

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8402270342 DOC. DATE: 84/02/22 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylvania 05000387
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylvania 05000388
 AUTH. NAME AUTHOR AFFILIATION
 FIELDS, J. S. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 PATEL, B. H. Pennsylvania, Commonwealth of,

SUBJECT: Forwards updated application for plan approval/permit for concrete batch plant originally submitted on 840213, in response to 840217 telcon.

DISTRIBUTION CODE: C001S COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 9
 TITLE: Licensing Submittal; Environmental Rept Amdt & Related Correspondence

NOTES: 1cy NMSS/FCAF/PM. LPDR 2cys. 05000387
 1cy NMSS/FCAF/PM. LPDR 2cys. 05000388

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL		RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	NRR LB2 BC 18	1 1		NRR LB2 LA 19	1 1
	PERCH, R. 04	1 1			
INTERNAL:	ELD/HDS4	1 0		NRR/DE/AEAB. 08	1 1
	NRR/DE/EEB 06	1 1		NRR/DE/EHEB	1 1
	NRR/DE/SAB 07	1 1		NRR/DSI/METB	1 1
	NRR/DSI/RAB 09	1 1		<u>REG FILE</u>	1 1
	RGN1	1 1			
EXTERNAL:	ACRS 20	6 6		LPDR 03	2 2
	NRC PDR 02	1 1		NSIC 05	1 1
	NTIS	1 1			
NOTES:		3 3			



Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101 • 215/770-5151

February 22, 1984

Mr. Babu H. Patel, Chief
Air Quality Control
Pennsylvania Department of Environmental Resources
90 E. Union Street, Second Floor
Wilkes-Barre, PA 18701-3296

SUSQUEHANNA STEAM ELECTRIC STATION
CONCRETE BATCH PLANT
APPLICATION FOR PLAN APPROVAL/PERMIT
CCN 741326 FILE 012
PLE-4550

Dear Mr. Patel:

In response to our telephone conversation of February 17, 1984, the Pennsylvania Power and Light Co. is updating an Application for Plan Approval/Permit for a Concrete Batch Plant submitted to the Pennsylvania Department of Environmental Resources (Pa. DER) on February 13, 1984. Two completed copies of an Air Permit Application form, Section C - Control Equipment, are attached.

If you have any questions, please call me at (215) 770-7889.

Respectfully yours,

Jerome S. Fields
Sr. Environmental Specialist-Nuclear

JSF:mp

jsfltb000552a

Attachments

cc:

~~A. Snelson~~

A. Snelson
P. J. Koval

~~Pa. DER~~

Pa. DER
Pa. DER

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PDR ADDCK 05000387
P PDR

Cool
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Section C - Control Equipment

1. POTENTIAL PROCESS EMISSIONS (OUTLET FROM PROCESS, BEFORE ANY CONTROL EQUIPMENT)

A. Outlet particulate loading (lbs/hr or gr/SCF Dry)

TRACE

B. Specific gravity of particulate (not bulk density) 3.1

C. Attach outlet particle size distribution information Portland Cement dust - 34% 0-10 microns;
52% 10-50 microns; 14% 50+ micronsD. Specify gaseous contaminants and concentration
N/A - vented air with no gaseous contaminants

Contaminant	Concentration	VOC	Contaminant	Concentration
(1) SO _x	_____ ppm (Vol.) _____ lbs/hr	(4) _____	_____	_____ ppm (Vol.) _____ lbs/hr
(2) NO _x	_____ ppm (Vol.) _____ lbs/hr	(5) _____	_____	_____ ppm (Vol.) _____ lbs/hr
(3) CO	_____ ppm (Vol.) _____ lbs/hr	(6) _____	_____	_____ ppm (Vol.) _____ lbs/hr

2. GAS CONDITIONER (IF APPLICABLE)

N/A

A. Water quenching ☐ Yes ☐ No

Water injection rate _____ GPM

B. Radiation and convection cooling ☐ Yes ☐ NoC. Air dilution ☐ Yes ☐ No _____ CFM

D. Gas conditioner outlet

_____ ACFM @ _____ °F

3. SETTLING CHAMBERS (IF APPLICABLE)

N/A

A. Manufacturer

B. Volume of gas handled

_____ ACFM @ _____ °F

C. Gas velocity

D. Length of expansion chamber (ft)

E. Width of expansion chamber (ft)

F. Height of expansion chamber (ft)

G. Number of trays

H. Inlet concentration
(lbs/hr or gr/SCF Dry)I. Outlet concentration
(lbs/hr or gr/SCF Dry)

J. Overall efficiency (%)

K. Water injection

☐ Yes ☐ No

L. Water injection rate (GPM)

M. Attach particle size
Efficiency curve

Section C — Control Equipment, Continued

4. INERTIAL AND CYCLONE COLLECTORS (IF APPLICABLE)

N/A

A. Manufacturer	B. Type	C. Model Number
D. Pressure Drop (water gage)	E. Inlet Gas Volume (ACFM)	F. Inlet Gas Temperature (°F)
G. Design inlet volume (ACFM)		
H. Inlet concentration (lbs/hr or gr/SCF Dry)	I. Outlet concentration (lbs/hr or gr/SCF Dry)	J. Overall efficiency (%)
K. Attach particle size efficiency curve	L. Number of individual cyclone(s)	
M. Inlet diameter (ft) or duct area (ft ²) of cyclone(s)	N. Outlet diameter (ft) or duct area (ft ²) of cyclone(s)	
O. Length of cyclone(s) cylinder (ft)	P. Length of cyclone(s) cone (ft)	
Q. Diameter of cyclone(s) cylinder	R. Outlet straightening vanes used? <input type="checkbox"/> Yes <input type="checkbox"/> No	

5. CATALYTIC AND THERMAL AFTERBURNERS (IF APPLICABLE)

N/A

A. Manufacturer	B. Type	C. Model No.
D. Minimum temperature maintained (°F)	E. Retention time at this temperature (sec)	F. Volume of gases handled (ACFM @ °F)
G. Design inlet volume (ACFM)	H. No. and capacity (BTU/hr) of burners	
I. Catalyst used	J. Expected temperature rise across catalyst	
K. Are temperature sensing devices being provided to measure the temperature rise across the catalyst? <input type="checkbox"/> Yes <input type="checkbox"/> No		
L. Is a heat exchanger system used for heat recovery? <input type="checkbox"/> Yes <input type="checkbox"/> No		
M. Inlet concentration ppm (Vol.)	N. Outlet concentration ppm (Vol.)	O. Overall efficiency (%)
P. Attach dimensioned diagram of afterburner and stack		
Q. Describe any temperature sensing and/or recording devices (including specific location of temperature probe).		

Section C - Control Equipment, Continued

G. FABRIC COLLECTORS (IF APPLICABLE)

A. Manufacturer Griffin Environmental Company, Inc.		B. Model No. 36IS		<input type="checkbox"/> Pressurized design
C. Air to cloth ratio (actual conditions) 2.8:1		D. Type of Fabric		<input checked="" type="checkbox"/> Suction design
E. Fabric Permeability (clean) @ 1/2" w.g. Δ P not available CFM/sq. ft.		Material <u>Cotton Sateen</u>		<input checked="" type="checkbox"/> Felted
		Weight <u>16</u> oz/sq yd		<input type="checkbox"/> Woven
		Thickness <u>---</u> in		<input type="checkbox"/> Felted-Woven
F. Pressure drop across collector (in. wg.) 5	G. Volume of gases handled (ACFM) 350	H. Inlet gas temperature (°F) Ambient		
I. Design inlet volume (ACFM) 350 max				
J. Inlet concentration (lbs/hr or gr/SCF Dry) 10 lbs/hr.	K. Outlet concentration (lbs/hr or gr/SCF Dry) TRACE	L. Overall efficiency (%) 99.9 + %		
M. No. of compartments 1	N. No. of bags per compartment 36			
O. Can each compartment be isolated for repairs and/or bag replacement? NO				
P. Bag dimensions Length <u>38"</u> Diameter (or width if envelope type bag) <u>4"</u>				
Q. If multiple walled bags provide detail N/A				
R. Method of bag cleaning				
<input checked="" type="checkbox"/> Shaker				
<input type="checkbox"/> Reverse compartmental pulse				
<input type="checkbox"/> Reverse bag pulse				
<input type="checkbox"/> Reverse jet (blow ring)				
<input type="checkbox"/> Reverse flow				
<input type="checkbox"/> Other				
S. Cleaning initiated by				
<input checked="" type="checkbox"/> Timer				
Frequency if timer actuated Bags are cleaned after every silo loading operation				
<input type="checkbox"/> Pressure drop <u>---</u> psig				
T. Shaker cleaning				
<input checked="" type="checkbox"/> Mechanical				
<input type="checkbox"/> Manual				
<input type="checkbox"/> One compartment shaken at a time				
<input checked="" type="checkbox"/> All compartments shaken at once				
U. Reverse flow cleaning air supply		V. Others		
Source <u>N/A</u>		Flushing pressure (psig) <u>N/A</u>		
CFM <u>---</u>				
W. Are temperature controls provided? (Describe in detail) NO				
X. Is baghouse insulated NO		Y. Maximum temperature bags can withstand (°F) 250		Z. Dew point at maximum Moisture (°F) N/A

Section C — Control Equipment, Continued

7. PARTICULATE MATTER SCRUBBERS (IF APPLICABLE)

N/A

A. Manufacturer		B. Type	C. Model No.
D. Pressure drop (water gage) across scrubber only. Do not include duct or demister losses			
E. Gas temperatures (°F) at inlet _____ outlet _____			
F. Volume of gases handled at inlet temperature (ACFM)		G. Design inlet volume (ACFM)	
H. Water flow rate (GPM)		I. Relative particulate/gas velocity (ejector scrubbers)	
J. Inlet concentration (lbs/hr or gr/SCF Dry)	K. Outlet concentration (lbs/hr or gr/SCF Dry)		L. Overall efficiency (%)
M. Attach particle size efficiency curve			
N. Describe equipment provided to measure pressure drop and water flow rate to scrubber			
O. Describe scrubber water supply system (amount of make-up and recirculating water, capacity of recirculating water system, etc.)			
P. Describe mist eliminator or separator (configuration, backflush capability, frequency)			
Q. pH monitoring and adjustment? Describe if yes <input type="checkbox"/> Yes <input type="checkbox"/> No			

Section C - Control Equipment Continued

B. ELECTROSTATIC PRECIPITATOR (IF APPLICABLE)

N/A

A. Manufacturer	B. Model No.	C. <input type="checkbox"/> Wet <input type="checkbox"/> Dry <input type="checkbox"/> Single-Stage <input type="checkbox"/> Multi-Stage
D. Pressure drop (water gage) Across collector only	E. Design inlet volume (ACFM) _____ Actual volume handled (ACFM) _____	
F. Maximum operating temp. (°F) _____ Actual operating temp. (°F) _____	G. Maximum Dust Inlet Conc. (gr/DSCF) _____ Maximum Dust Outlet Conc. (gr/DSCF) _____	
H. Dust resistivity (ohm/cm)	I. Gas Distribution Grids <input type="checkbox"/> Yes <input type="checkbox"/> No	
J. Total collecting surface area _____ sq. ft. Collector plates size length _____ ft x width _____ ft No. of fields _____ no. of collector plates/field _____ Spacing between collector plates _____ inches Maximum gas velocity _____ ft/sec Minimum gas treatment time _____ sec		
K. Total discharge electrode length _____ ft Number of discharge electrodes _____		
L. Number And Size of Transformer Rectifier Sets By Electrical Field		
Field No.	No. of Sets	Each Transformer KVA
		Each Rectifier KV Ave/Peak
		Ma DC
M. Current density _____ Micro amperes/ft. ²	N. Corona power _____ Watts/1000 ACFM	O. Corona power density _____ Watts/ft. ²
P. Number collecting electrode rappers _____ Minimum acceleration rating for rappers _____ g's		
Q. Flue gas conditioning equipment used? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe (If Yes)		

Section C — Control Equipment

9. ADSORPTION EQUIPMENT

N/A

A. Manufacturer		B. Type		C. Model No.	
D. Volume of gases handled ACFM			E. Inlet temperature (F)		
F. Design inlet volume (ACFM)			G. Percent concentration of solvent in exhaust gases		
H. Carbon charge per adsorber vessel and number of adsorber vessels			I. Adsorbent type, density and property		
J. Vapor pressure of solvents at the inlet temperature					
K. Length of MTZ (supplied by the manufacturer based upon laboratory data)					
L. Percent relative saturation of each solvent at the inlet temperature					
M. Breakthrough capacity		$\left[\frac{\text{lbs of solvent}}{100 \text{ lbs of adsorbent}} \right]$			
N. Working capacity of adsorbent (%)			O. Heel percent or unrecoverable solvent weight % in the adsorbent after regeneration		
P. Adsorber diameter (ft) and area (ft ²)					
Q. Adsorption bed depth (ft)					
R. Available steam in pounds to regenerate carbon adsorber					
S. Adsorption time per adsorption bed					
T. Inlet concentration lbs/hr		U. Outlet concentration lbs/hr		V. Overall efficiency (%)	
W. Please supply any additional data to thoroughly evaluate the control equipment.					

Section C — Control Equipment, Continued

10. ABSORPTION EQUIPMENT (IF APPLICABLE)

N/A

A. Manufacturer		B. Type		C. Model No.	
D. Volume of gases handled (ACFM)		E. Design inlet volume (ACFM)		F. Inlet temperature (°F)	
G. Configuration <input type="checkbox"/> Countercurrent <input type="checkbox"/> Cross flow <input type="checkbox"/> Cocurrent flow				H. Pressure drop (water gage)	
I. Absorbent type and concentration			J. Retention time (sec)		
K. Inlet concentration		L. Outlet concentration		M. Overall efficiency (%)	
N. Describe pH and/or other monitoring and controls					
O. Type packing and size (If applicable)		P. Height of packing (ft)		Q. No. of trays	
R. Diameter of tower (ft)					
S. Attach equilibrium data for absorption (If applicable)					

11. OTHER CONTROL EQUIPMENT (IF APPLICABLE)

A. Manufacturer		B. Type		C. Model No.	
D. Volume of gases handled (ACFM)		E. Design inlet volume (ACFM)		F. Inlet temperature (°F)	
G. Inlet concentration (lbs/hr or gr/SCF Dry)		H. Outlet concentration (lbs/hr or gr/SCF Dry)		I. Overall efficiency (%)	
J. Attach particle size efficiency curve or other efficiency information					
K. Describe fully giving important parameters and method of operation					

Section C - Control Equipment, Continued

11. COSTS

A. Cost of all control equipment including installation costs (List individual controls separately)

\$800.00

B. Estimated annual operating costs of control equipment only

\$1,000.00

12. Describe modifications to control equipment in detail

NONE

13. Describe in detail the method of dust removal from the air cleaning device and methods of controlling fugitive emissions from dust removal, handling and disposal.

Dust is not removed from system but bags are shaken and dust is emptied back into the silo.

14. Does air cleaning device employ hopper heaters, hopper vibrators or hopper level detectors? If so describe.

N/A

15. Attach manufacturer's performance guarantees and/or warranties for each of the major components of the control system (or complete system).

N/A

16. Attach the maintenance schedule for the control equipment and any part of the process equipment that if in disrepair would increase the air contaminant emissions. Periodic maintenance reports are to be submitted to the Department.

N/A

17. Attach any and all additional information necessary to thoroughly evaluate the control equipment.

NONE