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Pulp and Paper Sector Survey
Instructions for Part III:
Chemical Recovery Combustion Sources

2/4/11

This survey overview document provides instructions for completing Part III the pulp and paper survey. This overview is organized as follows:

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A. Part III Introduction

The pulp and paper sector information request applies for pulp and/or paper/paperboard mills that are a major source or synthetic area source of hazardous air pollutant (HAP) emissions that:

(a) Perform chemical wood pulping (kraft, sulfite, soda, or semichemical), or
(b) Perform mechanical, groundwood (e.g., thermomechanical pulping (TMP), refiner mechanical pulping (RMP)), secondary fiber, and non-wood pulping, or
(c) Perform bleaching, or
(d) Manufacture paper or paperboard products.

As defined in 40 CFR Part 63, subpart A,

> "*Major source*" means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

A "*synthetic area source"* is a stationary source which is subject to federally-enforceable conditions that limit its potential to emit to below major source thresholds.

Certain mills are not required to complete the pulp and paper sector survey. If your mill meets one of the following conditions, then you should have completed the form in Attachment 1 *of the Survey Overview document* and submitted it to Bill Schrock (EPA) before beginning Part I of the survey. Conditions for exemption from all parts of the pulp and paper sector survey are as follows:

- Your mill is not a major source or synthetic area source of HAP emissions, or
- Your mill was not operational in 2009 (and remains closed), or
- Your mill does not produce pulp, perform bleaching, or serve as a primary manufacturer of paper or paperboard products.

Part III of this information request applies for pulp mills that are a major source or synthetic area source of hazardous air pollutant (HAP) emissions that perform chemical wood pulping (for example, with the kraft, sulfite, soda, semichemical or other pulping process).

This survey is to be completed in a Microsoft Excel spreadsheet file that is divided into several worksheets ("tabs" within the spreadsheet file). You must complete certain tabs of the survey spreadsheet (depending on the type of mill you operate). Table 1 below denotes which survey spreadsheet tabs to complete depending on mill type. Additional spreadsheets are provided for submittal of continuous emissions monitoring system (CEMS) data or control measure cost information.

Please complete the survey for the facility listed in the Section 114 letter you received in the mail. If you received more than one Section 114 letter for multiple facilities, you must create a separate survey response for each facility. If you have not already received or downloaded a copy of the survey spreadsheets, they can be downloaded here: https://icr2010.rti.org/Industries/PulpPaper.aspx

Use the 2009 calendar year as the base year for all survey responses (e.g., 2009 emissions inventory, 2009 capacity, 2009 equipment configurations, etc.), unless another year is specified in the instructions (e.g., for emissions test data).

Part III of this survey asks questions about the chemical recovery combustion sources listed in Attachment 1 to this document. Section D, *How to Complete the Part III Survey*, explains how to treat various configurations of emission units (e.g., multiple emission units venting to the same stack, etc.) for each survey tab. Attachment 2 of this document contains a table of emission units and pollutants for which existing emission test data are requested under Part III.

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Use the following attachments to the *Survey Overview* document for reference:

Attachment 2: Regulatory definitions from the kraft pulp mill new source performance standards (NSPS) (40 CFR Part 60, subpart BB), chemical recovery combustion source national emissions standards for hazardous air pollutants (NESHAP) (40 CFR Part 63, subpart MM), the pulp and paper production NESHAP (40 CFR Part 63, subpart S), and selected definitions from the NSPS and NESHAP General Provisions.

Attachment 3: Acronyms and abbreviations used throughout the survey and associated spreadsheets.

Table 1. Part III Survey Spreadsheets and Tabs to Complete

Spreadsheet and tab	**Types of mills that should complete this spreadsheet tab**
P&P survey_PIII.xls	
PIII Equip detail	All mills subject to Part III
PIII Permit limits	All mills subject to Part III (unless permit limit information for Part III emission units was provided in Part I)
PIII Controls	Mills with add-on air pollution controls on chemical recovery combustion sources.
PIII Emissions test data	Mills operating emission units for which test data are requested in Attachment 2 to this document. Also, any mills that postponed submittal of Part I emissions test data until Part III.
P&P CEMS_PIII.xls	
CEMS data (separate tabs are included for different pollutants)	Mills operating CEMS on chemical recovery combustion sources. Also, any mills that postponed submittal of Part I CEMS data until Part III.
P&P costs OPTIONAL_PIII.xls (Completion of this spreadsheet is optional)	
APCD costs	Mills that installed selected air pollution controls (see section D3)
Equip change costs	Mills implementing selected process or equipment changes (see section D3)

Note that the information submitted by a facility is not intended for a compliance assessment. If actual data is not available, the facility should provide the best engineering estimates where appropriate. In addition, it is not the intent of the EPA to use this data to confirm data/information submitted in the facility's Toxic Release Inventory (TRI) or other regulatory required reports. It is understood that data submitted in this survey could vary due to the nature of the questions.

B. Confidential Business Information (CBI)

The EPA's procedures for handling confidential business information (CBI) are described in the letter (and attachments) accompanying the pulp and paper information collection request (ICR). If you believe that providing any specific information to us would reveal a trade secret, please identify this information clearly in your spreadsheet response by shading the spreadsheet cell containing the CBI with red highlight and indicating in the red block at the top of each spreadsheet tab that the tab contains CBI. (You will find the red highlighting and red CBI block at the top of the spreadsheet helpful when you separate your CBI data from non-CBI for submittal as indicated in section C2 below). Also, please clearly label any attachments submitted with your survey that contain CBI. However, please do not label your entire response as CBI if only a portion includes trade secrets. The EPA is likely to follow-up with a request for validation of CBI claims for mills claiming large amounts of information as trade secret, especially information that is readily reported by other mills without such claims.

C. How to Submit Your Part III Survey Response

If your response to this information collection request includes data with a claim of CBI, you should follow the instructions in this section to ensure the protection of your data. Please note that if you submit CBI, you will be separating your data into two portions and sending your data to EPA using two different mailing addresses.

C1. Submitting Your Non-CBI Response

Follow these instructions for the non-CBI portions of your survey response (or for responses that are entirely non-CBI.)

After you have completed and reviewed your survey response, sign and date the certification form in Attachment 4 of the *Survey Overview* document. Remove the CBI components from your survey as instructed in section C2, leaving only the red shading and replacing the CBI data with the letters "CBI". Save the Excel spreadsheet(s) containing the non-CBI portions of your completed response, emission test reports, and any other electronic non-CBI attachments on the flash drive you were provided with your section 114 letter (or on a CD or DVD). Assemble any non-CBI hard copy attachments to your survey (such as the signed certification form or test data). Please clearly label and mail the non-CBI flash drive (or disk) and any non-CBI hard copy materials in one envelope to EPA at the address specified below by the specified response deadline in the Section 114 letter. (Note: If the spreadsheet/attachments contain CBI, use the address for Mr. Morales provided in section C2 of this document.)

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
U.S. EPA Mailroom (E143-03)
Attn: Mr. Bill Schrock
109 TW Alexander Drive
Research Triangle Park, NC 27711

EPA recommends sending your non-CBI files via Registered U.S. Mail using return receipt requested, Federal Express, or other method for which someone must provide a signature upon receipt.

C2. Submitting CBI

Follow these instructions for any portion of your survey response that contains CBI.

Please create and label a separate CD or DVD containing a version of your spreadsheet response with only the CBI portion of your data (i.e., only the red highlighted data in the survey spreadsheet). Include on the disk any pages of attachments to your survey response containing CBI, with the CBI portions of the pages clearly marked (e.g., highlighted or circled). Clearly mark the disk with the words "Confidential Business Information." Send only these CBI files under separate cover to:

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
U.S. EPA Mailroom (C404-02)
Attn: Mr. Roberto Morales, Document Control Officer
109 T.W. Alexander Drive
Research Triangle Park, NC 27711

For the security of your data, EPA recommends sending your confidential files to Mr. Morales via Registered U.S. Mail using return receipt requested, Federal Express, or other method for which someone must provide a signature upon receipt.

DO NOT ELECTRONICALLY TRANSMIT CONFIDENTIAL BUSINESS INFORMATION TO EPA. E-mail and facsimile are not secure forms of communication and should never be used to transmit CBI.

D. How to Complete the Part III Survey

Your survey response will consist of emission test reports and completed Microsoft Excel spreadsheets. Separate Excel spreadsheet files are provided for completion (P&P survey_PIII.xls; P&P CEMS_PIII.xls; P&P costs OPTIONAL_PIII.xls). You must complete certain tabs of the P&P survey_PIII.xls spreadsheet file (depending on the type of mill you operate) as shown in Table 1 above. The P&P CEMS_PIII.xls spreadsheet file is to be completed if you have continuous emissions monitoring data to supply. The P&P costs OPTIONAL_PIII.xls spreadsheet file is an optional spreadsheet file that can be completed to supply control measure cost information helpful for EPA's regulatory analyses.

You will enter data into the white (unshaded) cells of the spreadsheets. Please do not enter data into the blue shaded area of the spreadsheet, or in the orange-colored column headings.

D1. Process data (P&P survey_PIII.xls)

In this portion of the survey you are asked to add data to the various tabs in the P&P survey_PIII.xls spreadsheet. Many of the instructions you need for completing the survey tabs are included in the "Instruction" row of each tab in the P&P survey_PIII.xls spreadsheet. However, more detailed instructions for selected tabs are provided below to account for common situations and to provide information on how the data will be used by EPA. Each survey tab includes fields with pull-down menus for common entries. Use these pull-down menus whenever possible, or write in information if your selection is not contained in the pull-down menu.

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Why does EPA need process data?

Facility and equipment details are being requested to inform the technological review of the pulp and paper NESHAP and NSPS and to provide information on means of reducing residual risk. While the NEI update (requested in Part II of this survey) provides EPA with data related to emissions release points (e.g., mass emission rate and stack exit parameters used for risk analysis and tracking nationwide trends), the technological review of the NESHAP and NSPS standards considers emission unit and control equipment details specific to the processes employed and matches these details to emissions levels that are achieved (e.g., emission concentrations). Applicability of the NESHAP and NSPS compliance options depends on the specific process equipment.

Several IDs are requested throughout Part III of the the pulp and paper survey response spreadsheet(s), including:

- NEI Site ID
- Emission Unit ID
- Collection system ID
- APCD_ID

The NEI Site ID and Emission Unit ID should correspond with the IDs used in the NEI update (Part II of this survey) where such IDs exist. If no NEI Site ID already exists (e.g., in cases where no previous NEI data exists for your mill), then you should use "NEW_____" for the NEI Site ID where the blank is your mill's zip code, as this will (in all likelihood) provide a unique identifier for your mill. If Emission Unit ID(s) for selected process units do not already exist in the NEI data set, then you may use any Emission Unit ID you choose (for example, the ID used in your permit), and this same ID should be used throughout all Parts of the survey. You will specify the Collection system ID and APCD_ID in the *PIII Equip detail* and other spreadsheet tabs.

A Note About Identification Numbers (IDs)

The different parts of the pulp and paper survey include the following IDs:

- NEI Site ID
- Emission Unit ID
- Collection system ID
- APCD_ID

It is imperative that you use the same IDs to describe the same facility, equipment/emission unit, and emission release point throughout all parts of this survey. These ID codes will be used to link the various pulp and paper data base tables together into a functional and informative data base to be used for regulatory analyses. You may choose your own IDs (e.g., based on Emission Unit IDs already included in the NEI, IDs from existing process flow diagrams, IDs in your air permit, etc.), but the IDs you choose must be consistent throughout your survey response. If you wish to avoid follow-up calls regarding your survey data, please make every effort to ensure that your IDs match throughout the spreadsheet(s) and in each part of your survey response. For example, any Emission Unit ID or APCD_ID you create/specify in Part I should also be used when referring to the same piece of equipment in Parts II and III for this survey response.

Also, please be sure that no extra spaces or characters are included in the ID cells. For example, Emission Unit ID "DIG1" is not read the same as "DIG-1" or "DIG-1_" by data base software.

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What if I have difficulty pairing emission units with corresponding Emission Unit IDs in the NEI?

Having Emission Unit IDs in Part I/III and the NEI matching as closely as possible will help tremendously as EPA analyzes the survey data (for those instances where we need to link the NEI and Part I/III data). However, we realize that information may be presented in the NEI differently than we are requesting it in the *Equip detail* tabs of Parts I/III of the pulp and paper survey. The *Equip detail* tabs and the NEI serve two different purposes, so this is to be expected. Instructions for handling difficult matches between the NEI and Part I/III are below:

1. When there is no corresponding Emission Unit ID in the NEI, then you should make one up (6 text characters or less) to use in Part I and/or Part III. If you add the emission unit to the NEI in Part II, then use the Emission Unit ID you made up for Parts I/III.

2. In some cases there may not be a one-to-one correspondence between an existing NEI Emission Unit ID and the equipment listing requested in the Part I/III *Equip detail* tab.

Example 1: An existing Emission Unit ID in the NEI may represent a grouping of equipment (e.g., "PSC" for 4 pulp storage chests), but these equipment need to be listed separately in the *Equip detail* tab. In this case, you should make up a similar Emission Unit ID for the *Equip detail* tabs of Parts I and III (e.g., PSC-1, PSC-2, PSC-3, PSC-4), and then add a note in the *Equip detail* tab "Process notes (optional)" column to indicate the corresponding NEI Emission Unit ID of PSC as shown below:

Emission Unit ID	Process notes (optional)
PSC-1	NEI Emission Unit ID (covering 4 tanks) = PSC
PSC-2	NEI Emission Unit ID (covering 4 tanks) = PSC
PSC-3	NEI Emission Unit ID (covering 4 tanks) = PSC
PSC-4	NEI Emission Unit ID (covering 4 tanks) = PSC

Example 2: Suppose the NEI contains 2 or more Emission Unit IDs for a given piece of equipment (such as a single paper machine's forming section {SN23} and burners {SN24}). In this case you need to pick a single representative Emission Unit ID (e.g., SN23) to use in the Part I/III response.

Example 3: Suppose a single NEI Emission Unit ID is provided for many pieces of unrelated equipment at the mill, but the NEI Process ID varies for the equipment (e.g., NEI Emission Unit ID = 001 for all equipment at the mill, but each emission unit has a unique Process ID {01, 02, 03….}). This is not common, but is the case for at least one mill. In this situation, it is suggested that the Emission Unit ID used for Part I/III be 001_01 for NEI Process ID 01; 001_02 for NEI Process ID 02, 001_03 for NEI Process ID 03 etc.

3. If respondents unfamiliar with their pre-populated NEI data are unable to match one or more NEI Emission Unit IDs with emissions unit(s) at their mill (using the SCCs as a guide), then it is suggested that the respondent flag the unmatchable NEI data for deletion in Part II, and replace it with revised NEI data for identifiable emission units. Include the identifiable Emission Unit IDs in Parts I/III.

Other tips:

- The NEI requires Emission Unit IDs to be limited to 6 characters.
- You may use the "Process notes (optional)" column in the Part I/III *Equip detail* tabs to clarify any matching discrepancies with the Part II NEI. These notes will assist EPA in analyzing the data and prevent confusion.

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In several parts of the survey, the agency requests "nominal daily throughput capacity." These values are typical operating rates for the process or emission unit and can be used by the agency to compare the relative size of the unit. You may use the pulping line nominal capacity (throughput) for all equipment in the pulping line. You may specify the nominal liquor solids or lime kiln throughput for equipment in the chemical recovery loop. The EPA is interested in capacity values that would be used for estimating emissions (for example, values used in your permit application). We are not interested in maximum capacity values for each piece of equipment outside of the constraints of the pulping/chemical recovery process within which it is located.

Follow the instructions below and in the "Instruction" rows of the spreadsheet to complete the survey tabs. Refer to Table 1 of this document to determine which tabs you must complete, depending on the type of mill you operate.

What if I do not know or have the information to answer a survey question?

There may be survey questions that you do not know the answer to, or for which information is not readily available. The following codes may be used:

> Unknown (UK): If you do not have the requested information, cannot obtain the information without extraordinary effort, and cannot provide a reasonable estimate, then you may enter "UK" for unknown.
>
> Not Applicable (NA): If a question is not applicable to your operations, then you may enter "NA" for not applicable.

Survey respondents are reminded that their certification of the accuracy of their response includes a certification that any identification of information as "unknown" or "not applicable" is accurate. Further, survey respondents providing an excessive number of responses as "UK or "NA" are likely to receive scrutiny and follow-up inquiries from EPA related to their survey response.

a. PIII Equip detail tab

All mills covered by Part III are asked to complete the *PIII Equip detail* tab. This tab asks for information for each individual emission unit. The purpose of this tab is to provide EPA with equipment-specific details needed for the Agency to review the technology-based standards (i.e., nationwide numbers of equipment, configuration of controls, pertinent equipment details, and regulatory compliance options used).

The types of emission units listed in Attachment 1 that you operate should be included in the *PIII Equip detail* tab. Columns A through AM ask generic questions for all emission units. The columns to the right of column AM request design and operating details for specific types of emission units (e.g., recovery furnaces, etc.). The table below summarizes the different types of equipment for which specific questions are included in the *PIII Equip detail* tab.

***PIII Equip detail* tab columns**	**Description of information requested**
A-AM	Equipment, exhaust flow rate, controls, and Federal rule applicability for each emission unit and collection system. Complete these columns for all emission units.
AN	Black liquor gasification
AO-AT	Black liquor oxidation systems
AU-BH	Recovery furnaces and recovery furnace ESPs
BI-BN	Semichemical combustion units (at stand-alone semichemical pulp mills)
BO-BT	Smelt/ash dissolving tanks
BU-CB	Lime kilns (including rotary lime kilns and fluidized bed calciners)
CC	Fuel-fired equipment
CD-CE	Equipment incinerating NCG or SOG
CF-DN	Primary and supplemental fuels
DO-DU	Emission unit startup and shutdown
DV	Comments

Data are requested for each emission unit (and need not be broken out by individual emission points for a given emission unit unless different collection or control measures apply for the different emission points from an emissions unit) or the characteristics of the emission points are different. Specify the Emission Unit ID and Collection system ID (if applicable), and APCD_ID(s) by following the directions in the "*Instruction"* row of the *PIII Equip detail* tab. Some common configurations of emission units are addressed below.

Multiple emission units ducted to a single release point. List each emission unit separately in the *PIII Equip detail* tab even if the exhaust from the emission unit is ducted to a common conveyance. For multiple emission units ducted through a common conveyance to the same release point, list each Emission Unit ID separately and provide the same Collection system ID for the different Emission Unit IDs.

Single emission unit with multiple release points. In the *PIII Equip detail* tab, EPA is most interested in learning how (or if) your emission unit is controlled and what Federal regulation compliance options are in use as indicated in columns A through AM. If the different release points (vents or stacks) have different controls or different NSPS/NESHAP applicability then you will need to list each vent (or group of vents with the same controls) on separate rows. Repeat the Emission Unit ID on separate rows and distinguish the release points using the "Emission unit description" column in as many rows as needed to reflect all of the release points associated with the emission unit in the *PIII Equip detail* tab.

For example, Emission Unit ID 001 (EU001) is vented to *two stacks with different controls*. Split EU001 to EU001a and EU001b on separate rows of the *PIII Equip detail* tab, and then indicate in

the "Emission unit description" column that EU001a and EU001b vent through separate stacks. Enter details associated with emission release (exhaust flow, APCD information and NSPS/NESHAP compliance options) in each row. Enter equipment details (year installed, hours per year [hr/yr], combustion controls, fuel data, equipment design and other operating parameters) in only 1 row, leaving all other rows associated with the Emission Unit ID blank.

Emission units vented into the building. Include emissions units that vent into a building in the *PIII Equip detail* tab, and enter "BLDG" in the "Configuration if not emitted through a conveyance" column.

Emission units that are not vented. Include emissions units that are not vented in the *PIII Equip detail* tab, and enter "NV" in the "Configuration if not emitted through a conveyance" column.

Emission units with fugitive emissions. Include emissions units with fugitive emissions in the *PIII Equip detail* tab, and enter "FUGITIVE" in the "Configuration if not emitted through a conveyance" column. If an emission unit produces both fugitive emissions and emissions that are emitted though a conveyance, then you need to either: (1) specify the fugitive emissions on a separate row in the *PIII Equip detail* tab (e.g., as a "Single emission unit with multiple release points" as described in the instructions immediately above for the *PIII Equip detail* tab), or (2) if you know the volume percent of exhaust flow captured from the emission unit (e.g., 60%), you could use only one row to represent the emission unit and note 60% capture in the "Control capture efficiency" column without specifying vent-by-vent details.

Bypass stacks used only during certain times. Do not include data for bypass stacks or control system bypasses in the *PIII Equip detail* tab.

Air pollution control devices (APCDs). In the APCD columns, enter primary air pollution control devices (APCDs) (i.e., the pollution control used most frequently) in the sequence in which they are used to control emissions from each emission unit (or collection system) identified in the Emission Unit ID column. Enter a description of the APCD in the APCD "type" column and an ID code in the APCD_ID column. The ID you enter into the APCD_ID field will correspond with the APCD_ID you enter in the *Controls* tab. For example,

If you use an electrostatic precipitator (ESP) (ESP1) followed by a scrubber (WSa), you would enter APCD1 type = ESP and APCD2 type = scrubber, and APCD1_ID = ESP1 and APCD2_ID = WSa.

Complete the applicable equipment-specific details requested in columns AN through DU for each type of emission unit in the *PIII Equip detail* tab by following the directions in the "*Instruction"* row of the tab. Additional specific instructions are provided below for equipment requiring instructions beyond what could be explained in the "*Instruction"* row. **Leave columns that do not apply for a given emission unit blank rather than entering "NA".**

What averaging period should be used in responding to process detail questions?

Several questions in the *PIII Equip detail* and other survey tabs ask for process parameters such as exhaust flow rate (acfm), percent solids, temperature, etc. Unless otherwise specified, typical values are requested, and are subject to the respondent's discretion. For example, if you measure a particular parameter with an online meter and you have data available for most operating hours of the year, then you may choose to supply an annual average for the parameter. However, if the parameter is only measured periodically, then you may want to provide the most recent measurement.

All emission units listed in Attachment 1. Complete columns A through AM. These columns ask generic questions for all emission units related to how the emission units are vented and controlled, and related to Federal rule applicability. Additional questions in columns AN through DU may also apply for selected emission unit types.

Mills using the PM bubble compliance option. If your mill is using the PM bubble compliance option under MACT subpart MM, please identify process equipment and controls included in the bubble and submit separately your most recent bubble calculations used for compliance demonstration. Please include the following in your calculation submittal: CaO production rate (ton/day), average volumetric gas flow (dscf/min), and average BLS firing rate (ton/day).

Recovery furnaces and semichemical combustion units. Questions pertaining to recovery furnaces have been combined for kraft, kraft with co-located semichemical, soda, and sulfite pulps. The equipment-specific details will provide post-MACT recovery furnace and semichemical combustion unit configurations. Capacities and other design parameters are requested for purposes of impacts analyses. Conversion years (e.g., year DCE converted to NDCE, or year of wet- to dry-bottom ESP conversion) allow EPA to identify mills that might have relatively recent cost and other information related to equipment conversions. The combustion unit hottest temperature is requested for semichemical combustion units in order to characterize the different types of semichemical combustion units.

Smelt dissolving tanks and lime kilns. These questions will characterize the population of smelt dissolving tanks and lime kilns following subpart MM compliance. Capacities and other design parameters are requested for purposes of impacts analyses.

Primary and supplemental fuels. Fuel types are requested for fuel-fired equipment because fuel type can have an effect on emissions. The EPA may consider fuel types and perform calculations based on fuel firing rates for various nationwide impact analyses. Because the types and amounts of fuels fired can vary throughout the year, EPA is requesting the approximate percent of annual heat input capacity in million British thermal units per year (MMBtu/yr) supplied by each fuel.

Primary fuel information is requested for fuel-fired equipment such as lime kilns. Primary fuels are not requested for recovery furnaces or semichemical combustion units because black liquor (or red liquor) is assumed to be the primary material combusted in these units. Non-condensable gases (NCG) and stripper off gases (SOG) are not considered to be either primary or supplemental fuels for purposes of this survey. Supplemental and other fuel information is requested for recovery furnaces and semichemical combustion units in addition to other fuel-fired equipment such as lime kilns and thermal oxidizers. Information for secondary and additional fuels used routinely for multifuel-fired equipment may be indicated in the supplemental and other fuel columns.

Emission unit startup and shutdown. Complete the startup and shutdown questions for all emission units currently subject to Federal or State emission limits or monitoring requirements. Questions pertaining to emission unit startup and shutdown are asked in order to provide EPA with an understanding of the duration, emissions potential, work practices, and control mechanisms of startup and shutdown events for the wide variety of equipment used at pulp and paper mills. The EPA is considering standards that could apply during startup and shutdown events (or whether the current standards developed for normal operation should apply) in light of the December 2008 vacatur of the NESHAP startup, shutdown, and malfunction exemption in 40 CFR Part 63, subpart A. The startup and shutdown questions would also identify pulp and paper emission unit types for which startup and shutdown are not already addressed with the current emission standards. You are asked to supply information for routine startup and shutdown events associated with planned process or mill downtime. (Do not provide information for unplanned startup/shutdown events associated with equipment malfunctions.) The startup and shutdown data in the *PIII Equip detail* tab are being sought for regulatory development purposes and will not be used for enforcement purposes.

b. PIII Permit limits tab

Permit limits for each emission unit/point listed in Attachment 1 of this document are requested. You do not need to complete this section if you provided the Part III emission unit permit limits in your response to Part I (simply mark the box that appears in cell F3 of the *PIII Permit limits* tab to indicate permit limits were submitted under Part I).

If available in the permit, provide limits in terms consistent with the suggested units shown in Table 2 below. These suggested units were taken from existing Federal limits codified in 40 CFR Part 60, subpart BB or 40 CFR Part 63, subparts S or MM. Specify permit limits as written in the permit if the suggested units are not included in the permit. You do not need to convert limits to the suggested units. You may specify limits for a given pollutant in multiple units/formats (e.g., ppmdv and/or % reduction) if the permit is written to include multiple compliance options. However, you do not need to provide every unit/format for pollutants with multiple limits in different units of measure or formats (e.g., only provide ppmdv and lb/MMbtu at specified % oxygen (O_2) for a combustion unit SO_2 limit specified in the permit in terms of ppmdv, lb/hr, lb/day, and tpy, lb/MMBtu at specified % O_2, etc.). The survey spreadsheet allows for up to five different permit limit formats for the same pollutant. Permit limits of most interest to EPA are concentration limits (ppmdv, gr/dscf, etc.), percent reduction, mass per unit production (lb/ton of material throughput, etc.) because these limits can be compared from facility to facility independent of emission unit or mill capacity. EPA will use the permit limit information you supply in comparing permit limits across similar emission units nationwide. Please be as specific as possible when entering permit limit units. Include any oxygen correction factors (% O_2). Be sure to note if ppm values are on a dry (d) or volume (v) or weight (w) basis if specified this way in your permit (ppmdv, ppmdw, ppmv, ppmw). Please note:

State Mass-based Limits: Mass emission rate limits (lb/hr or tpy), or limits based on state-only required modeling, are not being requested unless this is the only way in which limits are specified in the permit. The EPA is most interested in state permit limits that are more stringent than those limits in federal rules (e.g., PSD Avoidance or BACT limits).

Permits restating NESHAP and NSPS limits. Your permit may simply restate the emission limits contained in Federal rules such as NESHAP subparts S and MM. Some permits may list all of the compliance options contained in the Federal rules as permit limits. If this is the case, you do not need to enter permit limits that are exactly the same as Federal NESHAP or NSPS. Instead, specify the applicable Federal rule (not the specific numeric Federal limits) in Column F and skip the remaining permit questions/columns in the table. If your permit contains additional State limits in terms other than the Federal limit, please indicate these limits in the appropriate column (e.g., Column G for permit limit 1, Column J for permit limit 2, etc.) *Please do not enter State lb/hr or tpy emission limits in addition to the Federal limits.*

Opacity. The opacity limits of most interest to EPA are those for fuel fired equipment such as recovery furnaces, semichemical combustion units and lime kilns. *You do not need to include State opacity limits for every emission unit (only the fuel-fired units).*

Alternative to submit permit copy: The facility may also opt to send a pdf copy of their permit with the survey. While we would prefer to receive data in the *PIII Permit limits* tab, we will accept a copy of your operating permit (e.g., title V operating permit) instead of the completed *PIII Permit limits* tab. Other complete and up-to-date summaries of permit limits, such as a mill-specific summary of permit limits or compliance matrix, would be acceptable as well.

Table 2. Suggested Units of Measure for Permit Limits

Pollutant	Suggested units
PM[1]	Recovery furnaces/chemical recovery combustion units: gr/dscf @ 8% O_2 SDT: lb/ton BLS LK: gr/dscf @10% O_2 Other processes: lb/ton of throughput, lb/MMBtu, gr/dscf, g/dscm, or specify
PM_{10}[1]	
$PM_{2.5}$[1]	
Opacity	% (provide averaging time)
TRS	RF/combustion units: ppmdv @ 8% O_2 SDT: lb/ton BLS (as H_2S) LK: ppmdv @ 10% O_2 Other processes: lb/ADT pulp and/or ppmdv
SO_2	lb/MMBtu and/or ppmdv or limits on fuel S content
NO_X	lb/MMBtu (as NO_2) or ppmdv
CO	lb/MMBtu or ppmdv
Pb or other HAP metals	Specify units
VOC	lb/{production}, specify if as propane, etc. or ppmdv
THC	Report as carbon. RF/combustion units: lb/ton BLS
HCl	ppmdv and/or % reduction
Methanol and gaseous organic HAP	chemical recovery combustion sources: lb/ton BLS process sources: ppmv @ 10% O_2, lb/ton ODP, and/or percent reduction
Chlorine and chlorinated HAP	ppmv, lb/ton ODP, and/or percent reduction
Other speciated HAP (specify…)	Specify units

[1]Specify filterable and/or condensable if your permit limits distinguish between the filterable and condensable PM fractions.

c. PIII Controls tab

Complete the *PIII Controls* tab by following the instructions in the "*Instruction"* row for add-on APCDs used to control the Part III pulp and paper emission units listed in Attachment 1. The data requested in the *PIII Controls* tab include pertinent control device design parameters that will be used by EPA to distinguish among control devices (e.g., pressure drop and L/G ratio can be used to identify high- vs. low-efficiency wet scrubbers) and to understand the non-air environmental impacts associated with the control devices (e.g., amount of wastewater or solid waste generated and methods for handling).

Actual control efficiency. Actual control efficiencies are requested for PM, TRS, HCl, SO_2, and other HAP. This information will be used in determining the capability of different control devices for reducing emissions. If you have data from inlet/outlet emissions testing used to determine a percentage reduction in the requested pollutant across the control device, then you would enter this test result as the "actual" control efficiency. You may leave the control efficiency columns blank (rather than marking as "NA") if actual control efficiency is not known (or not applicable for a given pollutant).

Thermal oxidizers. Complete the questions pertaining to thermal oxidizers for thermal oxidizers or regenerative thermal oxidizers used to control Part III chemical recovery combustion units (e.g., semi-chemical recovery units).

Control device startup and shutdown. The EPA is considering standards that could apply during startup and shutdown events (or whether the current standards developed for normal operation should apply) in light of the December 2008 vacatur of the NESHAP startup, shutdown, and malfunction exemption in 40 CFR Part 63 subpart A. Questions pertaining to control device startup and shutdown are asked in order to provide EPA with an understanding of the duration and definition of startup and shutdown events for the types of control devices used at

pulp and paper mills. The EPA is seeking information on the integral nature of startup and shutdown events for the different combinations of emission units and control devices used in the pulp and paper industry. In addition, because Federal NSPS and NESHAP require continuous monitoring of emissions or control device operating parameters, information is requested to inform EPA of particular pulp and paper NSPS or NESHAP control device parameter limits that cannot feasibly be met during startup and shutdown events. Certain parameters may be "instant on" while others are more transient in nature (i.e., changing as startup or shutdown progresses). Examples could include control device temperature that must heat up to a set point, or pressure drop that cannot be achieved due to low exhaust gas flow from the emission unit. The EPA will use this information to evaluate which existing control device parameter limits may remain in effect during startup and shutdown events, and which parameter limits may need to be replaced with another requirement during startup and shutdown. In all of the control device startup and shutdown questions, you are asked to supply information for routine startup and shutdown events associated with planned equipment or mill downtime. (Do not provide information for unplanned startup/shutdown events associated with equipment malfunctions.) The startup and shutdown data in the *PIII Controls* tab are being sought for regulatory development purposes, and will not be used for enforcement purposes.

d. PCC tab

Mills that route lime kiln, boiler, or other process exhaust to a precipitated calcium carbonate (PCC) plant should complete the *PCC* tab. Information regarding the pulp and paper emission units involved, time, controls, and portion of pulp and paper process exhaust routed to the PCC plant are requested. Questions regarding land ownership and permitting are also asked. This information would help regulation writers understand the nature of this process and the relationship between pulp and paper mills and PCC plants, should routing of exhaust to an onsite PCC plant need to be mentioned (e.g., with a special provision, exemption, etc.) in a regulation.

Complete the *PCC* tab by following the instructions in the "*Instruction"* row.

D2. Test data

Attachment 2 of this Part III survey contains a table of emission units and pollutants for which existing emissions data are requested. Emissions data are being requested in the form of emissions test reports or continuous emissions monitoring data, whichever may be available. You are **not required** to conduct any new emissions testing or continuous emissions monitoring to respond to this survey. Follow the instructions below for the "PIII Emissions test data tab" for emissions test reports. Follow the instructions for completing the "CEMS data spreadsheet (P&P CEMS_PIII.xls)" if you have continuous emissions monitoring system (CEMS) data instead of emission test reports for a given emission unit and pollutant combination. The emissions test data collected will provide valuable information on current emissions levels and will allow EPA to consider variability in emissions from mill to mill (and over time for a given emission unit and pollutant) in reviewing and setting emission standards. When submitting test data, EPA is requesting full test reports with field and lab data sheets and example calculations, not just summary reports.

Be sure to include any emissions test data or CEMS data required under Part I that was postponed until Part III for submittal.

a. PIII Emissions test data tab

Attachment 2 of this survey contains a table of emission units and pollutants for which existing emission test data are requested. You are not required to conduct any new emissions testing to respond to this survey. The EPA is only requesting existing emission test reports at this time as they may already be available.

Review the test data request table in Attachment 2 of this survey. Locate any existing emissions test reports in your files that match the test method and other criteria for each emission unit and pollutant combination requested. Emissions test data representative of your current operations are requested. You are not required to supply emissions data that are no longer representative of the current emission unit and control system configuration. For

example, if you have installed controls or made significant process changes expected to change emissions, then you need not supply emissions data for the prior configuration. However, you may voluntarily supply emissions data for prior configurations, as such information would be useful to EPA in characterizing emissions in general (for non-site-specific uses), but we request that you identify that such data are no longer representative in the *PIII Emissions test data* tab.

Cutoff dates are provided in Attachment 2 for certain emission unit and pollutant combinations. More recent cutoff dates (e.g., 2001 or date of MACT compliance) are specified for emission unit and pollutant combinations expected to be widely available. Longer cutoff dates (e.g., dating back to 1990) are included for emission unit and pollutant combinations for which data are likely to be sparse. Test data prior to the cutoff dates are requested only if necessary to obtain results of at least one representative test for a given process unit and pollutant.

Provide available test data for multiple years dating back to the cutoff date. Multiple years of test data will allow EPA to examine and account for variability in emissions in setting emissions standards.

Supply both APCD inlet and outlet data if available.

As noted above, submit full and complete copies of the emission test reports, to include field and lab data sheets and example calculations, meeting the criteria in Attachment 2 with your survey response. Electronic (pdf) or hard copies are acceptable. Include the summary portion of the report and any appendices showing run-by-run test parameters, method detection limits, laboratory data, production data, example calculations, etc. EPA will extract the test data from the emission test reports for use in nationwide regulatory analyses.

Complete the *PIII Emissions test data* tab to identify the specific emission units and control systems for which emission test reports are being submitted, the pollutant tested, and the test method. The *PIII Emissions test data* tab will be used by EPA as the starting point for development of the emissions test data base that EPA intends to construct based on the emissions test data received through this survey.

b. CEMS data spreadsheet (P&P CEMS_PIII.xls)

The EPA is requesting existing CEMS data and/or continuous opacity monitoring system (COMS) data for calendar year 2009 (CY2009) operations from facilities that have installed continuous monitoring systems. You are not required to install or operate any new CEMS or COMS to respond to this survey.

CEMS data that are representative of your current operations are requested. You are not required to supply CEMS data that are no longer representative of the current emission unit and control system configuration.

A separate Microsoft Excel spreadsheet file (P&P CEMS_PIII.xls) is provided for submittal of the requested CEMS data. The spreadsheet file contains individual worksheets (tabs) designed specifically for TRS (12-hour block average), TRS (hourly), Opacity, and other pollutants (NOx, SO_2, CO, Methanol, HCl, and PM). Each worksheet is designed to accommodate data from one CEMS (including oxygen data). If you have multiple CEMS (e.g., two TRS CEMS on different emission units), then you must copy the relevant worksheet in order to enter data for the additional CEMS.

A brief introduction to each of the CEMS worksheets follows. Additional, field-specific instructions are included on each worksheet. An "EXAMPLE" completed worksheet is also provided as a separate tab within the P&P CEMS_PIII.xls spreadsheet file.

TRS (12-Hour Average). This worksheet is designed for recovery furnaces, smelt dissolving tanks, lime kilns subject to the TRS monitoring requirements in NSPS subpart BB, but can be used for any emission units with TRS CEMS (e.g., for compliance with State emissions standards which may be based on the TRS emissions guidelines). Respondents are requested to specify the Emission Unit ID (or Collection system ID), the APCD_ID, and report the 12-hour averages of CEMS concentration data for TRS for CY2009 operations.

In addition, respondents are asked to provide the highest single 12-hour average TRS concentration recorded in CY2009: (a) under normal operating conditions, (b) under conditions of startup or shutdown, and (c) under malfunction conditions. [Note: The reported concentrations of TRS should be corrected to 8% O_2 for recovery furnaces and 10% O_2 for lime kilns and other equipment.]

TRS (1-Hour Average). Same as above, except that this worksheet is designed to accept the 1-hour average TRS data for the same time period as provided for the 12-hour averages.

Opacity. This worksheet is designed for recovery furnaces or lime kilns equipped with COMS but may be used for other equipment. Respondents are requested to specify the Emission Unit ID (or Collection system ID) and the APCD_ID, and report the 6-minute average opacity for CY2009 operations. An optional column is also included for hourly average opacity for mills that calculate an hourly average. In addition, respondents are asked to provide the highest single 6-minute average opacity recorded in CY2009: (a) under normal operating conditions, (b) under conditions of startup or shutdown, and (c) under malfunction conditions.

Other pollutants (such as NOx, SO_2, CO, total HAP, methanol, HCl, or PM). This worksheet is designed for any emissions unit equipped with a CEMS. Specify the continuously monitored pollutant at the top of the worksheet. Respondents are requested to specify the Emission Unit ID (or Collection system ID) and the APCD_ID (or type of combustion controls used), and report the 1-hour averages of the CEMS data for CY2009 operations. In addition, respondents are asked to provide the highest single 1-hour average concentration recorded in CY2009: (a) under normal operating conditions, (b) under conditions of startup or shutdown, and (c) under malfunction conditions.

OPTIONAL-CEMS cost. Completion of this worksheet is OPTIONAL. This worksheet requests equipment cost data for CEMS or COMS installed within the past 10 years. EPA can use these data to estimate costs of CEMS or COMS when evaluating monitoring options.

What if my data are not in a form that can be inserted into P&P CEMS_PIII.xls?

It is very helpful for EPA's data analysis purposes if data are entered into the P&P CEMS_PIII.xls template provided. However, we understand that some CEMS software may not be configured to provide output that can be easily converted to our preferred spreadsheet format. We also understand that, in some cases, the hourly production data requested in the CEMS spreadsheet may not be coupled with the CEMS data or may not be available in a manner to be easily linked to the CEMS data. If you face these or related issues, please note that *EPA is not asking you to hand enter hard copy CEMS data into the spreadsheet.* You may provide CEMS data in an alternative format if you are unable to convert it to our spreadsheet format within the timeframe for this survey. We request that you provide CEMS data in a form suitable for analysis if possible (e.g., spreadsheet or data base format is preferred over read-only pdf format). We'd accept more recent CEMS data (e.g., from the most recent 6 months) if 2009 CEMS data are no longer in electronic form due to company records retention policies. Further, you may omit the production data if they cannot reasonably be included in your CEMS spreadsheet. Estimates of production data are acceptable (e.g., if you have a daily production rates, you may divide by 24 operating hours in a day to estimate hourly production).

D3. Optional cost data

The EPA requests information related to the capital and operating costs of selected air pollution controls or process/equipment changes. Providing this cost information to EPA is optional at this time. The Agency wishes to receive enough cost information on a voluntary basis to perform regulatory analyses. However, should additional cost information be needed, EPA reserves the right to follow up with mills that have installed equipment or implemented process changes of interest to request cost information under CAA section 114 authority.

The spreadsheet entitled "P&P costs OPTIONAL_PIII.xls" can be completed to provide cost information. This spreadsheet contains two tabs (*APCD costs* and *Equip change costs*). The EPA recognizes that cost information can be sensitive. The "P&P costs OPTIONAL_PIII.xls" spreadsheet contains a red block at the top of each tab where you can indicate if the tab contains CBI, or if the entire tab should be treated as CBI. Responses containing CBI should be submitted according to the instructions in section C2 of this document.

Any cost information that you provide would be very useful to EPA for purposes of evaluating the costs of control measures that may be considered as regulatory options. These cost data will be used by EPA to estimate the nationwide costs of any regulatory options based on the control measure indicated. Cost information from within the last 10-12 years is requested (e.g., costs dating back to 1998). The cost information could come from vendor quotes for APCD or equipment changes that either have been implemented or were explored but not implemented.

For Part III, the EPA is particularly interested in costs of the following APCDs. Please supply this information using the *APCD costs* tab:

- Recovery furnace scrubbers, dry sorbent injection/fabric filter (DI/FF), selective catalytic reduction (SCR), or selective non-catalytic reduction (SNCR)
- Black liquor oxidizer incinerators or thermal oxidizers
- Lime kiln ESP

The EPA is particularly interested in costs of the following process changes or equipment changes/upgrades. Please supply this information using the *Equip change costs* tab.

- Changing from a direct contact evaporator (DCE) to non-direct contact evaporator (NDCE) recovery furnace
- Changing from a wet bottom ESP to a dry bottom ESP
- Changing from a wet PM return system to a dry PM return system for your ESP
- Adding chambers/fields to an existing ESP
- Installation of quaternary air ports in the recovery furnace to improve combustion efficiency
- Process changes to improve lime mud washing or to control makeup water quality in the causticizing area
- Replacing a recovery furnace with a black liquor gasification system

Complete the *APCD costs* and *Equip change costs* tabs by following the instructions in the "*Instruction"* rows of those tabs. You may also submit information in an alternative format (e.g., as an attachment to your response) if needed. Because the cost data will be used by EPA to estimate the nationwide costs, please note if you believe that any portion of the cost information that you supply would be completely unrepresentative of costs that other mills may face for similar control projects (e.g., if your project capital cost included installation of extra buildings, land purchases, etc. that may not be required for other mills).

Form Approved __/__/__
OMB Control No. ____-____
Approval Expires __/__/__

PART III - ATTACHMENT 1
Emission Units to Include in the Part III Pulp and Paper Survey Response

Include the following types of equipment (emission units) in your Part III survey response. You may not operate all of the emission units listed below. Only include equipment operated at your mill.

Chemical Recovery Combustion Equipment
Recovery furnace
Semichemical combustion unit
Black liquor oxidation system
Smelt or ash dissolving tank
Salt cake mix tank
Lime kiln or calciner
Black liquor gasification system
Sulfur burner

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PART III - ATTACHMENT 2
Part III Emissions Test Data Request

(Note: Test Reports submitted should be full and complete copies of the emission test reports, to include field and lab data sheets and example calculations.)

Form Approved __/__/__
OMB Control No. ____-____
Approval Expires __/__/__

Part III - Attachment 2. Pulp and Paper Emission Units and Pollutants for Which Existing Representative Emission Test Data Are Requested

Note: Emissions test data representative of your current operations are requested as described in the survey instructions.

Emission Unit	Particulate matter (PM)[1]	Speciated HAP metals[2]	$PM_{2.5}$ (fil.)	$PM_{2.5}$ (cond.)	Hydrochloric acid (HCl)	Acetaldehyde, Formaldehyde, Methanol[1]	Total hydrocarbon (THC) as carbon	CDD/CDF and POM/PAH	Total reduced sulfur (TRS)[1,3]	Nitrogen oxides (NOx)[1]	Sulfur dioxide (SO_2)[1]	Carbon monoxide (CO)[1]
Test methods[4]	M5, M29, M17 PM CEMS, COMS	M29	EPA OTM 27	EPA OTM 28	M26 or 26A	Methanol: Method 308 (part 63); Methanol CEMS; or Other applicable methods	M25 or M25A	M23	M16 (or variants such as 16A, 16B, 16C) or TRS CEMS Provide total TRS data. Also provide speciated TRS data, if available.	M7 (or variants such as 7E) CEMS	M6 (or variants such as 6C) CEMS	M10 CEMS
Recovery furnaces (NDCE and DCE)	Supply data from 2001 and more recent following subpart MM MACT compliance	Supply data from 1990 or more recent	Supply most recent data		Supply data from 1990 or more recent			Supply <u>any</u> CDD or POM data and note if equipment config. has changed	Supply most recent data			
Black liquor oxidizer (BLO) **Note: The BLO vent is included in definition of DCE, but listed separately in case data are available for only the BLO)**	Not requested					Supply data from 1990 or more recent		Not requested	Supply most recent data	Not requested		
Chemical recovery combustion units - sulfite	Supply data from 2001 and more recent following subpart MM MACT compliance	Supply data from 1990 or more recent	Supply most recent data		Supply data from 1990 or more recent				Not requested	Supply most recent data		

Form Approved __/__/__
OMB Control No. ____-____
Approval Expires __/__/__

Emission Unit	Particulate matter (PM)[1]	Speciated HAP metals[2]	$PM_{2.5}$ (fil.)	$PM_{2.5}$ (cond.)	Hydrochloric acid (HCl)	Acetaldehyde, Formaldehyde, Methanol[1]	Total hydrocarbon (THC) as carbon	CDD/CDF and POM/PAH	Total reduced sulfur (TRS)[1,3]	Nitrogen oxides (NOx)[1]	Sulfur dioxide (SO_2)[1]	Carbon monoxide (CO)[1]
Chemical recovery combustion units - stand alone semichemical	Supply data from 1990 or more recent		Supply most recent data		Supply data from 1990 or more recent				Not requested	Supply most recent data		
Smelt dissolving tanks (SDT) or ash dissolving tanks	Supply data from 2001 and more recent following subpart MM MACT compliance	Supply data from 1990 or more recent	Supply most recent data			Supply data from 1990 or more recent			Supply most recent data	Not requested		
Lime kilns/fluidized bed calciners	Supply data from 2001 and more recent following subpart MM MACT compliance	Supply data from 1990 or more recent	Supply most recent data			Supply data from 1990 or more recent			Supply most recent data			
Black liquor gasification systems	Supply most recent data				Supply most recent data							

[1] If your emission unit is equipped with a continuous emissions monitoring system (CEMS) or continuous opacity monitoring system (COMS), supply the CEMS data using the CEMS data spreadsheet (P&P CEMS_PIII.xls). Synthetic area sources should supply the most recent data (if data are available).

[2] The HAP metals include antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium. Include chromium VI (Cr^{+6}) and speciated mercury (Hg) test data if available.

[3] Speciated TRS would include: hydrogen sulfide (H_2S), methyl mercaptan, dimethyl sulfide, and dimethyl disulfide.

[4] M = method (e.g., M5 is EPA Method 5). EPA Methods 5, 6, 7, 10, 16, 17, 23, 25/25A, 26/26A appear in 40 CFR Part 60, Appendix A. EPA Method 308 appears in Part 63, Appendix A. The "OTM" test methods can be found at http://www.epa.gov/ttn/emc/prelim.html