4 tons NO_X per year*
ACTUAL EMISSIONS VOC	[1.13 lbs. VOC per 1000 gallons of fuel] x (123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *0.1 tons of VOC per year*
ACTUAL EMISSIONS CO	[5.0 lbs. CO per 1000 gallons of fuel] x [123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *0.3 tons CO per year*
ACTUAL EMISSIONS LEAD	[0.0042 lbs. LEAD per 1000 gallons of fuel] x [123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *0.0003 tons LEAD per year*

SECTION C.1.4: EXAMPLE CALCULATIONS FOR GHG EMISSIONS

Table C.1.4-1 presents formulas using emissions factors to estimate greenhouse gas emissions from fuel utilization facilities. There is separate formula for each greenhouse gas.

TABLE C.1.4-1
Formulas for calculating Actual GHG Emissions from Fuel Utilization Facilities using Emission Factors

Air Contaminant	Formula for Estimating Emissions
CO_2, CH_4, N_2O ACTUAL EMISSIONS	[EMISSION FACTOR (in lbs. of CO_2, CH_4, or N_2O per 1000 gallons of fuel)] x [gallons of fuel used during the year / 1000] x [1 ton / 2000 lbs.] = Tons of Contaminant per year

SECTION C.2: THE WEIGHT OF THE VOC, HOC, OR HYC CONTROLLED

The Weight of the VOC, HOC, or HYC Controlled is the amount of the VOC, HOC or HYC that is destroyed in the treatment unit. It equals:

(WEIGHT of the VOC, HOC, or HYC USED) X (OVERALL [treatment] EFFICIENCY)
[Calculations shown below]

"THE WEIGHT OF THE VOC, HOC, or HYC USED" equals

(POUNDS of HOC, VOC or HYC used in FORMULATION) + (POUNDS of HOC, VOC, or HYC used in SOLVENT THINNER).
[Calculation A below] [Calculation B below]

CALCULATION A: The pounds of HOC, VOC, or HYC used in the formulation is calculated as follows:

1) Convert the total annual gallons of the formulation used to pounds:

   (GALLONS of the formulation USED) X (DENSITY of the formulation) = TOTAL POUNDS of formulation USED

2) Determine the pounds of HOC, VOC or HYC used in the formulation:

   (TOTAL POUNDS of formulation USED) X (WEIGHT % of the HOC, VOC, or HYC in the formulation)* = TOTAL POUNDS of HOC, VOC, or HYC used in the formulation

   *[The weight % will equal 1 if the formulation is from organic compounds. The weight % of the HOC, VOC, or HYC can be found on the formulation component MSDSs]

CALCULATION B: The amount of the HOC, VOC or HYC from use of solvent thinners is calculated as follows:

1) Convert the gallons of solvent thinner used to pounds

   (GALLONS of the solvent thinner USED) X (DENSITY of the solvent thinner) = POUNDS of solvent thinner used

2) Determine the pounds of HOC, VOC, or HYC used in solvent thinner

   (POUNDS of solvent thinner USED) X (WEIGHT % of the HOC, VOC, or HYC in the solvent thinner)* = POUNDS of HOC, VOC, or HYC in solvent thinner

   *[The weight % will equal 1 if the solvent thinner is an organic compound. The weight % of the HOC, VOC, or HYC can be found on the MSDS if the solvent thinner is a mixture]

APPENDIX D: AIR POLLUTION CONTROL EQUIPMENT CODES

Control Equipment Identification Codes: Control equipment is used to limit the emission of pollutants to the atmosphere. Numerous types of control equipment may be in place at a facility. For emission statement reporting, your facility is required to report the primary and secondary control equipment. The following list details the different active control equipment and their appropriate code.

019-CATALYTIC AFTERBURNER	139 - SCR (SELECTIVE CATALYTIC REDUCTION)
020-CATALYTIC AFTERBURNER WITH HEAT EXCHANGER	140 - SNCR (SELECTIVE NONCATALYTIC REDUCTION)
021-DIRECT FLAME AFTERBURNER	141 - WET SCRUBBER
022-DIRECT FLAME AFTERBURNER WITH HEAT EXCHANGER	146 - WET ELECTROSTATIC PRECIPITATOR
023-FLARING	147 - INCREASED AIR/FUEL RATIO WITH INTERCOOLING
025-STAGED COMBUSTION	149 - PRE-COMBUSTION CHAMBER
026- FLUE GAS RECIRCULATION029- LOW EXCESS AIR FIRING	154 - SCREENED DRUMS OR CAGES
031-AIR INJECTION	157 – SCREEN
035-MAGNESIUM OXIDE SCRUBBING	201 - KNOCK OUT BOX
036-DUAL ALKALI SCRUBBING	202 - SPRAY DRYER
038-AMMONIA SCRUBBING	203 - CATALYTIC CONVERTER
041-DRY LIMESTONE INJECTION	204 - OVERFIRE AIR
042-WET LIMESTONE INJECTION	205 - LOW NOX BURNER (LNB)
045-SULFUR PLANT	206 - DRY SORBENT INJECTION (DSI, OTHER THAN ACI)
046-PROCESS CHANGE	207 - ACTIVATED CARBON INJECTION (ACI)
048-ADSORPTION - ACTIVATED CARBON OR OTHER	208 –FREEBOARD REFRIGERATION DEVICE
049-LIQUID FILTRATION SYSTEM	209 – GRAVITY COLLECTOR
050-PACKED-GAS ABSORPTION COLUMN	211 – MIST ELIMINATOR
051-TRAY-TYPE GAS ABSORPTION COLUMN	212 - STEAM INJECTION
052-SPRAY TOWER	213 – WATER INJECTION
054-PROCESS ENCLOSED	214 – LOW NITROGEN CONTENT FUEL
056-DYNAMIC SEPARATOR (DRY)	215 - FLUE GAS DESULFURIZATION (FGD)
057-DYNAMIC SEPARATOR (WET)	217 – DUST SUPPRESSION
058-MAT OR PANEL FILTER	218 – ELECTROSTATIC SPRAYING
059-METAL FABRIC FILTER SCREEN (COTTON GINS)	301 – FUEL REBURNING
060-PROCESS GAS RECOVERY	302 – BIOFILTER
063-GRAVEL BED FILTER	303 – CATALYTIC ADDITIVES
064-ANNULAR RING FILTER	304 – ENCLOSED COMBUSTER
065-CATALYTIC REDUCTION	305 – DIELSEL PARTICULATE FILTERS (DPF)
066-MOLECULAR SIEVE	306 – DUCT SORBENT INJECTION
067-WET LIME SLURRY SCRUBBING	307 – FURNACE SORBENT INJECTION
068-ALKALINE FLY ASH SCRUBBING	308 – WET SORBENT INJECTION
069-SODIUM CARBONATE SCRUBBING	309 – LEAK DETECTION AND REPAIR (LDAR) PROGRAM
070-SODIUM-ALKALI SCRUBBING	310 – NON-SELECTIVE CATALYTIC REDUCTION (NSCR)
075-CYCLONE / CENTRIFUGAL COLLECTOR	311 – OTHER POLLUTION PREVENTIVE TECHNIQUE
079-DRY ELECTROSTATIC GRANULAR FILTER (DEGF)	312 – OXIDATION CATALYST
082-OZONATION	313 – SPRAY BOOTH and FILTER
085-WET CYCLONIC SEPARATOR	314 –SPRAY BOOTH and OVERSPRAY ARRESTOR
086-WATER CURTAIN	315 – SPRAY GUNS – HIGH VOLUME, LOW PRESSURE (HVLP)
087-NITROGEN BLANKET	316 –ULTRA LOW NOX BURNERS (ULNB)
088-CONSERVATION VENT	317 –RECUPERATIVE THERMAL OXIDIZER
089-BOTTOM FILLING	318 – PRODUCT SUBSTITUTION
093-SUBMERGED FILLING	319 – REGENERATIVE THERMAL OXIDIZER
095-WHITE PAINT	320 – COMBUSTION DEVICE
096-VAPOR LOCK BALANCE RECOVERY SYSTEM	321 – COVER VENTED TO CONTROL DEVICE
097-SECONDARY SEAL ON FLOATING ROOF TANK	322 – EXTERNAL FLOATING ROOF TANK
099-OTHER CONTROL DEVICE	323 - FIXED ROOF TANK
101-HIGH EFFICIENCY PARTICULATE AIR FILTER	324 - FIXED ROOF TANK VENTED TO CONTROL DEVICE
102 - LOW SOLVENT COATINGS	325 - FIXED ROOF TANK WITH INTERNAL FLOATING ROOF
103 - POWDER COATINGS	326 - FLOATING MEMBRANE COVER
104 - WATERBORNE COATINGS	327 – FLOATING ROOF
109- CATALYTIC OXIDIZER / INCINERATOR	328 - INTERNAL FLOATING ROOF
110 - VAPOR RECOVERY UNIT	329 – MULTIPLE CONTROLS IN SERIES
112 – AFTERBURNER	330 – PRESSURIZED TANK
113 – ROTOCLONE	331 – PROCESS MODIFICATION
119 - DRY SCRUBBER	332 – VAPOR BALANCING

121 - CYCLONES (MULTIPLE) 127 - FABRIC FILTER 128 - ELECTROSTATIC PRECIPITATOR - DRY (DESP) 132 – CONDENSER 133 – THERMAL OXIDIZER / INCINERATOR	333 - THERMAL CATALYTIC OXIDIZER WITHOUT HEAT RECOVERY 334 – ROTARY BED PROTECTOR 335 – PROCESS INCINERATION IN ONSITE UNIT (100% OF EXHAUST GAS) 336 - PROCESS INCINERATION IN ONSITE UNIT (<100% OF EXHAUST GAS) 337 - THERMAL CATALYTIC OXIDIZER

APPENDIX E: EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Information concerning the National Emission Standards for Hazardous Air Pollutants (NESHAPs) can be found on the USEPAs Technology Transfer Network – Air Toxics Website: Rules and Implementation webpage at:

https://www3.epa.gov/ttn/atw/eparules.html

Not only does this webpage have a link to the Emission Standards for Hazardous Pollutant webpage (discussed below), it also contains links to various webpages that discusses Rule Information (such as Residual Risk/Technology Rules, Area Source Standards, New Source Performance Standards (NSPS), Solid Waste Rules, and other portions of the CAA), Implementation Information (PTE, the Consolidated Air Rule (CAR), and Compliance Assurance Monitoring (CAM)), Urban Air Toxics Strategy, and the CAA Air Toxic Requirements.

The Emission Standards for Hazardous Pollutant webpage is located at the following URL:

https://www.epa.gov/stationary-sources-air-pollution/national-emission-standards-hazardous-air-pollutants-neshap-9

This page list the NESHAP or MACT standard, by source category, providing the applicable rule subpart, the date and citation the rule was published in the CFR, the compliance date, and the EPA Project Lead and Compliance Lead contact information. In addition, on this page, there is a link to the actual rule page which provides information on the proposed rule, comments to the proposed rule, amendments to the proposed rule, the final rule, background information documents (BIDs) pertaining to the rule, and Technical Fact Sheets pertaining to the rule.

APPENDIX F: MassDEP REGIONAL OFFICES

MASSDEP REGIONAL FACILITY MASTER FILE (FMF) CONTACTS

Information on MassDEP programs, permits, applications, forms and fees can be found on our website at https://www.mass.gov/orgs/massachusetts-department-of-environmental-protection

Questions about your Annual Compliance Fee

For specific information about your Annual Compliance Fee invoices and payments, please e-mail us at dep.compliance-fees@state.ma.us or call our ***Helpline at 1-888-846-4067.***

To Find the MassDEP regional office that serves your city/town

If you have questions regarding your facility permit status or other regulatory requirements at your facility, contact your regional office. You can determine your region, regional contact information, location and other useful information at http://mass.gov/dep/about/regional.htm.