

**USER'S MANUAL FOR THE  
RACT/BACT/LAER CLEARINGHOUSE (RBLC)  
STANDALONE EDITOR  
VERSION 4.2D**

CLEAN AIR TECHNOLOGY CENTER

SPONSORED BY:

Measurement Policy Group  
Office of Air Quality Planning and Standards  
U.S. Environmental Protection Agency  
Research Triangle Park, North Carolina 27711

Date: July 2010

## **DISCLAIMER**

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## PREFACE

This user's manual was prepared for and funded by the RACT/BACT/LAER Clearinghouse (RBLC),<sup>1</sup> U.S. Environmental Protection Agency (EPA). The RBLC has been established and is maintained by the Clean Air Technology Center (CATC) to assist State and local air pollution control personnel in making control technology determinations and in sharing technology information.

The RBLC provides data on prevention and control technology determinations made primarily by State and local permitting agencies. The Clearinghouse contains over 6,000 determinations that can help the user to identify appropriate technologies to mitigate or treat most air pollutant emission streams. The RBLC was designed to help permit applicants and reviewers make pollution prevention and control technology decisions for stationary air pollution sources and includes data submitted by 50 states and territories in the U.S. on over 200 different air pollutants and 1,000 industrial processes.

The RBLC Standalone Editor allows users who cannot access the RBLC Web Site to enter new data into a standalone program and then send the data to the EPA for inclusion in the RBLC Web Site.

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<sup>1</sup> NOTE: RACT, BACT and LAER are acronyms for different Clean Air Act program requirements combined to create the name "RACT/BACT/ LAER Clearinghouse." RACT, or Reasonably Available Control Technology, is required on existing sources in areas that are not meeting national ambient air quality standards (i.e., non-attainment areas). BACT, or Best Available Control Technology, is required on major new or modified sources in "clean" areas (i.e., attainment areas). LAER, or Lowest Achievable Emission Rate, is required on major new or modified sources in non-attainment areas. However, data in the Clearinghouse is not limited just to sources subject to these requirements. Noteworthy prevention and control technology decisions are included in the RBLC even if they are not related to RACT, BACT, or LAER decisions.

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## SECTION 5.5 RBLC STANDALONE EDITOR

### 5.5.1 INSTALLATION

The RBLC Standalone Editor is an independently executable program without any special software licenses. The Editor runs on an IBM compatible desktop computer with the following minimum requirements:

- Intel Pentium 90MHz or equivalent with 32MB RAM
- Microsoft Windows 95, 98, NT, 2000, ME, XP, Vista, or Windows 7 (Window's XP Compatibility Mode may be required) software environments

**PLEASE NOTE: If you have previously installed the RBLC Standalone Editor and have downloaded a new version for upgrade purposes, you MUST finalize all of your current determinations, generate an upload file, and uninstall the previous version before executing the setup program for the new Editor version. If you do not follow this procedure you WILL lose data and the new version may not function properly.**

To install the Editor, download the Zip file from the RBLC web site. Then, do the following:

1. Un-compress the download file into a temporary directory on your PC. (PKZip and WinZip are examples of the program needed for this operation.)
2. Find the ReadMe file (actually the file is in the directory the ZIP file will create and is called "READ THIS BEFORE INSTALLING OR YOU WILL LOSE DATA!!!.txt") and review the instructions in the file. As you might guess from the title, this step is very important.
3. Find SETUP.EXE in the directory.
4. Run SETUP.EXE and follow the directions in the ReadMe file and on the screen.

After following the program's installation procedure, the program is ready to use.

To uninstall the program,

1. Press the Windows System Tray Start Button.
1. Go to Settings and click on Control Panel.
2. Double-click on Add/Remove Programs.
3. Click on Install/Uninstall Tab.
4. Find RBLC Standalone Editor in list of installed programs and select it.
5. Press Add/Remove Button.
6. Program is now being removed from the PC.
7. Press OK Button to return to Control Panel.
8. Press File/Close to exit from Control Panel. The Upload Files and Archive Files sub-directories and any files located in them will remain after the uninstall process. If you wish to remove them

from your system, they must be removed manually. If you intend to reinstall the Editor with a new version, these files can remain and will not be affected.

### **5.5.2 STARTING THE PROGRAM**

1. Press the Windows System Tray Start Button.
2. Locate and click on RBLC Standalone Editor shortcut in the Windows Menu.

Notes:

The first time the Editor is started, a fresh database is created for storage of new determinations. After creating the new database, the program displays “No existing program database found, created new database” in a message box. Press the OK button to continue.

### **5.5.3 USING THE PROGRAM**

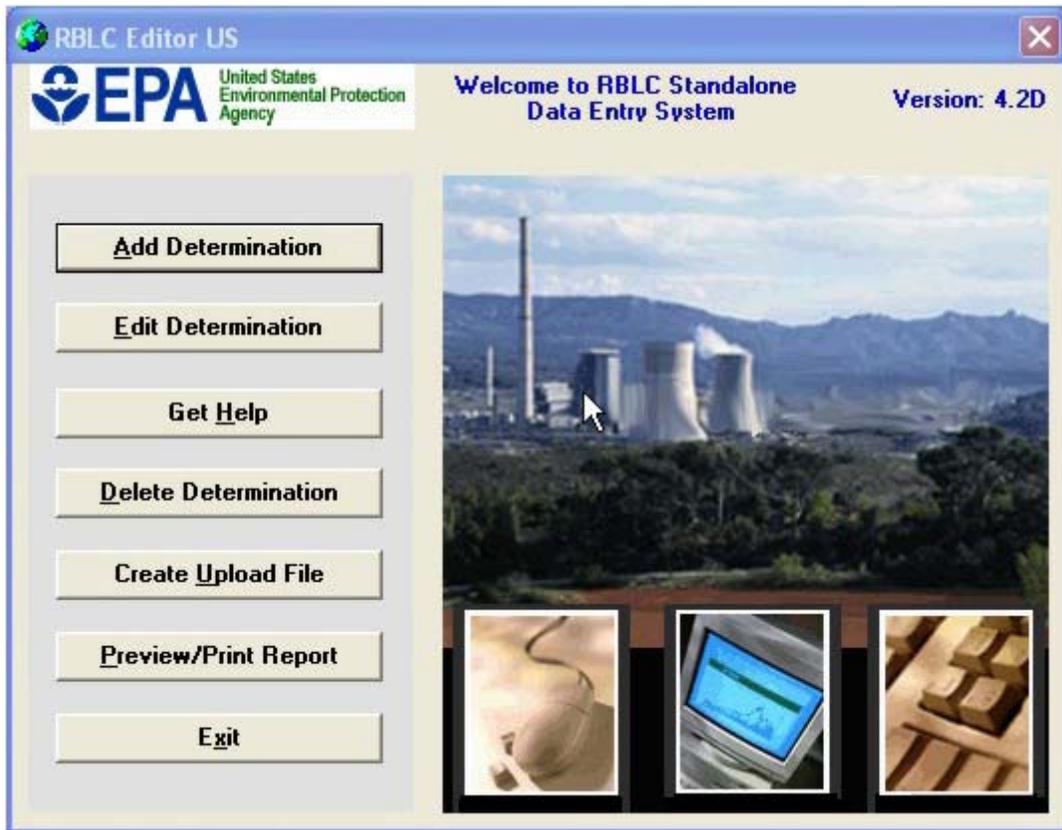
After starting the editor program, the main menu (Figure 5.5-1) displays the following operations:

- Add Determination (add a new determination to the Editor)
- Edit Determination (modify an existing determination in the Editor)
- Get Help (get help on how to use the Editor)
- Delete Determination (delete an existing determination in the Editor)
- Create Upload File (create a file containing the Editor’s data for EPA)
- Preview/Print Report (view or print a list of active determinations in the editor)
- Exit (quit Editor and return to Windows)

When using the editor, you may move the mouse pointer over items in the editor window to display help text near the item. Clicking on the Help button near the top of each window opens the Editor’s Help System.

For keyboard users:

- Use the Tab key to move from one box or button to another.
- To select a button utilizing the underlined letter, simultaneously press the Alt key & the underlined letter key
- In pull-down list boxes, use the F4 key to see items and the down arrow to select an item.



**Figure 5.5-1: Standalone Data Entry System Main Page**

### **5.5.3.1 USING THE EDITOR'S HELP SYSTEM**

The Editor's Help System can be accessed either from the Main Menu by pressing the Get Help button or from any of the Editor windows by pressing the Help button near the top of the window.

When the help system is activated, either the full help document may be read by scrolling down the displayed document, or specific information may be found by entering the text in the Enter Find Text box and pressing the Find button. Repeatedly pressing the Find button changes how the button works - it becomes a Find Next button and hitting it cycles through the document. Use the Print button to print all or part of the help information. To quit using the Help System, press the Quit button.

### **5.5.3.2 ADD A NEW DETERMINATION**

To add a new determination:

1. Go to the Editor's main menu.
2. Press the Add Determination button.

3. In the Select Criteria For Add window, select the state abbreviation (2- characters) from the State pull-down box.
4. Press the ADD Facility button to create a new determination form to enter data or the Cancel button to return to the main menu. (For more information on adding data to this form, please go to Section 5.5.3.4, titled 'Edit An Existing Determination.')

### **5.5.3.3 DELETE AN EXISTING DETERMINATION**

To delete a determination:

1. Go to the Editor's main menu.
2. Press the Delete Determination button.
3. In the Select Criteria For Delete window, use the pull-down list to select the Facility (State, RBLC-ID, Plant Facility) to be deleted.
4. Press the DELETE Facility button to delete it or the Cancel button to return to the main menu.

### **5.5.3.4 EDIT AN EXISTING DETERMINATION**

A complete determination has three parts: the Facility information, at least one Process information entry, and at least one Pollutant information entry. Please review Section 5.5.5, Planning and Preparation, and Section 5.5.6, Data Fields and Formats, for information about data entry requirements.

To start editing a determination:

1. Go to the Editor's main menu.
2. Press the Edit Determination button.
3. In the Select Criteria For Edit window, select the Facility (State, RBLC-ID, Facility) to be edited from the pull-down list.
4. Press the EDIT Facility button to edit it or the Cancel button to return to the main menu.

-- Edit Facility Section --

In Facility section, add or edit data in following text boxes or pull-down list boxes:

**Figure 5.5-2: Facility Data Entry Page**

- Company Name.
- Facility Name.
- Facility Description [This can be details about the facility’s location, operations, processes, emissions or current permit status]
- Facility County and ZIP code [data for the physical location]
- Facility Contact Name, Telephone, and E-mail Address.
- Agency [This is the Issuing Agency (State-Code, Agency Name). Select the correct one from the pull-down box. (If ‘0, SEE NOTES’ is selected, enter the Agency name in the ‘Other Agency Contact Info’ box.)]
- Other Agency Contact Info [The RBLC system will automatically display the current agency contact when the determination is uploaded to the RBLC Web. Use the Other Agency Contact Info box for additional contact information. If ‘See Notes’ is selected, enter the contact’s name and phone number]
- Permit Number [the Permit Number issued by the permitting agency]

- Permit Type [options are selected from the pull down list: A - New/Greenfield Facility; B - Add New Process to Existing Facility; C - Modify Existing Process at Existing Facility; and, D - Both B and C].
- Permit URL [If there is a website pertinent to this specific permit, the URL to it can be entered here]
- Permit Date and Application Acceptance Date [Select the Date button to the right of each date box and using the pull down lists provided in the pop up window. In addition, use the pull down list next to each date to indicate if these date entries are estimated (EST) or actual (ACT) dates.]
- SIC (Standard Industrial Classification) [Select code from SIC pull-down list box].
- NAICS (North American Industrial Classification System) code [Select code from NAICS pull-down list box].
- Facility Registry System (FRS) number. [FRS numbers can be found at: [http://oaspub.epa.gov/enviro/search\\$.startup](http://oaspub.epa.gov/enviro/search$.startup)]
- Other Permitting Info [Enter any explanatory information about the determination].

NOTE: The following fields are automatically generated by the system and cannot be changed:

- Entered Date [This box shows the date the determination was created. (auto-assigned)]
  - Updated Date [This box shows the date the determination was last modified. (auto-assigned)]
- Enter any Affected Boundaries information (sensitive areas affected by the facility's pollutants) by pressing the Add/Edit Affected Boundaries button (you will be asked if you want to save the data you have already entered before the 'Affected Boundaries' window opens)(Figure 5.5-3):
    - To add affected boundary to the table:
      - Select a boundary from the Boundary pull down list box.
      - Enter the distance of your plant from the Boundary (kilometers) in the Distance box.
      - Press the Add button to add it.
    - To delete boundary from the table:
      - Select boundary from the Boundary pull down list box.
      - Press the Delete button to delete it.
    - When using the Add or Delete buttons in the table, the data change is saved automatically. Press the Done button to go back to the previous window.
  - Enter any Facilitywide Emissions Change information (the facility's total emission changes due to the determination) by pressing the Add/Edit Facilitywide Emissions button (you will be asked if you want to save the data you have already entered before the 'Facilitywide Emissions' window opens) (Figure 5.5-4):
    - To add a pollutant to the table:
      - Select a pollutant from the Pollutant pull-down list box.
      - Enter the Emissions Rate Change After Control/Prevention (in T/YR) in the box. The field allows for negative entries for emission reductions.
      - Press the Add button to add the data to the table.

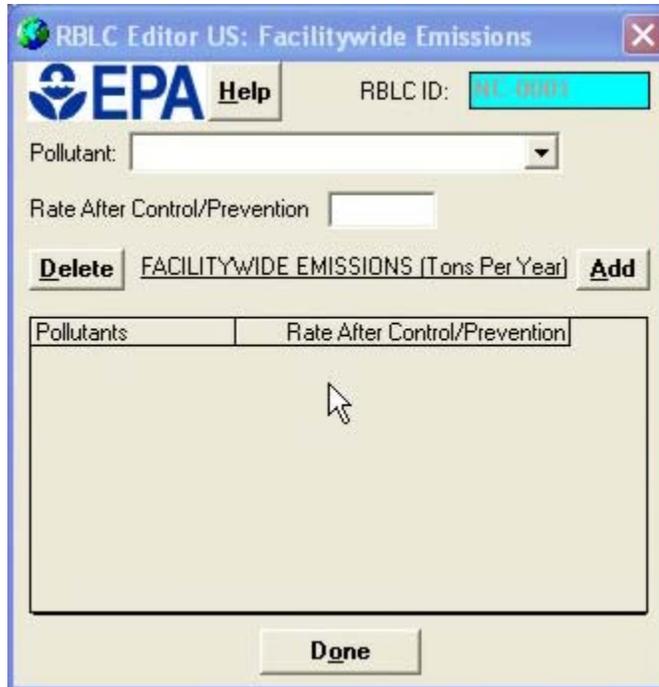
- To delete a pollutant from the table:
  - Select a pollutant from the Pollutant pull-down list box.
  - Press the Delete button to delete it.
- When using the Add or Delete buttons in the table, the data change is saved automatically. Press the Done button to go back to the previous window.

After editing the data, use one of the following buttons shown in Figure 5.5-2 to continue:

- Back (you will be asked to save data and returned to the previous window).
- Go To Main Menu (you will be asked to save data and then go to main menu).
- Go To Process List (automatically saves data and goes to Process section (next page)).
- Save (save data, stay in this window).

The screenshot shows a software window titled "RBLC Editor USA: Affected Boundaries". At the top left is the EPA logo and a "Help" button. To the right is an "RBLC ID:" label followed by a text box containing "101-00001". Below this is a "Boundary:" label and a dropdown menu. Underneath is a "Distance (Kilometers)" label and an empty text input field. A table titled "AFFECTED CLASS 1 BOUNDARIES" is centered in the window. The table has three columns: "BOUNDARY", "STATE", and "DISTANCE". The table body is empty. Above the table are "Delete" and "Add" buttons. At the bottom center is a "Done" button.

**Figure 5.5-3: Facility Data Affected Boundaries Entry Page**



**Figure 5.5-4: Facility Data FacilityWide Emissions Entry Page**

-- Edit Process Section --

When entering the Process section, the initial Process selection window (Figure 5.5-5) allows you to either:

- Add a new process by pressing the Add New button. After pressing this button, the Process section window is displayed (Figure 5.5-6). Enter the desired name and then continue to add information to this window.
- Edit an existing process by first selecting one from the Existing Process pull-down list box and then pressing the Edit button to edit it. After pressing this button, the Process section window is displayed (Figure 5.5-6).
- Go back to the previous window by pressing the Cancel button.
- Go to the main menu by pressing the To Main Menu button.

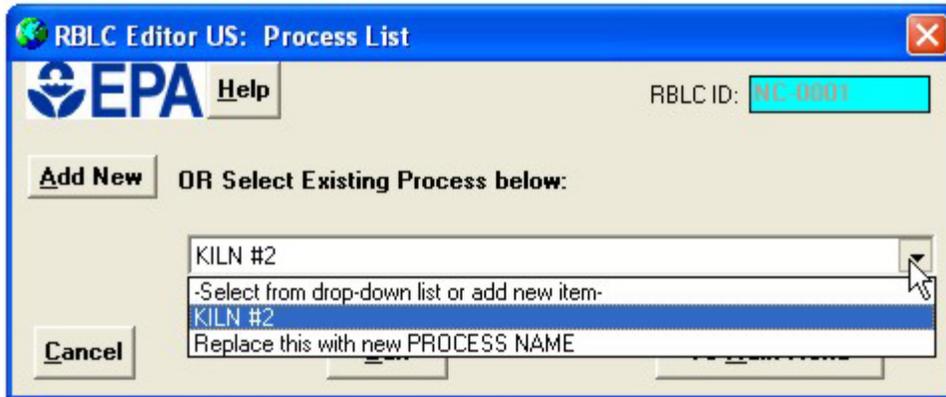


Figure 5.5-5: Process Data Process List Page

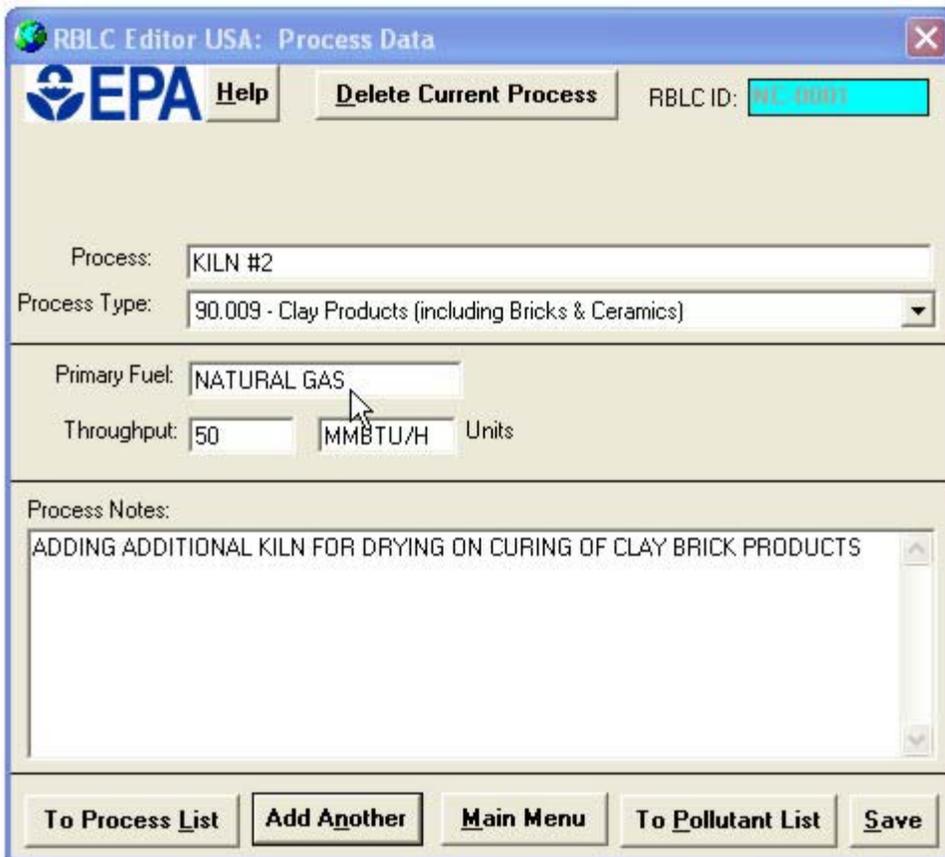


Figure 5.5-6: Process Data Entry Page

Add or edit Process section data by using the following text boxes or pull-down list boxes:

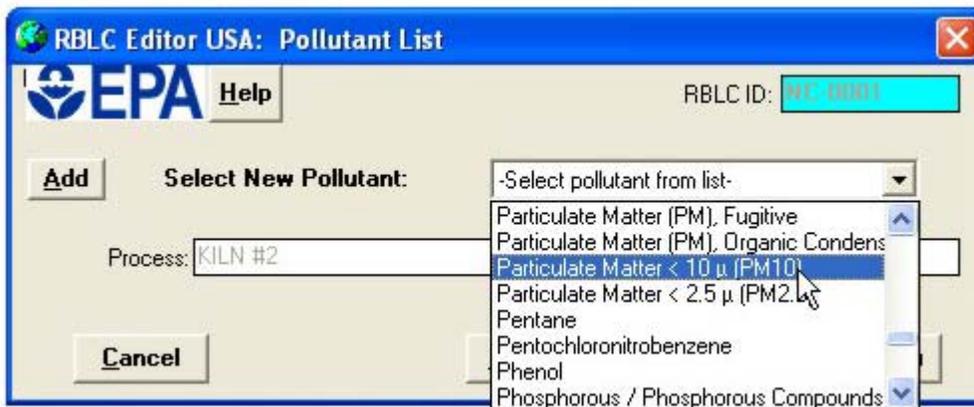
- Process [the name of the process involved in the permitting decision].
- Process Type [select the type of process that produces the emissions from the pull-down].
- Primary Fuel [the primary fuel used by this process].
- Throughput [a value for the throughput/capacity of the process unit].
- Throughput Units [the throughput/capacity units used for the process].
- Process Notes [any notes about the process or its compliance].

After editing the data, use one of the following buttons to continue:

- To Process List (you will be asked to save data and returned to the Process List window).
- Add Another (saves data and adds another new process).
- Main Menu (you will be asked to save data and returned to the main menu).
- To Pollutant List (saves data and goes to the Pollutant section, directly below).
- Save (saves data, stay in this window).
- Delete Current Process (deletes the displayed process) (at top of Process Data window).

-- Edit Pollutant Section --

When entering the Pollutant section the initial pollutant selection window (Figure 5.5-7), allows you to either:



**Figure 5.5-7: Pollutant Data Pollutant List Page**

- Add a new pollutant by pressing the Add button. After pressing this button, select the new pollutant from the Pollutant pull-down list box and press the Add button to add it.
- Edit an existing pollutant by first selecting one from the Existing Pollutant pull-down list box and then pressing the Edit button. (In Fig 5.5-7 this button is covered by drop-down Pollutant list.)
- Go to the Process List by pressing the To Process List button. (In Fig 5.5-7 this button is covered by drop-down Pollutant list.)
- Go back to the previous window by pressing the Cancel button.
- Go to the main menu by pressing the To Main Menu button. (Button covered in Fig 5.5-7.)

Add or edit the Pollutant section data (Figure 5.5-8) by using the following text or pull-down list boxes:

RBLC Editor USA: Pollutant Data

EPA Help Delete Current Pollutant RBLC ID: NC-0001

Process: KILN #2  
 Pollutant: Particulate Matter < 10 μ (PMT10), PM  
 Test Method: UNSPECIFIED

**CONTROL INFORMATION**

Control Method: A - Add on equipment  
 Control Method Description: BAGHOUSE  
 Estimated Efficiency (%): 99.00000  
 Compliance Verified: Y  
 Did factors, other than air pollution technology considerations, influence the BACT (technology) decision? N

EMISSION LIMITS	Numeric Limit	Unit of Measure	Avg. Time/Conditions
Emission Limit 1:	23	T/YR	
Emission Limit 2:			
Standardized:			

**BASIS INFORMATION**

Case-by-Case Basis: BACT-PSD  
 Other Applicable Requirements:  
 NSPS  
 NESHAP  
 MACT  
 SIP  
 OPERATING PERMIT  
 OTHER  
 N/A

**COST INFORMATION**

Dollar Value Year Used:   
 Cost Verified:   
 Cost Effectiveness (\$/ton):   
 Incremental Cost Effectiveness (\$/ton):

Pollutant Notes: EMISSIONS FROM PRODUCT HANDLING AND FUEL USAGE

To Pollutant List Add Another To Process List To Main Menu Save

Figure 5.5-8: Pollutant Data Edit Page

- Test Method [pull-down list].
- Control Method [pull-down list: N – No controls feasible; A – Add on equipment; P – pollution prevention; B – Both (pollution prevention and add on)].
- Control Method Description [description of the pollution prevention and/or add-on control equipment].
- Estimated Efficiency % [estimate efficiency of the control as a percentage (%). Do not include the % sign].
- Compliance Verified [pull-down list:(Y)es or (N)o ]

- Did factors, other than air pollution technology considerations influence the BACT (technology) decision? [answer either Yes, No, or Not Applicable (N/A) to the question]
- Emission Limit 1 [a value for the primary emission limit listed in the permit].
- Emission Limit 1 Unit [the units for the limit (e.g., LB/MMBTU)].
- Emission Limit 1 Other Conditions [details about the emission limit].
- Emission Limit 2 [a value for the alternative emission limit (if on permit)].
- Emission Limit 2 Unit [the units for the limit (e.g., LB/MMBTU)].
- Emission Limit 2 Other Conditions [details about the emission limit].
- Standardized Limit [a value for the RBLC Standardized emission limit (if required, see Appendix E)].
- Standardized Unit [the units for the limit (e.g., LB/MMBTU)].
- Standardized Other Conditions [details about the emission limit].
- Case-by-Case Basis pull-down (select one only), check boxes for Other Applicable Requirements (check all the apply). [the regulatory program on which the emission limit was/were based]
- Dollar Value Year Used [the year used to calculate the cost value].
- Cost Verified [pull-down list: Yes or No ].
- Cost Effectiveness (\$/Ton) [the cost effectiveness (dollars) ].
- Incremental Cost Effectiveness (\$/Ton) [the incremental cost effectiveness (dollars)].
- Pollutant Notes [any additional notes about emission limits, controls, or cost information].

After editing the data, use one of the following buttons to continue:

- To Pollutant List (you will be asked to save data and returned to the Pollutant List window).
- Add Another (data will be saved and you will be able to add another new pollutant).
- To Process List (data will be saved and you will be returned to the Process List).
- To Main Menu (you will be asked to save data and then will go to the main menu).
- Save (saves data).
- Delete Current Pollutant (deletes pollutant that is currently displayed) (at top of Process Data window).

### **5.5.3.5 CREATING AN EDITOR UPLOAD FILE**

In order to submit your determination data to the Clearinghouse, you must create an upload file.

The first time that you prepare an upload file to send to the RBLC, the software creates two folders: an upload folder and an archive folder. The determinations that you select to send to the RBLC are removed from the working data base when the upload file is created. This will prevent duplicates from being uploaded to the Online RBLC. A copy of the upload file is placed in the upload folder, and a copy of the entire working data base is placed in the archive folder. To send your entries to the RBLC via E-mail or on a CD, you must go to the upload folder and select the file you want to send to the RBLC and attach it to your E-mail or copy it to a CD. Copies of your submittal will remain in both the upload and archive folders. In fact, both

of these folders will remain even if you un-install the program; however, you can manually delete them.

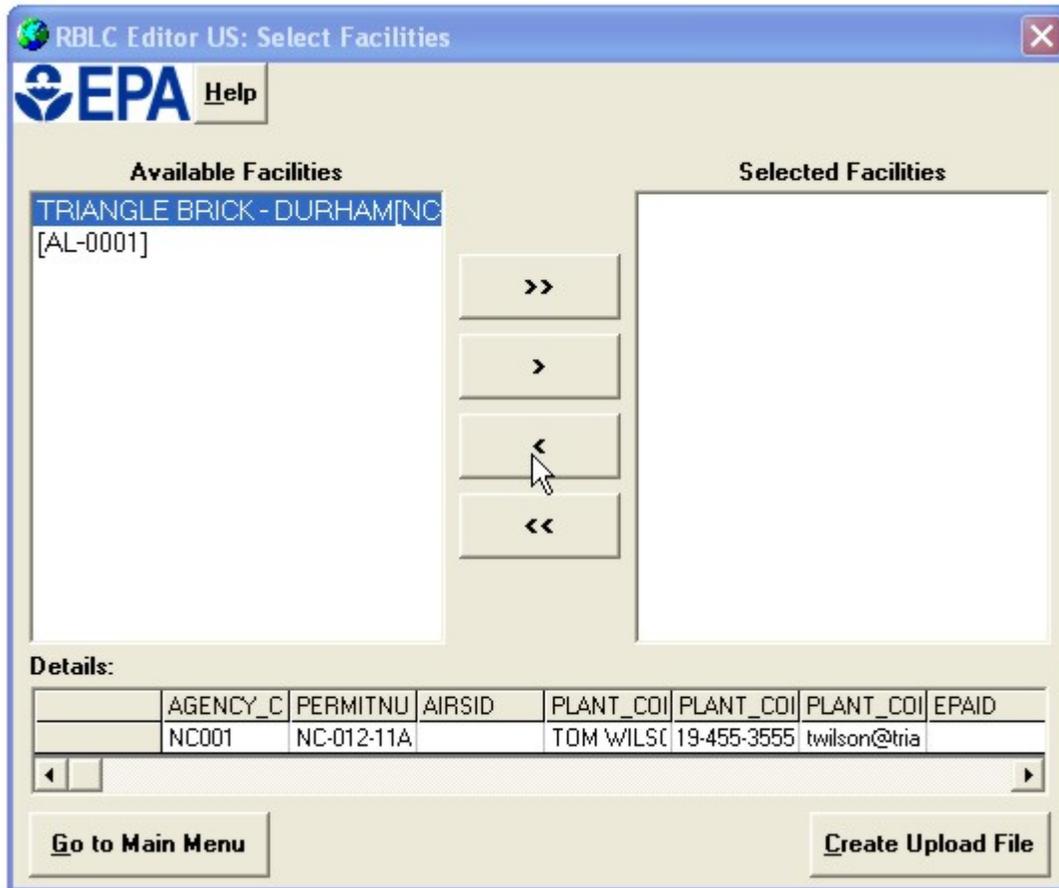
When the Editor Upload File is created, the following activities are performed:

- The existing working database is copied to the Archive Files sub-directory. This copy will contain all of your determinations. This archive copy will not be modified.
- The Editor Upload File is created based on determinations that you have selected for upload. This file is named based on the following scheme: "mmddyRBLChhmmssB.rblc," where mmddy is the current date (e.g., 12/11/2001 is 121101), hhmmss is the current 24-hour time (i.e., 18:35:24 is 183524), and B is the database revision level. The upload file, now present in the Upload Files sub-directory, has the extension of "rblc", however, it's actually an MS Access 97 Data base file containing only "NSR\_..." Tables.
- The selected determinations are removed from the working database.

Please note that your archived determinations are safe and can be retrieved. Please contact the CATC at (919) 541-0800 for assistance if this becomes necessary.

To create an Editor Upload File:

1. Go to the Editor's main menu.
2. Press the Create Upload File button.
3. In the Create Upload File window, first read the Create Upload File instructions and then either press the Next button to continue to the Select Facilities window or the Cancel button to return to the main menu.
4. After pressing the Next button, the Select Facilities window will open (Figure 5.5-9). The box on the left side of the window displays a list of the determinations currently in your working database. Click on a determination to select it. The box on the right side of the window will contain determinations you select for upload. The Details box at the bottom of the window displays facility information for a selected determination for verification purposes.
5. After selecting a determination, click the ">" button to move the selected determination from the Available Facilities box to the Selected Facilities box. To move them all at once, click the ">>" button.
6. Use the "<" and "<<" as described in step 5 to move determinations from the Selected box to the Available box.
7. Click the Create Upload File button once you have completed the selection process or the Go to Main Menu button to Cancel and return to the main menu.
8. Note the name and location of the file in the file creation confirmation dialog box and click the OK button to continue to the main menu.



**Figure 5.5-9: Select Facilities Window**

### 5.5.3.6 PREVIEW OR PRINT A DETERMINATIONS REPORT

The RBLC Editor allows you to view and/or print a “Freeform” determination report containing all of the determination entries in your working data base. To view or print the Determination Report:

1. Go to the Editor’s main menu.
2. Press the Preview/Print Report button.
3. In the Preview/Print Report window, use the scroll bars to view the report or press the Print button to print the report. Use the Quit button to return to the main menu.

### 5.5.4 SENDING AN EDITOR UPLOAD FILE TO EPA

Periodically, the Upload File (determinations) should be sent to the RBLC System Administrator for review and inclusion in the RBLC Web Site.

E-mail the Upload File by attaching it to an E-mail message addressed to the CATC at E-mail address:

catcmail@epa.gov

Be sure to include the sender's name, mailing address, and phone number in body of the message, in case there are any questions about the submittal.

If E-mail is not available, then copy the Upload File to a CD and mail it to:

RBLC, Mail Drop D243-05  
Measurement Policy Group  
U.S. Environmental Protection Agency  
109 T.W. Alexander Drive  
Research Triangle Park, NC 27709

Be sure to include the sender's name, mailing address, and phone number with the disk, in case there are any questions about the submittal.

When the Upload File is received at EPA, the RBLC System Administrator reviews it to make certain that all of the data files are there. Then, the determination is assigned a permanent RBLC ID and added to the website. The sender is notified via mail that the determinations are on-line, what the RBLC IDs are, and any deficiencies in the submittal. The RBLC Web Site's Edit option can be used to correct any of the problems.

### **5.5.5 PLANNING AND PREPARATION**

Agencies may wish to define procedures and quality standards for entry of determination data to the RBLC. Incomplete or incorrect data can result in repeated calls to the submitting agency for more information or to misunderstandings about the data. In some cases, appointing one person to coordinate a large data entry effort and to be the EPA contact point may be a logical approach. In other cases, defining specific procedures and tracking the progress of entries may be more than adequate. In all cases, quality assurance and quality control (QA/QC) standards should be maintained. See Section 5.5.6 for a suggested QA/QC checklist.

Data entry and edits can be done most efficiently when the RBLC web data requirements and data fields are understood and the permit information, including required information such as codes, units and abbreviations are available and have been organized before beginning data entry

Refer to Section 5.5.6 of this document for:

- Descriptions of data fields;
- Required data fields, units, and formats; and
- Data organization tips.

Keep in mind that the permit information needs to be entered in such a way that the data base search routines will be able to find it when it is relevant. Take the time to accurately match RBLC process type codes to the processes, and to describe control devices or pollution prevention technology. Identify processes and pollutants for which standard emission limits are required. The RBLC "Related Links", accessed from the RBLC Web Main Page, contains links to Web pages that provide access to the North American Industry Classification System (NAICS) Codes, Source Industrial Classification (SIC) Codes, and other relevant information needed to accurately categorize facilities and processes.<sup>2</sup> See Appendix E for a list of all processes with standardized emission limits.

At a more general level, identify the information needed to enter a complete determination. A determination must have information at the facility, process, and pollutant levels. Identify all likely pollutants for a process and be prepared to address them all, either as pollutant entries or explanatory notes in the process entry. Identify situations where a single process or piece of equipment may need to be entered as multiple process entries or several processes may need to be combined (see the examples below). When questions arise about non-standard situations, please contact the RBLC via the CATC Info-Line (919-541-0800).

**EXAMPLE - ONE PROCESS, MANY EMISSION LIMITS**

**Problem:** Separate emission limits for NO<sub>x</sub> emissions have been set for multiple operation scenarios for turbines at a power plant. **There are six operation scenarios based on three different fuel options and whether the turbines operate as simple or combined cycle.** Emission limits for other pollutants are the same regardless of the scenario.

**Solution:** Enter the scenarios as six separate processes (process type codes and SCCs change for each scenario), and enter the NO<sub>x</sub> emissions limits for each. Create a seventh process for the generic process (mixed fuels, and simple or combined cycles undefined), and enter the remaining pollutant limits under the seventh process. Document and explain this approach in the facility and process notes.

---

<sup>2</sup> The U.S Census Bureau maintains a Web site which cross references SIC codes with **the North American Industry Classification System (NAICS) of industrial codes:**  
<http://www.census.gov/epcd/www/naics.html>

EXAMPLE – MANY IDENTICAL PROCESSES, ONE SET OF EMISSION LIMITS

**Problem:** Eight identical natural gas fueled turbines, vented through a single stack, are permitted together with identical emission limits. Emission limits are expressed in units of pounds per hour for each turbine, and parts per million exiting from the stack. How should the turbines' emission limits be entered in the RBLC?

**Solution:** Enter all eight turbines as a single process. Specify in the process notes the number of turbines and whether the throughput is the combined throughput or throughput for each turbine. Enter the emission limits, remembering to enter the parts per million emission limit in the standard emission limit fields. Specify in the notes field that the pounds per hour emission limit is for each individual turbine.

### 5.5.6 DATA FIELDS AND FORMATS

For a determination to be considered complete and eligible for promotion to the permanent RBLC database, certain data fields must be entered, and required data formats must be observed. The RBLC Standalone Data Entry System allows its users to enter as much or as little information as they wish, but the required fields must be complete before the entry can be loaded into the online RBLC system

Use Table 5.1 to identify required and recommended data fields. These requirements help insure that searches will be productive and that the database contains information that is helpful to most users. Data elements marked as recommended fields should be entered in order to insure successful QA. Collecting and entering these data will improve the quality and usefulness of the database.

Refer to Appendix A and the on-line documentation for instructions for entries to each data field. As discussed previously, planning and organizing the data beforehand will make the data entry process more efficient. Figure 5.5-10 is a suggested QA/QC checklist for entries.

After a determination has been entered into the system, EPA will review the entry, follow up with the agency if necessary, and then promote the completed entry from Draft to Final.

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**TABLE 5.1  
NAMES AND CHARACTERISTICS OF RBLC DATA FIELDS**

<b>FIELD NAME</b>	<b>REQUIRED, RECOMMENDED, OR NOT REQUIRED</b>	<b>USED FOR SEARCHES</b>	<b>NOTES</b>
Chapter 5 FACILITY LEVEL INFORMATION			
RBLC ID	Assigned Automatically	Y	Assigned by the system. Unique to each determination.
Corporate/Company Name	Recommended	Y	Name of the parent corporation, if applicable.
Facility Name	Required	Y	Name of the facility.
Facility Description	Recommended	N	Description of facility operations.
Facility County	Recommended	Y	
Facility Zip Code	Recommended	N	Zip codes can be found at: <a href="http://www.usps.gov/ncsc/lookups/lookups.htm">http://www.usps.gov/ncsc/lookups/lookups.htm</a>
Facility Location - State	Required	Y	Assigned by the system.
EPA Region	Required	Y	Assigned by the system.
Facility Contact Name	Recommended	N	
Facility Contact Phone	Recommended	N	
Facility Contact E-mail	Recommended	N	
Agency	Required	Y	Chosen from a drop down list. The permitting agency's name/code can be use for searches.
Other Agency Contact Info	Not required	N	
Permit Number	Required	Y	

Permit Type (e.g., New/Modified/ etc.)	Recommended	N	
Permit URL	Not required	N	
Permit Date	Required	Y	May be “Estimated” or “Actual”. Must be labeled “Actual” date in order for the determination to be promoted to the Final data base.
Application Accepted Date	Recommended	N	May be “Estimated” or “Actual”
SIC Code	Recommended	Y	Drop down list; complete list on CHIEF web site.
NAICS Code	Recommended	Y	Complete list on CHIEF web site.
Facility Registry System Code (FRS)	Recommended	N	The Federal Registry System is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. This site is the companion to the FRS integrated searches in Envirofacts, a single point of access to select U.S. EPA environmental data. FRS codes can be found at: <a href="http://oaspub.epa.gov/enviro/search\$.startup">http://oaspub.epa.gov/enviro/search\$.startup</a>
Other Permitting Info.	Recommended	N	Specifics of permit determination can be included here.
Facility-wide Emissions Change	Recommended	Y	
Class 1/ U.S. Border Areas Name	Recommended	Y	
Distance to Class I / U.S. Border Area	Recommended	Y	
<b>PROCESS LEVEL INFORMATION</b>			
Process Name	Required	Y	
Process Type Code	Required	Y	Includes process type code, selected from a drop-down list. Also listed in Appendix D of this User’s Manual.
Primary Fuel	Recommended	N	For combustion units only.

Throughput and Units	Recommended	N	If this information is CBI, it should <b>not</b> be entered.
Process Notes	Recommended	N	
<b>POLLUTANT LEVEL INFORMATION</b>			
Pollutant Name and CAS Number	Required	Y	Select pollutant name and CAS number from the drop-down list.
Test Method	Recommended	N	A listing and explanation of the 'EPA/OAR Methods' can be found at <a href="http://www.epa.gov/ttn/emc/tmethods.html">http://www.epa.gov/ttn/emc/tmethods.html</a> . A listing and explanation of 'All Other Methods' can be found at <a href="http://www.epa.gov/ttn/emc/related.html">http://www.epa.gov/ttn/emc/related.html</a>
Control Method Code	Recommended	Y	
Control Method Description	Recommended	Y	A control method description is not required when there are no controls (control method code = N)
Emission Limit 1	Required	N	
Emission Limit 2	Recommended	N	
Standardized Emission Limit	Recommended	N	A standardized emission limit is required during QA review for the pollutants listed under the process type codes
Did factors, other than air pollution technology considerations, influence the BACT (technology) decision?	Recommended	N	Answer based on whether factors other than technology considerations (e.g., increment violations) were involved in the BACT decision.
Estimated Efficiency %	Recommended	Y	See note on "Emission Limit 1" emission limits below.
Compliance Verified?	Recommended	N	If this information is CBI, it should <b>not</b> be entered.
Case-By-Case Basis	Required	Y	
Other Applicable Requirements	Recommended	N	Select all that apply.

Pollutant Group	Assigned Automatically	Y	Assigned based on Pollutant.
Cost Info: Dollar Value Year Used	Recommended	N	
Cost Verified?	Recommended	N	
Cost Effectiveness	Recommended	N	
Incremental Cost Effectiveness	Recommended	N	In dollars per ton.
Pollutant Notes	Recommended	N	

## **QA/QC Checklist for Data Entry and Editing**

### **For the Entire Determination**

- Keep in mind the general goals of a QA review: ensuring entry completeness and accuracy in data entry, coding, naming, and reasonableness.
- Throughout the determination entry, check for typographical errors and misspellings, even in the notes fields. Make sure that the notes are concise, well worded, and informative.
- Check for accuracy in data entry.
- Check all required and recommended data fields. Use Table 5.5-10 and Appendix A to identify those fields.

### **Facility Level Input Form**

- 1) Are name, address and location data reasonable and correct?
- 2) Check NAICS and SIC codes. If you were looking for information about this type of facility, would you search using the code that has been assigned?
- 3) Is the permit issued date an actual or estimated date? Is the permit issued date after the application received date? Actual start up and compliance dates are especially helpful to users of the data base because those dates indicate that the project is actually operating. These should be entered in the Other Permitting Info field if available. (Please Note: The Permit (Issued) Date must be labeled "Actual" in order for the determination to be promoted to the Final data base.)

### **Process Level Input Form**

- 4) Are all of the processes covered by the determination included in your entry? Are the processes defined so that pollutants, controls, and limits can be entered in an understandable way for each one?
- 5) Check the process name. Does it use the standard naming approach for processes described in the data entry instructions in Appendix A, *RBLC Data Submittal Form and Instructions* (e.g., turbine, single cycle, natural gas)?
- 6) Check the process code. Does it accurately reflect the associated industry and regulations? If you were looking for this process, would you search using the code that you assigned?
- 7) Check the units for throughput. Use Appendix D to check unit abbreviations.
- 8) If throughput is not in terms of fuel, is information provided about the throughput material in the notes?

### **Pollutant Level Input Form**

9) Are all of the pollutants included for each process? In many cases, the permit addresses only one or a few of the pollutants that can be expected to be emitted from a process. If there are pollutants that are not included in the determination for a process, include an explanation in the process notes.

10) Is the Control Method Code properly assigned? Remember that a device added to a process that reduces emissions during the process (e.g., low-NO<sub>x</sub> burners) should be defined as pollution prevention, not as an add-on. Pollution prevention encompasses recycling, materials changes and reformulation, and pollution reduction technology that are integral to the process.

11) If the control method code is add on, pollution prevention or both (add on and pollution prevention), there must be a description of the control method in the text field.

12) Check the descriptors for add on control devices and pollution prevention methods. Use the names and abbreviations in Appendix D, *RBLC Process, Unit, and Pollutant Abbreviations* to insure that consistent terms are used throughout the database.

13) Has compliance information been entered?

14) Have emission limits been entered? Limits can be entered as either emissions or as a control's percent efficiency. If the only limit is the percent efficiency, the efficiency should be entered in the field for emission limit 1 and in the percent efficiency field.

15) Are pollutant emission limits, and percent efficiency levels reasonable?

16) Emission limits for visible emissions (VE) should be expressed as percent opacity (% opacity). VE emission limits for all processes should be entered in the standardized emission limit field.

17) Check the processes in the determination against the list of processes included in Appendix E, *RBLC Standard Emission Units by Process Type Code*. If a process matches any of those on that list, there should be a standardized emission limit entered for the pollutants listed for that process, and the limit should be in standardized emission limit units.

**Figure 5.5-10: QA/QC Checklist, continued.**

**APPENDIX A  
DATA SUBMITTAL FORM AND INSTRUCTIONS**

**(Appendix not included. Go to the Products section on the RBLC Website for this document. Appendices A & B are included in Volume 3 of the RBLC User's Manual. The URL is:**

**<[http://www.epa.gov/ttn/catc/rblc/htm/rblcprod\\_eg.html#rblcuser](http://www.epa.gov/ttn/catc/rblc/htm/rblcprod_eg.html#rblcuser)>**

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**APPENDIX B  
AGENCY CODE LISTING**

**(Appendix not included. Go to the Products section on the RBLC Website for this document. Appendices A & B are included in Volume 3 of the RBLC User's Manual. The URL is:**

**<[http://www.epa.gov/ttn/catc/rblc/htm/rblcprod\\_eg.html#rblcuser](http://www.epa.gov/ttn/catc/rblc/htm/rblcprod_eg.html#rblcuser)>**

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**APPENDIX C**  
**PROCESS TYPE CODE LISTING**

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## Appendix C -- Process Code Listing

**PLEASE NOTE:** The RBLC re-organized the Process Type Code (PTC) system several years ago. The archived PTCs can be found at the end of this Appendix.

### **10.000 FUEL COMBUSTION**

11.000 Utility/Large Industrial-Size Boilers/Furnaces (> 250 MMBtu/h)  
(Excludes 21.000, Waste Combustion Processes)

11.100 Solid Fuel & Solid Fuel Mixtures (> 250 MMBtu/h)

11.110 Coal (includes bituminous, subbituminous, anthracite, and lignite)

11.120 Biomass (includes wood, wood waste, bagasse, and other biomass)

11.130 Coal Gasification (Integrated Gasification Combined Cycle (IGCC))

11.190 Other Solid Fuel & Solid Fuel Mixtures

11.200 Liquid Fuel & Liquid Fuel Mixtures (> 250 MMBtu/h)

11.210 Residual Fuel Oil (ASTM # 4,5,6)

11.220 Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel)

11.290 Other Liquid Fuel & Liquid Fuel Mixtures

11.300 Gaseous Fuel & Gaseous Fuel Mixtures

11.310 Natural Gas (includes propane and liquefied petroleum gas)

11.320 Landfill/Digester/Bio-Gas

11.390 Other Gaseous Fuel & Gaseous Fuel Mixtures

11.900 Other Fuels and Combinations (> 250 MMBtu/h)

(e.g., solid/liquid, liquid/gas)

12.000 Industrial-Size Boilers/Furnaces (> 100 MMBtu/h & <= 250 MMBtu/h)  
(Excludes 21.000, Waste Combustion Processes)

12.100 Solid Fuel & Solid Fuel Mixtures (> 100 MMBtu/h & <= 250 MMBtu/h)

12.110 Coal (includes bituminous, subbituminous, anthracite, and lignite)

12.120 Biomass (includes wood, wood waste, bagasse, and other biomass)

12.190 Other Solid Fuel & Solid Fuel Mixtures

12.200 Liquid Fuel & Liquid Fuel Mixtures (> 100 MMBtu/h & <= 250 MMBtu/h)

12.210 Residual Fuel Oil (ASTM # 4,5,6)

12.220 Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel)

12.290 Other Liquid Fuel & Liquid Fuel Mixtures

12.300 Gaseous Fuel & Gaseous Fuel Mixtures (> 100 MMBtu/h & <= 250 MMBtu/h)

12.310 Natural Gas (includes propane and liquefied petroleum gas)

12.320 Landfill/Digester/Bio-Gas

12.390 Other Gaseous Fuel & Gaseous Fuel Mixtures

12.900 Other Fuels and Combinations (> 100 MMBtu/h & <= 250 MMBtu/h)

(e.g., solid/liquid, liquid/gas)

## CODE PROCESS TYPE

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- 13.000 Commercial/Institutional-Size Boilers/Furnaces ( $\leq 100$  MMBtu/h)  
(Excludes 21.000, Waste Combustion Processes)
- 13.100 Solid Fuel & Solid Fuel Mixtures ( $\leq 100$  MMBtu/h)
  - 13.110 Coal (includes bituminous, subbituminous, anthracite, and lignite)
  - 13.120 Biomass (includes wood, wood waste, bagasse, and other biomass)
  - 13.190 Other Solid Fuel & Solid Fuel Mixtures
- 13.200 Liquid Fuel & Liquid Fuel Mixtures ( $\leq 100$  MMBtu/h)
  - 13.210 Residual Fuel Oil (ASTM # 4,5,6)
  - 13.220 Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel)
  - 13.290 Other Liquid Fuel & Liquid Fuel Mixtures
- 13.300 Gaseous Fuel & Gaseous Fuel Mixtures ( $\leq 100$  MMBtu/h)
  - 13.310 Natural Gas (includes propane and liquefied petroleum gas)
  - 13.320 Landfill/Digester/Bio-Gas
  - 13.390 Other Gaseous Fuel & Gaseous Fuel Mixtures
- 13.900 Other Fuels and Combinations ( $\leq 100$  MMBtu/h)  
(e.g., solid/liquid, liquid/gas)
- 14.000 Reserved
- 15.000 Large Combustion Turbines ( $> 25$  MW)
- 15.100 Simple Cycle (turbine alone w/out waste heat recovery) ( $> 25$  MW)
  - 15.110 Natural Gas (includes propane and liquefied petroleum gas)
  - 15.120 Landfill/Digester/Bio-Gas
  - 15.150 Other Gaseous Fuel & Gaseous Fuel Mixtures
  - 15.190 Liquid Fuel & Liquid Fuel Mixtures
- 15.200 Combined Cycle & Cogeneration ( $> 25$  MW)
  - 15.210 Natural Gas (includes propane and liquefied petroleum gas)
  - 15.220 Landfill/Digester/Bio-Gas
  - 15.250 Other Gaseous Fuel & Gaseous Fuel Mixtures
  - 15.290 Liquid Fuel & Liquid Fuel Mixtures
- 15.900 Other/Unknown Cycle and/or Fuel ( $> 25$  MW)
- 16.000 Small Combustion Turbines ( $< 25$  MW)
- 16.100 Simple Cycle (turbine alone w/out waste heat recovery) ( $< 25$  MW)
  - 16.110 Natural Gas (includes propane and liquefied petroleum gas)
  - 16.120 Landfill/Digester/Bio-Gas ( $< 25$  MW)

## CODE PROCESS TYPE

---

- 16.150 Other Gaseous Fuel & Gaseous Fuel Mixtures
- 16.190 Liquid Fuel & Liquid Fuel Mixtures
- 16.200 Combined Cycle & Cogeneration (< 25 MW)
  - 16.210 Natural Gas (includes propane and liquefied petroleum gas)
  - 16.220 Landfill/Digester/Bio-Gas
  - 16.250 Other Gaseous Fuel & Gaseous Fuel Mixtures
  - 16.290 Liquid Fuel & Liquid Fuel Mixtures
- 16.900 Other/Unknown Cycle and/or Fuel (< 25 MW)
  
- 17.000 Internal Combustion Engines
  - 17.100 Large Internal Combustion Engines (> 500 HP)
    - 17.110 Fuel Oil (ASTM #1,2, includes kerosene, aviation, diesel fuel)
    - 17.120 Other Liquid Fuel & Liquid Fuel Mixtures
    - 17.130 Natural Gas (includes propane and liquified petroleum gas)
    - 17.140 Landfill/Digester/Bio-Gas
    - 17.150 Other Gaseous Fuel & Gaseous Fuel Mixtures
    - 17.190 Other/Unknown Fuel
  - 17.200 Small Internal Combustion Engines (<= 500 HP)
    - 17.210 Fuel Oil (ASTM #1,2, includes kerosene, aviation, diesel fuel)
    - 17.220 Other Liquid Fuel & Liquid Fuel Mixtures
    - 17.230 Natural Gas (includes propane and liquified petroleum gas)
    - 17.240 Landfill/Digester/Bio-Gas
    - 17.250 Other Gaseous Fuel & Gaseous Fuel Mixtures
    - 17.290 Other/Unknown Fuel
  
- 18.000 Reserved
  
- 19.000 Miscellaneous Combustion
  - 19.100 Crematoriums
  - 19.200 Emission Control Afterburners & Incinerators (Combustion Gases Only)
  - 19.300 Flares
    - 19.310 Chemical Plant Flares
    - 19.320 Digester & Landfill Gas Flares
    - 19.330 Refinery Flares
    - 19.390 Other Flares
  - 19.600 Misc. Boilers, Furnaces, Heaters
  - 19.700 Misc. Combustion Turbines
  - 19.800 Misc. Internal Combustion Engines
  - 19.900 Other Misc. Combustion

## CODE PROCESS TYPE

---

### **20.000 WASTE DISPOSAL**

21.000 Waste Combustion Processes

21.100 Commercial/Industrial Solid Waste Combustion

21.200 Hazardous Waste Incineration

21.300 Hospital/Medical/Infectious Waste Incineration

21.400 Municipal Waste Combustion

21.500 Wastewater Treatment Sludge Incineration

21.900 Mixed/Other Waste Combustion/Incineration

22.000 Wastewater/Contaminated Ground Water Treatment  
(Excludes 21.500 Wastewater Treatment Sludge Incineration)

22.100 Contaminated Ground Water Treatment

22.200 Industrial Wastewater Treatment

22.300 Publically Owned Treatment Works (POTW)

22.900 Other Wastewater Treatment Processes

29.000 Other Waste Processing and Disposal

29.100 Contaminated Soil Treatment

29.200 Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF)

29.300 Waste Recycling Processes

29.900 Other Waste Processing & Disposal Processes

### **30.000 WOOD PRODUCTS INDUSTRIES**

30.100 Charcoal Manufacturing

30.200 Kraft Pulp & Paper Processes

30.210 Kraft Material Recovery Processes

30.211 Kraft Recovery Furnaces/ Boilers

30.212 Kraft Smelt Dissolving Tanks

30.219 Other Kraft Material Recovery Processes

30.220 Kraft Digesting Processes

30.221 Kraft Batch Digesters

30.229 Other Kraft Digesting Processes

30.230 Kraft Lime Kiln Processes

30.231 Kraft Lime Kilns

30.239 Other Kraft Lime Kiln Processes

## CODE PROCESS TYPE

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- 30.240 Kraft Paper Making Processes
  - 30.241 Kraft Paper Machines
  - 30.242 Kraft Bleach Processes
  - 30.249 Other Kraft Paper Making Processes
- 30.290 Other Kraft Processes
- 30.300 Plywood Manufacturing
  - 30.310 Plywood Dryers
  - 30.320 Plywood Presses
  - 30.390 Other Plywood Manufacturing Processes
- 30.400 Non-Kraft Pulp & Paper Processes
  - 30.420 Non-Kraft Paper Machines
  - 30.490 Other Non-Kraft Operations
- 30.500 Particle & Strand Board Manufacturing
  - 30.510 "Board Mfg, Material Handling. (e.g. unloading, storage & distribution)"
  - 30.520 Board Presses.
  - 30.530 Board Mfg. Dryers
  - 30.540 "Board Product Finishing. (e.g. sanders, saws and trimmers)"
  - 30.590 Miscellaneous Particle & Strand Board Operations
- 30.600 Wood Treatment
- 30.700 Wood Working
- 30.800 Wood Lumber Kilns
- 30.999 Other Wood Products Industry Sources

## **40.000 ORGANIC EVAPORATIVE LOSSES**

### 41.000 SURFACE COATING/PRINTING/GRAPHIC ARTS

- 41.001 Aerospace Surface Coating
- 41.002 Automobiles and Trucks Surface Coating (OEM)
- 41.003 Automotive Refinishing
- 41.004 Can Surface Coating
- 41.005 Fabric Coating/Printing/Dyeing (except 41.017)
- 41.006 Flatwood Paneling Surface Coating
- 41.007 Flexible Vinyl & Urethane Coating/Printing
- 41.008 Large Appliance Surface Coating
- 41.009 Magnetic Tape Surface Coating
- 41.010 Magnetic Wire Surface Coating
- 41.011 Metal Coil Surface Coating
- 41.012 Metal Furniture Surface Coating
- 41.013 Miscellaneous Metal Parts and Products Surface Coating

## CODE PROCESS TYPE

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41.014 Paper, Plastic & Foil Web Surface Coating (except 41.007 & 41.018)  
41.015 Plastic Parts for Business Machines Surface Coating  
41.016 Plastic Parts & Products Surface Coating (except 41.015)  
41.017 Polymeric Coating of Fabrics  
41.018 Pressure Sensitive Tapes and Labels Coating  
41.019 Printing - Forms  
41.020 Printing - News Print  
41.021 Printing - Packaging  
41.022 Printing - Publication  
41.023 Printing/Publication (except 41.007 & 41.019-022)  
41.024 Ship Building & Repair Surface Coating  
41.025 Wood Products/Furniture Surface Coating (except 41.006)  
41.026 Leather Surface Coating  
41.999 Other Surface Coating/Printing/Graphic Arts Sources

### 42.000 LIQUID MARKETING (PETROLEUM PRODUCTS, GASOLINE, VOL)

42.001 Gasoline Bulk Plants  
42.002 Gasoline Bulk Terminals  
42.003 Gasoline Marketing (except 42.001 & 42.002)  
42.004 Petroleum Liquid Marketing (except 42.001-003 & 42.005-006)  
42.005 Petroleum Liquid Storage in Fixed Roof Tanks  
42.006 Petroleum Liquid Storage in Floating Roof Tanks  
42.009 Volatile Organic Liquid Storage  
42.010 Volatile Organic Liquid Marketing (except 42.009)  
42.999 Other Liquid Marketing Sources

### 49.000 ORGANIC EVAPORATIVE LOSSES (except 41 & 42)

49.001 Aerosol Can Filling  
49.002 Dry Cleaning - PERC/Chlorinated Solvents  
49.003 Dry Cleaning - Petroleum Solvents  
49.004 Fiberglass Boat Manufacturing  
49.005 Fiberglass/Reinforced Polymer Products Manufacturing (except 49.004)  
49.006 Halogenated Solvent Cleaners  
49.007 Ink Manufacturing  
49.008 Organic Solvent Cleaning & Degreasing (except 49.006)  
49.009 Paint/Coating/Adhesives Manufacturing  
49.010 Paint Stripping  
49.011 Consumer Products  
49.012 Architectural & Industrial Maintenance (AIM) Coatings

## CODE PROCESS TYPE

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49.013 Automobile Refinish Coatings  
49.999 Other Organic Evaporative Loss Sources

### **50.000 PETROLEUM/NATURAL GAS PRODUCTION AND REFINING**

50.001 Oil and Gas Field Services  
50.002 Natural Gas/Gasoline Processing Plants  
50.003 Petroleum Refining Conversion Processes (cracking, CO boilers, reforming, alkylation, polymerization, isomerization, coking)  
50.004 Petroleum Refining Feedstock (blending, loading and unloading)  
50.005 Petroleum Refining Separation Processes (distillation and light ends recovery)  
50.006 Petroleum Refining Treating Processes (hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, deasphalting, sulfur recovery units, acid gas/sulfur recovery unit incinerators)  
50.007 Petroleum Refining Equipment Leaks/Fugitive Emissions  
50.008 Petroleum Refining Flares and Incinerators (except acid gas/sulfur recovery unit Incinerators - 50.006)  
50.009 Petroleum Refining Wastewater and Wastewater Treatment  
50.010 Shale Processing  
50.999 Other Petroleum/Natural Gas Production & Refining Sources (except 50.001-010 and 42.000 - Liquid Marketing)

### **60.000 CHEMICALS MANUFACTURING**

#### 61.000 AGRICULTURAL CHEMICALS MANUFACTURING

61.009 Phosphate Fertilizers Production  
61.012 Fertilizer Production (except 61.009)  
61.999 Other Agricultural Chemical Manufacturing Sources

#### 62.000 INORGANIC CHEMICALS MANUFACTURING

62.003 Chlorine Production  
62.006 Fume Silica Production  
62.008 Hydrogen Cyanide Production  
62.010 Phosphoric Acid Manufacturing  
62.012 Sodium Cyanide Production  
62.014 Nitric Acid Plants  
62.015 Sulfuric Acid Plants

## CODE PROCESS TYPE

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62.018 Sodium Carbonate Production  
62.019 Sulfur Recovery (except 50.006)  
62.020 Inorganic Liquid/Gas Storage & Handling  
62.999 Other Inorganic Chemical Manufacturing Sources

### 63.000 POLYMER AND RESIN PRODUCTION

63.002 Acrylonitrile-Butadiene-Styrene Production  
63.006 Butyl Rubber Production  
63.012 Ethylene-propylene Rubber Production  
63.013 Flexible Polyurethane Foam Production  
63.015 Maleic Copolymers Production  
63.025 Polycarbonates Production  
63.026 Polyester Resins Production  
63.028 Polyethylene Terephthalate Production  
63.029 Polymerized Vinylidene Production  
63.031 Polystyrene Production  
63.033 Polyvinyl Acetate Emulsions Production  
63.036 Polyvinyl Chloride and Copolymers Production  
63.037 Reinforced Plastic Composites Production  
63.039 Styrene Butadiene Rubber and Latex Production  
63.999 Other Polymer and Resin Manufacturing Sources

### 64.000 SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY (SOCMI)

64.001 Batch Reaction Vessels ( except 69.011)  
64.002 "Equipment Leaks (valves, compressors, pumps, etc.)"  
64.003 "Processes Vents (emissions from air oxidation, distillation, and other reaction vessels)"  
64.004 Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020)  
64.005 "Transfer of SOCMI Chemicals (loading/unloading, filling, etc.)"  
64.006 Wastewater Collection & Treatment  
64.999 Other SOCMI Processes

### 65.000 SYNTHETIC FIBERS PRODUCTION

65.001 Acrylic Fibers/Modacrylic Fibers Production  
65.003 Spandex Production  
65.999 Other Synthetic Fibers Production Sources

69.000 "CHEMICAL MANUFACTURING (except 61, 62, 63, 64 & 65)"

69.008 Explosives Production

## CODE PROCESS TYPE

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69.011 Pharmaceuticals Production  
69.015 Carbon Black Manufacturing  
69.016 Soap & Detergent Manufacturing  
69.999 Other Chemical Manufacturing Sources

### **70.000 FOOD AND AGRICULTURAL PRODUCTS (also see 61 - AGRICULTURAL CHEMICALS)**

70.100 Alcohol Production  
    70.110 Alcoholic Beverage Production  
    70.120 Alcohol Fuel Production  
    70.190 Other Alcohol Production  
70.200 Grain Handling and Drying  
    70.210 Grain Dryers  
    70.230 Grain Loading & Unloading  
    70.290 Other Grain Handling  
70.300 Vegetable Oil Manufacturing  
    70.310 Corn & Sun Flower Seed Oil Manufacturing - Germ Wet Mill  
    70.320 Corn Oil Manufacturing - Dry Mill  
    70.330 Cotton Seed Oil Manufacturing  
    70.350 Soybean Oil Manufacturing  
    70.390 Other Vegetable Oil Manufacturing Processes  
70.400 Fruit & Vegetable Processing  
70.500 Agricultural Products Processing & Manufacturing  
    70.510 Starch Manufacturing  
    70.520 Tobacco Processing  
    70.530 Cotton Ginning  
    70.540 "Seeds, Nuts, Spices & Herbs Processing"  
    70.550 Bakeries and Snack Food  
    70.590 Other Agricultural Products  
70.600 Meat Processing  
70.700 Fish Processing  
70.900 Other Food & Agricultural Products & Processes

### **80.000 METALLURGICAL INDUSTRY**

81.000 FERROUS METAL INDUSTRY

81.100 Coke Processes

## CODE PROCESS TYPE

---

- 81.110 Coke Oven Batteries - non-by product
- 81.111 Pushing
- 81.112 Battery Stack
- 81.113 Doors
- 81.114 Lids
- 81.115 Charging
- 81.190 Other Coke Processes
- 81.200 Integrated Iron & Steel Production & Mini Mills
  - 81.210 Electric Arc Furnaces
  - 81.220 Hot Metal Transfer & Ladle Processes
  - 81.230 Casting & Pouring Processes
  - 81.290 Other Steel Manufacturing Processes
- 81.300 Steel Foundry Processes
  - 81.310 Electric Arc Furnaces
  - 81.320 Cupola Furnaces
  - 81.330 Induction Furnaces
  - 81.340 Ladle Metallurgy Processes
  - 81.350 Casting & Pouring Processes
  - 81.360 Core Making Processes
  - 81.370 Miscellaneous Melt Shop Operations
  - 81.380 Scrap Handling & Preparation Processes
  - 81.390 Other Steel Foundry Processes
- 81.400 Iron Foundry Processes
  - 81.410 Cupola Furnaces
  - 81.420 Induction Furnaces
  - 81.430 Desulfurization
  - 81.440 Sand, Core & Mold Making Processes
  - 81.450 Casting & Pouring Processes
  - 81.460 Shake Out Processes
  - 81.490 Other Iron Foundry Processes
- 81.500 Ferroalloy Production Processes (Includes Stainless & Specialty Steels)
  - 81.510 Electric Arc Furnaces
  - 81.520 Metal Oxygen Refining
  - 81.530 Fugitive Dust Sources
  - 81.590 Other Ferroalloy Production Processes
- 81.600 Pickling Processes
- 81.900 Other Ferrous Metal Industry Processes
  
- 82.000 NONFERROUS METALS INDUSTRY
  - 82.100 Aluminum Products & Smelting
    - 82.110 Primary Aluminum

## CODE PROCESS TYPE

---

- 82.111 Primary AL Furnaces & Pot Lines
- 82.119 Misc. Primary AL Processes
- 82.120 Secondary Aluminum
  - 82.121 Secondary AL Furnaces
  - 82.123 Secondary AL Casting Lines
  - 82.129 Misc. Secondary AL Processes
- 82.300 Brass Production
- 82.400 Copper Products & Smelting
  - 82.410 Primary Copper Production
  - 82.420 Secondary Copper Production
- 82.500 Lead Products & Smelting
  - 82.510 Lead Acid Battery Manufacturing
  - 82.520 Secondary Lead Smelting
  - 82.590 Misc. Lead Products & Smelting
- 82.800 Zink Smelting
- 82.999 Other Non-Ferrous Metals Industry Sources

## **90.000 MINERAL PRODUCTS**

- 90.001 Alumina Processing
- 90.002 Asphalt/Coal Tar Application - Metal Pipes
- 90.003 Asphalt Concrete Manufacturing
- 90.004 Asphalt Processing (except 90.002, 90.003 & 90.034)
- 90.005 Calcium Carbide Manufacturing
- 90.006 Cement Manufacturing (except 90.028)
- 90.007 Chromium Refractories Production
- 90.008 Clay and Fly Ash Sintering
- 90.009 Clay Products (including Bricks & Ceramics)
- 90.010 Coal Conversion/Gasification
- 90.011 Coal Handling/Processing/Preparation/Cleaning
- 90.012 Concrete Batch Plants
- 90.013 Elemental Phosphorous Plants
- 90.014 Frit Manufacturing
- 90.015 Glass Fiber Manufacturing (except 90.033)
- 90.016 Glass Manufacturing
- 90.017 Calciners & Dryers and Mineral Processing Facilities
- 90.018 Lead Ore Crushing and Grinding
- 90.019 Lime/Limestone Handling/Kilns/Storage/Manufacturing
- 90.020 Mercury Ore Processing
- 90.021 Metallic Mineral/Ore Processing (except 90.018, 90.020 & 90.031)
- 90.022 Mineral Wool Manufacturing

## CODE PROCESS TYPE

---

- 90.023 Mining Operations (except 90.032)
- 90.024 Non-metallic Mineral Processing (except 90.011, 90.019, 90.017, 90.026) (NOTE: This category includes stone quarrying, sand and gravel processing, gypsum processing, perlite processing and all other non-metallic mineral/ore processing.)
- 90.026 Phosphate Rock Processing
- 90.027 Phosphogypsum Stacks
- 90.028 Portland Cement Manufacturing
- 90.029 Refractories
- 90.031 Taconite Iron Ore Processing
- 90.032 Underground Uranium Mines
- 90.033 Wool Fiberglass Manufacturing
- 90.034 Asphalt Roofing Products Manufacturing
- 90.035 Asbestos Manufacturing
- 90.999 Other Mineral Processing Sources

### **99.000 MISCELLANEOUS SOURCES**

- 99.001 Abrasive Blasting
- 99.002 Chromic Acid Anodizing
- 99.003 Comfort Cooling Towers
- 99.004 Commercial Sterilization Facilities
- 99.005 Decorative Chromium Electroplating
- 99.006 Electronics Manufacturing (except 99.011)
- 99.007 Hard Chromium Electroplating
- 99.008 Hospital Sterilization Facilities
- 99.009 Industrial Process Cooling Towers
- 99.010 Rocket Engine Test Firing
- 99.011 Semiconductor Manufacturing
- 99.012 Welding & Grinding
- 99.013 Electroplating/Plating (except Chrome - 99.002, 99.005 & 99.007)
- 99.014 Polystyrene Foam Products Manufacturing
- 99.015 Rubber Tire Manufacturing and Retreading
- 99.016 Polyurethane Foam Products Manufacturing
- 99.017 Leather Tanning
- 99.018 Synthetic Fuels Production (except 70.016 & 90.010)
- 99.019 Geothermal Power
- 99.020 Rocket Demilitarization
- 99.100 Fugitive Dust Sources
  - 99.110 Agricultural Activities
  - 99.120 Ash Storage, Handling, and Disposal
  - 99.130 Construction Activities

## CODE PROCESS TYPE

---

- 99.140 Paved Roads
- 99.150 Unpaved Roads
- 99.190 Other Fugitive Dust Sources
- 99.999 Other Miscellaneous Sources

### **ARCHIVED CODES:**

#### 11.000 EXTERNAL COMBUSTION

- 11.001 Bagasses Combustion
- 11.002 Coal Combustion
- 11.003 Lignite Combustion
- 11.004 Multiple Fuels Combustion
- 11.005 Natural Gas Combustion
- 11.006 Fuel Oil Combustion
- 11.007 Waste Oil Combustion
- 11.008 Wood/Wood Waste Combustion
- 11.999 Other External Combustion Sources

#### 14.000 MISCELLANEOUS HEATERS AND FURNACES (UNKNOWN SIZE)

- 14.100 Solid Fuel & Solid Fuel Mixtures
- 14.200 Liquid Fuel & Liquid Fuel Mixtures
- 14.300 Gaseous Fuel & Gaseous Fuel Mixtures
- 14.900 Other/Unknown Fuels and Combinations (e.g., solid/liquid, liquid/gas)

#### 15.000 INTERNAL COMBUSTION

- 15.001 Aviation Fuels
- 15.002 Diesel Fuel
- 15.003 Gasoline
- 15.004 Natural Gas
- 15.005 Process Gas

## CODE PROCESS TYPE

---

15.006 Fuel Oil

15.007 Multiple Fuels

15.999 Other Internal Combustion Sources

### 21.000 WASTE COMBUSTION PROCESSES

21.001 Municipal Waste Combustors/Incinerators

21.002 Municipal Waste Landfills

21.003 Publicly Owned Treatment Works (POTW) Emissions (except 21.004)

21.004 Sewage Sludge Incineration

21.999 Other Municipal Waste Processing/Disposal Facilities

### 22.000 WASTEWATER/CONTAMINATED GROUND WATER TREATMENT

22.001 Benzene Waste Treatment

22.002 Hazardous Waste Incineration

22.003 Hazardous Waste Landfills

22.004 Site Remediation

22.005 Treatment, Storage and Disposal Facilities (TSDF) (except 22.002, 22.003 & 22.006)

22.006 Contaminated Soil Treatment

22.007 Asbestos Demolition, Renovation, and Disposal

22.999 Other Hazardous Waste Processing/Disposal Facilities

### 29.000 OTHER WASTE PROCESSING AND DISPOSAL

29.001 Automobile Body Shredding/Incineration

29.002 Industrial Wastewater/Contaminated Water Treatment

29.003 Industrial Landfills

29.004 Medical/Infectious Waste Incineration

29.999 Other Waste Disposal Sources

### 30.000 WOOD PRODUCTS INDUSTRY

30.001 Charcoal

30.002 Kraft Pulp Mills

30.003 Plywood and Veneer Operations

30.004 Pulp and Paper Production other than Kraft

30.005 Reconstituted Panelboard Plants (waferboard, particleboard, etc.)

30.006 Wood Treatment

30.007 Woodworking

30.008 Wood Lumber Kilns\

## CODE PROCESS TYPE

---

30.311 Plywood Dryers

30.321 Plywood Presses

30.421 Non-Kraft Paper Machines

30.999 Other Wood Products Industry Sources

61.001 2,4-D Salts and Esters Production

61.002 4-Chloro-2-Methylphenoxyacetic Acid Production

61.003 4,6-Dinitro-o-Cresol Production

61.004 Captafol (tm) Production

61.005 Captan (tm) Production

61.006 Chloroneb (tm) Production

61.007 Chlorthalonil (tm) Production

61.008 Dacthal (tm) Production

61.010 Sodium Pentachlorophenate Production

61.011 Tordon Acid Production

62.001 Ammonium Sulfate Production - Caprolactam By-Product Plants

62.002 Antimony Oxides Manufacturing

62.004 Chromium Chemicals Manufacturing

62.005 Cyanuric Chemicals Manufacturing

62.007 Hydrochloric Acid Production

62.009 Hydrogen Fluoride Production

62.011 Quaternary Ammonium Compounds Production

62.013 Uranium Hexafluoride Production

62.016 Chloroalkali Production

63.001 Acetal Resins Production

63.003 Alkyd Resins Production

63.004 Amino Resins Production

63.005 Butadiene-Furfural Cotrimer (R-11)

63.007 Carboxymethylcellulose Production

63.008 Cellophane Production

63.009 Cellulose Ethers Production

63.010 Epichlorohydrin Elastomers Production

63.011 Epoxy Resins Production

63.014 Hypalon (tm) Production

63.016 Methylcellulose Production

63.017 Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production

63.018 Methyl Methacrylate-Butadiene-Styrene Terpolymers Production

63.019 Neoprene Production

## CODE PROCESS TYPE

---

63.020 Nitrile Butadiene Rubber Production  
63.021 Non-Nylon Polyamides Production  
63.022 Nylon 6 Production  
63.023 Phenolic Resins Production  
63.024 Polybutadiene Rubber Production  
63.027 Polyether Polyols Production  
63.030 Polymethyl Methacrylate Resins Production  
63.032 Polysulfide Rubber Production  
63.034 Polyvinyl Alcohol Production  
63.035 Polyvinyl Butyral Production  
63.038 Styrene-Acrylonitrile Production

65.002 Rayon Production

69.001 Benzyltrimethylammonium Chloride Facilities  
69.002 Butadiene Dimers Production  
69.003 Carbonyl Sulfide Production  
69.004 Chelating Agents Production  
69.005 Chlorinated Paraffins Production  
69.006 Dodecanedioic Acid Production  
69.007 Ethylidene Norbornene Production  
69.009 Hydrazine Production  
69.010 OBPA/1,3-Diisocyanate Production  
69.012 Photographic Chemicals Production  
69.013 Phthalate Plasticizers Production  
69.017 Propellant Manufacturing & Production  
69.014 Rubber Chemicals Manufacturing

70.001 Alfalfa Dehydrating  
70.002 Baker's Yeast Manufacturing  
70.003 Bread Bakeries  
70.004 Cellulose Food Casing Manufacturing  
70.005 Coffee Roasting  
70.006 Cotton Ginning  
70.007 Feed and Grain Handling, Storage & Processing (including Mills and Elevators)  
70.008 Alcoholic Beverages Production  
70.009 Fish Processing  
70.010 Fruit and Vegetable Processing  
70.011 Meat Smokehouses  
70.012 Roasting (except 70.005)  
70.013 Starch Manufacturing  
70.014 Sugar Cane Processing

## CODE PROCESS TYPE

---

70.015 Vegetable Oil Production  
70.016 Alcohol Fuel Production  
70.999 Other Food and Agricultural Products Sources

81.000 FERROUS METALS INDUSTRY  
81.001 Coke By-product Plants  
81.002 Coke Production (except 81.001)  
81.003 Ferroalloy Production  
81.004 Iron Foundries  
81.005 Stainless Steel/Specialty Steel Manufacturing  
81.006 Steel Foundries  
81.007 Steel Manufacturing (except 81.005 & 81.006)  
81.008 Steel Pickling - HCL Process  
81.999 Other Ferrous Metals Industry Sources

82.001 Lead Acid Battery Manufacturing  
82.002 Lead Acid Battery Reclamation  
82.003 Lead Oxide and Pigment Production  
82.004 Lead Products (except 82.001-002, 82.006 & 82.012)  
82.005 Primary Aluminum Production  
82.006 Primary Copper Smelting  
82.007 Primary Lead Smelting  
82.008 Primary Magnesium Refining  
82.009 Primary Zinc Smelting  
82.010 Secondary Aluminum Production  
82.011 Secondary Brass & Brass Ingot Production  
82.012 Secondary Copper Smelting & Alloying  
82.013 Secondary Lead Smelting  
82.014 Secondary Magnesium Smelting  
82.015 Secondary Zinc Processing  
82.016 Beryllium Processing and Manufacturing

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**APPENDIX D**  
**ABBREVIATIONS FOR PROCESSES, UNITS, AND**  
**POLLUTANTS**

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## Appendix D -- Abbreviations for Processes, Units, and Pollutants

### Abbreviations for Processes and Descriptors

<b><u>Abbreviation</u></b>	<b><u>Process or Descriptor</u></b>
ADD	additive
AL	aluminum
AM	American
ASSOC	association
ATMOS	atmospheric
CALC	catalytic
CEM	continuous emission monitoring
CO	company
COLL	collection
COOP	cooperative
CORP	corporation
DECARB	decarbonization
DESULF	desulfurization
DISTIL	distillation
DISTN	distribution
DIV	division
E	eastern
EA	each
EFF	efficiency
ELECT	electric
EMISS	emissions
ENVIRON OR ENV	environmental
ESP	electrostatic precipitator
FAC	facility
FCC	fluid catalytic cracking
FCCU	fluid catalytic cracking unit
FGR	flue gas recirculation
FURN	furnace
GEN	generator
HAND	handling
HRSG	heat recovery steam generator
HVLP	high-volume, low pressure (spray guns)
I.C.	internal combustion
INCIN	incinerator
INDEP	independent
INTERNAT	international
LAB	laboratory

**Abbreviation**

LDOUT  
LIQ  
LT  
MATL  
MFG  
MISC  
MODIF  
NAT  
NATL  
POLL  
PREP  
PROD  
PWR  
REC  
RECIP  
RECLAM  
REFIG  
REFIN  
REG  
REGEN  
RESID  
ROT  
SCR  
SCRUB  
SECOND  
SHIP  
SNCR  
SOLN  
STOR  
SUP  
SYS  
TRANS  
UNIV  
VAC  
VERT

**Process or Descriptor**

loadout  
liquid  
light  
material  
manufacturing  
miscellaneous  
modification  
natural  
national  
pollutant/pollution  
preparation  
production  
power  
recovery  
reciprocating  
reclamation  
refrigeration  
refinery  
regular  
regenerator  
residual  
rotary  
selective catalytic reduction  
scrubber  
secondary  
shipping  
selective non-catalytic reduction  
solution  
storage  
supplementary  
system  
transmission  
university  
vacuum  
vertical

## Abbreviations for Emission Limit Units

<b><u>Abbreviation</u></b>	<b><u>Emission Limit Unit</u></b>
ACF	actual cubic feet
ACFM	actual cubic feet per minute
ACS	applied coating solids
ADP	air dried pulp
ADTP	air dried tons product
ADTFP	air dried tons of final product
ADTUBP	air dried tons of unbleached pulp
ADUP	air dried unbleached pulp
AMP-H	ampere hours
AV	average
BBL	barrels
BF	board feet
BHP	brake horsepower
BLS	black liquor solids
BPSD	barrels per stream day
BTU	British thermal units
CF	cubic feet
CFM	cubic feet per minute
CUYD	cubic yard
D	day
DFEED	dry feed
DACF	dry actual cubic feet
DIST	distillate
DSCF	dry standard cubic feet
F	feet
G	gram
G/B-HP-H	grams per brake horsepower-hour
G/HP-H	grams per horsepower-hour
G/O	gas/oil
GAL	gallon
GAL/M	gallons per minute
GIGA	giga- ( $10^9$ prefix)
GR	grains
H	hour
HP	horsepower
J	joule
KG	kilogram
KW	kilowatt
L	liter

**Abbreviation**

LB  
LT  
M  
MI  
MIN  
MG/L  
MM  
MO  
MW  
UG  
N  
NG  
OPAC  
PPM  
PPH  
%  
%BY VOL  
% BY WT  
RDF  
RESID  
SB  
SCF  
SCFD  
SCFH  
SCFM  
SEC  
SQF  
T  
T/D  
T/H  
T/YR  
TONNE  
VOL  
WKS  
YD  
YR

**Emission Limit Unit**

pound  
long ton  
thousand ( $10^3$ )  
miles  
minute  
milligram per liter  
million ( $10^6$ )  
month  
megawatt  
microgram ( $10^{-6}$ )  
natural  
nanogram ( $10^{-9}$ )  
opacity  
parts per million  
parts per hundred  
percent  
% by volume  
% by weight  
refuse derived fuel  
residual  
subbituminous  
standard cubic feet  
standard cubic feet per day  
standard cubic feet per hour  
standard cubic feet per minute  
second  
square feet  
ton  
tons per day  
tons per hour  
tons per year  
metric tonne  
volume  
weeks  
yard  
year

## Abbreviations for Pollutants

<u>Abbreviation</u>	<u>Pollutant</u>
AG	silver
AN	acrylonitrile
AR	argon
AS	arsenic
BA	barium
BAP	benzo(a)pyrene
BE	beryllium
CA	calcium
CD	cadmium
CDD	chlorodibenzodioxins
CDF	chlorodibenzofurans
CL	chlorine
CL <sub>2</sub>	chlorine (gas)
CL <sub>2</sub> /OCL	chlorine and oxychlorine
CLO <sub>2</sub>	chlorine dioxide
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
COS	carbonyl sulfide
CR	chromium
CRVI	hexavalent chrome
CS	cesium
CU	copper
DCB	1,4-dichloro-2-butene
ETH	ethylene
ETO	ethylene oxide
F	fluorine
TF	fluorides, total
FSP	fine suspended particulates
HBR	hydrogen bromide
HC	hydrocarbons
HCL	hydrochloric acid
HCN	hydrogen cyanide
HDM	hexamethylene diisocyanate monomer
HF	hydrogen fluoride
HG	mercury
HHD	homopolymer of HDM (see above)
H <sub>2</sub> O	water
H <sub>2</sub> S	hydrogen sulfide
H <sub>2</sub> SO <sub>4</sub>	sulfuric acid

**Abbreviation**

H2SO4  
MA  
MC ACETATE  
MEK  
MG  
MI KETONE  
MMH  
MN  
MO  
NAOH  
NA2SO4  
NH3  
NH4  
NH4CL  
NI  
NMHC  
NMOC  
NOX  
NO2  
N2O  
PAH  
PB  
PCB  
PCDF  
PCNB  
PM, PM10  
POCL3  
POHC  
RHC  
ROC  
ROG  
RSC  
S  
SB  
SE  
SN  
SO2  
SO3  
TCDD  
TCDF  
TCE

**Pollutant**

mist sulfuric acid mist (also referred to as SAM)  
maleic anhydride  
methyl cellulose acetate  
methyl ethyl ketone  
magnesium  
methyl isobutyl ketone  
methyl hydrazine  
manganese  
molybdenum  
sodium hydroxide  
salt cake  
ammonia  
ammonium  
ammonium chloride  
nickel  
nonmethane hydrocarbons  
nonmethane organic carbon  
nitrogen oxide  
nitrogen dioxide  
nitrous oxide  
polynuclear aromatic hydrocarbons  
lead  
polychlorinated biphenyls  
polychlorinated dibenzo furans  
pentachloronitrobenzene herbicide  
particulate matter  
phosphorous oxychloride  
principle organic hazardous constituents  
reactive hydrocarbons  
reactive organic compounds  
reactive organic gases  
reduced sulfur compounds  
sulfur  
antimony  
selenium  
tin  
sulfur dioxide  
sulfur trioxide  
2,3,7,8-tetrachlorodibenzo-P-dioxin  
tetrachlorodibenzo furan  
trichloroethylene

**Abbreviation**

TC-ETHANE

TF

TICL4

TMT

TRS

U

UF4

V

VC

VCM

VE

VOC

ZN

ZRSO4

**Pollutant**

1,1,1-trichloroethane

Total Fluorides

titanium tetrachloride

tetramethyl tin

total reduced sulfur

uranium

uranium tetrafluoride

vanadium

vinyl chloride

vinyl chloride monomer

visible emissions

volatile organic compounds

zinc

zirconium sulfate

Pollutant Name and CAS Number

See also the previous table, Abbreviations for Pollutants

<b><u>POLLUTANT</u></b>	<b><u>ALTERNATE NAME</u></b>	<b><u>CAS NUMBER</u></b>
1,1,1 TRICHLOROETHANE		71-55-6
2,3,7,8 TCDD	2,3,7,8-tetrachlorodibenzo-P-dioxin	1746-01-6
2-BUTANONE		78-93-3
ACETONE		67-64-1
ACRYLAMIDE		79-06-1
ACRYLAMIDE MONOMER		79-06-1
ACRYLIC ACID		79-10-7
ACRYLONITRILE		107-13-1
AG	Silver	7440-22-4
ALUMINUM OXIDE		1344-28-1
AMMONIA		7664-41-7
AN	Acrylonitrile	107-13-1
AR	Argon	13994-71-3
ARGON		13994-71-3
AS	Arsenic	7440-38-2
ASBESTOS		1332-21-4
BA	Barium	7440-39-3
BAP	Benzo(a)pyrene	50-32-8
BE	Beryllium	7440-41-7
BENZENE		71-43-2
BENZO-A-PYRENE		50-32-8
BENZOTRICHLORIDE		98-07-7
BENZYL CHLORIDE		100-44-7
BR	Bromine	7726-95-6
BUTYL ACETATE		123-86-4
BZ	Benzene	71-43-2
CA	Calcium	7440-70-2
CALCIUM HYDROXIDE		1035-62-0
CAPROLACTAM		105-60-2
CARBON BLACK		1333-86-4
CARBON TETRACHLORIDE		56-23-5
CCL2F2	Dichlorodifluoromethane	75-71-8
CD	Cadmium	7440-43-9
CHCL3	Chloroform	67-66-3
CHLORINE		7782-50-5
CHLORINE DIOXIDE		10049-04-4
CHLOROFORM		67-66-3

<u>POLLUTANT</u>	<u>ALTERNATE NAME</u>	<u>CAS NUMBER</u>
CHROME	Chromium	7440-47-3
CHROMIC ACID		1333-82-0
CL	Chlorine	7782-50-5
CL2	Chlorine (gas)	10049-04-4
CO	Carbon Monoxide	630-08-0
CO2	Carbon Dioxide	124-38-9
COBALT		7440-48-4
CR	Chromium	7440-47-3
CRO3	Chromium Trioxide	1333-82-0
CS	Cesium	7440-46-2
CU	Copper	7440-50-8
DCB	1,4-dichloro-2-butene	764-41-0
DCB		25321-22-6
DIBUTYL PHTHALATE		84-72-2
DIISOBUTYL KETONE		108-83-8
DIMETHYL ACETAMIDE		127-19-5
DIMETHYL FORMAMIDE		68-12-2
DIOXINS		SEQ. 128
ETHYL ACETATE		141-78-6
ETHYL ALCOHOL		64-17-5
ETHYL BENZENE		100-41-4
ETHYLBENZENE		100-41-4
ETHYLENE GLYCOL		107-21-1
ETHYLENE OXIDE		75-21-8
ETO	Ethylene Oxide	75-21-8
F	Fluorine	7782-41-4
FLUORIDE		16984-48-8
FLUORIDES		16984-48-8
FORMALDEHYDE		50-00-0
FREON 12		75-71-8
GRAPHITE		7782-42-5
H2O	Water	7732-18-5
H2S	Hydrogen Sulfide	7783-06-4
H2SO4	Sulfuric Acid	7664-93-9
H2SO4 MIST		7664-93-9
H2SO4 VAPORS		7664-93-9
HBR	Hydrogen Bromide	10035-10-6
HC		SEQ. 11
HCL	Hydrochloric Acid	7647-01-0
HCN	Hydrogen Cyanide	7490-8
HEPTANE		142-82-5

<u>POLLUTANT</u>	<u>ALTERNATE NAME</u>	<u>CAS NUMBER</u>
HF	Hydrogen Fluoride	7664-39-3
HG	Mercury	7439-97-6
HYDRAZINE		302-01-2
HYDROGEN PEROXIDE		7722-84-1
ISOOCTYL ALCOHOL		52738-99-5
ISOPROPYL ACETATE		94-11-1
ISOPROPYL ALCOHOL		67-63-0
MAGNESIUM		7439-95-4
MALEIC ANHYDRIDE		108-31-6
MEK	Methyl Ethyl Ketone	78-93-3
MEK-PEROXIDE	Methyl Ethyl Ketone Peroxide	1338-23-4
METHACRYLIC ACID		79-41-4
METHANE		74-82-8
METHANOL		67-56-1
METHYL AMYL KETONE		110-43-0
METHYL BROMIDE		74-83-9
METHYL ETHYL KETONE		78-93-3
METHYL ISOBUTYL KETONE		108-10-1
METHYLENE CHORIDE		75-09-2
MG	Magnesium	7439-95-4
MINERAL SPIRITS		64475-85-0
MMH	Methyl Hydrazine	60-34-4
MN	Manganese	7439-96-5
MO	Molybdenum	7439-98-7
N-BUTYL ACETATE		123-86-4
N-BUTYL ALCOHOL		71-36-3
N-PROPYL ACETATE		109-60-4
N2O	Nitrous Oxide	10024-97-2
NAOH	Sodium Hydroxide	1310-73-2
NAPHTHALENE		91-20-3
NH3	Ammonia	7664-41-7
NH4	Ammonium	14798-03-9
NH4CL	Ammonium Chloride	12125-02-5
NI	Nickel	7440-02-0
NICKEL		7440-02-0
NITRIC ACID		7697-37-2
NO2	Nitrogen Dioxide	10102-44-0
P-TOLUIDINE		106-49-0
PAH	Polynuclear Aromatic Hydrocarbons	SEQ. 6
PB	Lead	7439-92-1
PCB	Polychlorinated Biphenyls	1336-36-3

<u>POLLUTANT</u>	<u>ALTERNATE NAME</u>	<u>CAS NUMBER</u>
PERCHLOROETHYLENE		127-18-4
PHENOL		108-95-2
PHOSPHORIC ACID		7664-38-2
PHOSPHOROUS		7723-14-0
POCL3	Phosphorous Oxychloride	10025-87-3
POTASSIUM HYDROXIDE		1310-58-3
PROPYLENE OXIDE		75-56-9
S	Sulfur	7704-34-9
SB	Antimony	7440-36-0
SE	Selenium	7782-49-2
SILVER		7440-22-4
SN	Tin	7440-31-5
SO2	Sulfur Dioxide	7446-09-5
SO3	Sulfur Trioxide	7446-11-9
SODIUM BICHROMATE		10588-01-9
STRONTIUM CHROMATE		7789-06-2
STYRENE		100-42-5
SULFATES		14808-79-8
SULFURIC ACID		7664-93-9
SULFURIC ACID MIST		7664-93-9
TCDD	2,3,7,8-tetrachlorodibenzo-P-dioxin	1746-01-6
TICL4	Titanium Tetrachloride	7550-45-0
TITANIUM DIOXIDE		13463-67-7
TL	Thallium	7440-28-0
TOLUENE		108-88-3
TRICHLOROETHYLENE		79-01-6
TRIETHYLAMINE		121-44-8
U	Uranium	7440-61-1
UF4	Uranium Tetrafluoride	10049-14-6
URANIUM		7440-61-1
V	Vanadium	7440-62-2
XYLENE		1330-20-7
XYLENES		1330-20-7
ZINC		7440-66-6
ZINC CHROMATE		13530-65-9
ZN	Zinc	7440-66-6

**Basis for Limit (Case by Case)**

RACT	Reasonably Available Control Technology
BACT-PSD	Prevention of Significant Deterioration
LAER	Lowest Available Control Technology
MACT	Maximum Achievable Control Technology
OTHER(Case by Case)	Other Control Technology Standards (Includes 'Other', 'BACT-Other' and 'BACT-Local')
N/A	Not Applicable
BART	Best Available Retrofit Technology
BAT (Non US Only)	Best Available Technology

**Basis for Limit (Other Applicable Requirements)**

NSPS	New Source Performance Standards
NESHAPS	National Emission Standards for Hazardous Air Pollutants
MACT	Maximum Achievable Control Technology
SIP	State Implementation Plan
OPERATING PERMIT	
OTHER	Other Control Technology Standards
N/A	Not Applicable

**Emission Type**

Point, Fugitive, or Area Source

**APPENDIX E**  
**RBLC STANDARD EMISSION LIMIT UNITS**  
**BY PROCESS TYPE CODE**

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Appendix E --RBL Standard Emission Units by Process Type Code

Standard emission units have been established for the processes listed below. These units are required for reporting standardized emission limits in the RBL data base for these processes. Standardization of emission units facilitates ranking of emission control requirements on a pollutant specific basis. For visible emissions (VE), percent ( %) opacity has been established as the standardized unit for all processes

<b>Clearinghouse Process Code / Name or Description</b>		<b>Pollutant</b>	<b>Required Emission Units</b>
ALL	All Processes with Emission Limits for Visible Emissions	Visible Emissions	% Opacity
11.110 11.120 11.210 11.220 11.310	Utility and Large Industrial Size Boilers/ Furnaces (>250 MMBTU/H)	PM, PM10, PM2.5, SO <sub>x</sub> , NO <sub>x</sub> , CO	LB/MMBTU
12.110 12.120 12.210 12.220 12.310	Industrial-Size Boilers/Furnaces (> 100MMBTU/H and <= 250 MMBTU/H)	PM, PM10, PM2.5, SO <sub>x</sub> , NO <sub>x</sub> , CO	LB/MMBTU
13.110 13.120 13.210 13.220 13.310	Commercial/Institutional-Size Boilers/Furnaces (<= 100 MMBTU/H)	PM, PM10, PM2.5, SO <sub>x</sub> , NO <sub>x</sub> , CO	LB/MMBTU
15.110 15.190 15.210 15.290	Large Combustion Turbines (>25 MW)	NO <sub>x</sub> , CO	PPM @ 15% O <sub>2</sub>

<b>Clearinghouse Process Code / Name or Description</b>		<b>Pollutant</b>	<b>Required Emission Units</b>
16.110 16.190 16.210 16.290	Small Combustion Turbine (≤ 25 MW)	NO <sub>x</sub> , CO	PPM @ 15% O <sub>2</sub>
17.110 17.130 17.210 17.230	Internal Combustion Engines	NO <sub>x</sub> , CO	G/B-HP-H
21.100	Commercial/Industrial Solid Waste Incinerator	CO, HCL,SO <sub>2</sub> , & Nox	PPMVD @7% O <sub>2</sub>
		PM, PM <sub>10</sub> ,PM 2.5, CD,PB & HG	MG/DSCM @ 7% O <sub>2</sub>
		Dioxins /Furans	NG/DSCM TEQ @7% O <sub>2</sub>
21.200	Hazardous Waste Combustor	AS, BE, CR, CD, PB, HG	Micro G/DSCM @7% O <sub>2</sub>
		HCL, CL <sub>2</sub> , CO & HC	PPMV @7% O <sub>2</sub>
		PM, PM <sub>10</sub> & PM <sub>2.5</sub>	MG/DSCM @7% O <sub>2</sub>
		Dioxins / Furans	NG/DSCM TEQ @7% O <sub>2</sub>
21.300	Hospital/Medical/Infectious Waste Incineration	CO, NO <sub>x</sub> , SO <sub>2</sub> & HCL	PPMVD @7% O <sub>2</sub>
		PM, PM <sub>10</sub> , PM 2.5, CD, PB, HG	MG/DSCM @7% O <sub>2</sub>
		Dioxins / Furans	NG/DSCM TEQ @7% O <sub>2</sub>
21.400	Municipal Waste Combustor	PM, PM <sub>10</sub> , PM <sub>2.5</sub> , CD, PB, HG	MG/DSCM @7% O <sub>2</sub>
		SO <sub>2</sub> , HCL, & NO <sub>x</sub> (CO?)	PPMV @7% O <sub>2</sub>
		Dioxins / Furans	NG/DSCM @7% O <sub>2</sub>
21.500	Wastewater Treatment Sludge Incineration	PM, PM <sub>10</sub> & PM <sub>2.5</sub>	LB/T of dry sludge input
		HG	G/24 H Period

<b>Clearinghouse Process Code / Name or Description</b>		<b>Pollutant</b>	<b>Required Emission Units</b>
30.002	Kraft Pulp Mills - Recovery Furnace	PM, PM10 & PM2.5	GR/DSCF @ 8% O <sub>2</sub>
	Kraft Pulp Mills - Lime Kiln	PM, PM10 & PM2.5	GR/DSCF @ 10% O <sub>2</sub>
	Kraft Pulp Mills - Smelt Dissolving Tanks	PM, PM10 & PM2.5	LB/T BLS
	Kraft Pulp Mills - Digesters, Brown Stock Washers, Evaporators, Oxidation, & Stripping System	TRS	PPMV @ 10% O <sub>2</sub>
41.002	Auto & Light Truck Surface Coating	VOC	LB/GAL ACS
41.004	Can Surface Coating	VOC	LB/GAL ACS
41.007	Flexible Vinyl & Urethane Coating and Printing	VOC	LB/LB ink solids
41.008	Large Appliance Surface Coating	VOC	LB/GAL ACS
41.011	Metal Coil Surface Coating	VOC	LB/GAL ACS
41.012	Metal Furniture Surface Coating	VOC	LB/GAL ACS
41.015	Plastic Parts for Business Machines Surface Coating	VOC	LB/GAL ACS
41.018	Pressure Sensitive Tape & Label Surface Coating	VOC	LB/LB ACS
50.003	Petroleum Refining - Cracking	PM, PM10 & PM2.5, Sox, CO	LB/1000 LB PPMV
50.006	Petroleum Refining - Claus Sulfur Recovery Units	SO <sub>x</sub> , TRS, H <sub>2</sub> S	PPMV @ 0% Excess Air
61.009	Phosphate Fertilizers Production	Total Fluoride	LB/T
62.001	Ammonium Sulfate Production	PM, PM10 & PM2.5	LB/T ammonium sulfate prod.
62.014	Nitric Acid Plants	NOX	LB/T of Acid Produced (100% acid)
62.015	Sulfuric Acid Plants	SO <sub>2</sub> & Acid Mist	LB/T
65.001-65.999	Synthetic Fibers Production	VOC	LB/1000 LB solvent feed
70.007	Grain Elevators	PM, PM10 & PM2.5	GR/DSCF

<b>Clearinghouse Process Code / Name or Description</b>		<b>Pollutant</b>	<b>Required Emission Units</b>
81.003	Ferroalloy Production	PM, PM10 & PM2.5 CO	LB/MW-H % (volume basis)
81.004	Iron Foundries	PM, PM10 & PM2.5	GR/DSCF
81.210	Electric Arc Furnaces (EAF) used in Integrated Iron & Steel Production & Mini Mills	PM, PM10 & PM2.5	GR/DSCF
81.310	Steel Foundries		
81.510	Ferroalloy Production (Includes Stainless & Specialty Steels)		
82.001	Lead Acid Battery Mfg. All Lead Emitting Operations	Pb (Lead)	GR/DSCF
82.005	Primary Aluminum Production	Total Fluorides	LB/T
82.006	Primary Copper Smelters	PM, PM10 & PM2.5	GR/DSCF
82.007	Primary Lead Smelting	PM, PM10 & PM2.5	GR/DSCF
82.009	Primary Zinc Smelting	PM, PM10 & PM2.5	GR/DSCF
82.011	Secondary Brass & Brass Ingot Production	PM, PM10 & PM2.5	GR/DSCF
82.013	Secondary Lead Smelting	PM, PM10 & PM2.5	GR/DSCF
90.004	Hot-Mix Asphalt Processing	PM, PM10 & PM2.5	GR/DSCF
90.011	Coal Handling/Processing/ Preparation/Cleaning	PM, PM10 & PM2.5	GR/DSCF
90.016	Glass Manufacturing Furnace	PM, PM10 & PM2.5	LB/T
90.019	Lime/Limestone Handling/Kilns/ Storage/Manufacturing	PM, PM10 & PM2.5	LB/T
90.021	Metallic Mineral/Ore Processing	PM, PM10 & PM2.5	GR/DSCF
90.024	Non-metallic Mineral Processing	PM, PM10 & PM2.5	GR/DSCF
90.026	Phosphate Rock Processing	PM, PM10 & PM2.5	LB/T
90.028	Portland Cement Plants - kiln, in-line raw mill and kiln, clinker cooler	PM, PM10 & PM2.5	LB/T
90.033	Wool Fiberglass Manufacturing	PM, PM10 & PM2.5	LB/T glass pulled
90.034	Asphalt Roofing Products Manufacturing	PM, PM10 & PM2.5	LB/1000 LB

<b>Clearinghouse Process Code / Name or Description</b>		<b>Pollutant</b>	<b>Required Emission Units</b>
99.015	Rubber Tire Manufacturing Industry - Tread End Cementing, Water-Based Inside Green Tire Spray, & Water- Based Outside Green Tire Spray	VOC	G/TIRE/MO
	Bead Cementing	VOC	G/Bead/MO
	Organic Green Tire Spray, Michelin A Operations, Michelin B Operations Michelin C Operations, Sidewall Cementing, & Undertread Cementing	VOC	% Reduction