



DUKE ENERGY CORPORATION
Cliffside Steam Station
573 Duke Power Road
Cliffside, NC 28024

Mailing Address:
Cliffside Steam Station
573 Duke Power Road
Mooresboro, North Carolina 28114

828 657 6314

June 13, 2007

Dr. Don Van der Vaart, P.E.
Division of Air Quality
1641 Mail Service Center
Raleigh, North Carolina 27699-1641

Attention: Ed Martin

Subject: Cliffside New Generation Project
PSD Construction Permit Application – Corrected Forms

Dear Dr. Van der Vaart:

Attached are several revised permit application forms for the Cliffside new generation project. These correct minor errors or items that required further clarification that were noted by DAQ staff and Duke Energy following our May 29, 2007 submittal of the addendum to the PSD permit application.

If you have any questions, please contact Kris Knudsen (980-373-3225).

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained or referenced in this letter are true, accurate, and complete.

Sincerely,

Rick R. Roper, Manager
Cliffside Steam Station

cc: Keith Overcash
DAQ Permit Branch – 6 Copies

Attachment

FORMs A2, A3, A4
EMISSION SOURCE LISTING FOR THIS APPLICATION - A2
112r APPLICABILITY INFORMATION - A3
SURVEY OF FACILITY REDUCTION & RECYCLING ACTIVITIES - A4

REVISED 12/01/01

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

A2

EMISSION SOURCE LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted			
EMISSION SOURCE ID NO.	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE ID NO.	CONTROL DEVICE DESCRIPTION
Equipment To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)			
U6	Unit 6 Boiler	CD19-22	SCR, SDA, Baghouse, and Wet FGD
Aux	Auxiliary Boiler	NA	
CT1	Cooling Tower	NA	
C19	Unit 6 Coal Reclaim Hopper		
C27-30	Unit 6 Boilerhouse Coal Handling	CD28	Baghouse
A9	Ash Handling Point Source Unit 6	CD30	Baghouse
A1, A12	Ash Handling Fugitive Source Unit 6	NA	
VF1 - VF8	Coal Reclaim Feeders		
LSSDA	Lime for SDA	CD32-3	Bin Vent Filter (on silo)
EG6	Emergency Generator		
FWP	Emergency Fire Water Pump		
Existing Permitted Equipment To Be MODIFIED By This Application			
FVehicle	Fugitive Vehicle Emissions		
C1	Existing Coal Unloading		
C2, C3, C4, C5, C7	Coal Handling Conveyors and Telescoping Chutes		
C9, C10	Coal Storage-Pile Fugitive Emissions		
C15	Unit 5 Crusher House	CD33	
GS3, GS4	Gypsum Handling - Stockout Conveyors		
GS5	Gypsum Storage Piles		
GS9	Gypsum Bulldozing and Truck Loading		
LS1	Limestone Rail Car Unloading		
LS2	Limestone Stockout Conveyor		
LS6	Limestone Stockout Conveyor		
LS8	Limestone Storage Piles		
LS9, LS10	Limestone Bulldozing and Reclaim Hoppers		
FLandfill	Landfill Activities - Active Cell		
Equipment To Be DELETED By This Application			
U1	Unit 1 Boiler	CD1	ESP
U2	Unit 2 Boiler	CD2	ESP
U3	Unit 3 Boiler	CD3	ESP
U4	Unit 4 Boiler	CD4	ESP
C6	Stockout Conveyor SC3		
C8	Stockout Conveyor SC4		
C13	Reclaim Conveyor RC1 to Transfer house		
C14	Reclaim Conveyor RC1 to U5 Crusher House		
C16	Reclaim Conveyor RC3 to Unit 5 Boiler House		
C20-23	Coal Reclaim Conveyors		
C24-C26	Unit 6 & 7 Crusher House and Reclaim Conveyors	CD27	Baghouse
C31-34	Unit 7 Boilerhouse Coal Handling	CD29	Baghouse
LS3	Limestone Transfer House (existing)		
LS7	Limestone Stacking Tube		
LS12	Limestone Reclaim Conveyor		
LS13-3	Limestone Silo No. 3		
LS15	Limestone Reclaim Conveyor		
GS8	Gypsum Rail Car Loading		

112(r) APPLICABILITY INFORMATION

A 3

Is your facility subject to 40 CFR Part 68 "Prevention of Accidental Releases" - Section 112(r) of the Federal Clean Air Act? Yes No

If No, please specify in detail how your facility avoided applicability: _____

If your facility is Subject to 112(r), please complete the following:

A. Have you already submitted a Risk Management Plan (RMP) to EPA Pursuant to 40 CFR Part 68.10 or Part 68.150?
 Yes No Specify required RMP submittal date: _____ If submitted, RMP submittal date: 6/8/2004

B. Are you using administrative controls to subject your facility to a lesser 112(r) program standard?
 Yes No If yes, please specify: _____

SURVEY OF FACILITY REDUCTION & RECYCLING ACTIVITIES

A 4

Facility Name: Duke Cliffside Steam Station

Mailing Address Line 1: 573 Duke Power Road Mailing Address Line 2: _____

City: Cliffside State: NC Zip Code: 28114 County: Rutherford & Cleveland

Phone No. (828) 657-2339 Fax No. (828) 657-2060 Email Address: _____

Pollutant	Ongoing Source Reduction Activities (Enter Code)	Qty. Emitted Before Reduction (lb/yr)	Qty. Emitted After Reduction (lb/yr)	Planned Source Reduction Activities (Enter Code)
SO2		51,742,000	35,130,000	C19-U5 WFGD
SO2		10,918,000		C19-U1-4 Retire
NOx		2,816,000		C19-U1-4 Retire
PM		698,000		C19-U1-4 Retire
CO		130,000		C19-U1-4 Retire

For assistance with Section A4, please contact the North Carolina Division of Pollution Prevention and Environmental Assistance at 1-800-763-0136 or nowaste@p2pays.org

Attach Additional Sheets As Necessary

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 12/01/01

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

C1

CONTROL DEVICE ID NO: C28	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): C27-C30		
EMISSION POINT (STACK) ID NO(S): EP-C29-C30	POSITION IN SERIES OF CONTROLS	NO. 1	OF 1 UNITS
MANUFACTURER: TBD	MODEL NO: TBD		
DATE MANUFACTURED: TBD	PROPOSED OPERATION DATE: 2011		
OPERATING SCENARIO:		PROPOSED START CONSTRUCTION DATE: 2007	
1 OF _1_		P.E. SEAL REQUIRED (PER 2Q .0112)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

DESCRIBE CONTROL SYSTEM:
Fabric filter baghouse to control emissions from the Unit #6 Boiler House (tripper conveyor)

POLLUTANT(S) COLLECTED:	Particulates	_____	_____	_____	_____
BEFORE CONTROL EMISSION RATE (LB/HR):	3400	_____	_____	_____	_____
CAPTURE EFFICIENCY:	_____ %	_____ %	_____ %	_____ %	_____ %
CONTROL DEVICE EFFICIENCY:	_____ %	_____ %	_____ %	_____ %	_____ %
CORRESPONDING OVERALL EFFICIENCY:	99.9 %	_____ %	_____ %	_____ %	_____ %
EFFICIENCY DETERMINATION CODE:	_____	_____	_____	_____	_____
TOTAL EMISSION RATE (LB/HR):	3.4	_____	_____	_____	_____

PRESSURE DROP (IN. H ₂ O): MIN: 4 MAX: 7	GAUGE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	WARNING ALARM? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
BULK PARTICLE DENSITY (LB/FT ³): 50 - 60	INLET TEMPERATURE (°F): MIN MAX ambient	
POLLUTANT LOADING RATE: 10 <input checked="" type="checkbox"/> LB/HR <input checked="" type="checkbox"/> GR/FT ³	OUTLET TEMPERATURE (°F): MIN MAX ambient	
INLET AIR FLOW RATE (ACFM): 40,000	FILTER MAX OPERATING TEMP. (°F): 275	
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 544	LENGTH OF BAG (IN.): 144
DIAMETER OF BAG (IN.): 3"x6" oval	DRAFT: <input checked="" type="checkbox"/> INDUCED/NEG. <input type="checkbox"/> FORCED/POS.	FILTER SURFACE AREA (FT ²): 8383
AIR TO CLOTH RATIO: 4.8 : 1	FILTER MATERIAL: 16 oz polyester felt	<input checked="" type="checkbox"/> WOVEN <input checked="" type="checkbox"/> FELTED

DESCRIBE CLEANING PROCEDURES: Either Air Pulse or Reverse Flow <input checked="" type="checkbox"/> AIR PULSE OR <input type="checkbox"/> SONIC <input checked="" type="checkbox"/> REVERSE FLOW <input type="checkbox"/> SIMPLE BAG COLLAPSE <input type="checkbox"/> MECHANICAL/SHAKER <input type="checkbox"/> RING BAG COLLAPSE <input type="checkbox"/> OTHER	PARTICLE SIZE DISTRIBUTION		
	SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
	0-1	-	
	1-10	20	
	10-25	25	
	25-50	25	
50-100	30		
>100	-		
TOTAL = 100			

METHOD FOR DETERMINING WHEN TO CLEAN: Ether Automatic or Timed
 AUTOMATIC OR TIMED MANUAL

METHOD FOR DETERMINING WHEN TO REPLACE THE BAGS:
 ALARM INTERNAL INSPECTION VISIBLE EMISSION OTHER

SPECIAL CONDITIONS:
 MOISTURE BLINDING CHEMICAL RESISTIVITY OTHER
 EXPLAIN: n/a

DESCRIBE MAINTENANCE PROCEDURES: Check Filter Bag, Bag Cage and Housing Condition. Replace worn or teared bags. Replace and repair defective components.

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

FORM B

SPECIFIC EMISSIONS SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 12/01/0

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

B

EMISSION SOURCE DESCRIPTION: Unit 5 Crusher House	EMISSION SOURCE ID NO: C15	
	CONTROL DEVICE ID NO(S): CD33	
OPERATING SCENARIO _____1_____ OF _____1_____	EMISSION POINT (STACK) ID NO(S): Fugitive	

DESCRIBE IN DETAIL THE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
 Emissions include Unit 5 Crusher House which is controlled by particulate scrubber, water sprayers and enclosure.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

Coal,wood,oil, gas, other burner (Form B1)
 Woodworking (Form B4)
 Manufact. of chemicals/coatings/inks (Form B7)
 Int.combustion engine/generator (Form B2)
 Coating/finishing/printing (Form B8)
 Incineration (Form B8)
 Liquid storage tanks (Form B3)
 Storage silos/bins (Form B6)
 Other (Form B9)

START CONSTRUCTION DATE: January 2007	OPERATION DATE: April 2010	DATE MANUFACTURED: 2007
MANUFACTURER / MODEL NO.: NA	EXPECTED OP. SCHEDULE: 24 HR/DAY 7 DAY/WK 52 WK/YR	
IS THIS SOURCE SUBJECT TO? NSPS (SUBPART?): Y NESHAP (SUBPART?): MACT (SUBPART?):		
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25 MAR-MAY 25 JUN-AUG 25 SEP-NOV 25		
EXPECTED ANNUAL HOURS OF OPERATION: 8760		
VISIBLE STACK EMISSIONS UNDER NORMAL OPERATION: <20 % OPAC		

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OR EMISSION FACTOR	EXPECTED ACTUAL		POTENTIAL EMISSIONS			
		AFTER CONTROLS / LIMITS		BEFORE CONTROLS / LIMITS		(AFTER CONTROLS / LIMITS)	
		lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
PARTICULATE MATTER (PM)	1	2.57	11.26			2.57	11.26
PARTICULATE MATTER<10 MICRONS (PM ₁₀)	1	2.57	11.26			2.57	11.26
PARTICULATE MATTER<2.5 MICRONS (PM _{2.5})							
SULFUR DIOXIDE (SO ₂)							
NITROGEN OXIDES (NO _x)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT AND CAS NO.	SOURCE OR EMISSION FACTOR	EXPECTED ACTUAL		POTENTIAL EMISSIONS			
		AFTER CONTROLS / LIMITS		BEFORE CONTROLS / LIMITS		(AFTER CONTROLS / LIMITS)	
		lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

INDICATE EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS

TOXIC AIR POLLUTANT AND CAS NO.	EF SOURCE	lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

¹ Emissions are based on control device outlet concentration design and exhaust fan parameters.

FORM B9

EMISSION SOURCE (OTHER)

REVISED: 12/01/01

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

B9

EMISSION SOURCE DESCRIPTION: Unit 5 Crusher House	EMISSION SOURCE ID NO: C15
OPERATING SCENARIO: _____1_____ OF _____1_____	CONTROL DEVICE ID NO(S): CD33
	EMISSION POINT (STACK) ID NO(S): Fugitive

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):

Emissions include Unit 5 Crusher House which is controlled by particulate scrubber, water sprayers and enclosure.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN CAPACITY (UNIT/HR)	REQUESTED CAPACITY LIMITATION(UNIT/HR)
TYPE	UNITS		
Coal	tons	3000	NA

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN CAPACITY (UNIT/BATCH)	REQUESTED CAPACITY LIMITATION (UNIT/BATCH)
TYPE	UNITS		

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED: NA	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR): NA
MAX. CAPACITY HOURLY FUEL USE: NA	REQUESTED CAPACITY ANNUAL FUEL USE: NA

COMMENTS:

Attach Additional Sheets as Necessary

FORM C8

CONTROL DEVICE (WET PARTICULATE SCRUBBER)

REVISED 12/01/01

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

C8

CONTROL DEVICE ID NO: CD33	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): C15		
EMISSION POINT ID NO(S): fugitive	POSITION IN SERIES OF CONTROLS: NO. 1 OF 1 UNITS		
MANUFACTURER: Engart	MODEL NO: 30		
DATE MANUFACTURED: 2007	PROPOSED OPERATION DATE: 2011		
OPERATING SCENARIO:	PROPOSED CONSTRUCTION DATE: June 2007		
___ 1 ___ OF ___ 1 ___	P.E. SEAL NEEDED (PER 2Q .0112)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		

DESCRIBE CONTROL SYSTEM:

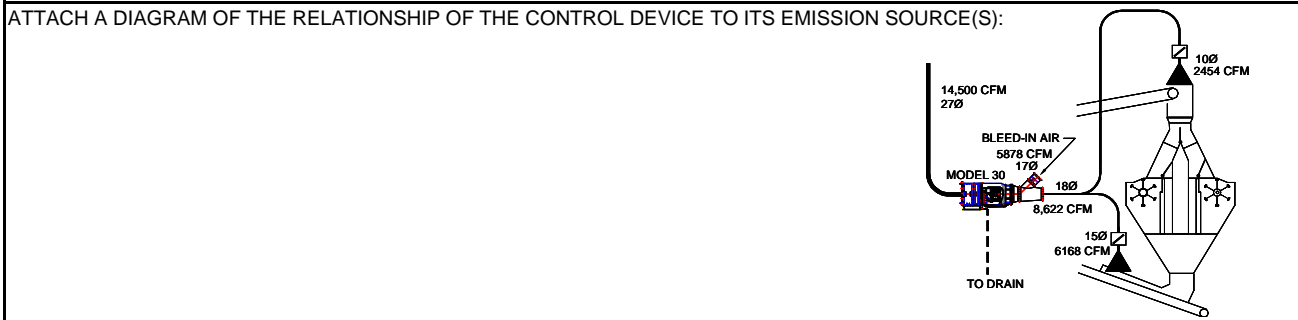
Dust laden air is drawn into ductwork by the wet dust extractor fan. At the entrance to the wet dust extractor, the dust laden air is mixed with ambient air also drawn in by the fan (bleed-in air), diluting the dust laden air. The diluted air is agglomerated at the wet collector fan by centrifugal action and fan water sprays. The air, water, and agglomerated dust travels over and under the fan motor and impacts on a stainless steel screen that is continuously sprayed with multiple water nozzles. Here the agglomerated dust is separated from the air stream by the screen and the filtered air passes through the screen while the captured dust is turned into a slurry and gravity feed to the sump located under the screen area. The sump is a pass through device and the slurry is discharged to the plant's floor drainage system. The wet dust extractor contains an online backflush system to clean the screen while the wet collector is running.

POLLUTANT(S) COLLECTED:	Coal dust			
BEFORE CONTROL EMISSION RATE (LB/HR .02#/Ton)	44			
CAPTURE EFFICIENCY:	99 %	%	%	%
CONTROL DEVICE EFFICIENCY:	97 %	%	%	%
CORRESPONDING EFFICIENCY:	96 %	%	%	%
EFFICIENCY DETERMINATION CODE:	manufacturer			
TOTAL EMISSION RATE (LB/HR):	NA (air is returned to enclosed crusher house)			

PRESSURE DROP (IN. H ₂ O): MIN -6	WARNING ALARM? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
INLET TEMPERATURE (°F): MIN 32 MAX 140	OUTLET TEMPERATURE (°F): MIN 32 MAX 140		
INLET AIR FLOW RATE (ACFM): 14500	MOISTURE CONTENT: INLI 10%		OUTLET 99%
THROAT VELOCITY (FT/SEC): 67	THROAT TYPE: <input checked="" type="checkbox"/> FIXED		<input type="checkbox"/> VARIABLE
TYPE OF SYSTEM: Mat Mist Collector	TYPE OF PACKING USED IF ANY: Stainless steel knit mesh		
ADDITIVE LIQUID SCRUBBING MEDIUM WATER	PERCENT RECIRCULATED: NONE		
MINIMUM LIQUID INJECTION RATE (GAL/MII 8	FLOW RATE GAUGE INSTALLED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		

0.9603

MAKE UP RATE (GAL/MIN): N/A FOR ADDITIVE (GAL/MIN): DESCRIBE MAINTENANCE PROCEDURES: Remove screen, pressure wash, and replace	PARTICLE SIZE DISTRIBUTION <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">SIZE (MICRONS)</th> <th style="width: 30%;">WEIGHT % OF TOTAL</th> <th style="width: 40%;">CUMULATIVE %</th> </tr> </thead> <tbody> <tr><td>0-1</td><td></td><td></td></tr> <tr><td>1-10</td><td></td><td></td></tr> <tr><td>10-25</td><td></td><td></td></tr> <tr><td>25-50</td><td></td><td></td></tr> <tr><td>50-100</td><td></td><td></td></tr> <tr><td>>100</td><td></td><td></td></tr> <tr><td colspan="3" style="text-align: right;">TOTAL = 100</td></tr> </tbody> </table>	SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %	0-1			1-10			10-25			25-50			50-100			>100			TOTAL = 100		
SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %																							
0-1																									
1-10																									
10-25																									
25-50																									
50-100																									
>100																									
TOTAL = 100																									
DESCRIBE ANY MONITORING DEVICES, GAUGES, TEST PORTS, ETC: Common systems include a motor vibration sensor, water filtration system with automatic back flush, CO monitor if venting a silo or bunker, alarm strobe, water pressure gauges, PLC, and control cabinet with graphic system representation.																									



Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSIONS SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 12/01/01

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

B

EMISSION SOURCE DESCRIPTION: Fugitive Fly Ash Sources	EMISSION SOURCE ID NO: A1, A12
OPERATING SCENARIO <u>1</u> OF <u>1</u>	CONTROL DEVICE ID NO(S):
	EMISSION POINT (STACK) ID NO(S): Fugitive

DESCRIBE IN DETAIL THE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
 Sources include the following:
 A1: Wet Botton Ash Transfer and Pickup - Botton ash has consistency of wet sand - no emissions expected.
 A12: Flyash Dishcharge to Truck

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

Coal,wood,oil, gas, other burner (Form B1)
 Woodworking (Form B4)
 Manufact. of chemicals/coatings/inks (Form B7)
 Int.combustion engine/generator (Form B2)
 Coating/finishing/printing (Form B5)
 Incineration (Form B8)
 Liquid storage tanks (Form B3)
 Storage silos/bins (Form B6)
 Other (Form B9)

START CONSTRUCTION DATE June 2007	OPERATION DATE: 2011	DATE MANUFACTURED: TBD
MANUFACTURER / MODEL NO.: NA	EXPECTED OP. SCHEDULE: <u>24</u> HR/DAY <u>7</u> DAY/WK <u>52</u> WK/YR	
IS THIS SOURCE SUBJECT TO? NSPS (SUBPART?): NESHAP (SUBPART?): _____ MACT (SUBPART?): _____		
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25 MAR-MAY 25 JUN-AUG 25 SEP-NOV 25		
EXPECTED ANNUAL HOURS OF OPERATIC < 8760		
VISIBLE STACK EMISSIONS UNDER NORMAL OPERATION: <u><20</u> % OPACITY		

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS)		POTENTIAL EMSSIONS (BEFORE CONTROLS / LIMITS) (AFTER CONTROLS / LIMITS)			
		lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
		PARTICULATE MATTER (PM)	AP-42	0.09	0.1		
PARTICULATE MATTER<10 MICRONS (PM ₁₀)	AP-42	0.04	0.05			0.04	0.05
PARTICULATE MATTER<2.5 MICRONS (PM _{2.5})							
SULFUR DIOXIDE (SO ₂)							
NITROGEN OXIDES (NO _x)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT AND CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS)		POTENTIAL EMSSIONS (BEFORE CONTROLS / LIMITS) (AFTER CONTROLS / LIMITS)			
		lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

INDICATE EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS

TOXIC AIR POLLUTANT AND CAS NO.	EF SOURCE	lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

FORM B

SPECIFIC EMISSIONS SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 12/01/01

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

B

EMISSION SOURCE DESCRIPTION: Unit 6 Fly Ash Handling (Controlled)	EMISSION SOURCE ID NO: A3, A6, A7, A8 & A9 CONTROL DEVICE ID NO(S): C30
OPERATING SCENARIO <u>1</u> OF <u>1</u>	EMISSION POINT (STACK) ID NO(S): EPA3, A6, A7, A8 & A9

DESCRIBE IN DETAIL THE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):

Sources include the following:

- A3: Dry Fly Ash Pickup at Boiler Economizer - Fly ash pneumatically conveyed to silo
- A6: Fly Ash Silo (3 days total storage)
- A7: Dry Fly Ash Truck Loading (350 tph)
- A8: Dry Fly Ash Pickup at Boiler Economizer - Fly ash

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- | | | |
|---|--|---|
| <input type="checkbox"/> Coal, wood, oil, gas, other burner (Form B1) | <input type="checkbox"/> Woodworking (Form B4) | <input type="checkbox"/> Manufact. of chemicals/coatings/inks (Form B7) |
| <input type="checkbox"/> Int. combustion engine/generator (Form B2) | <input type="checkbox"/> Coating/finishing/printing (Form B5) | <input type="checkbox"/> Incineration (Form B8) |
| <input type="checkbox"/> Liquid storage tanks (Form B3) | <input checked="" type="checkbox"/> Storage silos/bins (Form B6) | <input type="checkbox"/> Other (Form B9) |

START CONSTRUCTION DATE: June 2007	OPERATION DATE: 2011	DATE MANUFACTURED: 2007
MANUFACTURER / MODEL NO.: NA	EXPECTED OP. SCHEDULE: <u>24</u> HR/DAY <u>7</u> DAY/WK <u>52</u> WK/YR	
IS THIS SOURCE SUBJECT TO? NSPS (SUBPART?): NESHAP (SUBPART?): _____ MACT (SUBPART?): _____		
PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 25 MAR-MAY 25 JUN-AUG 25 SEP-NOV 25		
EXPECTED ANNUAL HOURS OF OPERATIC 8760 VISIBLE STACK EMISSIONS UNDER NORMAL OPERATION: <u>20</u> % OPACITY		

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL		POTENTIAL EMISSIONS			
		(AFTER CONTROLS / LIMITS)		(BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)	
		lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
PARTICULATE MATTER (PM)	1	0.0013	0.01			0.0013	0.01
PARTICULATE MATTER <10 MICRONS (PM ₁₀)	1	0.0013	0.01			0.0013	0.01
PARTICULATE MATTER <2.5 MICRONS (PM _{2.5})							
SULFUR DIOXIDE (SO ₂)							
NITROGEN OXIDES (NO _x)							
CARBON MONOXIDE (CO)							
VOLATILE ORGANIC COMPOUNDS (VOC)							
LEAD							
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT AND CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL		POTENTIAL EMISSIONS			
		(AFTER CONTROLS / LIMITS)		(BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)	
		lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

INDICATE EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS

TOXIC AIR POLLUTANT AND CAS NO.	EF SOURCE	lb/hr	lb/day	lb/yr

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

¹ Emissions are based on filter design, material charge rate and density of material charged.

FORM B6

EMISSION SOURCE (STORAGE SILO/BINS)

REVISED 12/01/01

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

B6

EMISSION SOURCE DESCRIPTION: Unit 6 Fly Ash Handling (Controlled)	EMISSION SOURCE ID NO: A3, A6, A7, A8 & A9
OPERATING SCENARIO: _____ 1 _____ OF _____ 1 _____	CONTROL DEVICE ID NO(S): C30
EMISSION POINT(STACK) ID NO(S): EPA3, A6, A7, A8 & A9	

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):
Sources include the following:
A3: Dry Fly Ash Pickup at Boiler Economizer - Fly ash pneumatically conveyed to silo
A6: Fly Ash Silo (3 days total storage)
A7: Dry Fly Ash Truck Loading (350 tph)
A8: Dry Fly Ash Pickup at Boiler Economizer - Fly ash

MATERIAL STORED: Fly Ash	DENSITY OF MATERIAL (LB/FT ³): 80
CAPACITY	CUBIC FEET:
DIMENSIONS (FEET)	TONS:
HEIGHT: 100	DIAMETER: 30 (OR)
LENGTH:	WIDTH: HEIGHT:
ANNUAL PRODUCT THROUGHPUT (TONS)	ACTUAL: ~284,000/each
MAXIMUM DESIGN CAPACITY:	

PNEUMATICALLY FILLED	MECHANICALLY FILLED	FILLED FROM
☝ BLOWER	☝ SCREW CONVEYOR	☝ RAILCAR
☝ COMPRESSOR	☝ BELT CONVEYOR	☝ TRUCK
☝ OTHER:	☝ BUCKET ELEVATOR	☝ STORAGE PILE
	☝ OTHER:	☝ OTHER:

NO. FILL TUBES:	
MAXIMUM ACFM:	

MATERIAL IS FILLED TO:

BY WHAT METHOD IS MATERIAL UNLOADED FROM SILO?
Material is mixed with water and dropped into an open bed truck. The truck is then tarped for transport.
Material can also be withdrawn through a dustless unloader into an enclosed pneumatic tank truck for shipment.

MAXIMUM DESIGN FILLING RATE OF MATERIAL (TONS/HR):	45-90
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MAXIMUM DESIGN UNLOADING RATE OF MATERIAL (TONS/HR):	350
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COMMENTS:

Attach Additional Sheets As Necessary

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 12/01/01

NCDENR/Division of Air Quality - Application for Air Permit to Construct/Operate

C1

CONTROL DEVICE ID NO: C30		CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): A3, A6, A7, A8 & A9		
EMISSION POINT (STACK) ID NO(S): EPA3, A6, A7, A8 & A9		POSITION IN SERIES OF CONTROLS NO. 1 OF 1 UNITS		
MANUFACTURER: TBD		MODEL NO: TBD		
DATE MANUFACTURED: TBD		PROPOSED OPERATION DATE: 2011		
OPERATING SCENARIO:		PROPOSED START CONSTRUCTION DATE: June 2007		
__ 1 __ OF __ 1 __		P.E. SEAL REQUIRED (PER 2Q .0112)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
DESCRIBE CONTROL SYSTEM: Bin Vent fabric filter to control emissions from the Unit #6 fly ash silo				
POLLUTANT(S) COLLECTED: <u>Particulates</u>				
BEFORE CONTROL EMISSION RATE (LB/HR):		<u>1.3</u>		
CAPTURE EFFICIENCY:		_____ % _____ % _____ % _____ %		
CONTROL DEVICE EFFICIENCY:		_____ % _____ % _____ % _____ %		
CORRESPONDING OVERALL EFFICIENCY:		<u>99.9</u> % _____ % _____ % _____ %		
EFFICIENCY DETERMINATION CODE: _____				
TOTAL EMISSION RATE (LB/HR):		<u>0.0013</u>		
PRESSURE DROP (IN. H ₂ O): MIN: 4 MAX: 7		GAUGE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO WARNING ALARM? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
BULK PARTICLE DENSITY (LB/FT ³): 50 - 60		INLET TEMPERATURE (°F): MIN MAX <u>ambient</u>		
POLLUTANT LOADING RATE: 10 <input type="checkbox"/> LB/HR <input checked="" type="checkbox"/> GR/FT ³		OUTLET TEMPERATURE (°F): MIN MAX <u>ambient</u>		
INLET AIR FLOW RATE (ACFM): N/A		FILTER MAX OPERATING TEMP. (°F): 275		
NO. OF COMPARTMENTS: 1	NO. OF BAGS PER COMPARTMENT: 124	LENGTH OF BAG (IN.): 144		
DIAMETER OF BAG (IN.): 3"x6" oval	DRAFT: <input checked="" type="checkbox"/> INDUCED/NEG. <input type="checkbox"/> FORCED/POS.	FILTER SURFACE AREA (FT ²): 1911		
AIR TO CLOTH RATIO: 5.2 : 1	FILTER MATERIAL: 16 oz polyester felt <input type="checkbox"/> WOVEN <input checked="" type="checkbox"/> FELTED			
DESCRIBE CLEANING PROCEDURES: Either Air Pulse or Reverse Flow		PARTICLE SIZE DISTRIBUTION		
<input checked="" type="checkbox"/> AIR PULSE <input type="checkbox"/> SONIC <input checked="" type="checkbox"/> REVERSE FLOW <input type="checkbox"/> SIMPLE BAG COLLAPSE <input type="checkbox"/> MECHANICAL/SHAKER <input type="checkbox"/> RING BAG COLLAPSE <input type="checkbox"/> OTHER		SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
		0-1	-	
		1-10	20	
		10-25	25	
		25-50	25	
		50-100	30	
		>100	-	
		TOTAL = 100		
METHOD FOR DETERMINING WHEN TO CLEAN: Either Automatic or Timed <input checked="" type="checkbox"/> AUTOMATIC <input type="checkbox"/> TIMED <input type="checkbox"/> MANUAL				
METHOD FOR DETERMINING WHEN TO REPLACE THE BAGS: <input type="checkbox"/> ALARM <input type="checkbox"/> INTERNAL INSPECTION <input checked="" type="checkbox"/> VISIBLE EMISSION <input type="checkbox"/> OTHER				
SPECIAL CONDITIONS: MOISTURE BLINDING _____ CHEMICAL RESISTIVITY _____ OTHER _____ EXPLAIN: N/A				
DESCRIBE MAINTENANCE PROCEDURES: Check Filter Bag, Bag Cage and Housing Condition. Replace worn or teared bags. Replace and repair defective components.				
ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):				