OMB Control No: xxxx-xxxx
Expiration Date: xx/xx/xxxx

Did any of the responses (individual cells) you entered in this tab contain CBI?
If yes, be sure to shade the CBI-containing cells red and follow the instructions in section C of the survey overview document for submitting CBI.

Review Draft

UK = Unknown. **NA = Not Applicable**. See instruction document for details on use of these terms.
You may find it helpful to use Excel's "freeze panes" or "split" features when viewing this spreadsheet.

Instruction:	Provide for all entries. This should match NEI Site ID used in Part II.	Provide for all entries. Use the Emission Unit ID in the NEI data set for your mill (supplied for Part II) if the individual emission unit is listed there. -If emission units are aggregated by collection system in the NEI, then you would list each emission unit separately with a new Emission Unit ID in this tab. . See the survey instruction document for more information on matching Emission Unit IDs to the NEI. Note that in some cases the Emission Unit ID will be the same as a Collection system ID or APCD_ID. -	Leave columns that do not apply for a given emission unit blank. Specify the collection system if applicable. (Examples of collection systems include closed vent systems, LVHC, and HVLC systems.)	Enter the decimal value for control capture efficiency, if available (e.g., 0.90 = 90% capture). Blank entries for emission units with control devices will be considered as having 100% capture.	Enter the following codes for emission units that are not emitted through a conveyance such as a collection system or stack: NV = not vented; BLDG = vented into a building; FUGITIVE = fugitive emission source	Use this column for notes or if helpful to relate equipment and process lines to your permit, the NEI, or other information	Write in a description using the common equipment types listed in Attachment 1 of the survey instruction document.	Enter "UK" if unknown; or "pre-1990" if more than 20 years old and the install date is unknown. If the emission unit was substantially upgraded, enter the year of the upgrade as "XXXX-upgrade."	Enter manufacturer ONLY for chemical recovery combustion sources (recovery furnaces, black liquor oxidizers, chemical recovery combustion units, lime kilns, black liquor oxidizers) and boilers. Enter "UK" for unknown. Enter "shop-built" for equipment designed by the mill.	Enter 2009 operating hr/yr
Survey reference:	Equipment identification									
Field:	**NEI Site ID**	**Emission Unit ID**	**Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).**	**Control Capture Efficiency (%)**	**Configuration if not emitted through a conveyance**	**Process notes (optional)**	**Emission unit description**	**Year emission unit installed**	**Emission unit manufacturer**	**Emission unit operating hr/yr**
Example entry:	99999	LK1					lime kiln	1983	Chanderpur Works	8400
	99999	GENERIC UNIT		0.85		NEI Emission Unit ID = GEN09	generic example row	UK	Wellons	8430

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Instruction:	Enter the exhaust flow rate from the emission unit (if known) in actual cubic feet per minute (acfm). Leave blank for emission units not ducted through a conveyance (e.g., emission units not vented, vented into a building, or fugitive sources). Measured flow rates from stack tests are preferred (if available). Otherwise, provide an estimate or enter "UK" for unknown. If the emission unit listed in this row has multiple vents, the please enter the total flow from all vents combined and note in column P "multiple vents combined". See instruction document for details. If exhaust from the emission unit is combined with exhaust from other emission units, please indicate the emission units IDs in the next column with combined exhaust flow.	Enter the emission unit exhaust gas temperature in degrees Fahrenheit (if known)	Enter the emission unit exhaust gas moisture content (% H2O), if known. For example, enter "10" for 10%.	Exhaust flow rate measurements may have been performed through stack testing at the emission point after multiple exhaust streams have been combined. If exhaust from the emission unit is combined with exhaust from other emission units, please indicate the emission units IDs with combined exhaust flow. If the emission unit has multiple vents and the exhaust flow provided is the total from multiple combined vents, enter the "multiple vents combined" in this column.	Specify the location of the flow rate provided. Select from menu (or write in response):
Survey reference:	Emission unit exhaust parameters (if emitted through a conveyance)				
Field:	**Emission unit exhaust flow rate, acfm (if known)**	**Exhaust gas temperature, F (if known)**	**Exhaust gas moisture content, % (if known)**	**Emission units IDs (or Collection System IDs) with combined exhaust flow**	**Location of flow rate provided**
Example entry:	45,000	290	8		control device outlet
	18,000	150	7		control device outlet

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Instruction:	Enter any combustion control measures installed/employed to reduce air pollution from combustion sources (e.g., recovery furnaces, lime kilns)	Select yes/no	Enter percent reduction (if known) and indicate the basis for the value provided (e.g., CEMS data, before-and-after testing, design value).	Enter percent reduction (if known) and indicate the basis for the value provided (e.g., CEMS data, before-and-after testing, design value).	Enter percent reduction (if known) and indicate the basis for the value provided (e.g., CEMS data, before-and-after testing, design value).	Describe any specific process control or pollution prevention measures used to reduce emissions from the Emission Unit ID (other then the use of combustion controls or an air pollution control device). Use this column to describe control measures that are not otherwise reflected elsewhere in this survey response spreadsheet.	Use these "APCD" columns to describe the primary method of control. Enter controls in sequence in which they are used to control each emission unit. Enter controls for collection systems only in the row where the collection system ID appears in the Emission Unit ID column.	Enter ID code for first APCD (to be used throughout the survey spreadsheets)	Enter 2nd control device if multiple controls used.	Enter ID code for 2nd APCD (to be used throughout the survey spreadsheets)	Enter 3rd control device if multiple controls used.	Enter ID code for 3rd APCD (to be used throughout the survey spreadsheets)	Enter 4th control device if multiple controls used.	Enter ID code for 4th APCD (to be used throughout the survey spreadsheets)	Select yes/no.
Survey reference:	Combustion modifications or controls					Process controls or pollution prevention	Air pollution controls (primary method of control)								Subpart BB NSPS applicability
Field:	**Combustion controls**	**Were these combustion controls added within the last 10 years?**	**Combustion control NOx %red (note basis)**	**Combustion control SO2 %red (note basis)**	**Combustion control CO %red (note basis)**	**Process controls or pollution prevention measures**	**APCD1 type**	**APCD1_ID**	**APCD2 type**	**APCD2_ID**	**APCD3 type**	**APCD3_ID**	**APCD4 type**	**APCD4_ID**	**Is emission unit subject to NSPS BB?**
Example entry:						use fresh mill water for lime mud washing to reduce TRS from the lime kiln	Scrubber	SCBR2							yes
	overfire air	No	20%-design				WESP	WESP 1							no
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Instruction:	Provide year. If not known, enter approximate year (e.g., "pre-1990")	Select from menu.	Select from menu for recovery furnaces subject to subpart BB (straight or cross).	Indicate NSPS BB TRS compliance option used to demonstrate NSPS compliance with primary method of control. [Note: You may enter the compliance option for each emission unit or for the relevant collection system if listed separately.]	Select yes/no	Provide description for emission units subject to subpart MM. If no physical equipment changes or operational changes were required to achieve subpart MM compliance, then enter "no changes required."	If yes, submit PM bubble calculations per instructions for "Mills using the PM bubble compliance option."	If black liquor gasification is used, a diagram and description of the system including any combustion controls or add-on controls used to reduce air pollutants would be helpful.
Survey reference:					Subpart MM NESHAP applicability			Black liquor gasification
Field:	**If yes, year became subject to BB (XXXX)**	**Reason subject to BB**	**Type of recovery furnace subject to subpart BB**	**Specify TRS compliance option used to demonstrate NSPS subpart BB compliance (if applicable)**	**Is emission unit subject to NESHAP MM?**	**Describe any physical or operational changes made to the emission unit in order to achieve subpart MM compliance**	**Is this emission unit involved in a subpart MM PM bubble calculation?**	**Black liquor gasifier capacity (million lb BLS/day)**
Example entry:	1983	new		8 ppmdv @ 10% O2 (lime kilns)	yes	no changes required	no	
					no			1.9

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Instruction:	Complete for each black liquor oxidation (BLO) system.	Select from menu	Select from menu	Enter number	Enter numeric value. Use the average from 2009 or target value.	Enter numeric value (e.g., enter "45" for 45%). Use the average from 2009 or target value.	Complete for each recovery furnace at kraft, soda, sulfite, and co-located kraft/Semichemical pulp mills. "Recovery furnaces" may also be referred to as "black liquor boilers" or "recovery boilers."	If you operate an NDCE recovery furnace, indicate if it was previously a DCE recovery furnace that underwent a DCE furnace conversion (e.g., a low odor conversion).	Enter year (e.g., 2000) when DCE furnace was converted to an NDCE furnace (if applicable). Enter pre-1990 if conversion was not within the last 20 years.	Select from menu or write in	Enter numeric capacity value for black liquor solids (BLS) feed rate or red liquor solids (RLS) for sulfite	Enter numeric value (e.g., enter "45" for 45%). Use the average from 2009 or target value.	Enter % sulfur, chloride, or nitrogen if known. Use the average from 2009 or target value.					Input site-specific higher heating value (HHV) of the pulping liquor, if measured. Use the average from 2009 or target value
Survey reference:	Black liquor oxidation systems						Recovery furnaces												
Field:	**Emission Unit ID(s) of recovery furnace(s) downstream of BLO**	**Type of liquor oxidized**	**BLO type**	**No. of air oxidation stages**	**Liquor flow rate, gpm**	**Liquor solids content, %**	**Recovery furnace type**	**Was NDCE formerly a DCE (i.e., has the unit undergone a low odor conversion)?**	**DCE furnace conversion year (XXXX), if applicable**	**Type of liquor**	**Spent liquor solids nominal daily throughput capacity, million lb BLS/day (or million lb RLS/day for sulfite)**	**Liquor solids % by weight**	**Liquor solids sulfur % by weight**	**Liquor solids chloride % by weight**	**Liquor solids nitrogen % by weight**				**Liquor HHV Btu/lb dry solids**
Example entry:																			
	RF1	strong	air	1	364	49	DCE	no		black	1.9	65	4.3	0.71				5940

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Instruction:	Indicate the type of liquid used in the wet bottom ESP	Select wet or dry from menu	Select from menu	Enter year (e.g., 2000) if an ESP was converted.	Select from menu	Select from menu	Enter numeric capacity value	Input site-specific higher heating value (HHV) of the pulping liquor, if measured.	Enter numeric value	Select from menu	Enter numeric value. For example, capacity is usually the same as recovery furnace capacity (e.g., lb BLS/day), except when there are two smelt tanks for one recovery furnace.	Select from menu or write in. Enter "SDT scrubber water" if the SDT scrubber water drains into the SDT (as if often the case). See description of the other menu choices in the survey overview document instructions for the Controls tab. If a mixture of water sources are used, please specify the sources.	Enter numeric value in milligrams per liter. Use the average from 2009 or target value.
Survey reference:	Recovery furnace ESPs				Semichemical combustion units					Smelt/ash dissolving tanks			
Field:	**Type of liquid used in the ESP**	**Wet or dry PM return system (for recovery furnace ESPs)**	**For wet PM return system, specify liquid**	**Indicate year (XXXX) recovery furnace ESP was converted from a wet bottom/wet PM return system to a dry bottom/dry PM return system, if applicable**	**Type of combustor**	**Liquor evaporation equipment**	**Type of DCE**	**Spent liquor solids nominal daily production capacity, million lb/day**	**Liquor HHV Btu/lb dry solids**	**Combustion unit hottest temperature, F**	**Emission Unit ID of RF or combustion unit supplying SDT/ADT**	**Type**	**Smelt or ash nominal daily production rate, lb liquor solids/day**	**Type and source of water used in tank**	**Methanol concentration of water used to dissolve smelt/ash in tank (if known), mg/l**
Example entry:															
	Oxidized black liquor	wet	Oxidized black liquor		fluidized bed reactor	DCE	Venturi scrubber	75	5420	1400	RF1	smelt	690000	process water {weak wash}	45
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Instruction:	Enter numeric value in milligrams per liter. Use the average from 2009 or target value. Enter NA if TRS emissions would not be expected (e.g., for nonsulfur Semichemical pulp mills)	Complete Table 8 for each kraft or soda lime kiln. Select from menu	Enter numeric value	Enter numeric value (i.e., "70" = 70%). Use the average from 2009 or target value.	Enter numeric value for kiln hot end operating temperature (F). Use the average from 2009 or target value.	Enter numeric value for kiln cold end operating temperature (F). Use the average from 2009 or target value.	Select from menu	Select yes/no	Select from menu	Complete for recovery furnaces, semichemical combustion units, and lime kilns. Do not enter thermal oxidizer information in this column. Thermal oxidizers controlling Part III emission units are addressed in the PIII Controls tab. Enter numeric value in million Btu per hour (MMBtu/hr) representing the total heat input for all fuels including spent pulping liquor.	Complete for lime kilns, recovery furnaces and chemical recovery combustion units that are used to incinerate NCG or SOG. List all sources of NCG or SOG, identified by their Collection System IDs or Emission Unit IDs separated by commas, for which the emission unit serves as primary control (e.g., LVHC1, SOG, TALLOIL, ...). Many of these IDs will come from your Part I response.	List all sources of NCG or SOG, identified by their Collection System IDs or Emission Unit IDs separated by commas, for which the emission unit serves as backup control (e.g., LVHC2, HVLC1 ...)
Survey reference:		Lime kilns (including rotary lime kilns and fluidized bed calciners)								Fuel-fired equipment	Equipment incinerating NCG or SOG	
Field:	**TRS concentration of water used to dissolve smelt/ash in tank (if known), mg/l**	**Type of kiln**	**Lime nominal daily production capacity, ton CaO/d**	**Lime mud percent solids, %**	**Kiln hot end temperature (F)**	**Kiln cold end temperature (F)**	**NCG introduction method**	**Are SOGs combined with NCGs before being introduced into the kiln?**	**If no, SOG introduction method**	**Design heat input capacity, MMBtu/hr**	**NCG/SOG for which the emission unit provides primary control**	**NCG/SOG for which the emission unit provides backup control**
Example entry:		rotary	200	71	2000	450	with primary fuel	no	NA - SOG are not burned in lime kiln		LVHC-1	
										435	STRIPPER	

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Hidden columns:

Instruction:	Complete for fuel-fired equipment having a primary fuel type other than spent pulping liquor (e.g., complete for lime kilns). Do not enter thermal oxidizer information in this column. Thermal oxidizers controlling Part III emission units are addressed in the PIII Controls tab. Enter primary fuel type.	Enter decimal percent (e.g., 1 = 100% or 0.9 = 90%). Approximations based on the average from 2009 or a target value will suffice.	Optional. Enter the numeric higher heating value (HHV) for non-fossil fuels corresponding to the suggested units in next column. Biomass or black liquor syngas is an example of a non-fossil fuel that could be used in lime kilns. -EPA can assume default HHVs for fossil fuels, or you may opt to enter the HHV for your fossil fuel (e.g., if the fuel is relatively uncommon)	Specify units corresponding to the HHV. Use Btu/gal for liquid fuels, MMBtu/ton (dry basis) for solid fuels, and Btu/MMscf for gaseous fuels.	Optional. If biomass is the primary fuel type, specify average moisture content as fired for biomass fuels only (decimal percent by weight, i.e., enter "0.2" for 20%)	Complete for fuel-fired equipment such as recovery furnaces, semichemical combustion units, and lime kilns. Do not enter thermal oxidizer information in this column. Thermal oxidizers controlling Part III emission units are addressed in the PIII Controls tab. Include secondary and additional fuels used routinely for multi-fuel fired equipment in these columns.	Enter decimal percent (e.g., 1 = 100% or 0.9 = 90%). Approximations based on the average from 2009 or a target value will suffice.	Enter the numeric higher heating value (HHV) for non-fossil fuels corresponding to the suggested units in next column. Optional. EPA can assume default HHVs for fossil fuels, or you may opt to enter the HHV for your fossil fuel (e.g., if the fuel is relatively uncommon)	Specify units corresponding to the HHV. Use Btu/gal for liquid fuels, MMBtu/ton (dry basis) for solid fuels, and Btu/MMscf for gaseous fuels.	Select from menu or write in. You may write in more than one condition. Multi-fuel fired units can select "routine use (multi-fuel fired unit)" from the menu.
Survey reference:	Primary fuels for fuel-fired equipment (except black or red liquor)					Supplemental or other fuels for fuel-fired equipment					
Field:	**Primary fuel type**	**Approximate percent of annual heat input capacity (MMBtu/yr) supplied by primary fuel**	**Optional: Average HHV of non-fossil primary fuels**	**Optional: Primary fuel HHV units**	**Optional: Moisture content for biomass fuel (decimal % by weight)**	**Supplemental fuel type 1**	**Approximate percent of annual heat input capacity (MMBtu/yr) supplied by supplemental fuel 1**	**Optional: Supplemental fuel type 1 HHV (if non-fossil)**	**Optional: Supplemental fuel type 1 HHV units**	**Conditions when supplemental fuel type 1 used**	
Example entry:	natural gas		1020000000	Btu/MMscf		#6 residual oil	1	150000	Btu/gal	backup	
	hog fuel	0.95	12.6	MMBtu/ton	0.23	natural gas	0.05			startup, backup	
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You may find it helpful to use Excel's Additional supplemental fuel columns (for types 2-6) are hidden. Unhide and complete these columns if relevant.

Instruction:	Supply startup/shutdown information for equipment (including collection systems or APCDs) that appear in the Emission Unit ID column. Enter approximately how long it takes for the emission unit to startup. Use decimals if less than one hour (e.g., 18 minutes = 0.3 hr). Supply information for routine startup and shutdown events such as events associated with planned mill downtime. (Do not provide information for startup/shutdown events associated with control device or emission unit malfunctions). "Startup" means the setting in operation of an affected source or portion of an affected source for any purpose.	Select from menu or write in	Write in response specifying when startup ends and normal operation begins (e.g., Startup ends when the auxiliary burners switch off and material throughput begins to flow.)	Enter approximately how long it takes for the emission unit to shutdown. Use decimals if less than one hour (e.g., 18 minutes = 0.3 hr). "Shutdown" means the cessation of operation of an affected source or portion of an affected source for any purpose.	Select from menu or write in	Write in response specifying when shutdown begins and normal operation ends (e.g., Shutdown begins when material throughput ceases to flow.)
Survey reference:	Emission Unit Startup and Shutdown					
Field:	**Approximate duration of emission unit startup (hours)**	**Measures employed to reduce air emissions during emission unit startup (if any)**	**What marks the end of emission unit startup and beginning of normal operating conditions?**	**Approximate duration of emission unit shutdown (hours)**	**Measures employed to reduce air emissions during shutdown (if any)**	**What marks the end of normal operating conditions and beginning of emission unit shutdown?**
Example entry:	24	Ensure scrubber liquid is flowing during startup once LK1 temperature reaches 200F	LK1 hot end temperature reaches 2000F	18	Continue operating scrubber until temperature in LK1 drops to 200F	Turn down gas burner to 50% flow
	12	emission unit and control device operates in compliance with NSPS and NESHAP parameter limits during emission unit startup	Combustion temperature is reached	14	Temperature drops below 200F	Cease flow of liquor through injection nozzles

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Instruction:	OPTIONAL QUESTION. Input on appropriate standards that would be reasonable for your pulp and paper source category emission units is requested. Supply recommendations for the specific equipment (including collection systems or APCDs) appearing in the Emission Unit ID column.	Optional. Enter any comments you have on the data supplied.
Survey reference:		
Field:	**Optional: Do you wish to recommend a standard that would apply during startup or shutdown of this emission unit? If so, please describe the event to which the standard would apply; the recommended standard (this could be an emission limitation, work practice, or operational standard) that would apply during the period; the basis for the recommended standard; why and how the standard would minimize emissions during the event; and how would compliance be determined and/or monitored. Supply as a separate attachment to your survey response if necessary.**	**Comments**
Example entry:	Require compliance with scrubber liquid flow parameter monitoring limit, but not pressure drop parameter monitoring limit (since the pressure drop cannot be maintained without sufficient exhaust flow from the lime kiln.	

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Field:	NEI Site ID	Emission Unit ID	Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).	Control Capture Efficiency (%)	Configuration if not emitted through a conveyance	Process notes (optional)	Emission unit description	Year emission unit installed	Emission unit manufacturer	Emission unit operating hr/yr
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Field:	NEI Site ID	Emission Unit ID	Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).	Control Capture Efficiency (%)	Configuration if not emitted through a conveyance	Process notes (optional)	Emission unit description	Year emission unit installed	Emission unit manufacturer	Emission unit operating hr/yr
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Field:	NEI Site ID	Emission Unit ID	Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).	Control Capture Efficiency (%)	Configuration if not emitted through a conveyance	Process notes (optional)	Emission unit description	Year emission unit installed	Emission unit manufacturer	Emission unit operating hr/yr
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Field:	NEI Site ID	Emission Unit ID	Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).	Control Capture Efficiency (%)	Configuration if not emitted through a conveyance	Process notes (optional)	Emission unit description	Year emission unit installed	Emission unit manufacturer	Emission unit operating hr/yr
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Field:	NEI Site ID	Emission Unit ID	Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).	Control Capture Efficiency (%)	Configuration if not emitted through a conveyance	Process notes (optional)	Emission unit description	Year emission unit installed	Emission unit manufacturer	Emission unit operating hr/yr
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Field:	NEI Site ID	Emission Unit ID	Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).	Control Capture Efficiency (%)	Configuration if not emitted through a conveyance	Process notes (optional)	Emission unit description	Year emission unit installed	Emission unit manufacturer	Emission unit operating hr/yr
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Field:	NEI Site ID	Emission Unit ID	Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).	Control Capture Efficiency (%)	Configuration if not emitted through a conveyance	Process notes (optional)	Emission unit description	Year emission unit installed	Emission unit manufacturer	Emission unit operating hr/yr
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Field:	NEI Site ID	Emission Unit ID	Collection system ID (for collection systems that collect gases from multiple process units prior to air pollution control).	Control Capture Efficiency (%)	Configuration if not emitted through a conveyance	Process notes (optional)	Emission unit description	Year emission unit installed	Emission unit manufacturer	Emission unit operating hr/yr
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OMB Control No: xxxx-xxxx

Expiration Date: xx/xx/xxxx

Review Draft

Place an "X" in the box below if all permit limits were supplied under Part I

Note: If you already included all of your permit limits in Part I of the survey, then you do not need to complete this spreadsheet. Please mark the box to the right.
UK = Unknown. **NA = Not Applicable**. See instruction document for details on use of these terms.
Pulp and Paper sector permit data.

Instruction:	Provide for all entries. This should match NEI Site ID used in Part II.	Provide for all entries. Use the Emission Unit ID in the *PIII Equip detail* tab if the individual emission unit was listed there. If emission units are aggregated by a collection system then you may need to use the Collection system ID from the *PIII Equip detail* tab.	OPTIONAL column useful for cross-checking permit data and when comparing permit to NEI.	Select from menu or write in	OPTIONAL. Complete this column to avoid restating Federal permit limits in the columns to the right.	Enter numeric value of permit limit coinciding with the pollutant selected. You do not have to provide every limit for pollutants with multiple limits in different units of measure. See the survey instruction document for permit limit units of interest.
Survey reference:	Equipment identification					
Field:	**NEI Site ID**	**Emission Unit ID or Collection System ID**	**Identifier used in permit (e.g., emission unit ID, stack ID, etc) - optional**	**Pollutant**	**If the permit limit is identical to the Federal NESHAP or NSPS limit, you may enter the NESHAP/NSPS subpart here rather than restating the Federal limit in the columns to the right**	**Numeric permit limit 1**
Example entry:	99999	RF1	RF01	PM - filterable		0.02
	99999	RF1	RF01	Opacity		5
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OMB Control No:

Expiration Date:

Review Draft

Note: If you already incl
UK = Unknown. **NA = I**
Pulp and Paper sector

Instruction:	Enter units for permit limit	Supply averaging time for permit limit if an averaging time is specified in the permit. Averaging times are commonly specified for pollutants measured with continuous monitors (e.g., 3-hour block average, daily average, etc). Leave blank if no averaging time is specified in your permit.	Enter numeric value of permit limit coinciding with the pollutant selected. You do not have to provide every limit for pollutants with multiple limits in different units of measure. See the survey instruction document for permit limit units of interest.	Enter units for permit limit	Supply averaging time for permit limit if an averaging time is specified in the permit. Averaging times are commonly specified for pollutants measured with continuous monitors (e.g., 3-hour block average, daily average, etc). Leave blank if no averaging time is specified in your permit.
Survey reference:					
Field:	**Units for permit limit 1 (including any applicable %O2 or %CO2 correction factors)**	**Averaging time for permit limit 1 (if applicable)**	**Numeric permit limit 2**	**Units for permit limit 2 (including any applicable %O2 or %CO2 correction factors)**	**Averaging time for permit limit 2 (if applicable)**
Example entry:	gr/dscf @ 8% O2 % opacity	 6-min avg	 20	 % opacity	 Do not exceed 20% for more than three 6-min averages in a 3-hour period determined by Method 9

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OMB Control No:

Expiration Date:

Review Draft

Note: If you already incl
UK = Unknown. **NA = I**
Pulp and Paper sector

Instruction:	Enter numeric value of permit limit coinciding with the pollutant selected. You do not have to provide every limit for pollutants with multiple limits in different units of measure. See the survey instruction document for permit limit units of interest.	Enter units for permit limit	Supply averaging time for permit limit if an averaging time is specified in the permit. Averaging times are commonly specified for pollutants measured with continuous monitors (e.g., 3-hour block average, daily average, etc). Leave blank if no averaging time is specified in your permit.	Enter numeric value of permit limit coinciding with the pollutant selected. You do not have to provide every limit for pollutants with multiple limits in different units of measure. See the survey instruction document for permit limit units of interest.	Enter units for permit limit	Supply averaging time for permit limit if an averaging time is specified in the permit. Averaging times are commonly specified for pollutants measured with continuous monitors (e.g., 3-hour block average, daily average, etc). Leave blank if no averaging time is specified in your permit.
Survey reference:						
Field:	**Numeric permit limit 3**	**Units for permit limit 3 (including any applicable %O2 or %CO2 correction factors)**	**Averaging time for permit limit 3 (if applicable)**	**Numeric permit limit 4**	**Units for permit limit 4 (including any applicable %O2 or %CO2 correction factors)**	**Averaging time for permit limit 4 (if applicable)**
Example entry:						

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OMB Control No:

Expiration Date:

Review Draft

Note: If you already incl
UK = Unknown. **NA = I**
Pulp and Paper sector

Instruction:	Enter numeric value of permit limit coinciding with the pollutant selected. You do not have to provide every limit for pollutants with multiple limits in different units of measure. See the survey instruction document for permit limit units of interest.	Enter units for permit limit	Supply averaging time for permit limit if an averaging time is specified in the permit. Averaging times are commonly specified for pollutants measured with continuous monitors (e.g., 3-hour block average, daily average, etc). Leave blank if no averaging time is specified in your permit.	Optional. Enter any comments you have on the data supplied.
Survey reference:				
Field:	**Numeric permit limit 5**	**Units for permit limit 5 (including any applicable %O2 or %CO2 correction factors)**	**Averaging time for permit limit 5 (if applicable)**	**Comments**
Example entry:				

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Field:	NEI Site ID	Emission Unit ID or Collection System ID	Identifier used in permit (e.g., emission unit ID, stack ID, etc) - optional	Pollutant	If the permit limit is identical to the Federal NESHAP or NSPS limit, you may enter the NESHAP/NSPS subpart here rather than restating the Federal limit in the columns to the right	Numeric permit limit 1
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Field:	NEI Site ID	Emission Unit ID or Collection System ID	Identifier used in permit (e.g., emission unit ID, stack ID, etc) - optional	Pollutant	If the permit limit is identical to the Federal NESHAP or NSPS limit, you may enter the NESHAP/NSPS subpart here rather than restating the Federal limit in the columns to the right	Numeric permit limit 1
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Field:	NEI Site ID	Emission Unit ID or Collection System ID	Identifier used in permit (e.g., emission unit ID, stack ID, etc) - optional	Pollutant	If the permit limit is identical to the Federal NESHAP or NSPS limit, you may enter the NESHAP/NSPS subpart here rather than restating the Federal limit in the columns to the right	Numeric permit limit 1
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Field:	NEI Site ID	Emission Unit ID or Collection System ID	Identifier used in permit (e.g., emission unit ID, stack ID, etc) - optional	Pollutant	If the permit limit is identical to the Federal NESHAP or NSPS limit, you may enter the NESHAP/NSPS subpart here rather than restating the Federal limit in the columns to the right	Numeric permit limit 1
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Field:	NEI Site ID	Emission Unit ID or Collection System ID	Identifier used in permit (e.g., emission unit ID, stack ID, etc) - optional	Pollutant	If the permit limit is identical to the Federal NESHAP or NSPS limit, you may enter the NESHAP/NSPS subpart here rather than restating the Federal limit in the columns to the right	Numeric permit limit 1
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OMB Control No: xxxx-xxxx
Expiration Date: xx/xx/xxxx

Did any of the responses (individual cells) you entered in this tab contain CBI?
If yes, be sure to shade the CBI-containing cells red and follow the instructions in section C of the survey overview document for submitting CBI.

Review Draft

Complete this table for add-on air pollution controls. Questions regarding combustion controls and process changes are included elsewhere in other survey tabs.
UK = Unknown, **NA = Not Applicable**. See instruction document for details on use of these terms.
Complete this tab for air pollution control devices used on the Part III chemical recovery combustion sources listed in Part III Attachment 1.

Instruction:	Provide for all entries. This should match NEI Site ID used in Part II.	Enter APCD_ID matching the *PIII Equip detail* tab	Enter Emission Unit ID or Collection system ID matching the Equip detail tab.	Select from menu or write in	Enter the manufacturer of the APCD, if known. Enter "UK" for unknown. Enter "shop-built" for equipment designed by the mill.	Enter the year installed, if known. Enter "UK" if unknown; or "pre-1990" if more than 20 years old and the install date is unknown. If the APCD was substantially upgraded, enter the year of the upgrade as "XXXX-upgrade."	Enter the typical pressure drop across the control device in inches of water	Enter control efficiencies, if known (e.g., enter 99 for 99%). "Actual" control efficiency is a measured value obtained through inlet/outlet emissions testing. Leave blank if not known or not applicable.				Include control efficiency for specific HAP that you identify. This may be HAPs used as surrogates in a rule (e.g., methanol, chlorine) or other HAP.	You may attach a separate listing of HAPs and control efficiencies if this information is available for a number of compounds.
Survey reference:	APCD identification						P-drop	Control efficiency						
Field:	**NEI Site ID**	**APCD_ID**	**Emission Unit ID(s) or Collection system ID(s) controlled**	**Type of control device**	**APCD manufacturer (if known)**	**Year installed (XXXX)**	**Pressure drop, in. H2O**	**Actual PM control efficiency (if known), %**	**Actual TRS control efficiency (if known), %**	**Actual HCl control efficiency (if known), %**	**Actual SO2 control efficiency (if known), %**	**Actual HAP control efficiency (if known), %**	**Specify HAP**	
Example entry:	99999	ANYCONTROL	ANYUNIT	ANYTYPE	Coen	pre-1990	4	98				90	Methanol	
	99999	SCRB2	LK1, LVHC1	Scrubber	Ducon	1985	6	95	92		82	50	Formaldehyde, Methanol	

OMB Control No:
Expiration Date:
Review Draft
Complete this table for add-on air po
UK = Unknown, **NA = Not Applica**
Complete this tab for air pollution co

Instruction:	Complete for thermal oxidizers or incinerators used to control Part III emission sources (such as semi-chemical liquor combustors) Select from list	Enter number of canisters (media beds) for a regenerative thermal oxidizer (RTO)	Enter target firebox combustion/operating temperature (F)	Enter time stack gases are exposed to the target temperature (actual or design value)	Select the auxiliary fuel type used in the thermal oxidizer (i.e., fuel other than the organic emissions controlled by the thermal oxidizer)	Enter the auxiliary fuel heat input. An approximation based on the average from 2009 or a target value will suffice.	Select yes/no	Select from list or write in	Complete the sorbent injection questions for sorbents injected into the gas stream prior to collection by a fabric filter or other control device for which information is being provided. For example, complete the sorbent injection questions for a dry injection fabric filter system in the same row where you enter information for the fabric filter.	Select from list or write in	Enter pounds per hour (lb/hr) of sorbent injected into the exhaust gas stream. Use the average from 2009 or a target value.	Complete for fabric filters (baghouses) if used to control any Part III emission sources. Indicate the filter material and note if coatings are added to the filter material (e.g., polyester with PTFE coating). If no coating is indicated (e.g., polyester), the it will be assumed that the filter material is uncoated.	Select from list	Enter typical bag life (or expected bag life), months	Enter number of fabric filter compartments. Enter "1" if the baghouse is not separated by different compartments.	Enter the design air-to-cloth ratio (gas flow divided by the filter bag material area)	Complete the ESP questions for dry ESPs and WESPs Enter number of fields	Enter number of fields used during normal operation. This may be the same as the total number of fields unless some fields are offline (e.g., for cleaning).	Enter the design specific collection area (area of the plates divided by gas flow rate).	Describe any ESP upgrades made within the last 10 years, such as addition of fields or other upgrades to increase ESP efficiency. If no upgrades, leave blank.	Complete these additional ESP questions for WESPs. If a quench is used prior to the ESP, complete the scrubber questions for the quench.
Survey reference:	Thermal oxidizers/incinerators								Sorbent injection			Fabric filters					ESPs				WESPs
Field:	**Incinerator type**	**If RTO, number of canisters**	**Target firebox temperature (F)**	**Residence time at operating temperature (sec)**	**Auxiliary fuel type**	**Approximate auxiliary fuel use, MMBtu/hr**	**Heat recovery**	**What is the recovered heat from the incinerator exhaust used for?**	**Sorbent type**	**List pollutants the sorbent injection was installed to control**	**Sorbent injection rate, lb/hr**	**Filter material and coatings**	**Bag cleaning method**	**Typical bag life (months)**	**Number of compartments**	**Air-to-cloth ratio (acfm/ft2)**	**Total number of fields**	**Number of fields used during normal operation**	**Specific collection area, ft²/1,000 acfm**	**Have fields/chambers been added to expand the ESP within the last 10 years?**	**Is WESP preceded by a quench chamber**
Example entry:	Single-stage combustion chamber	NA	1300	1.8	natural gas	0.3	no	NA	activated carbon	Hg	100	Polyester	Shake	15	1	7	8	4	466	No	No
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OMB Control No:
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Complete this table for add-on air po
UK = Unknown. NA = Not Applica
Complete this tab for air pollution co

Instruction:	Include water flow through the WESP. Use the average from 2009 or a target value.	Complete for all types of wet scrubbers (venturi, tray, plate, injection, quench, etc) Enter type of alkali added (e.g., NaOH/caustic, KOH, KMNO4). Leave blank if no alkali added.	Enter the numeric value for the scrubber design liquid-to-gas ratio (L/G) in gallons of liquid per 1000 acfm of gas. Use the average from 2009 or a target value.	Enter numeric value for the target pH. Use the average from 2009 or a target value.	Enter typical gallons per minute of scrubbing fluid (e.g., water) makeup added to the system. Use the average from 2009 or a target value.	Select yes/no for scrubbers that control chemical recovery furnaces or Semichemical liquor combustion units. Leave blank for other scrubbers.	Complete the scrubber questions and complete the additional questions below related to the packing material			Enter water source and usage information for wet control devices such as wet scrubbers, WESP, mist eliminators, absorbers, etc. Do not include spent pulping liquor used in recovery furnace wet bottom ESPs here (as information for wet bottom ESPs is requested in the *PIII Equip detail* tab).	Select yes/no	Enter numeric value in gallons per minute (gpm). Use the average from 2009 or a target value.	Enter the decimal percentage of recirculation gpm flow (e.g., 0.1 for 10%) that is not recirculated back to the control device (i.e., the blowdown percentage). Use the average from 2009 or a target value.	Enter end use or disposal method for the blowdown
Survey reference:		Scrubber					Packed bed scrubbers/absorbers			Water source and usage				
Field:	**WESP water flow, gpm**	**Type of alkali added, if any**	**Liquid-to-gas ratio (gal/1000 acfm)**	**Inlet pH of scrubbing liquid**	**Scrubbing fluid make-up rate, gpm**	**For recovery furnaces/combustion units: Does scrubber also serve as a direct contact evaporator?**	**Type of packing material**	**Packing material depth, ft**	**Scrubber/absorber cross-sectional area, ft²**	**Water source**	**Is water recirculated?**	**Water recirculation rate, gpm**	**Wastewater (blowdown) %**	**Wastewater (blowdown) reuse or disposal method**
Example entry:	275			8	130	No	plastic packing	3	19.6	treated wastewater	Yes	200	0.1	Treated in onsite wastewater treatment plant
		Caustic	6	10	60					surface water and water from recirculation pond	Yes	350	0.35	Treated in onsite wastewater treatment plant

OMB Control No:
Expiration Date:
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Complete this table for add-on air po
UK = Unknown, **NA = Not Applica**
Complete this tab for air pollution co

Instruction:	Complete the solid material questions for control devices that collect or generate solid material to be handled or disposed. Do not include baghouses or cyclones used solely for wood/material handling operations. Provide information for any solid material collected by the APCD (e.g., PM, sorbent, etc)	Explain how the solid material is used or disposed. Explain where the material re-enters the process if it is reused.	Enter the amount of solid material disposed annually (if known) in cubic yards per year (cu yd/yr). Use the average from 2009 or a target value.	Identify any other solid waste associated with the APCD that must be replaced/disposed periodically (e.g., packing material, ceramic saddles)	Enter the frequency in which the material must be replaced/disposed, etc.	Explain how the solid material is used or disposed. Explain where the material re-enters the process if it is reused.	Enter the amount of material that must be disposed in cubic yards (if known). Use the average from 2009 or a target value.	Select from list or write in. List multiple parameters for the same control device separated by commas (as shown in the example below).	List any operating parameters not included in the previous column	OPTIONAL: Supply approximate capital costs of the parameter monitoring system equipment installed within the past 10 years for this control device. Include in the equipment costs the analyzer and data acquisition system (DAS), if known.	OPTIONAL: Enter year for parameter monitoring system costs
Survey reference:	Solid material handling and disposal							Parameter monitoring			
Field:	**Type of material collected**	**End use/method of disposal for solid material collected**	**Solid material disposed (if known), cu yd/yr**	**Identify any other solid waste associated with the APCD**	**Frequency of material replacement/disposal**	**End use/method of disposal for solid material collected**	**Amount of material to be disposed (if known), cu yd**	**List continuous parameter monitoring systems used for this control device (e.g., pressure drop, liquid flow)**	**Please list below any additional operating parameters that are either monitored or that are important for proper operation of the APCD, and include average values and units.**	**Capital costs of parameter monitoring system, $**	**Base year for parameter monitoring system capital cost (e.g., 2005)**
Example entry:	carbon sorbent laden with PM	landfill onsite	410	degraded packing material	5 yr	landfill offsite	0.5	liquid flow, voltage	carbon injection rate (100 lb/hr)	22,000	1999
								pressure drop, liquid flow rate		34500	2007

OMB Control No:
Expiration Date:
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Complete this table for add-on air po
UK = Unknown, **NA = Not Applica**
Complete this tab for air pollution co

Instruction:	Supply startup/shutdown information for the equipment that appears in the APCD_ID column. Enter approximately how long it takes for the control device to startup. Use decimals if less than one hour (e.g., 18 minutes = 0.3 hr). Supply information for routine startup and shutdown events such as events associated with planned mill downtime. (Do not provide information for startup/shutdown events associated with control device or emission unit malfunctions). "Startup" means the setting in operation of an affected source or portion of an affected source for any purpose.	Select from menu, expand on menu response, and/or write in. For example, is a certain gas flow rate from the emission unit required before the control device operating parameter limits can be met? Is a certain heating value from the emission unit exhaust gas required to achieve control device temperature?	List any control device parameter limits that cannot be met during control device startup. Certain parameters may be "instant on" while others are more transient in nature. 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 is particularly interested in emission limits or parameter limits originating from the pulp and paper NSPS or NESHAP that cannot be met during control device startup or shutdown. Select from menu if the applicable emission and parameter limits are expected to be met during startup.	Write in response (if any).	Write in response specifying when control device startup ends and normal operation begins (e.g., Startup ends when oxidizer temperature set point of 1200F is reached.)	Enter approximately how long it takes for the control device to shutdown. Use decimals if less than one hour (e.g., 18 minutes = 0.3 hr). "Shutdown" means the cessation of operation of an affected source or portion of an affected source for any purpose.	Select from menu, expand on menu response, and/or write in. For example, is a certain gas flow rate from the emission unit required for the control device operating parameter limits to be met? Is a certain heating value from the emission unit exhaust gas required to achieve control device temperature?	List any control device parameter limits that cannot be met during control device shutdown. Certain parameters may be "instant off" while others are more transient in nature. Examples could include control device temperature that decreases from the set point as shutdown progresses, or pressure drop that cannot be achieved due to low exhaust gas flow from the emission unit. The EPA is particularly interested in emission limits or parameter limits originating from the pulp and paper NSPS or NESHAP that cannot be met during control device startup or shutdown. Select from menu if the applicable emission and parameter limits are expected to be met during shutdown.	Select from menu or write in	Write in response specifying when shutdown begins and normal operation ends (e.g., Shutdown begins when the burners are shut off.)
Survey reference:	Control Device Startup and Shutdown									
Field:	**Approximate duration of control device startup (hours)**	**Explain how control device startup is integrated with (dependent upon) emission unit startup/operation**	**List any control device continuous emissions monitoring or operating parameter limits that cannot be met during control device startup**	**Measures employed to reduce air emissions during control device startup (if any)**	**What marks the end of control device startup and beginning of normal operating conditions?**	**Approximate duration of control device shutdown (hours)**	**Explain how control device shutdown is integrated with (dependent upon) emission unit shutdown**	**List any control device continuous emissions monitoring or operating parameter limits that cannot be met during control device startup**	**Measures employed to reduce air emissions during control device shutdown (if any)**	**What marks the end of normal operating conditions and beginning of control device shutdown?**
Example entry:	0.4	Need airflow from emission unit of at least 10,000 acfm in order for injected carbon to properly mix and become entrained in gas stream	carbon injection rate	Ensure water is recirculated through control device throughout startup	route emission unit exhaust damper to control device and switch on carbon injection once process exhaust gas reaches 10,000 acfm	0.4	Need airflow from emission unit of at least 10,000 acfm in order for injected carbon to properly mix and become entrained in gas stream	carbon injection rate	Continue injection of carbon until process gas flow drops to 10,000 acfm; continue water recirculation unit emission unit switched off	When process gas flow drops to 10,000 acfm and carbon injection is shut off
	3	Control device cannot function as designed unless an air flow rate of 29,000 acfm from the emission unit is achieved.	pressure drop	meet liquid flow parameter limit	Startup ends when the pressure drop parameter limit range is achieved	0.5	Control device cannot function as designed unless an air flow rate of 29,000 acfm from the emission unit is achieved.		Wait until LK is cooled to 200F before switching off liquid flow.	Shut off liquid flow

OMB Control No:
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Complete this table for add-on air po
UK = Unknown, **NA = Not Applica**
Complete this tab for air pollution co

Instruction:	OPTIONAL QUESTION. Input on appropriate standards that would be reasonable for your pulp and paper source category control system is requested. Supply recommendations for the specific APCD appearing in the APCD_ID column.	Optional. Enter any comments you have on the data supplied.
Survey reference:		
Field:	**Optional: Do you wish to recommend a standard that would apply during startup or shutdown of this control device? If so, please describe the event to which the standard would apply; the recommended standard (this could be an emission limitation, work practice, or operational standard) that would apply during the period; the basis for the recommended standard; why and how the standard would minimize emissions during the event; and how would compliance be determined and/or monitored. Supply as a separate attachment to your survey response if necessary.**	**Comments**
Example entry:	Require compliance with liquid flow parameter limit during startup and shutdown (but not carbon injection rate limit)	
	Meet liquid flow parameter limits during startup and shutdown (but not the pressure drop drop parameter limit because it can only be achieved during normal operation)	

OMB Control No: xxxx-xxxx
Expiration Date: xx/xx/xxxx
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Did any of the responses (individual cells) you entered in this tab contain CBI?
If yes, be sure to shade the CBI-containing cells red and follow the instructions in section C of the survey overview document for submitting CBI.

UK = Unknown. **NA = Not Applicable**. See instruction document for details on use of these terms.

Instruction:	Provide for all entries. This should match NEI Site ID used in Part II.	Enter Emission Unit ID routing exhaust to the PCC plant. This should match the Emission Unit ID in the *PIII Equip detail* tab.	Select yes/no	If answer to the previous question is no, please explain if exhaust does not pass through the full emission control system prior to being routed to the PCC plant.	Enter numeric value. Use the average from 2009 or a target value.	This will be 1 (for 100%), unless if the exhaust stream in split such that only a portion of the volume goes to the PCC plant. Enter decimal percent (e.g., enter "0.15" for 15%). Use the average from 2009 or a target value.	Specify	Select yes/no	Answer "yes" unless the PCC plant is included in your title V permit	Optional. Enter any comments you have on the data supplied.
Survey reference:										
Field:	**NEI Site ID**	**Emission Unit ID routing exhaust to a PCC plant**	**Does exhaust pass through the emission unit air pollution control device(s) prior to being routed to PCC plant?**	**If no, explain control configuration relevant to the exhaust stream routed to the PCC plant**	**hr/yr exhaust routed to PCC plant**	**Volume percent of exhaust stream routed to PCC plant**	**Owner of PCC plant**	**Is PCC plant located on P&P mill property**	**Does the PCC plant have a separate air permit from the P&P mill?**	**Comments**
Example entry:	99999	LK1	yes		1500	0.15	Carbonate Minerals, Inc	no	yes	
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OMB Control No: xxxx-xxxx
Expiration Date: xx/xx/xxxx
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Did any of the responses (individual cells) you entered in this tab contain CBI?
If yes, be sure to shade the CBI-containing cells red and follow the instructions in section C of the survey overview document for submitting CBI.

Use this table to identify the specific emission units for which emission test reports are being submitted. EPA will extract the test data from the emission test reports.
UK = Unknown. **NA = Not Applicable**. See instruction document for details on use of these terms.
See Attachment 2 of the Part III survey instructions document for a list of emissions test reports to be submitted.

			Leave columns that do not apply for a given emission unit blank.							
Instruction:	Provide for all entries. This should match NEI Site ID used in Part II.	Provide for all entries. Emission Unit IDs should match those used in other tabs such as the *PIII Equip detail* tab.	Specify the collection system if applicable. Collection system IDs should match those used in other tabs such as the *PIII Equip detail* tab. (Note: Unlike in Part I, few (if any) collection systems are expected to be reported for Part III emission units.)	Provide the APCD used during the emissions test. APCD_IDs should match those used in other tabs such as the *PIII Equip detail* tab (unless equipment configuration has changed).	Enter combustion controls used during the emission test (e.g., combustion modifications/controls specified in the *PIII Equip detail* tab)	Use this column for notes or if helpful to specify the emission points tested (e.g., for equipment with multiple emission points, where only selected emission points/vents were tested)	Enter year testing was conducted (i.e., the test date year)	List the pollutants tested. Separate multiple pollutants by commas.	Enter the EPA test method number (e.g., M5, M7E). Be very specific if the method used was not an EPA method.	Specify if APCD inlet or outlet data are provided (or both)
Survey reference:										
Field:	**NEI Site ID**	**Emission Unit ID(s)**	**Collection system ID(s)**	**APCD_ID(s)**	**Combustion modifications or controls used to reduce air pollution (from combustion sources)**	**Process testing notes (optional)**	**Test report year (XXXX)**	**Pollutants tested**	**Test method(s) used**	**Are inlet or outlet data provided?**
Example entry:	99999	DIG-1, DIG-2, EVAP	LVHC-1	LK1/SCBR2			2006	methanol	M308	inlet and outlet
	99999	LK1		SCBR2			2006	PM	M5	outlet
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Use this table to identify the specific
UK = Unknown, **NA = Not Applic**
See Attachment 2 of the Part III surv

Instruction:	This question will be used in determining whether the test data remain representative of your current operations.	Explain any changes in equipment configuration as they relate to representativeness of the emissions test data supplied.	OPTIONAL: Data regarding frequency and cost of testing would help EPA more accurately estimate testing costs associated with the pulp and paper NESHAP and NSPS.	OPTIONAL	Optional. Enter any comments you have on the data supplied.
Survey reference:					
Field:	**Has the configuration of the emission unit, combustion controls, collection system, or APCD changed since the test was conducted?**	**If yes, please explain**	**How often are you required to perform testing of this emission unit for the pollutants listed?**	**Approximate cost per test, $**	**Comments**
Example entry:	no		one-time test only	12000	
	no		annually	6000	

Field:	NEI Site ID	Emission Unit ID(s)	Collection system ID(s)	APCD_ID(s)	Combustion modifications or controls used to reduce air pollution (from combustion sources)	Process testing notes (optional)	Test report year (XXXX)	Pollutants tested	Test method(s) used	Are inlet or outlet data provided?
100										

Drop Down List	Field	NOTE
Frequently Used Drop Downs		
	CBI Boxes	All tabs but Permit Limits
Yes		
No		
	Were these combustion controls added within the last 10 years?	equip
	Is emission unit subject to NSPS BB?	equip
	Is emission unit subject to NESHAP MM?	equip
	Are SOGs combined with NCGs before being introduced into the kiln?	equip
	Is this emission unit involved in a subpart MM PM bubble calculation?	equip
	Heat recovery	controls
	Is WESP preceded by a quench chamber	controls
	Have fields/chambers been added to expand the ESP within the last 10 years?	controls
	Is water recirculated?	controls
	Has the configuration of the emission unit, combustion controls, collection system, or APCD changed since the test was conducted?	Emission
	Does exhaust pass through the emission unit air pollution control device(s) prior to being routed to PCC plant?	PCC
Yes	Is PCC plant located on P&P mill property	PCC
No	Does the PCC plant have a separate air permit from the P&P mill?	PCC
PIII Equip detail Tab		
	Configuration if not emitted through a conveyance	
NV		
BLDG		
FUGITIVE		
	Year emission unit installed	
UK		
pre-1990		
	Emission unit manufacturer	
UK		
shop-built		
	Location of flow rate provided	
inlet to collection system		
collection system outlet prior to control device,		
inlet to control device,		
control device outlet		
prior to atmospheric release		
	Combustion controls	
low NOx burners		
quarternary air		
other {specify}		
	APCD1 type	
Recovery furnace ESP (dry bottom)	APCD2 type	
Recovery furnace ESP (wet bottom)	APCD3 type	
ESP (dry)	APCD4 type	
Wet ESP (WESP)		
Scrubber - venturi		
Scrubber - quench		
Scrubber - packed bed		
Scrubber		
Absorber		
Mist eliminator		
Thermal oxidizer/incinerator		
Regenerative thermal oxidizer		
Multicyclone		
Cyclone (excluding product recovery cyclones)		
Fabric filter (baghouse)		
Condenser		
Gravel bed		
Dry sorbent injection		
Carbon absorber		
Selective noncatalytic reduction		
Selective catalytic reduction		
Boiler (specify Emission Unit ID)		
Lime kiln (specify Emission Unit ID)		
Recovery furnace (specify Emission Unit ID)		
Other - specify type (and Emission Unit ID if applicable)		
Uncontrolled		

Reason subject to BB
new
modified
reconstructed
modified or reconstructed (not sure)

Specify TRS compliance option used to demonstrate NSPS subpart BB compliance (if applicable)
8 ppmdv @ 10% O2 (lime kilns)
0.033 lb/ton BLS as H2S (SDT - 1986 limit)
0.0168 lb/ton BLS (SDT - 1978 limit)
5 ppmdv @ 8% O2 (straight recovery furnace)
25 ppmdv @ 8% O2 (cross recovery furnace)
Meet permit limit more stringent than NSPS

Type of recovery furnace subject to subpart BB
straight
cross

Type of liquor oxidized
strong
weak

BLO type
air
molecular oxygen

Recovery furnace type
DCE
NDCE

Was NDCE formerly a DCE (i.e., has the unit undergone a low odor conversion)?
yes
no
NA

Type of liquor
black
red
mixture of kraft black liquor and semi hem green liquor

Type of liquid used in the ESP
Oxidized black liquor
Unoxidized black liquor
water
weak liquor
NA - wet bottom ESP not used

Wet or dry PM return system (for recovery furnace ESPs)
wet
dry

For wet PM return system, specify liquid
Oxidized black liquor
Unoxidized black liquor

Type of combustor
fluidized bed reactor
recovery furnace
smelter
rotary liquor kiln
pyrolysis reactor

Liquor evaporation equipment
Concentrator
DCE
None

Type of DCE
Cyclone
Cascade
Venturi scrubber

Type
smelt
ash

Type and source of water used in tank
SDT scrubber water
surface water
fresh water
process water {specify source}
treated wastewater
partially treated wastewater {specify last wastewater treatment unit water passed through}
mixture {specify sources}

Type of kiln
rotary
fluidized bed

NCG introduction method
with primary fuel
with primary combustion air
dedicated nozzle located near burner
NA - NCG are not burned in lime kiln

If no, SOG introduction method
with primary fuel
with primary combustion air
dedicated nozzle located near burner
NA - SOG are not burned in lime kiln

Primary fuel type
natural gas
#2 distillate oil
#6 residual oil
bark
hog fuel
turpentine
tall oil
petroleum coke
tire-derived fuel
wastewater treatment plant residuals
OCC rejects
allow others

Optional: Primary fuel HHV units
Btu/gal
MMBtu/ton
Btu/MMscf

Supplemental fuel type 1	Supplemental fuel type 2	Supplemental fuel type 3	Supplemental fuel type 4	Supplemental fuel type 5	Supplemental fuel type 6
natural gas					
#2 distillate oil					
#6 residual oil					
bark					
hog fuel					
turpentine					
tall oil					
petroleum coke					
tire-derived fuel					
wastewater treatment plant residuals					
OCC rejects					

Optional: Supplemental fuel type 1 HHV units
Btu/gal
MMBtu/ton
Btu/MMscf

Conditions when supplemental fuel type 1 used

routine use (multi-fuel fired unit)
startup
backup
shutdown
pilot light
during upset conditions
seasonally during curtailments or peak prices
when turpentine prices are low
when tall oil prices are low

	Measures employed to reduce air emissions during emission unit startup (if any)
emission unit and control device operates in compliance with NSPS and NESHAP parameter limits during emission unit startup	
emission unit and control device operates during emission unit startup (but not necessarily in compliance with all NSPS/NESHAP parameter limits)	
backup control	
NA - applicable emission and parameter limits not expected to be exceeded during startup	

	Measures employed to reduce air emissions during shutdown (if any)
Continue operating scrubber until temperature in LK1 drops to 200F	
Temperature drops below 200F	

PI Permit limits	
	Pollutant
TRS	
SO2	
sulfuric acid mist	
NOx	
CO	
Pb or other HAP metals	
VOC	
THC	
HCl	
Methanol and gaseous organic HAP	
Opacity	
PM	
PM - filterable	
PM - condensable	
PM10	
PM10 - filterable	
PM10 - condensable	
PM2.5	
PM2.5 - filterable	
PM2.5 - condensable	
	If the permit limit is identical to the Federal NESHAP or NSPS limit, you may enter the NESHAP/NSPS subpart here rather than restating the Federal limit in the columns to the right
Subpart MM (P&P combustion source NESHAP)	
Subpart BB (Kraft NSPS)	
Subpart BB (Kraft NSPS) - 1978	
Subpart BB (Kraft NSPS) - 1986 revision	
	Units for permit limit 1 (including any applicable %O2 or %CO2 correction factors)
gr/dscf @ 8% O2	Units for permit limit 2 (including any applicable %O2 or %CO2 correction factors)
gr/dscf @ 10% O2	Units for permit limit 3 (including any applicable %O2 or %CO2 correction factors)
lb/ton BLS	Units for permit limit 4 (including any applicable %O2 or %CO2 correction factors)
ppmdv @ 8% O2	Units for permit limit 5 (including any applicable %O2 or %CO2 correction factors)
ppmdv @ 10% O2	Units for permit limit 6 (including any applicable %O2 or %CO2 correction factors)
lb/ton BLS (as H2S)	
lb/MMBtu	
ppmdv	
% reduction	
% opacity	
	Averaging time for permit limit 1 (if applicable)
3-hour	Averaging time for permit limit 2 (if applicable)
12-hour	Averaging time for permit limit 3 (if applicable)
daily	Averaging time for permit limit 4 (if applicable)
test	Averaging time for permit limit 5 (if applicable)
PIII Controls	

	Type of control device

Recovery furnace ESP (dry bottom)
Recovery furnace ESP (wet bottom)
ESP (dry)
Wet ESP (WESP)
Scrubber - venturi
Scrubber - quench
Scrubber - packed bed
Scrubber
Absorber
Mist eliminator
Thermal oxidizer/incinerator
Regenerative thermal oxidizer
Multicyclone
Cyclone (excluding product recovery cyclones)
Fabric filter (baghouse)
Condenser
Gravel bed
Dry sorbent injection
Carbon absorber
Selective noncatalytic reduction
Selective catalytic reduction
Other - *specify type*

Incinerator type
Single-stage combustion chamber
Two-stage combustion chamber
Regenerative thermal oxidizer (RTO)

Auxillary fuel type
natural gas
propane
fuel oil
other {specify}

What is the recovered heat from the incinerator exhaust used for?
preheat incoming emission stream
produce steam
produce hot water

Sorbent type
activated carbon
lime
other (specify)

List pollutants the sorbent injection was installed to control
acid gases (HCl, SO2, HF)
SO2
Hg
dioxins

Bag cleaning method
Shake
Reverse air
Pulse jet

Water source
surface water
fresh water
process water {specify source}
treated wastewater
partially treated wastewater {specify last wastewater treatment unit water passed through}
mixture {specify sources}

Wastewater (blowdown) reuse or disposal method
Treated in onsite wastewater treatment plant
Recycled to mud washer(s)
Recycled to SDT
Recycled to process: {specify equipment receiving water using Emission Unit ID OR APCD_ID}
POTW
Other {specify}

Type of material collected
PM
PM and sorbent
Sorbent

End use/method of disposal for solid material collected
landfill onsite
lanffill offsite
recycle to causticizing system
sent to salt cake mix tank
reuse {specify}

List continuous parameter monitoring systems used for this control device (e.g., pressure drop, liquid flow)
pressure drop
liquid flow rate
voltage
current
temperature (specify if inlet, outlet, bed, or other temperature)
pH
percent solids in recycle water
other (specify)

Explain how control device startup is integrated with (dependent upon) emission unit startup/operation
Control device is started up and meets required operating parameter limits before emission unit is started up.
Control device cannot be started prior to emission unit starting up due to safety issue or risk of property damage. {Explain}
Control device cannot function as designed unless an air flow rate of {*specify*} acfm from the emission unit is achieved.

List any control device continuous emissions monitoring or operating parameter limits that cannot be met during control device startup
The applicable emission and parameter limits are expected to be met during startup

Explain how control device shutdown is integrated with (dependent upon) emission unit shutdown
Control device continues to operate and meets required operating limits while emission unit is shut down.
Control device cannot operate during emission unit shut down due to safety issue or risk of property damage. {Explain}
Control device cannot function as designed unless an air flow rate of {*specify*} acfm from the emission unit is achieved.

PCC

All items were Yes/No Questions. Items were listed with frequent use

PIII Emissions test data

Pollutants tested
PM
PM2.5-filterable
PM2.5-cond.
NOx
SO2
CO
methanol
THC
chlorine
CDD/CDF
POM/PAH
Speciated HAP metals
HCl
TRS

Are inlet or outlet data provided?
outlet
inlet
inlet and outlet

How often are you required to perform testing of this emission unit for the pollutants listed?
annually
every 2 years
every 5 years
one-time test only

as requested by the permitting authority