

**USER'S MANUAL FOR THE
RACT/BACT/LAER CLEARINGHOUSE (RBLC)
STANDALONE EDITOR
VERSION 3.2b**

CLEAN AIR TECHNOLOGY CENTER (CATC)

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PREFACE

This user's manual was prepared for and funded by the RACT/BACT/LAER Clearinghouse (RBLC),¹ 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 5,000 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.

¹ 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 166 MHz or equivalent with 64MB RAM
- Microsoft Windows© 98, NT, 2000, XP, or ME 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 or WinZip is required for this operation.)
2. Find the ReadMe.RTF or the ReadMe.TXT file and review the instructions in the file.
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 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 Menus.

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 determination data)
- 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 acts as a Find Next button and 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, please see Section 5.5.3.5, Adding and Editing Data.)

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

To edit 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. (For more information on editing data, please see Section 5.5.3.5, Adding and Editing Data.)

5.5.3.5 ADDING AND EDITING DATA

A complete determination has three parts: the Facility data, Process Data (each Facility must have at least one process), and Pollutant data. Please review Section 5.5.5, Planning and Preparation, and Section 5.5.6, for information about data entry requirements.

-- Facility Data --

In the Facility Data section (Figure 5.5-2), add or edit data by using the following text or pull-down list boxes:

Figure 5.5-2: Facility Data Entry Page

- The Entered Date box shows the date the determination was created. (auto-assigned)
- The Updated Date box shows the date the determination was last modified. (auto-assigned)
- Enter the Corporate/Company Name.
- Enter the Facility Name.
- Enter a general Facility Description that indicates the type of facility (e.g., integrated steel plant), major processes, and what is addressed in this permitting action.
- Enter the Facility County (i.e., the county or political jurisdiction in which the facility is located).
- Enter the ZIP code (postal code) for the physical location of the facility.
- Fill in the Facility Contact Name, Telephone, and E-mail Address fields.
- In the Agency Contact section, select the Agency (State-Code, Agency Name) that issued the permit from the pull-down box. (If the agency is not listed, select “0, SEE NOTES” and

enter the agency's name in the Other Permitting Information box.)

- The RBLC system will automatically display the current agency contact when the determination is uploaded to the RBLC Web. Use the Agency Contact Info box for additional contact information.
- Enter the Permit Number issued by the permitting agency.
- Select the Permit Type 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.
- Enter the Permit date and Application Acceptance Date by selecting 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.
- Select the facility's SIC (Standard Industrial Classification) code from SIC pull-down list box.
- Enter the facility's NAICS (North American Industrial Classification System) code in the NAICS box.
- Enter the EPA Facility Registry System (FRS) number. FRS numbers can be found at: http://www.epa.gov/enviro/html/fii/fii_query_java.html.
- Enter any explanatory information about the determination in the Other Permitting Info box. This may include details about the facility's location, operations, processes, emissions or current permit status.
- Enter the name of Class 1 or U.S. border areas (sensitive areas) affected by the facility's pollutants by selecting the "Press to Add/Edit Affected Boundaries button":
 - To add a Class 1 or U.S. border area to the table:
 1. Select a Class 1 or U.S. border area from the Boundary pull-down list box
 2. Enter the distance from the facility to the Boundary area (kilometers) in the Distance box.
 3. Press the Add button to add the data to the table.
 4. Repeat steps 1-3 above to add additional Class 1 and U.S. Border areas to the table.
 - To delete a Class 1 or U.S. border area from the table:
 1. Select a Class 1 or U.S. border area from the Boundary pull-down list box.
 2. Press the Delete button to delete it.
 3. Repeat steps 1-2 above to delete additional Class 1 and U.S. Border areas from the table
 - 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 Facilitywide Emissions Change information (the facility's total CO, NO_x, PM, SO_x, and VOC emission changes resulting from this permitting action) by selecting the "Press to Add/Edit Plantwide Emissions" button:
 - To add a pollutant to the table:

1. Select a pollutant from the Pollutant pull-down list box.
 2. Enter the Emissions Rate Change After Control/Prevention (in T/YR) in the box. The field allows for negative entries for emission reductions.
 3. Press the Add button to add the data to the table.
 4. Repeat steps 1-3 above to add additional pollutants to the table.
- To delete a pollutant from the table:
1. Select a pollutant from the Pollutant pull-down list box.
 2. Press the Delete button to delete it.
 3. Repeat steps 1-2 above to delete additional pollutants from the table.
- 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 adding or editing the data, use one of the following buttons to continue:

- Back (you will be asked to “Save Changes?” (Yes/No) before returning to the previous window).
- Go to Main Menu (you will be asked to “Save Changes?” (Yes/No) before going to the main menu).
- Go to Process List (automatically saves data and goes to Process Data section).
- Save (saves data and stays in this window).

-- Process Data --

When entering the Process Data section, the initial Process selection window (Figure 5.5-3) allows you to:

- Add a new process by pressing the Add New button. After pressing this button, the Process Data window is displayed.
- Edit an existing (previously entered) process by first selecting a process from the Existing Process pull-down list box and then pressing the Edit button to edit it.
- Go back to the previous window by pressing the Cancel button.
- Go to the main menu by pressing the To Main Menu button.

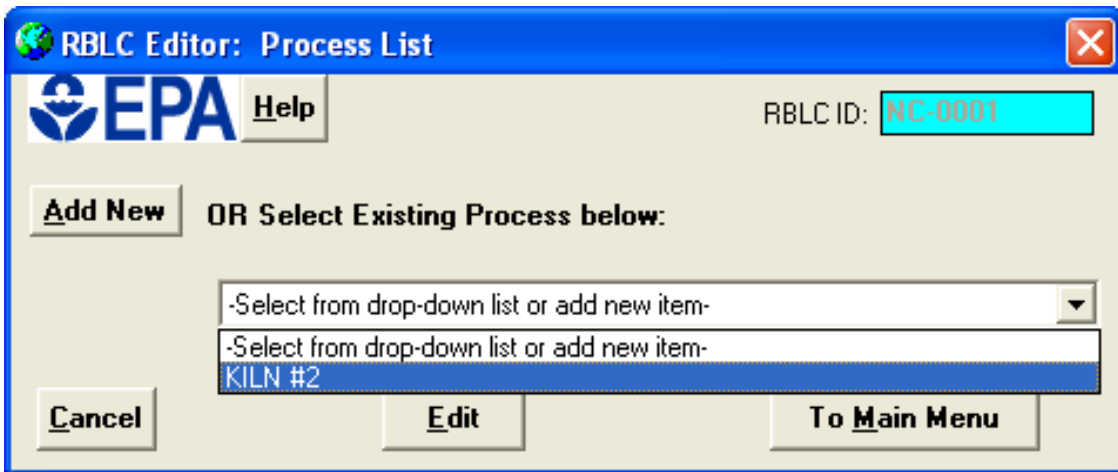


Figure 5.5-3: Process List Page

Add or edit Process Data (Figure 5.5-4) by using the following text boxes or pull-down list boxes:

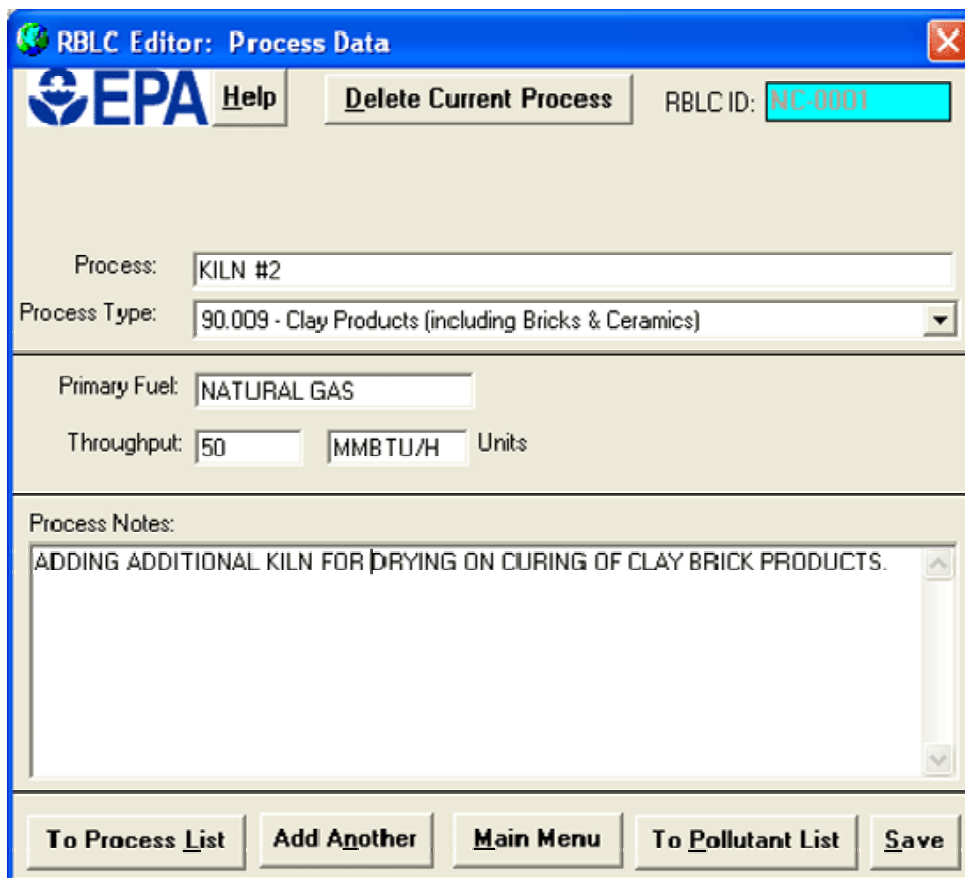


Figure 5.5-4: Process Data Entry Page

- Enter/edit the name of a process involved in the permitting decision in the Process box.
- Select the type of process that produces the emissions from the Process Type pull-down list.
- Enter the primary fuel used by this process in the Primary Fuel box (if appropriate).
- Enter a value for the throughput/capacity of the process in the Throughput box.
- Enter the throughput/capacity units used for the process in the Throughput Units box.
- Enter any notes about the process or its compliance in the Process Notes box.

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

- To Process List (you will be asked to “Save Changes?” (Yes/No) before returning to the Process List window).
- Add Another (automatically saves data and goes to the Process Data window).
- Main Menu (you will be asked to “Save Changes?” (Yes/No) before returning to the main menu).
- To Pollutant List (automatically saves data and goes to the Pollutant List screen).
- Save (saves data).
- Delete Current Process (deletes the displayed process).

-- Pollutant Data --

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

- Add a new pollutant by pressing the Add New 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 (previously entered) pollutant by first selecting a pollutant from the Existing Pollutant pull-down list box and then pressing the Edit button.
- Go to the Process List by pressing the To Process List button.
- Go back to the previous window by pressing the Cancel button.
- Go to the main menu by pressing the To Main Menu button.

Add or edit Pollutant Data (Figure 5.5-6) by using the following text or pull-down list boxes:

- Select the Control Method from the pull-down list:
 - N – No controls feasible;
 - A – Add on equipment;
 - P – Pollution prevention; or
 - B – Both (pollution prevention and add on equipment).

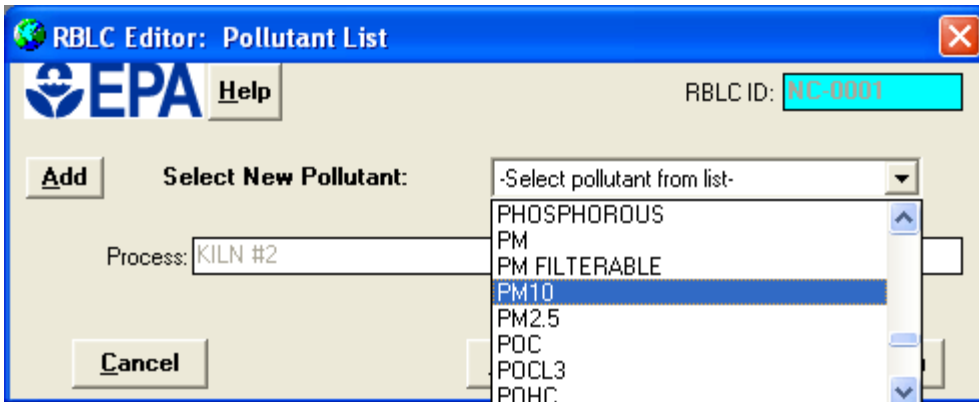


Figure 5.5-5: Pollutant Selection Window - Pollutant List

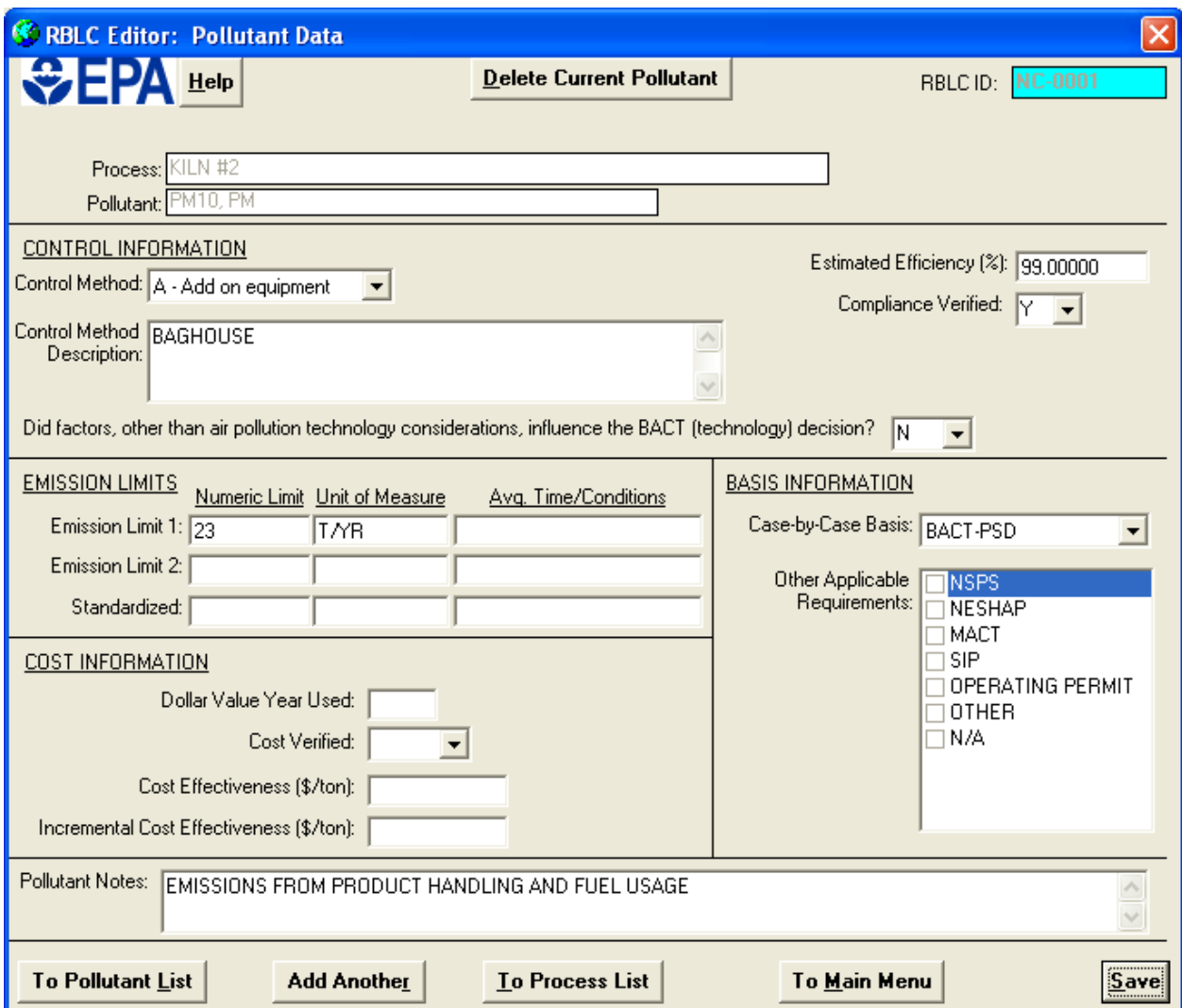


Figure 5.5-6: Pollutant Data Entry Page

- Enter a description of the pollution prevention and/or add-on control equipment in the

Control Method Description box.

- Enter the Estimated Efficiency of the control as a percentage (%). Do not include the % sign.
- Select either Yes or No from the pull-down list to indicate if compliance with the pollutant emission limits stated below has been verified.
- Select either Yes, No or Not Applicable (N/A) from the pull-down list to answer the question: Did factors, other than air pollution technology considerations influence the BACT (technology) decision?
- In the Emission Limit 1 box, enter a value for the primary emission limit listed in the permit.
- In the Emission Limit 1 Unit box, enter the units for the limit (e.g., LB/MMBTU).
- In the Emission Limit 1 Avg. Time/Other Conditions box, enter the averaging time and/or other details about the emission limit.
- In the Emission Limit 2 box, enter a value for the alternative emission (if included in the permit).
- In the Emission Limit 2 Unit box, enter the units for the limit (e.g., LB/MMBTU).
- In the Emission Limit 2 Avg. Time/Other Conditions box, enter the averaging time and/or other details about the emission limit.
- In the Standardized box, enter a value for the RBLC Standardized emission limit (if required, see Appendix E).
- In the Standardized Unit box, enter the units for the limit (e.g., LB/MMBTU).
- In the Standardized Time/Other Conditions box, enter the averaging time and/or other details about the emission limit.
- Select the regulatory program(s) on which the emission limit(s) was/were based from the Case-by-Case Basis pull-down (select only one), the check boxes for Other Applicable Requirements (check all that apply).
- Enter the year used to calculate the cost value in the “Dollar Value Year Used” box.
- For the “Cost Verified” box, select either Yes or No from the pull-down list.
- Enter the cost effectiveness (dollars) in the Cost Effectiveness (\$/Ton) box.
- Enter the incremental cost effectiveness (dollars) in Incremental Cost Effectiveness (\$/Ton) box.
- Add any additional notes about emission limits, controls, or cost information in the Pollutant Notes field.

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

- To Pollutant List (you will be asked to “Save Changes?” (Yes/No) before returning to the Pollutant List window).
- Add Another (automatically saves data and goes to the Pollutant List screen).
- To Process List (automatically saves data and goes to Process List screen).
- To Main Menu (you will be asked “save Changes?” (Yes/No) before going to the main menu).

- Save (saves data).
- Delete Current Pollutant (deletes pollutant that is currently displayed).

5.5.3.6 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 floppy disk, 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 floppy disk. 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: "mmddyyRBLChhmmssB.mdb," where mmddyy 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 indicates the version of the RBLC Standalone Editor software used to generate the data file. The upload file, now present in the Upload Files sub-directory, is 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 (Figure 5.5-), or the Cancel button to return to the main menu.

4. After pressing the Next button, the Select Facilities window will open. 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 determinations 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 Facilities box to the Available Facilities box.
7. Click the Create Upload File button once you have completed the selection process or the
8. Go to Main Menu button to return to the main menu.
9. 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.

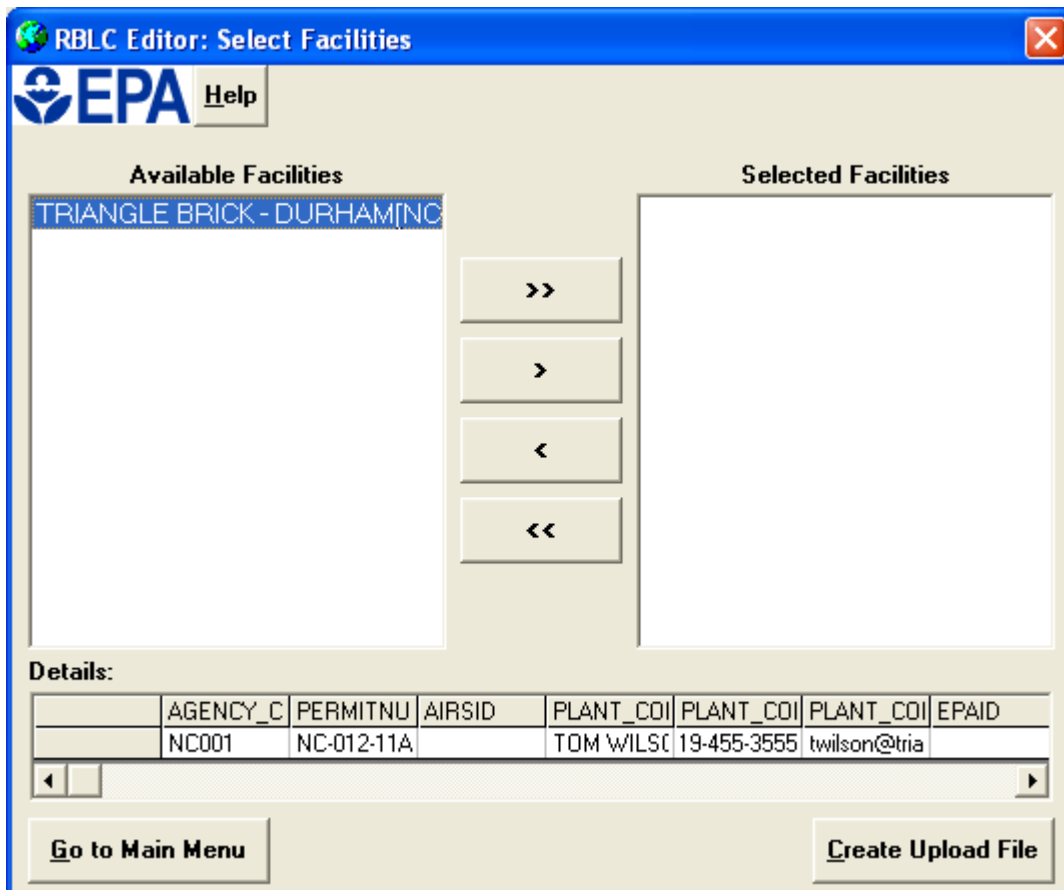


Figure 5.5-7 : Select Facilities Window

5.5.3.7 PREVIEW OR PRINT A DETERMINATIONS REPORT

The RBLC Editor allows you to view 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 diskette and mail it to:

RBLC
MD-E143-03
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

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 entry.

Refer to Section 5.5.6 of this document for:

- C Descriptions of data fields;
- C Required data fields, units, and formats; and
- C 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 Reference Library, accessed from the RBLC Web Main page, contains a link to EPA's CHIEF web site. CHIEF maintains text and data base files containing the North American Industry Classification System (NAICS) Codes and the Source Industrial Classification (SIC) Codes, needed to accurately categorize facilities and processes. 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 how to enter non-standard situations, please contact the RBLC Webmaster.

EXAMPLE - ONE PROCESS, MANY EMISSION LIMITS

Problem: Separate emission limits for NO_x 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 change for each scenario), and enter the NO_x 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.

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. Figure 5.1 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.

**TABLE 5.5-1
NAMES AND CHARACTERISTICS OF RBLC DATA FIELDS**

FIELD NAME	REQUIRED, RECOMMENDED, OR NOT REQUIRED	USED FOR SEARCHES	NOTES
Chapter 5 FACILITY LEVEL INFORMATION			
RBLC ID	Assigned Automatically	Y	Assigned by the system. Unique to each determination.
Corporate/Company Name	Required	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	Required	Y	
Facility Zip Code	Required	N	Not required for new green field construction. Zip codes can be found at: http://www.usps.gov/ncsc/lookups/lookups.htm
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 Contact	Required	Y	Depending on the security authorization of the editor, either automatically assigned by the system or chosen from a drop down list. The permitting agency's name/code can be use for searches.

FIELD NAME	REQUIRED, RECOMMENDED, OR NOT REQUIRED	USED FOR SEARCHES	NOTES
Other Agency Contact Info	Not required	N	
Permit Number	Required	Y	
Permit Type (e.g., New/Modified)	Recommended	N	
Permit Date	Recommended	Y	Must be actual date in order for the determination to be promoted to the Final data base.
Application Accepted Date	Recommended	N	
SIC Code	Recommended	Y	Drop down list; complete list on CHIEF web site. 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
NAICS Code	Recommended	N	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: http://oaspub.epa.gov/enviro/search\$.startup
Other Permitting Info.	Recommended	N	Specifics of permit determination can be included here.

FIELD NAME	REQUIRED, RECOMMENDED, OR NOT REQUIRED	USED FOR SEARCHES	NOTES
Facility-wide Emissions Change	Recommended	Y	
Class I/ U.S. Border Areas Name	Recommended	Y	
Distance to Class I / U.S. Border Area	Recommended	Y	
PROCESS LEVEL INFORMATION			
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 not be entered.
Process Notes	Recommended	N	
POLLUTANT LEVEL INFORMATION			
Pollutant Name and CAS Number	Required	Y	Select pollutant name and CAS number from the drop-down list.
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)
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.

FIELD NAME	REQUIRED, RECOMMENDED, OR NOT REQUIRED	USED FOR SEARCHES	NOTES
Estimated Efficiency %	Recommended	Y	See note on "Emission Limit 1" emission limits below.
Compliance Verified?	Recommended	N	
Emission Limit 1	Recommended (see Notes)	N	An emission limit is required during the QA step for every pollutant entry except as follows: 1) If no control is used, (control method code = N); 2) If P2 is used (control method code = P) and either the estimated % efficiency is provided or a material or operational criteria is specified in Control Method Description or Pollutant/Compliance Notes.
Emission Limit 1 Unit of Measure	Recommended	N	An emission unit is required if a limit has been entered.
Emission Limit 1 Average Time/Conditions	Recommended	N	Conditions that apply to the limit, such as operating conditions, or averaging period.
Emission Limit 2	Recommended	N	Applies only if the permit specifies an alternate of additional emission limit.
Emission Limit 2 Unit of Measure	Recommended	N	An emission unit is required if a limit has been entered.
Emission Limit 2 Average Time/Conditions	Recommended	N	Conditions that apply to the limit, such as operating conditions, or averaging period.

FIELD NAME	REQUIRED, RECOMMENDED, OR NOT REQUIRED	USED FOR SEARCHES	NOTES
Standardized Emission Limit	Recommended (see Notes)	Y	<p>A standardized emission limit is required during QA review for the pollutants listed under the process type codes in Appendix E, <i>RBLC Standard Emission Units by Process Type Code</i>. If the process type and pollutant are not listed in Appendix E, an emission limit is not required.</p> <p>For all processes, the emission limit for visible emissions (VE as percent opacity) should be listed in the standardized emission limit field.</p>
Standardized Emission Limit Unit of Measure	Recommended	Y	An emission unit is required if a limit has been entered.
Standardized Emission Limit Average Time/Conditions	Recommended	N	Conditions that apply to the limit, such as operating conditions, or averaging period.
Case-by-Case Basis	Recommended	Y	The regulatory basis for pollutant limits (select one)
Other Applicable Requirements	Recommended	Y	More than one Applicable Requirement can be selected.
Dollar Value Year Used	Recommended	N	If this information is CBI, it should not be entered.
Costs Verified (by Agency)	Recommended	N	
Cost Effectiveness	Recommended	N	In dollars per ton.

FIELD NAME	REQUIRED, RECOMMENDED, OR NOT REQUIRED	USED FOR SEARCHES	NOTES
Incremental Cost Effectiveness	Recommended	N	
Pollutant Notes	Recommended	N	

QA/QC Checklist for Data Entry and Editing

For the Entire Determination

- C Keep in mind the general goals of a QA review: insuring entry completeness, and accuracy in data entry, coding, naming, and reasonableness.
- C 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.
- C Check for accuracy in data entry.
- C Check all required and recommended data fields. Use Table 5.1 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?

Process Level Input Form

- 4) Are all of the processes covered by the determination included in the 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. If you were looking for this process, would you search using the code that you assigned?

Figure 5.5-8: QA/QC Checklist

- 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_x 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 is 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) Check units for emission limits 1 and 2. Use Appendix D to check abbreviations for emission units.
- 17) 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.

Figure 5.5-8: QA/QC Checklist, continued.

17) 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.

18) 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 5.5-8: QA/QC Checklist, continued.

APPENDIX C
PROCESS TYPE CODE LISTING

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Appendix C -- Process Code Listing

PLEASE NOTE: The RBLC is currently in the process of re-organizing the Process Type Code (PTC) system. To date, the external combustion (formerly PTC 11.xxx), internal combustion (formerly PTC 15.xxx); waste disposal sources (formerly PTC 21.xxx, 22.xxx, 29.xxx); and ferrous metal industries (formerly PTC 81.xxx) have been modified and are reflected in this list. The new codes include 11.xxx, 12.xxx, 13.xxx, 15.xxx, 16.xxx, 17.xxx, 19.xxx, 21.xxx, 22.xxx, 29.xxx, and 81.xxx. The archived external combustion 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)
 - 11.190 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)

CODE PROCESS TYPE

- 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)

- 13.000 Commercial/Institutional-Size Boilers/Furnaces (<= 100 MMBtu/h)
(Excludes 21.000, Waste Combustion Processes)

- 13.100 Solid Fuel & Solid Fuel Mixtures (<= 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 (<= 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 (<= 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 (<= 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)

CODE PROCESS TYPE

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)

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

CODE PROCESS TYPE

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

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

30.001 Charcoal Manufacturing
30.200 Kraft Pulp & Paper Processes
 30.210 Kraft Material Recovery Processes
 30.211 Kraft Recovery Furnaces/ Boilers

CODE PROCESS TYPE

- 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
- 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
 - 30.311 Plywood Dryers
 - 30.321 Plywood Presses
 - 30.390 Other Plywood Manufacturing Processes
- 30.400 Non-Kraft Pulp& Paper Processes
 - 30.421 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
- 30.006 Wood Treatment
- 30.007 Woodworking
- 30.008 Wood/Lumber Kilns
- 30.999 Other Wood Products Industries

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

CODE PROCESS TYPE

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
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)

CODE PROCESS TYPE

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
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

61.001 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

CODE PROCESS TYPE

61.008 Dacthal (tm) Production
61.009 Phosphate Fertilizers Production
61.010 Sodium Pentachlorophenate Production
61.011 Tordon Acid Production
61.012 Fertilizer Production (except 61.009)
61.999 Other Agricultural Chemical Manufacturing Sources

62.000 INORGANIC CHEMICALS MANUFACTURING

62.001 Ammonium Sulfate Production - Caprolactam By-Product Plants
62.002 Antimony Oxides Manufacturing
62.003 Chlorine Production
62.004 Chromium Chemicals Manufacturing
62.005 Cyanuric Chemicals Manufacturing
62.006 Fume Silica Production
62.007 Hydrochloric Acid Production
62.008 Hydrogen Cyanide Production
62.009 Hydrogen Fluoride Production
62.010 Phosphoric Acid Manufacturing
62.011 Quaternary Ammonium Compounds Production
62.012 Sodium Cyanide Production
62.013 Uranium Hexafluoride Production
62.014 Nitric Acid Plants
62.015 Sulfuric Acid Plants
62.016 Chloroalkali Production
62.017 Hydrofluoric Acid Production
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

63.001 Acetal Resins Production
63.002 Acrylonitrile-Butadiene-Styrene Production
63.003 Alkyd Resins Production
63.004 Amino Resins Production
63.005 Butadiene-Furfural Cotrimer (R-11)
63.006 Butyl Rubber Production
63.007 Carboxymethylcellulose Production
63.008 Cellophane Production

CODE	PROCESS TYPE
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63.009 Cellulose Ethers Production
63.010 Epichlorohydrin Elastomers Production
63.011 Epoxy Resins Production
63.012 Ethylene-propylene Rubber Production
63.013 Flexible Polyurethane Foam Production
63.014 Hypalon (tm) Production
63.015 Maleic Copolymers 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
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
63.025 Polycarbonates Production
63.026 Polyester Resins Production
63.027 Polyether Polyols Production
63.028 Polyethylene Terephthalate Production
63.029 Polymerized Vinylidene Production
63.030 Polymethyl Methacrylate Resins Production
63.031 Polystyrene Production
63.032 Polysulfide Rubber Production
63.033 Polyvinyl Acetate Emulsions Production
63.034 Polyvinyl Alcohol Production
63.035 Polyvinyl Butyral Production
63.036 Polyvinyl Chloride and Copolymers Production
63.037 Reinforced Plastic Composites Production
63.038 Styrene-Acrylonitrile 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 Chemicals (loading/unloading, filling, etc.)
64.005 Transfer of SOCMI Chemicals (loading/unloading, filling, etc.)

CODE PROCESS TYPE

64.006 Wastewater Collection & Treatment
64.999 Other SOCOMI Industry Sources

65.000 SYNTHETIC FIBERS PRODUCTION

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

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

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
69.008 Explosives Production
69.009 Hydrazine Production
69.010 OBPA/1,3-Diisocyanate Production
69.011 Pharmaceuticals Production
69.012 Photographic Chemicals Production
69.013 Phthalate Plasticizers Production
69.014 Rubber Chemicals Manufacturing
69.015 Carbon Black Manufacturing
69.016 Soap & Detergent Manufacturing
69.017 Propellant Manufacturing & Production
69.999 Other Chemical Manufacturing Sources

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

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

CODE PROCESS TYPE

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

80.000 METALLURGICAL INDUSTRY

81.000 FERROUS METAL INDUSTRY

81.100 Coke Processes
 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

CODE PROCESS TYPE

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

82.001 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
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)

CODE	PROCESS TYPE
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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
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

CODE PROCESS TYPE

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

CODE PROCESS TYPE

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

15.006 Fuel Oil

15.003 Gasoline

15.007 Multiple Fuels

15.004 Natural Gas

15.005 Process Gas

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

CODE PROCESS TYPE

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
30.999 Other Wood Products Industry 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

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

<u>Abbreviation</u>	<u>Process or Descriptor</u>
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
LDOUT	loadout
LIQ	liquid
LT	light

Abbreviation

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

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

<u>Abbreviation</u>	<u>Emission Limit Unit</u>
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	<i>giga- (10⁹ prefix)</i>
GR	grains
H	hour
HP	horsepower
J	joule
KG	kilogram
KW	kilowatt
L	liter
LB	pound
LT	long ton
M	thousand (10 ³)
MI	miles

Abbreviation

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

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 ₂	chlorine (gas)
CL ₂ /OCL	chlorine and oxychlorine
CLO ₂	chlorine dioxide
CO	carbon monoxide
CO ₂	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 ₂ O	water
H ₂ S	hydrogen sulfide
H ₂ SO ₄	sulfuric acid
H ₂ SO ₄ mist	sulfuric acid mist (also referred to as SAM)
MA	maleic anhydride
MC ACETATE	methyl cellulose acetate
MEK	methyl ethyl ketone

Abbreviation

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
TC-ETHANE
TF
TiCl₄
TMT
TRS
U
UF₄
V

Pollutant

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
1,1,1-trichloroethane
Total Fluorides
titanium tetrachloride
tetramethyl tin
total reduced sulfur
uranium
uranium tetrafluoride
vanadium

Abbreviation

VC

VCM

VE

VOC

ZN

ZRSO₄

Pollutant

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

<u>POLLUTANT</u>	<u>ALTERNATE NAME</u>	<u>CAS NUMBER</u>
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
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
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
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

BACT-PSD	Prevention of Significant Deterioration
BACT-Other	Other (i.e., T-BACT, Toxics-BACT, etc)
LAER	Lowest Available Control Technology
MACT	Maximum Achievable Control Technology
RACT	Reasonably Available Control Technology
GACT	Generally Available Control Technology
NSPS	New Source Performance Standards
NESHAPS	National Emission Standards for Hazardous Air Pollutants
OTHER	Other Control Technology Standards

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

Clearinghouse Process Code / Name or Description		Pollutant	Required Emission Units
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 _x , NO _x , 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 _x , NO _x , 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 _x , NO _x , CO	LB/MMBTU
15.110 15.190 15.210 15.290	Large Combustion Turbines (>25 MW)	NO _x , CO	PPM @ 15% O ₂

Clearinghouse Process Code / Name or Description		Pollutant	Required Emission Units
16.110 16.190 16.210 16.290	Small Combustion Turbine (≤ 25 MW)	NO _x , CO	PPM @ 15% O ₂
17.110 17.130 17.210 17.230	Internal Combustion Engines	NO _x , CO	G/B-HP-H
21.100	Commercial/Industrial Solid Waste Incinerator	CO, HCL, SO ₂ , & Nox	PPMVD @7% O ₂
		PM, PM ₁₀ , PM 2.5, CD, PB & HG	MG/DSCM @ 7% O ₂
		Dioxins / Furans	NG/DSCM TEQ @7% O ₂
21.200	Hazardous Waste Combustor	AS, BE, CR, CD, PB, HG	Micro G/DSCM @7% O ₂
		HCL, CL ₂ , CO & HC	PPMV @7% O ₂
		PM, PM ₁₀ & PM _{2.5}	MG/DSCM @7% O ₂
		Dioxins / Furans	NG/DSCM TEQ @7% O ₂
21.300	Hospital/Medical/Infectious Waste Incineration	CO, NO _x , SO ₂ & HCL	PPMVD @7% O ₂

Clearinghouse Process Code / Name or Description		Pollutant	Required Emission Units
		PM, PM10, PM 2.5, CD, PB, HG	MG/DSCM @7% O2
		Dioxins / Furans	NG/DSCM TEQ @7% O2
21.400	Municipal Waste Combustor	PM, PM10, PM2.5, CD, PB, HG	MG/DSCM @7% O2
		SO2, HCL, & NOx (CO?)	PPMV @7% O2
		Dioxins / Furans	NG/DSCM @7% O2
21.500	Wastewater Treatment Sludge Incineration	PM, PM10 & PM2.5	LB/T of dry sludge input
		HG	G/24 HR Period
30.002	Kraft Pulp Mills - Recovery Furnace	PM, PM10 & PM2.5	GR/DSCF @ 8% O ₂
	Kraft Pulp Mills - Lime Kiln	PM, PM10 & PM2.5	GR/DSCF @ 10% O ₂
	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 ₂
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

Clearinghouse			
Process Code / Name or Description		Pollutant	Required Emission Units
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	SOx, TRS, H ₂ 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 pdtn.
62.014	Nitric Acid Plants	NOX	LB/T of Acid Produced (100% acid)
62.015	Sulfuric Acid Plants	SO ₂ & 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
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

Clearinghouse Process Code / Name or Description		Pollutant	Required Emission Units
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
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

