BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED NEW 35 Ill. ADM. CODE 217, SUBPART U,	)	R01-17
NOx CONTROL AND TRADING PROGRAM FOR	)	(Rulemaking-
SPECIFIED Nox GENERATING UNITS, SUBPART X,	)	Air)
VOLUNTARY Nox EMISSIONS REDUCTION PROGRAM,	)	P.C. #3
AND AMENDMENTS TO 35 Ill. ADM CODE 211	)	

NOTICE OF FILING

TO: Ms. Dorothy M. Gunn
Clerk of the Board
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601
(VIA Certified U.S. MAIL)

Bobb A. Beauchamp, Esq
Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601
(VIA FAX)

PLEASE TAKE NOTICE that I have filed today with the Office of the Illinois Pollution Control Board comments on behalf of the University of Illinois, a copy of which is herewith served upon you.

Respectfully submitted,

OFFICE FOR PLANNING AND BUDGETING
UNIVERSITY OF ILLINOIS

By: Lyle D. Wachtel
Lyle D. Wachtel, P.E.

Dated: January 8, 2001

Lyle D. Wachtel, P.E.
Director, Office for Planning and Budgeting
338 Henry Administration Building
506 South Wright Street
Urbana, IL 61801
(217) 333-0375

The University, in support of seeking relief to the continuous emissions requirements of the current NOx SIP Call, offers the following comments to the Board for their thoughtful consideration.

In September 1961, The Babcock and Wilcox Company (B & W), a manufacturer of stoker boilers, responded to a bid solicited by the Board of Trustees of the University of Illinois. This proposal was to furnish a 150 Mlb/Hr coal fired steam boiler for the Urbana campus of the University of Illinois. B & W also provided as an alternate bid, a 200 Mlb/Hr coal fired steam boiler. These ratings were based on continuous operation.

The University selected the larger alternate and the boiler was installed at the Abbott power plant in 1962. As part of the installation, an owner's manual that documented the boilers specifications was provided. Four pages of this manual have been copied and are attached for reference as Exhibit A.

On page two of Exhibit A, two ratings are referenced for the boiler operation: a two hour maximum peak rating of 220 Mlb/Hr and a continuous rating of 200 Mlb/Hr. Using the continuous rating, the rating that the boiler was designed to operate over the long term, the specifications indicate that a fuel quantity of 21,200 lbs of coal/hour (Exhibit A, page 3, line 9) was the maximum rate of fuel input. Furthermore, based on the coal available from a mine in Vermillion County, Illinois, with a heat content of 11,500 BTU/lb (Exhibit A, page 4, line 50), the total heat input of the boiler was designed for 243.8 million BTU/Hr (21,200 lb/Hr X 11,500 BTU/lb). This heat input is less than

the 250 million BTU required for inventory classification under the current NOx SIP Call.

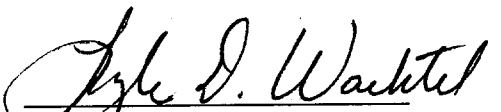
The Title V permit submitted to the Agency by the University was in error by including the peak rating of the boiler as a nameplate operation and not the continuous rating as provided in the specifications. If the Agency desires, the University will submit corrected documents reflecting this oversight to better reflect the true continuous heat input of boiler #7.

Note that the Vermillion County mine, that produced coal specified for boiler #7 in 1962, has since closed. The coal available for use at Abbott for the past ten years has been limited to two suppliers based in Illinois. Attached for reference as Exhibit B (existing coal supplier) and Exhibit C (previous coal supplier) are the coal analyses of the two suppliers competing for the University business. In both cases, the heat content is less than 11,500 BTU/lb (Exhibit B 10,597 BTU/lb – Exhibit C 11,074 BTU/lb) originally specified by the boiler manufacturer. Consequently, based on the boiler input rate and because of the boiler grate size and fire box dimensions, this lower quality coal will never provide enough heat input to exceed the 250 million BTU/Hr threshold provided under the current NOx SIP Call.

It is unfortunate the University did not correct this oversight prior to the NOx SIP Call, but it is the expressed desire of the University to have this rating corrected in the Agency's inventory prior to finalization of this rule. The University believes that as long

as the NOx budget of the State is not affected, then this adjustment could be possible pursuant to the precedent set and described under the rule revision found in the Federal Register (Dec. 21, 2000, Volume 65, Number 246). The Board has heard testimony of another entity requesting additions to the inventory and this adjustment provides an opportunity to accommodate this entity.

Respectfully submitted,
UNIVERSITY OF ILLINOIS

By: 
Lyle D. Wachtel, P.E.
Director
Office for Planning and Budgeting

Dated: January 8, 2001

Lyle D. Wachtel, P.E.
Director, Office for Planning and Budgeting
338 Henry Administration Building
506 South Wright Street
Urbana, IL 61801
(217) 333-0375

VOLUME 1 OF 2

B7

INSTRUCTIONS

B&R - 7

EXHIBIT A

for the

CARE AND OPERATION

of

BABCOCK & WILCOX EQUIPMENT

FURNISHED ON CONTRACT

113-0104

S-10104

for

UNIVERSITY OF ILLINOIS

ABBOTT POWER PLANT

CHAMPAIGN, ILLINOIS

THE BABCOCK & WILCOX COMPANY
161 EAST 42nd STREET, NEW YORK 17, N.Y.

B

#7

DESCRIPTION OF UNIT

MAXIMUM CONTINUOUS HIGH PRESSURE STEAM OUTPUT

LB/HR:	200,000
2 HR. PEAK	220,000

STEAM CONDITIONS AT SUPERHEATER OUTLET

TEMPERATURE, F:	760
PRESSURE, PSI:	875

DESIGN PRESSURE, PSI.

BOILER:	975
ECONOMIZER:	1,050

HEATING SURFACE, SQ. FT.

BOILER:	14,114
FURNACE:	2,160
SUPERHEATER:	3,671
ECONOMIZER:	6,600

APPROXIMATE WATER HOLDING CAPACITY
IN POUNDS PER UNIT

NORMAL:	98,400
HYDROSTATIC:	124,200

STEAM, ACTUAL, M LB/HR		200	220			
TYPE OF FUEL		Coal	Coal			
RATE AND LOAD DURATION, HR		Cont.	2 Hr. Pk.			
FURNACE LIBERATION, KB/CU FT-HR						
EXCESS AIR LEAVING BOILER %		25	25			
BURNERS, NO. IN USE PER FURNACE						
QUANTITIES M LB/HR	CONTINUOUS BLOWDOWN	0	0			
	FUEL	21.2				
	FLUE GAS LEAVING BOILER	243.5				
	AIR LEAVING A H **	189.5				
PRESSURES LB/SQ IN	STEAM AT S H OUTLET	875	875			
	MIN OPER IN BOILER DRUM	907				
	DROP, DRUM TO S H OUTLET	32				
	DROP THRU ECON	55				
TEMPERATURES F	SUPERHEATED STEAM	760	762			
	FLUE GAS LEAVING BLR	681				
	FLUE GAS LEAVING ECON	489 r				
	FLUE GAS LEAVING A H	350				
	WATER ENTERING ECON	380	388			
	WATER ENTERING BLR	458				
	AIR ENTERING A H	100	100			
	AIR LEAVING A H	293				
DRAFT LOSSES IN. OF WATER	FURNACE	0.1				
	BOILER AND SUPERHEATER	0.8				
	ECONOMIZER	1.6				
	AIR HEATER	2.0				
	DUST COLLECTOR	2.5				
	FLUES	1.2				
	NET DRAFT LOSS	8.2	9.9			
AIR RESIS. IN. OF WATER	STOKER AND WINDBOX	1.7				
	DUCTS	1.5				
	AIR HEATER & STM. A.H.	0.7				
	NET RESISTANCE	3.9	4.7			
HEAT LOSES %	DRY GAS	5.4				
	H_2 AND H_2O IN FUEL	5.4				
	MOISTURE IN AIR	0.2				
	UNBURNED COMBUSTIBLE *	3.5				
	RADIATION	0.6				
	UNACCOUNTED FOR	1.5				
	TOTAL HEAT LOSS	16.8				
EFFICIENCY OF UNIT, %		83.2	82.6			

* Based on cinder returns from boiler hoppers and cinder trap only.

** Based on 85% of furnace air through air heater.

MAX ALLOWABLE BOILER CONC, PPM		1500				
SOLIDS IN STEAM PPM		1				
PULVERIZER	NO. IN USE PER FURNACE					
	AIR TEMP TO PULV, F					
	TOTAL POWER, KW HR/TON					
	% THRU NO. 200 U.S. SIEVE					
	% THRU NO. 50 U.S. SIEVE					

EXPECTED PERFORMANCE

GC 1525

SOURCE	SAMPLES				
	ANALYSES	Customers Specifications			
SOLID	KIND				
	A.S.T.M. CLASS				
	A.S.T.M. GROUP				
	SOURCE MINE				
	SOURCE SEAM				
	SOURCE DISTRICT				
	SOURCE COUNTY	Vermilion			
	SOURCE STATE	Illinois			
	SIZE	1 1/4			
	GRINDABILITY				
	SURFACE MOIST., %				
	PROX ANAL % MOISTURE	12.6			
	PROX ANAL % VOL MATTER	40.5			
	PROX ANAL % FIXED CARBON	38.3			
	PROX ANAL % ASH	8.6			
	PROX ANAL % TOTAL	100.0			
	ASH TEMP F	–	REDUCING	OXIDIZING	
	ASH TEMP F INITIAL DEFORMATION				
	ASH TEMP F SOFTENING		2020.		
	ASH TEMP F LIQUID				
LIQUID	KIND				
	GRAVITY, DEG. A.P.I.				
GASEOUS	KIND				
	SP GR REL TO AIR				
ULTIMATE ANALYSES	FUEL	Coal			
	% BY	Wt.			
	ASH	8.6			
	S	2.5			
	H_2	4.53			
	C	63.00			
	CH_4				
	C_2H_4				
	C_2H_6				
	CO				
	CO_2				
	SO_2				
	H_2O	12.6			
	N_2	1.0			
	O_2	7.45			
	TOTAL	100.00			
	BTU/LB	11,500			
	BTU/CU FT AT 60 F, 30 IN. HG				

FUEL ANALYSIS

EXHIBIT B

STANDARD LABORATORIES, INC.
8451 River King Dr. (Shipping)
Freeburg , IL 62243-0039

Lab No. 2000-00482-001

Date Rec'd. 4/04/2000

Date Sampled 3/31/2000 to 3/31/2000

Sampled By CLIENT

Date: 04/21/2000 08:48:25

Sample ID: 20000048201

P.O.# 652-8801

TURRIS COAL COMPANY
P.O. BOX 21
ELKHART, IL 62634

ATTN: TIM LAZOEN

Remark: TURRIS STOKER COAL 03/31/2000

PROXIMATE ANALYSIS		As Received	Dry Basis
% Moisture	D3302	16.68	*****
% Ash	D3174	9.01	10.81
% Volatile	D3175	34.03	40.84
% Fixed Carbon	D3172	40.29	48.35
BTU	D1989	10597	12719
MAF-BTU	D1989	14261	
Total Sulfur	D4239	3.20	3.84

SULFUR FORMS			
% Pyritic	D2492	1.30	1.56
% Sulfate	D2492	0.02	0.02
% Organic	D2492	1.88	2.26
% Total Sulfur	D4239	3.20	3.84

WATER SOLUBLE			
% Na2O	ASME1974	0.132	0.158
% K2O	ASME1974	0.003	0.003
% Chlorine	ASME1974	*****	*****

Alkalies as Na2O	ASME197	0.22	0.26

FUSION TEMP. OF ASH D1857	Reducing	Oxidizing
I.D.	1955	2340
H=W	1970	2375
H=1/2W	2000	2440
Fluid	2205	2610

GRINDABILITY INDEX D409 59 @ 2.15 % Moist.
GRIND INDEX UNCONDITIONED ***** @ ***** % Moist.

FREE SWELLING INDEX D720 2.5

Apparent Specific Gravity of Coal ModIC7113 *****

Equilibrium Moisture D1412 13.11

ULTIMATE ANALYSIS		Weight % As Received	Dry Basis
% Moisture	D3302	16.68	*****
% Carbon	D5373	58.47	70.18
% Hydrogen	D5373	3.98	4.78
% Nitrogen	D5373	1.05	1.26
% Chlorine	D2361	0.21	0.25
% Sulfur	D4239	3.20	3.84
% Ash	D3174	9.01	10.81
% Oxygen (Diff.)	D3176	7.40	8.88

MINERAL ANALYSIS D6349	% Ignited Basis
Phos. Pentoxide, P2O5	0.06
Silica, SiO2	52.42
Ferric Oxide, Fe2O3	21.40
Alumina, Al2O3	13.78
Titania, TiO2	0.74
Lime, CaO	3.62
Magnesia, MgO	0.55
Sulfur Trioxide, SO3	3.76
Potassium Oxide, K2O	1.34
Sodium Oxide, Na2O	1.50
Barium Oxide, BaO	0.03
Strontium Oxide, SrO	0.03
Manganese Dioxide, MnO2	0.06
Undetermined	0.71
Type of Ash ASME1974	Bituminous
Silica Value ASME1974	67.21
T250 Deg B&W	2385
Base/Acid Ratio ASME1974	0.42
lb Ash/mm BTU	*****
lb SO2/mm BTU	6.03
Fouling Index ASME1974	0.63
Slagging Index ASME1974	1.61

Respectfully Submitted, Al Meinert

STANDARD LABORATORIES, INC.
8451 River King Dr. (Shipping)
Freeburg , IL 62243-0039

Lab No. 2000-00482-001

Date Rec'd. 4/04/2000

Date Sampled 3/31/2000 to 3/31/2000

Sampled By CLIENT

Date: 04/18/2000 13:08:16

Sample ID: 20000048201

TURRIS COAL COMPANY
P.O. BOX 21
ELKHART, IL 62634

P.O.# 652-8801

ATTN: TIM LAZOEN

Remark: TURRIS STOKER COAL 03/31/2000

TRACE ELEMENT		DRY BASIS	RESULTS	METHOD
ANTIMONY	SB	PPM	0.48	ASTM PS52 - GFAA
ARSENIC	AS	PPM	1.6	ASTM PS52 - ICP-AES
BARIUM	BA	PPM	23	ASTM PS52 - ICP-AES
BERYLLIUM	BE	PPM	2.8	ASTM PS52 - ICP-AES
BORON	B	PPM	NA	HCL BOMB - ICP-AES
BROMINE	BR	PPM	NA	BOMB-ISE
CADMIUM	CD	PPM	0.17	ASTM PS52 - GFAA
CHLORINE	CL	PPM	NA	ASTM D2361-95 MOD
CHROMIUM	CR	PPM	11	ASTM PS52 - ICP-AES
COBALT	CO	PPM	2.4	ASTM PS52 - ICP-AES
COPPER	CU	PPM	5	ASTM PS52 - ICP-AES
FLUORINE	F	PPM	NA	ASTM D3761 - ISE
IRON	FE	PPM	NA	ASTM PS52 - ICP-AES
LEAD	PB	PPM	2	ASTM PS52 - ICP-AES
LITHIUM	LI	PPM	4.2	ASTM PS52 - ICP-AES
MAGNESIUM	MG	PPM	NA	ASTM PS52 - ICP-AES
MANGANESE	MN	PPM	37	ASTM PS52 - ICP-AES
MERCURY	HG	PPM	0.07	ASTM D3684-94 - FICVAA
MOLYBDENUM	MO	PPM	3.2	ASTM PS52 - ICP-AES
NICKEL	NI	PPM	7	ASTM PS52 - ICP-AES
SELENIUM	SE	PPM	1.6	ASTM D3684 - GFAA
SILVER	AG	PPM	0.06	ASTM PS52 - ICP-AES
STRONTIUM	SR	PPM	23	ASTM PS52 - ICP-AES
THALLIUM	TL	PPM	NA	ASTM PS52 - GFAA
TIN	SN	PPM	0.4	ASTM PS52 - ICP-AES
URANIUM	U	PPM	NA	ASTM PS52 - ICP-AES
VANADIUM	V	PPM	19	ASTM PS52 - ICP-AES
ZINC	ZN	PPM	13	ASTM PS52 - ICP-AES
ZIRCONIUM	ZR	PPM	12.5	ASTM PS52 - ICP-AES

NA = NOT ANALYZED

Respectfully Submitted, Tim Lutchison

EXHIBIT C

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300
SINCE 1908
Member of the SGS Group (Société Générale de Surveillance)

PLEASE ADDRESS ALL CORRESPONDENCE
P.O. BOX 752, HENDERSON, KY 42
TELEPHONE: (502) 827-1
FAX: (502) 826-0

August 16, 1995

FREEMAN COAL SALES, INC.
1999 WABASH AVENUE
SUITE 200-C
SPRINGFIELD IL 62704
ATTN: CHUCK SMITH

Sample identification by
Freeman Coal Sales

Crown III Mine
Stoker
Semi-Annual
5 Day Composite
1st Half 1995
P. O. #F 910346
Release #83-05184

Kind of sample reported to us: Coal

Sample taken at: Crown III Mine

Sample taken by: Freeman Coal Sales

Date sampled: ------

Date received: July 31, 1995

Post-it® Fax Note 7671	Date 8/9/95	# of pages ▶ 2
To Dan Darcy	From Lisa Duffey	
Co./Dept. U of J	Co. Freeman Coal Sales	
Phone #	Phone #	
Fax #	Fax #	

Analysis Report

PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	13.86	xxxxx
% Ash	8.42	9.77
% Volatile	36.82	42.75
% Fixed Carbon	40.90	47.48
	100.00	100.00
Btu/lb	11074	12856
% Sulfur	3.43	3.98
MAF Btu		14248
Alk. as Sodium Oxide	0.27	0.31

ULTIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	13.86	xxxxx
% Carbon	60.63	70.38
% Hydrogen	4.42	5.13
% Nitrogen	0.99	1.15
% Sulfur	3.43	3.98
% Ash	8.42	9.77
% Oxygen(diff)	8.25	9.59
	100.00	100.00
% Chlorine	0.09	0.10

FORMS OF SULFUR

% Pyritic	0.96	1.11
% Sulfate	0.01	0.01
% Organic(diff)	2.46	2.86

WATER SOLUBLE ALK.

% Sodium oxide	0.093	0.108
% Potassium oxide	0.003	0.004

% EQUILIBRIUM MOISTURE = 13.8
FREE SWELLING INDEX = 3.0

FUSION TEMPERATURE OF ASH, (°F)

	Reducing	Oxidizing
Initial Deformation (IT)	1990	2330
Softening (ST)	2080	2390
→ Hemispherical (HT)	2140	2420
Fluid (FT)	2280	2490

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO. KB

Manager, Henderson Laboratory

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300
SINCE 1896
Member of the SGS Group (Société Générale de Surveillance)

August 16, 1995

PLEASE ADDRESS ALL CORRESPONDENCE T(
P.O. BOX 752, HENDERSON, KY 424
TELEPHONE: (502) 827-11
FAX: (502) 826-07

FREEMAN COAL SALES, INC.
1999 WABASH AVENUE
SUITE 200-C
SPRINGFIELD IL 62704
ATTN: CHUCK SMITH

Sample identification by
Freeman Coal Sales

Crown III Mine
Stoker
Semi-Annual
5 Day Composite
1st Half 1995
P. O. #F 910346
Release #83-05184

Kind of sample reported to us: Coal

Sample taken at: Crown III Mine

Sample taken by: Freeman Coal Sales

Date sampled: ------

Date received: July 31, 1995

Analysis Report No. 63-88548

ANALYSIS OF ASH	WEIGHT %, IGNITED BASIS
Silicon dioxide	52.80
Aluminum oxide	18.02
Titanium dioxide	0.88
Iron oxide	17.00
Calcium oxide	2.76
Magnesium oxide	0.78
Potassium oxide	2.27
Sodium oxide	1.72
Sulfur trioxide	3.01
Phosphorus pentoxide	0.16
Strontium oxide	0.03
Barium oxide	0.08
Manganese oxide	0.05
Undetermined	0.44
	100.00

Silica Value = 71.99
Base:Acid Ratio = 0.34
Tsso Temperature = 2489 °F

Type of Ash = BITUMINOUS
Fouling Index = 0.58
Slagging Index = 1.35

Respectfully submitted.
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Henderson Laboratory