BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

IN THE MATTER OF:	)	
	)	
NATURAL GAS-FIRED, PEAK-LOAD	)	PCB No. R01-10
ELECTRICAL POWER GENERATING	)	
FACILITIES (PEAKER PLANTS)	)	

NOTICE

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601

Amy L. Jackson, Hearing Officer
Illinois Pollution Control Board
600 South Second Street
Suite 402
Springfield, IL 62704

PLEASE TAKE NOTICE that I have today filed with the office of the Clerk of the Pollution Control Board ADDITIONAL COMMENTS, copies of which are herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

_____

Scott O. Phillips
Deputy Counsel
Division of Legal Counsel
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
217/782-9143 (TDD)
Dated: November 6, 2000

BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

IN THE MATTER OF:	)	
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NATURAL GAS-FIRED, PEAK-LOAD	)	PCB No. R01-10
ELECTRICAL POWER GENERATING	)	
FACILITIES (PEAKER PLANTS)	)	

ADDITIONAL COMMENTS

NOW COMES the Illinois Environmental Protection Agency ("Agency" or "Illinois EPA"), by one of its attorneys, Scott O. Phillips, Deputy Counsel, and hereby files additional comments as follows:

1. In the Hearing Officer's order dated September 25, 2000, the Hearing Officer asked the Illinois EPA a series of questions. The Illinois EPA responded to those questions in its AGENCY RESPONSE TO QUESTIONS FROM HEARING OFFICER ORDER DATED SEPTEMBER 25, 2000, filed on October 4, 2000. Also, the Illinois EPA responded to these questions at the Pollution Control Board's ("Board's") public hearing on October 6, 2000. In its written response and at hearing, the Illinois EPA deferred responding to Questions 18, 19, and 20 contained in the Hearing Officer's order so that the Illinois EPA could provide the Board with the most current information possible on the permit-related statistics requested by the Board.

   Comment: Attached Exhibit 1 is a summary listing of natural gas-fired turbine electrical power plant projects since 1998, updated as of November 2, 2000. This summary is in chronological order based upon the date that an application for the plant was first received (or the date of expiration or withdrawal).

Also attached is Exhibit 2 which contains a printout of a spreadsheet listing in more detail these permit-related statistics requested by the Board. Attached Exhibit 3 is an electronic copy of this spreadsheet in Microsoft Excel format. Attached Exhibit 4 contains an explanation of certain columns within this spreadsheet. Note that in spreadsheet cells where no information is provided, such as emissions limitation information, this typically means that the information is not yet available because the construction permit application is still pending.

2. At the Board's public hearing held on October 6, 2000, Board Member Kezelis inquired as to the use of actual, pound-per-hour emissions data used modeling.

Comment: For modeling purposes, the Illinois EPA requires that applicants for new peakers use the maximum permitted hourly emission rate to address the NAAQS for each criteria pollutant having an NAAQS expressed as a "short-term" average. For PM-10 (24-hour NAAQS), SO_2 (24-hour and 3-hour NAAQS), and CO (1-hour and 8-hour NAAQS) the maximum hourly emission rate is assumed for an operating rate of 24 hours per day. The Illinois EPA also requires applicants to perform evaluations of impacts during reduced-load operation and startup in order to assure that the emissions for these configurations will not threaten air quality. For NO_2 (annual NAAQS), the emissions (or operating rates) permitted on an annual basis are assumed in the modeling.

"Actual" emissions are not used since the source is modeled prior to construction and therefore actual emission data is not available. However, after the source is built, in order for the source to remain in compliance with its permit conditions, the actual emissions cannot exceed the permitted emissions that were used for modeling the source.

3. At the Board's public hearing held on October 6, 2000, the Board inquired as to how localized impacts are assessed, and what methodologies are employed to make the modeling conservative.

Comment: There are several aspects of the modeling process that ensure the conservatism of the results. First, as mentioned previously, the modeling incorporates emission rates that reflect maximum operating rates at maximum permitted hourly emissions on a continuous basis (i.e., 24 hours per days). This assumption is applied not only for the proposed source but for all background sources included in the modeling as well. Second, the maximum modeled impacts are added to a conservatively estimated background concentration determined from nearby monitoring stations (typically the highest monitored values for the worst of three years of data are used to estimate background concentrations). Third, concentrations are calculated by the model using five years of hourly meteorological observations to determine worst-case conditions. In other words, the worst-case meteorological

conditions are assumed to occur at the same time as the highest background concentrations are observed and at the same time that the new source and all other sources are operating at maximum load conditions. Finally, concentrations are evaluated at all locations off plant property, including but not limited to the locations of nearby schools and residences. Typically the highest concentrations reported in modeling studies are predicted to occur at or immediately downwind of plant fence lines, in areas with little or no population exposure.

4. At the Board's public hearing held on October 6, 2000, the Board requested an explanation of the term "small, if not insignificant" used by the Illinois EPA in describing air quality impacts.

Comment: The Illinois EPA typically uses U.S. EPA's definition of "significant air quality impact" (from PSD guidance) in describing air quality impacts. The established significant impact thresholds are expressed as micrograms per cubic meter (ug/m^3) and are usually in the range of 1% to 5% of an applicable NAAQS (*see* Illinois EPA Group Exhibit 2, Exhibit 10, Table 2). For example, the significant impact threshold for NOx is 1 ug/m^3 while the NAAQS is 100 ug/m^3 for an annual average. The significance thresholds are used as a trigger in the PSD air quality analysis process to require more detailed analyses and are not intended as "not to be exceeded" limitations. As presented by the Illinois EPA, the modeling analyses have

shown that most peakers will not cause significant air quality impacts (i.e., their maximum impacts will not exceed the PSD significant impact thresholds). In a few cases, impacts have been shown to be "significant" but were still only a small percentage of the applicable NAAQS, thus the reference to "small" impacts in the Illinois EPA's testimony.

5. At the Board's public hearing held on October 6, 2000, the Board requested data from the continuous emissions monitoring system (CEMS) at the Elwood facility located in Will County.

Comment: Exhibit 5 contains the CEMS data from the Elwood facility. Note that:

a. The data provided in Exhibit 5 is from the second quarter of 2000. Validated third quarter data is not yet available.
b. Each bundle of information contains the same types of data, one bundle for the CEMS for each of the four units located at Elwood (each unit has a separate CEMS). The CEMS at Elwood measure only NOx emissions. The monitors are operated in accordance with the Acid Rain regulations.
c. The data included on the bar charts each type of data recorded by the CEMS for each day the unit operated. As the units did not operate every day during the quarter, only those days on which they did operate show recorded data. These charts provide the megawattage ("Gross Load"), the NOx rate in

pounds/mmBtu, the total pounds of NOx emitted ("NOx Mass"), and the unadjusted NOx concentrations in parts per million.

d. A table is also provided that includes numerical data for each unit's daily operation. This table provides the total number of hours per day that the unit operated, the total heat input per day, the average NOx rate per day, the total number of tons of NOx emitted per day, and the number of tons of carbon dioxide emitted (a calculated number based upon oxygen content of the exhaust),[1] and the total gross load in megawatts.

e. The second group of tables provides hourly data for the operating hours, the total heat input for that hour, the NOx rate for that hour, the number of pounds of NOx emitted during that hour, the tons of CO_2 emitted during that hour (a calculation) and the gross load during that hour. The first day of operating in April for Unit 4 was on the 4th. The facility operated for half an hour or less during the hour between 7:00 and 8:00 a.m. The heat input during this time was a little over 544 mmBtu. Its NOx rate during that half hour was 0.112 ppm. It emitted about 60 pounds of NOx. It produced 40 megawatts of electricity. The F Factor shown is a constant value specific to natural gas (the fuel used at Elwood) that is used in the calculation of emission rates. During the rest of the time on April 4 until the hour between 10:00 and 11:00 p.m.,

the heat input steadied at around 1,750 lb/mmBtu/hr until shutdown. Likewise, the NOx rate, the number of pounds of NOx emitted, and the gross load all steadied until shutdown. Note that start-up and shutdown each took less than an hour. For purposes of comparison, the NOx emission limits applying to the turbines during normal operation are 0.061 pound/mmBtu and 108 pounds per hour, and the units are rated at 170 MW output a maximum firing rate of 1763 mmBtu/hr (Low Heating Value) at 49° F.

f. The final piece of information here is a print-out of U.S. EPA's "Emissions Tracking System," cumulative data through the second quarter of 2000. As you can see, the Elwood Energy facility is the 8th facility listed on this page. This data identifies the total operating hours for the year to the end of the 2nd quarter per unit, the cumulative annual heat input, the cumulative annual emissions (the values provided are the default values for natural gas), the average annual NOx emission rate in lb/mmBtu, the cumulative mass emissions of CO_2, and the percentage of time that the monitors were operating (the Elwood monitors operated well within the expectations for CEMS under 40 CFR Part 75).

[1] Emissions of carbon dioxide (CO_2) are also identified on this exhibit. Electrical power plants in general are major contributors to greenhouse gas emissions of CO_2, and data on emissions of CO_2 is collected by the U.S. EPA's Acid Rain Program as related to global warming.

6. During this proceeding, witnesses expressed concerns regarding the amount of emissions that may occur from natural gas-fired peaking power plants during start-up.

Comment: General information and background on emissions from a turbine during startup is contained in U.S. EPA's Alternative Control Technology document (*see* Illinois EPA Group Exhibit 2, Exhibit 4). In Section 5.2 of this document, U.S. EPA provides a description of how low-NOx combustors, with which new peaking turbines are equipped, operate and how emissions of pollutants vary during startup. This information generally describes the two different phenomena that are occurring during the startup of the turbine. One phenomenon occurs for pollutants that are incomplete combustion products, i.e., CO and VOM, while another is taking place for NOx, which is a byproduct of high-temperature combustion. Upon startup of the combustors, the concentration of NOx begins at an intermediate level associated with "natural" combustion. The NOx concentration gradually increases as the rate of firing is increased and combustion conditions improve to a level at which the combustion process is sufficiently stable to begin low-NOx operation. At this point, the concentration of NOx drops rapidly, as pre-mixing of fuel and air is initiated or water begins to be injected into the combustors. The concentration of NOx then remains relatively stable as the operation of the turbine increases to full load. In contrast, during startup, the concentrations of incomplete combustion products start at very high levels, but then rapidly decrease as the conditions for combustion

(temperature and turbulence) stabilize as fuel firing rate is increased. The concentrations gradually decrease further to normal levels as the combustion conditions in the combustors continue to improve, with only a brief interruption, as the concentrations temporarily jump when the combustors are shifted into low-NOx operation.

In applying this theory to a particular turbine to develop a quantitative determination of emissions during startup, one must consider a number of elements. These include the variation of fuel firing rate and airflow during the startup, the overall duration of the startup, the degree to which NOx is reduced by low-NOx operation of the combustor, and the consequences of this degree of NOx reduction on combustion conditions and emissions of incomplete combustion products. For purposes of comparing turbines, it is also necessary to consider the safety factors included in projections of emissions provided by equipment manufacturers.

The information provided in permit applications to date suggests that startup does not have a significant effect on the overall NOx emissions of a turbine, when emissions are evaluated in terms of pounds per hour. Although the concentrations of NOx are somewhat higher during startup, this is balanced out by the reduced level of operation during startup. Thus, NOx emissions during an hour with a startup are similar, or only slightly higher than those during an hour of normal operation. This is confirmed by NOx emission data collected by the NOx CEMS at the Elwood Energy facility. In

particular, the CEMS data show a NOx emission rate in lb/mmBTU during a startup that is about twice the normal rate.[2] The CEMS data shows that the peaking turbines presently at Elwood Energy normally operate at about 0.05 to 0.055 lb NOx/mmBtu. (The permit limit is 0.061 lb/mmBtu, based on an exhaust concentration of 15 ppm NOx.) During startup, NOx emissions are in the range of 0.1 to 0.115 lb/mmBtu. Of course, the average firing rate during a startup is about half of the turbines capacity. This indicates that startup of these peaking turbines does not significantly change the hourly NOx emissions of these turbines.

A different conclusion is reached for the new model of turbines and combustors that are being added to Elwood. During normal operation, these new units are required to comply with a lower emission rate than the existing units, i.e., 0.037 lb NOx/mmBtu. (This limit is equivalent to 9 ppm NOx.) Assuming that the emissions of NOx from these turbines during startup itself are unchanged from the startup emissions for the older turbines, the emissions during an hour when one of these new turbines startup could be about 25 percent higher than the emissions during a normal hour of operation. If the turbines typically operate five hours at a stretch, however, the consideration of startup would still only increase overall NOx emissions from the turbine by about five percent. Nevertheless, as combustors become more effective in

[2] During the September 14, 2000 site visit to Peoples Energy's Elwood facility, representatives of the facility stated that start-up for its natural gas-fired peaker turbines takes about 20 minutes.

lowering NOx emissions during normal operations, the startup emissions will likely become higher in comparison.

7. During this proceeding, a witness suggested that the NOx waiver applies to the Metro-East nonattainment area as well as the Chicago nonattainment area.

Comment: U.S. EPA never granted Illinois' request for a NOx waiver for Metro-East ozone nonattainment area, and nonattainment New Source Review for VOM and NOx applies to the new electric generating units (EGUs) locating in that area. The major source threshold for purposes of New Source Review is 100 tons per year in the Metro-East nonattainment area, as opposed to 25 tons per year in the Chicago ozone nonattainment area, because Metro-East is a moderate ozone nonattainment area.

8. During this proceeding, a witness referred to the findings and recommendations of the Ozone Transport Assessment Group ("OTAG"), referring to regions and subregions as used in the context of OTAG. This witness suggested that the regions and subregions of OTAG might be comprised of Illinois or even the Lake Michigan nonattainment area.

Comment: The OTAG region was comprised of 37 jurisdictions from North Dakota to Texas and east to the Atlantic Coast. At one point, OTAG modeled the effect on

regional ozone levels of control strategies applied in subregions. Each of these subregions was made up of a number of states. The regions and subregions did not refer to single nonattainment areas or portions of nonattainment areas or even individual states. It is important to keep in mind that OTAG's major finding was that NOx is a regional problem and that regional reductions of NOx, meaning reductions in the NOx SIP call area, are necessary to generally reduce transported ozone and ozone precursors. The findings of OTAG addressed the benefits of reducing NOx as a regional, transport problem rather than as a local problem within nonattainment areas such as the Chicago ozone nonattainment area.

9. During this proceeding, a witness suggested that the OTAG process refuted the validity of NOx disbenefit.

Comment: OTAG recognized NOx disbenefit as a local issue. OTAG also recognized that local control measures, meaning those control strategies unique to a given state or nonattainment area, might be necessary in addition to the regional NOx reductions it recommended to U.S. EPA. These local measures would likely be strategies to reduce emissions of VOCs, but they might be measures to reduce NOx emissions in addition to or other than those identified to U.S. EPA; however, OTAG made no findings or recommendations with regard to the benefits of local NOx reductions.

10. Several witnesses suggested that the NOx SIP call supported the need for NOx reductions within the Chicago ozone nonattainment area as part of the State's attainment demonstration.

Comment: The purpose of the NOx SIP call is to address ozone transport. Consistent with OTAG's findings, U.S. EPA issued the NOx SIP call to require reductions in regional NOx in order to reduce the transport of ozone and ozone precursors. These regional reductions of NOx are intended to enable Illinois and the other Lake Michigan states to demonstrate attainment with the 1-hour ozone standard in the Lake Michigan area, in conjunction with any local control measures that might be necessary or appropriate. Without regional reductions of NOx, Illinois would have to implement extreme levels of reductions of VOCs in the nonattainment areas. If the regional reductions in NOx do not actually provide attainment as our modeling predicts or if there is significant importation of NOx allowances under the national trading program such that NOx emissions in the State continue to interfere with attainment, then the Illinois EPA will have to impose additional emissions limitations as appropriate. In any event, it is important to keep in mind that the NOx SIP call addresses NOx as a regional issue involving a large sector of the eastern portion of the United States.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Scott O. Phillips
Deputy Counsel
Division of Legal Counsel
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
217/782-9143 (TDD)

Dated: November 6, 2000

CERTIFICATE OF SERVICE

I, the undersigned attorney at law, hereby certify that on November 6, 2000, I served true and correct copies of ADDITIONAL COMMENTS, submitted on recycled paper, by placing true and correct copies thereof in properly sealed and addressed envelopes and by sending said sealed envelopes via overnight express delivery, upon the following named persons:

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street
Suite 11-500
Chicago, IL 60601

Amy L. Jackson, Hearing Officer
Illinois Pollution Control Board
600 South Second Street
Suite 402
Springfield, IL 62704

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Scott O. Phillips
Deputy Counsel
Division of Legal Counsel
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
217/782-9143 (TDD)

EXHIBIT 1

NATURAL GAS FIRED TURBINE ELECTRIC POWER PLANT PROJECTS

Status as of November 2, 2000

PROJECTS AT NEW PLANT SITES

Project	ID No./Application No. Rec'd/Issued Dates	Type of Turbine (Rated Power – MW e)		Backup Fuel	Status
		Simple Cycle (Peaking)	Comb. Cycle (Base Load)		
LS Power LS Power – Nelson Project Nelson, Lee County	103814AAC 98080039 R 8/11/98 I 1/28/00	Units may first be operated as peaking units	4 @ 250 w/SCR	oil	Permitted (being built)
LS Power Kendall Energy Minooka, Kendall County	093808AAD 98110017 R 11/5/98 I 6/2/99	Units may first be operated as peaking units	4 @ 250 w/SCR	–	Permitted
Illinois Power Tilton Plant Tilton, Vermilion County	183090AAE 98110018 R 11/5/98 I 1/99	4 @ 44 w/WI		–	Permitted (operating)
Dynegy Rocky Road Power East Dundee, Kane County	089425AAC 98120016 R 12/4/98 I 2/4/99	2 @ 121 w/DLN 1 @ 35 w/WI		–	Permitted (operating)
	99050098 R 5/99 I 10/27/99	1 @ 121 w/DLN		–	Permitted (operating)
Soyland Power Soyland - Alsey Plant Alsey, Scott County	171851AAA 98120050 R 12/6/98 I 3/24/99	2 @ 30 2 @ 22.5 w/WI		oil	Permitted (operating)
	99120026 R 12/9/99 I 7/7/00	1 @ 25		oil	Permitted
Enron Des Plaines Green Land Dev. Manhattan, Will County	197811AAH 99020021 R 2/3/99 I 9/28/99	8 @ 83 w/DLN		–	Permitted (operating)
	99020021 R 4/3/00	1 @ 167		–	Final Rev. (major mod.)
Enron Kendall New Century Dev. Plano/Yorkville, Kendall Cty	093801AAN 99020032 R 2/3/99 I 1/14/00	8 @ 83 w/DLN		–	Permitted
Union Electric Kinmundy Plant Kinmundy, Marion County	121803AAA 99020027 R 2/4/99 I 6/28/99	2 @ 135 w/DLN		oil	Permitted (being built)
Union Electric Gibson City Plant Gibson City, Ford County	053803AAL 99020071 R 2/19/99 I 6/16/99	2 @ 135 w/DLN		oil	Permitted (operating)
Mid America Cordova Energy Cordova, Rock Island County	161807AAN 99020097 R 2/26/99 I 9/2/99		2 @ 250 w/SCR	–	Permitted (being built)
Reliant Energy McHenry County Plant Woodstock, McHenry County	111805AAP 99050089 R 5/26/99 1 12/9/99	3 @ 170 w/DLN		–	Permitted
Spectrum Energy Central Illinois Power St. Elmo, Fayette County	051808AAK 99060052 R 6/16/99 I 9/8/99	1 @ 45		–	Permitted (being built)
Duke Energy Lee Generating Station South Dixon, Lee County	103817AAH 99090029 R 9/13/99 I 3/31/00	8 @ 83 w/DLN		–	Permitted
Ameren Pinckneyville Power Plant Pinckneyville, Perry County	145842AAA 99090035 R 9/13/99 I 11/10/99	4 @ 48.5 w/WI		–	Permitted (operating)
	00090076 R 9/28/00	4 @ 48 w/DLN		–	In review (minor mod.)

ABB Energy Ventures Grande Prairie Energy Bartlett, DuPage County	043412AAH 99090051 R 9/16/99 I* 9/5/00		2 @ 279 w/SCR	oil	Permitted
Reliant Energy Williamson Energy Center Crab Orchard, Williamson Cty	199856AAK 99090084 R 9/30/99 I 12/20/99	8 @ 41 w/WI		–	Permitted
Reliant Energy Shelby Energy Center Sigel, Shelby County	173801AAA 99090085 R 9/30/99 I 2/23/00	8 @ 41 w/WI		–	Permitted (operating)
Spectrum Energy Central Illinois Power St. Peter, Fayette County	051030AAD 99100013 R 10/4/99 I 2/1/00	1 @ 45		–	Permitted
Constellation Power Holland Energy LLC Beecher City, Shelby County	173807AAG 99100022 R 10/7/99 I 4/6/00		2 @ 168 w/SCR	oil	Permitted (being built)
Peoples Energy Calumet Power LLC Chicago, Cook County	031600GGV 99100023 R 10/7/99 I 12/13/99	2 @ 133 w/WI		–	Permitted
Reliant Energy Reliant DuPage County LP Aurora, DuPage County	043407AAF 99110018 R 11/3/99 I 5/10/00	6 @ 45 w/WI 4 @ 170 w/DLN		–	Permitted (being built)
Skygen Services Zion Energy Center Zion, Lake County	097200ABB 99110042 R 11/12/99	5 @ 160 w/DLN		oil	Final Review (major)
Coastal Power Fox River Peaking Station Big Rock, Kane County	089802AAF 99110073 R 11/19/99	3 @ 115 w/DLN		–	Final Review
Indeck Indeck Rockford Rockford, Winnebago County	201030BCG 99110088 R 11/24/99 I 2/16/00	2 @ 150 w/DLN		–	Permitted (operating)
Calumet Energy LLC Calumet Energy Team Chicago, Cook County	031600GHA 99110107 R 11/24/99 I 5/18/00	2 @152.5 w/DLN		oil	Permitted (being built)
Standard Energy Ventures Standard Energy West Chicago, DuPage Cty	043090ADB 99120001 R 12/01/99	800 MW w/SCN (Specific turbines yet to be selected)	(Combined cycle turbines may be chosen in place of simple cycle units)	–	In review (major source)
Constellation University Park Energy LLC University Park, Will County	197899AAB 99120020 R 12/06/99 I 5/1/00	6 @ 25 + 25 w/WI		–	Permitted (being built)
Midwest Generation West Tech Turbines Chicago, Cook County	031600GHS 00020062 R 12/14/99 I 4/7/00	5 @ 22 (temporary)		–	Permitted (operating)
Power Energy Partners Crete Energy Park Crete, Will County	197030AAO 99120056 R 12/20/99	3 @ 131 w/WI		–	In review (minor source)
Carlton North Shore Power Plant Zion, Lake County	097810AAC 99120057 R 12/21/99	3 @ 169 w/DLN or 6 @ 80 w/DLN		–	Final Review (minor)
Kinder Morgan Aux Sable Power Plant Morris, Grundy County	063800AAP 00030031 R 3/6/00	4 @ 44 w/WI		–	In review (minor source)
Entergy Power Clay County Power, LLC Flora, Clay County	025804AAC 00030053 R 3/16/00	4 @ 73 2 @ 148 both w/DLN		–	Permitted
Duke Energy Duke Energy Kankakee Kankakee, Kankakee County	091806AAM 00040067 R 4/10/00		2 @ 310 MW	–	Final Rev. (major source)
Duke Energy Duke Energy Cook County Chicago Heights, Cook Cty	031801AAI 00040068 R 4/24/00		2 @ 310 MW	–	In review (major source)

Rolls-Royce Power Ventures Lockport Power Generation Lockport, Will County	197810ABS 00050010 R 5/1/00 10/27/00	6 @ 49 w/DLN		–	Permitted
Spectrum Energy Logan County Power New Holland, Logan County	107815AAC 00050025 R 5/5/00 I 9/12/00	3 @ 45 w/WI		–	Permitted
Aquila Energy MEP Flora Power Flora, Clay County	025803AAD 00050050 R 5/8/00	4 @ 94.5 w/DLN		–	In review (minor source)
Indeck Indeck-Bourbonnais Bourbonnais, Kankakee Cty	091015AAD 00060010 R 6/6/00	4 @ 170.8 w/DLN		–	In review (minor source)
EnerStar Montana Station Newman, Douglas County	041806AAC 00060075 R 6/22/00	2 @ 161 w/DLN 1 @ 38 w/DLN			In review (minor source)
PPL Global University Park Power Plant University Park, Will County	197899AAC 00080078 R 8/17/00	12 @ 44.2 w/WI & SCR		–	In review (minor source)
Entergy Franklin County Power Kegley, Franklin County	055803AAB 00080055 R 8/22/00	2 @ 147.8 4 @ 72.9 both w/DLN		–	In review (minor source)
Gen Power Gen Power – West Frankfort West Frankfort, Franklin Cty	055807AAD 00090005 R 9/1/00	4 @ 80 w/DLN		–	In review (minor source)
MEP Investments Washington County Posen, Washington County	189802AAA 00090081 R 9/28/00	6 @ 94.5 w/DLN		–	In review (minor source)
MEP Investments Piatt County Deland/Lodge, Piatt County	147803AAC 00090082 R 9/28/00	6 @ 94.5 w/DLN		–	In review (minor source)
Ameren Energy Elgin Energy Center Elgin, Cook County	031438ABC 00100065 R 10/26/00	4 @ 113 w/DLN		–	In review (minor source)

Notes: DLN = Dry Low NOx Burners
SCR = Selective Catalytic Reduction
WI = Water Injection Burners
SCN = SCONOX ™
SCR = Selective Catalytic Reduction

R = Received
I = Issued
I* = Issued. Permit becomes effective 30 days following issuance

PROJECTS AT EXISTING INDUSTRIAL AND UTILITY PLANTS

Project	ID No./Application No. Rec'd/Issued Dates	Type of Turbine (Rated Power – MW e)		Backup Fuel	Status
		Simple Cycle (Peaking)	Comb. Cycle (Base Load)		
Peoples Gas Elwood Energy Center I/II/III McDonnell Energy Center Elwood, Will County (McDowell Synthetic Natural Gas Plant)	197808AAG 98060091 R 6/98 I 12/98	4 @ 170 w/DLN		ethane	Permitted (operating)
			10 @ 250 w/SCR	ethane	Permitted
	197035AAG 00010076 R 1/27/00 I 10/17/00	2 @ 172 w/DLN			Permitted
	197035AAH 00010077 R 1/27/00 I 10/17/00	3 @ 172 w/DLN			Permitted
Houston Industries Cardinal Energy Roxana, Madison County (Shell - Wood River Refinery)	119090AAH 98090064 R 9/21/98 I 7/14/99		3 @ 211 w/SCR	fuel gas	Permitted
Ameren Grand Tower Station Grand Tower, Jackson Cty (Grand Tower Power Plant)	077806AAA 99080101 R 8/30/99 I 2/25/00		2 @ 300 w/DLN & future SCR	–	Permitted (being built)
Electric Energy Midwest Electric Power Joppa, Massac County (Joppa Power Plant)	127899AAA 99100060 R 10/18/99 I 3/29/00	3 @ 72 w/WI 2 @ 51 w/WI		–	Permitted (operating)
CILCO Medina Cogeneration Plant Mossville, Peoria County (Caterpillar Engine Plant)	143810AAG 99100102 R 10/29/99 I 5/30/00		3 @ 14.2 w/DLN	–	Permitted
Dominion Energy Lincoln Generation Kincaid, Christian County (Kincaid Power Plant)	021814AAG 00020011 R 2/3/00	4 @ 172 w/DLN		–	In review (major modification)
Midwest Generation EME Waukegan Peaking Facility Waukegan, Lake County (Waukegan Power Plant)	097190AAC 00050071 R 5/22/00	2 @ 145.8 w/DLN		–	In review (minor source)
Southern Illinois Power Coop Marion Marion, Williamson County (SIPCO Power Plant)	199856AAC 00070028 R 7/12/00	2 @ 83 w/DLN		oil	In review (netting)

WITHDRAWN APPLICATIONS AND EXPIRED PERMITS

Project	ID No./Application No. Action Dates	Type of Turbine (Rated Power – MW e)		Backup Fuel	Status
		Simple Cycle (Peaking)	Comb. Cycle (Base Load)		
Indeck Indeck – Pleasant Valley Woodstock, McHenry County	111805AAO 98100061 R 10/19/98 I 1/28/99 Rev 3/4/99 Exp 3/4/00	2 @ 150 w/DLN		–	Permit Expired
KN Power Lake County Plant Island Lake, Lake County	097454AAB 98120032 R 12/11/98 WD 2/00	6 @ 62.5 w/DLN	1 @ 135 w/DLN	oil	Application Withdrawn
Constellation West Chicago Energy LLC West Chicago, DuPage Cty	043090ADC 99120014 R 12/06/99 WD 5/15/00	6 @ 25 + 25 w/WI		–	Application Withdrawn
Unicom (Com Ed) North Chicago Power North Chicago, Lake County	097125ABT 99100028 R 10/8/99 I 2/24/00 WD 8/24/00	1 @ 37.8 w/DLN 1 @ 39.8 w/WI		–	Permit Withdrawn
Indeck Indeck-Chicago Heights Chicago Heights, Cook Cty	031045ANT 00080004 R 8/3/00 WD 9/13/00	3 @ 69 w/DLN		–	Application Withdrawn
Indeck Indeck – Libertyville Libertyville, Lake County	097090ACD 98120030 R 2/14/00 WD 10/3/00	2 @ 150 w/DLN		–	Application Withdrawn
Indeck Indeck – Holiday Hills Holiday Hills, McHenry Cty	111032AAA 99080066 R 8/20/99 WD 10/3/00	2 @ 150 w/DLN		–	Application Withdrawn

NEW COAL-FIRED BOILER POWER PLANTS

Project	ID No./Application No. Action Dates	Type of Boiler	Emission Controls	Rated Output (MW e)	Status
Enviropower Enviropower Benton, Franklin County	055802AAG 00080042 R 8/16/00	Fluidized bed (Coal/coal waste)	Baghouse	250 ea.	Major (Under review)

COAL-FIRED BOILER PROJECTS AT EXISTING UTILITY POWER PLANTS

Project	ID No./Application No. Action Dates	Type of Boiler	Emission Controls	Rated Output (MW e)	Status
Southern Illinois Power Coop Marion Marion, Williamson County (SIPCO Power Plant)	199856AAC 00070028 R 7/12/00	Fluidized Bed (coal/tire-derived fuel)	Baghouse	120	In review (Netting, with existing units)

EXHIBIT 2

Table: List of Existing and New Simple Cycle, and New Combined Cycle Units

Combined Cycle Units are Highlighted

F:utility\peakersEGU\sheet 2\10-31-2000\v gupta

S. No.	ID #	Company Name	Street Address	Location	County	EGU Site Existing/ New	Ozone Attainment Yes/No	Permit Number	Permit Type C/O
1	2	3	4	5	6	7	8	9	10
1	021814AAG	Dom. Energy-Lincoln Generation	Route 104	Kincaid	Christian	Existing	Yes	00020011	C
2	025803AAD	Aquila Energy/MEP Flora Power	Route 2, Box 89a	Harter/Flora	Clay	New	Yes	00050050	C
3	025804AAC	Entergy Power-Flora Peaking Stn	To Be Determined	Flora	Clay	New	Yes	00030053	C
4	025804AAC	Entergy Power-Flora Peaking Stn	To Be Determined	Flora	Clay	New	Yes	00030053	C
5	031600AMI	Midwest Generation	1111 W Cermak Rd	Chicago	Cook	Existing	No	95090081	Title V
6	031600GGV	People's Energy/Calumet Power	3200 E 98th St	Chicago	Cook	New	No	99100023	C
7	031600GHA	Calumet Energy Team LLC	10301 S Doty Ave	Chicago	Cook	New	No	99110107	C
8	031801AAI	Duke Energy Chicago Hts	1600 Feet West Of Cottage G	Chicago Hts	Cook	New	No	00040068	C
9	041806AAC	Ener Star- Montana Stn	Rural	Newman	Douglas	New	Yes	00060075	C
10	041806AAC	Ener Star- Montana Stn	Rural	Newman	Douglas	New	Yes	00060075	C
11	043090ADB	Standard Energy Venture, LLC	McChesney Rd and Fabyan P	W.Chicago	Du Page	New	No	99120001	C
12	043407AAF	Reliant Energy/Reliant DuPage Cty	Eola Rd @ Ferry Rd	Aurora	Du Page	New	No	99110018	C
13	043407AAF	Reliant Energy/Reliant DuPage Cty	Eola Rd @ Ferry Rd	Aurora	Du Page	New	No	99110018	C
14	043412AAH	Grand Prairie Energy, LLC/ABB	Old Bartlett Quarry	Bartlett	Du Page	New	No	99090051	C
15	051030AAD	Spectrum Energy/C.I. C.S.Power	1 mile NE of city of St. Peters	St. Peters	Fayette	New	Yes	99100013	C
16	051808AAK	Cent.Ill. S C Pow./ Spectrum	State Route 4	St. Elmo	Fayette	New	Yes	99060052	C
17	053803AAL	Ameren CIPS	545 N Jordan Dr	Gibson City	Ford	New	Yes	99020071	C
18	055803AAB	Entergy -Franklin County Pwr	2429 Eaton Road	Thompsonville	Franklin	New	Yes	00080055	C
19	055803AAB	Entergy -Franklin County Pwr	2429 Eaton Road	Thompsonville	Franklin	New	Yes	00080055	C
20	055807AAD	Gen Power	Woods Road	W.Frankfort	Franklin	New	Yes	00090005	C
21	063800AAP	Kinder Morgan-Aux Sable Power P	East Route 6	Morris	Grundy	New	No	00030031	C
22	077806AAA	Ameren CIPs	1820 Power Plant Rd.	Grand Tower	Jackson	Existing	Yes	99080101	C
23	089425AAC	DMG (Dynegy/Rocky Road)	1221 Power Dr	E.Dundee	Kane	New	No	98120016	C
24	089425AAC	DMG (Dynegy/Rocky Road)	1221 Power Dr	E.Dundee	Kane	New	No	98120016	C
25	089425AAC	DMG (Dynegy/Rocky Road)	1221 Power Dr	E.Dundee	Kane	New	No	99050098	C
26	089802AAF	Fox River Pkng Stn/Coastal Power	Lasher and Dauberman	Big Rock	Kane	New	No	99110073	C
27	091015AAD	Indeck-Bourbonnais Energy Cente	East of I57 on George Road	Bourbonnais	Kankakee	New	Yes	00060010	C
28	091806AAM	Duke Energy	Township Rd 6000 N	Manteno	Kankakee	New	Yes	00040067	C

29	093801AAN	Kendall New Cent. Dev./Enron	Corneils Rd Between Eldermaun	Plano	Kendall	New	Yes	99020032	C
30	093808AAD	L S Power/Kendall Energy	County Line and Wildy Rds.	Minooka	Kendall	New	No	98110017	C
31	097190AAC	Midwest Generation	401 E Greenwood Ave	Waukegan	Lake	Existing	No	95090043	Title V
32	097190AAC	Midwest Generation	401 E Greenwood Ave	Waukegan	Lake	Existing	No	00050071	C
33	097200ABB	Skygen/Zion Energy Center LLC	West Ninth St	Zion	Lake	New	No	99110042	C
34	097810AAC	Carlton Inc./North Shore Power	N. Of 9th St, E Of Union Pacifi	Zion	Lake	New	No	99120057	C
35	103814AAC	Lee Cty Gen. Facility/L S Power	Nelson Rd At I-88	Nelson	Lee	New	Yes	98080039	C
36	103817AAH	Lee Generating Stn./Duke Energy	Nachusa Rd	South Dixon	Lee	New	Yes	99090029	C
37	107815AAC	Spectrum Energy-Logan County	1 1/2 Miles E Of New Holland	Sheridan	Logan	New	Yes	00050025	C
38	111805AAP	Reliant Energy	4500 S Route 47	Woodstock	McHenry	New	No	99050089	C
39	119090AAH	Reliant Energy (Cardinal Energy)	Madison St. East of Hwy 111	Roxana	Madison	New	No	98090064	C
40	119105AAA	Ameren CIPS	701 Main & McKinley Bridge	Venice	Madison	Existing	No	95090017	Title V
41	121803AAA	Ameren Energy Gen. Company-Ki	2816 Kinoka Rd	Patoka	Marion	New	Yes	99020027	C
42	127899AAA	Electric Energy/Midwest Elec. Pow	2100 Portland Rd	Joppa	Massac	Existing	Yes	99100060	C
43	127899AAA	Electric Energy/Midwest Elec. Pow	2100 Portland Rd	Joppa	Massac	Existing	Yes	99100060	C
44	145842AAA	Ameren Energy Gen. Company	4646 White Walnut Rd	Pinckneyville	Perry	New	Yes	99090035	C
45	145842AAA	Ameren Energy Gen. Company	4646 White Walnut Rd	Pinckneyville	Perry	New	Yes	00090076	C
46	147803AAA	MEP Investments-Deland	To Be Announced	Goose Creek	Piatt	New	Yes	00090082	C
47	161807AAN	Cordova Energy	SW Corner 192nd St.,and 250	Cordova	Rock Island	New	Yes	99020097	C
48	167822ABG	CWLP	3620 Ridgely Rd	Springfield	Sangamon	New	Yes	94120058	O
49	171851AAA	Soyland Power	1175 E Campbell Rd	Alsey	Scott	New	Yes	98120050	C
50	171851AAA	Soyland Power	1175 E Campbell Rd	Alsey	Scott	New	Yes	98120050	C
51	173801AAA	Shelby Enrgy Cntr/ Reliant Energy	Us 45 @ County Rd 35	Sigel	Shelby	New	Yes	99090085	C
52	173807AAG	Holland Energy, LLC	RR2, County Line Rd.	Holland	Shelby	New	Yes	99100022	C
53	183090AAE	DMG/Tilton Energy Center	80 W First St	Tilton	Vermilion	New	Yes	98110018	O
54	189802AAA	MEP Investments-Posen	To Be Announced	Bolo	Washington	New	Yes	00090081	C
55	197030AAO	Power Energy Partners/Crete Ener	Burville Road Access	Crete	Will	New	No	99120056	C
56	197035AAG	Elwood Energy/Peoples Gas	20900 West Noel Road	Elwood	Will	New	No	00010076	C
57	197035AAH	Elwood Energy/Peoples Gas	20900 West Noel Road	Elwood	Will	New	No	00010077	C
58	197808AAG	Elwood Energy Center,LLC	21100 W Noel Rd	Elwood	Will	New	No	98060091	C
59	197808AAG	Elwood Energy Center,LLC	21100 W Noel Rd	Elwood	Will	New	No	98060091	C

60	197810ABS	Rolls-Royce/Lockport Pwr Gen.	East Of I and M Canal	Lockport	Will	New	No	00050010	C
61	197811AAH	Desplaines Greenland/Enron	27155 S Kankakee St	Manhattan	Will	New	No	99020021	C
62	197811AAH	Desplaines Greenland/Enron	27155 S Kankakee St	Manhattan	Will	New	No	99020021	C
63	197899AAB	Univ. Park Energy/ Constellation P	SW Intersection Of Central Ave ar	Univ. Park	Will	New	No	99120020	C
64	197899AAC	Univ. Park Power (PPL Global)	Dralle Road	Univ. Park	Will	New	No	00080078	C
65	199856AAC	Southern Ill. Power Coop.	11543 Lake Of Egypt Rd	Marion	Williamson	Existing	Yes	00070029	C
66	199856AAK	Reliant Energy/ Williamson Enrgy (	Hwy 13 Near Hwy 166	Crab Orchard	Williamson	New	Yes	99090084	C
67	201030BCG	Indeck-Rockford	136 Harrison Ave	Rockford	Winnebago	New	Yes	99110088	C
		Total							

Abbreviations: DLN=Dry Low NOx burner, WI= Water Injection, SCR=Selective Catalytic Reduction, SCN= Sconox, CT=Combution Turbine, SCT= Simple Combustion Turbine, CCT= Combined Cycle Turbin

HRSG= Heat Recovery Steam Generator, EGU= Electric Generating Unit, C= Construction, O=Operating, MW=Megawatt, NG=Natural Gas, F.Oil=Fuel Oil, tpy=tons/year, JP-4=Jet Fuel, D.B.=Duct Burne

*SCT or CCT . The company has not made the final decision

** Currently many new EGUs are operating under the construction permit, and they are planning to apply for Title V permit. Title V permit has been applied for existing Waukegan an

*** Combined Cycle may be chosen in place of single cycle turbines

*1 DLN when n.gas used, WI when oil is fired, HRSG s controlled by SCR

*3 99 ppm NOx is approximately equal to 0.397 lb/mmBtu for gas turbines burning natu

*2 40 CFR75 monitoring required if 3-year annual average capacity factor exceeds 10% and, if oil is also fired, and average annual heat input from oil exceeds 15%.

Date Applic. Rec'd	Date Permit Issued	Oper. Permit Expiration** Date	Permit Action Status	Turbine Unit Type	No. of Identical Turbines	Turbine Manufacture	Turbine Model No.	Alternative Turbine Proposal	Existing Under Subpart W	Turbine NOx Control	MW Capacity/ Turbine	Turbine Heat Input mmBtu/hr
11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
2/3/00			Add. Info Ltr 3/6/00	SCT	4	GE	7FA Frame		No	DLN	172	1972
5/8/2000			Review Pending	SCT	6	GE	7EA Frame		No	DLN	94.5	1001.7
3/16/2000			Public Notice	SCT	4	GE	7EA Frame		No	DLN	73	1024
3/16/2000			Public Notice	SCT	2	GE	7FA Frame		No	DLN	148	1747
9/7/1995			Review Pending	SCT	8	Worthingtor	GG4		Yes	None	33	558
10/7/1999	3/24/2000		Permitted	SCT	2	ABB	11N2		No	WI	133	1500
11/24/1999	5/19/2000		Permitted	SCT	2	ABB	11N2		No	DLN or WI	152.5	1604
4/24/2000			Review Pending	CCT	2	GE	7FA Frame		No	SCR	310	4232
6/22/2000			Review Pending	SCT	2	GE	7FA Frame		No	DLN	161	1640
6/22/2000			Review Pending	SCT	1	GE	7FA Frame		No	DLN	40	400
12/1/1999			Draft Permit	SCT***	16	Pratt & Whi	FT8 "Twin Packs"Aero		No	?? (DLN??)/	50	554.8
10/29/1999	5/9/2000		Permitted	SCT	4	GE	7FA Frame		No	DLN	170	1885
10/29/1999	5/9/2000		Permitted	SCT	6	GE (Stewart	LM6000 PC		No	WI	45	444
9/16/1999	9/5/2000		Permitted	CCT	2				No	WI(o), SCR (	250	1868
10/4/1999	2/1/2000		Permitted	SCT	1	GE	LM6000 Aero		No	WI	45	420
6/16/1999	9/7/1999		Permitted	SCT	1	GE	LM6000 Aero		No	WI	45	420
2/19/1999	6/16/1999		Permitted	SCT	2	Westingho	501D5A		No	DLN	135	1457
8/22/2000			Review Pending	SCT	2	GE	7FA Frame		No	DLN	147.8	1747
8/22/2000			Review Pending	SCT	4	GE	7EA Frame		No	DLN	72.9	787.6
9/1/2000			Review Pending	SCT	4	GE	7EA Frame		No			
3/6/2000			Draft Permit	SCT	4	GE	LM6000 Aero		No	WI	44	403
8/30/1999	2/25/2000		Permitted	CCT	2	Westingho	501F		Yes	SCR), SCR(HR	300	2050
12/4/1998	6/5/2000		Permitted	SCT	1	GE	LM5000		No	WI	35	367
12/4/1998	6/5/2000		Permitted	SCT	2	Westingho	501DA		No	DLN	121	1439
5/28/1999	10/27/1999		Permitted	SCT	1	Westingho	501D5A		No	DLN	121	1439
11/19/1999			Final Review	SCT	3	ABB	11N2 Frame		No	DLN	115	1362
6/6/2000			No Action	SCT	4	GE	7FA Frame		No	DLN	170.8	1540
4/10/2000			Public Notice	CCT	2	GE	7FA Frame		No	SCR	310	4232

2/3/1999	1/14/2000		Permitted	SCT	8	GE	7EA Frame		No	DLN	83	1002
11/5/1998	6/2/1999		Permitted	CCT/SCT*	4	GE or Equi	7241		No	LN), SCR (HR	250	2166
9/7/1995			Consoldation	SCT	4	Worthingto	GG4		Yes	None	33	558
5/22/2000			Review Pending	SCT	2	GE	7FA Frame		No	DLN	145.8	1951
11/12/1999			Final Review	SCT	5	GE	7FA Frame		No	DLN/WI	160	1719
12/21/1999			Final Review	SCT	3	GE/ABB	7FA/11N2 Frame	6 GE Type EA each 80 MW	No	DLN	187	1746
8/11/1998	1/28/2000		Permitted	CCT/SCT*	4	GE or Equi	TBD		No	WI(o),HRSG(	250	2516
9/13/1999	3/31/2000		Permitted	SCT	8	GE	7EA Frame		No	DLN	83	978
5/5/2000	9/12/2000		Permitted	SCT	6	GE	LM6000 Aero		No	WI	45	420
5/26/1999	12/9/1999		Permitted	SCT	3	GE	7FA Frame		No	DLN	170	1874
9/21/1998	7/14/1999		Permitted	CCT	3	GE/Westin	7FA/501D		No	, SCR (CT, HF	211	1916
			Permitted	SCT	1	Westingho	W-301G		Yes	None	37	372
2/4/1999	6/28/1999		Permitted	SCT	2	Westingho	501D5A		No	LN(g),WI(o	135	1457
6/23/2000	7/25/2000		Permitted	SCT	3	GE	Frame 7B		No	WI	72	743
6/23/2000	7/25/2000		Permitted	SCT	2	GE	Frame 7B		No	WI	51	
9/13/1999	11/9/1999		Permitted	SCT	8	GE/Stewart	LM6000 Aero		No	WI	48.5	444
9/28/2000			Review Pending	SCT	4	GE	PG6581		No	DLN	48	553
9/28/2000			Review Pending		6	GE	7EA Frame		No	DLN	94.5	
2/26/1999	9/2/1999		Permitted	CCT	2				No	(g), SCR (HR	250	1974
3/14/1997	3/21/1997	3/14/2002	Permitted	SCT	1	Westingho	501D5A		No	WI	100	1370
12/6/1998	3/24/1999		Permitted	SCT	2	Westingho	251AA Frame		No	DLN	30	375
12/9/1999	7/2/2000		Permitted	SCT	1	Westingho	251AA Frame		No	WI	25	341
9/30/1999	2/23/2000		Permitted	SCT	8	GE	LM6000 Aero		No	WI	41	444
10/7/1999	4/5/2000		Permitted	CCT	2				No	,WI(o),SCR(	168	1762
10/22/1999	6/1/2000	4/1/2002	Permitted	SCT	4	GE	LM6000 Aero		No	WI	44	410
9/28/2000			Review Pending	SCT	6	GE	7EA Frame		No	DLN	94.5	
12/20/1999			Draft Permit	SCT	3	ABB	11N2 Fram	Equivalent to	No	DLN or WI	131	1624
1/27/2000	10/17/2000		Permitted	SCT	2	GE	7FA Frame		No	DLN	172	1763
1/27/2000	10/17/2000		Permitted	SCT	3	GE	7FA Frame		No	DLN	172	1763
2/18/1999	10/17/2000		Permitted	SCT	4	GE	7FA Frame		No	DLN	170	1763
4/2/1999	10/17/2000		Permitted	CCT	10	GE	7FA Frame		No	DLN,SCR	250	1763

5/1/2000	10/27/2000		Permitted	SCT	6	RR	Trent(p) Aero	No	DLN	62	492
2/3/1999	9/28/1999		Permitted	SCT	8	GE	7EA Frame	No	DLN	83	1002
4/3/2000			Final Revision	SCT	1	GE	7FA Frame	No	DLN	167	2750 ??
12/6/1999	5/1/2000		Permitted	Aero CT	6	Pratt & Whi	FT8 "Twin Packs" Aero	No	WI	50	494
8/17/2000			Review Pending	SCT	12	GE	LM6000PC	No	WI+SCR	44.2	452
7/12/2000			Draft Permit	SCT	2	GE	PG7172 (EA)	No	DLN	83	1165
9/30/1999	12/20/1999		Permitted	SCT	8	GE	LM6000 Aero	No	WI	41	444
11/24/1999	2/16/2000		Permitted	SCT	2	SW	V84 Frame	No	DLN	150	1698.5
					279					**7948**	**77659.6**

ıe,

er, G=Gas, O=Oil

ıd Fisk peakers

ural gas as per ACT for Turbines

Duct Burner H.Input mmBtu/hr	Fuel Used	Load Type	NOx limit		N. Gas Limit, mmcf		F. Oil Limit	Hrs of Operation Limit / y		Nox Rate	NOx Rate	Ox Emissio
			per turbine lb per hour	All Turbines @Site tpy	per turbine per hr	All Turbines @Site/yr	Turbines @S mmGal./Yr.	per turbine	All Turbines @Site	ppm	lb per mmBtu	uring Startu lb/hr
24	25	26	27	28	29	30	31	32	33	34	35	36
	N.Gas	Peaking								9	0.036	
	N.Gas	Peaking	60	245		8475				9-15	0.036-0.060	
	N.Gas	Peaking	55	212						9-15	0.036-0.060	
	N.Gas	Peaking	99	212						9	0.018	
	JP-4, N.G.	Peaking							110(JP-4), 70		0.44 (o) 0.28(g)	
	N.Gas Only	Peaking	151.2	233	3.25	5002				25	0.1	
	N.Gas/Oil	Peaking	170 (g) 317 (o	240	1.6	4870	8			25-g/42-oil	0.10(g)-0.168(o)	
	N.Gas	Base								3.5	0.014	
	N.Gas	Peaking								9	0.036	
	N.Gas	Peaking								25	0.1	
430??	N.Gas/Oil	Base/Peaking	54(g) 194(o)	732			2500(Total);500		20000	nnual) 15 (ho	0.06 (g), 0.17 (o)	1.68 tpy Start
	N.Gas Only	Peaking	105	247		9878				9	0.036	
	N.Gas Only	Peaking	41	247		9878				25	0.1	
	N.G./Oil	Base	24.5(g) 67.6 (o	213				480(o)	4.5 (g), 10.5 (o		0.017 (g), 0.043 (o)	
	N.Gas Only	Peaking	43	85.9		1700		4000		25	0.1	
	N.Gas Only	Peaking	43	85.9		1580		4000		25	0.1	
	N.G./Oil	Peaking	136 (g) 242 (o	245			37			25(G),42(O)	0.10(g)-0.168(o)	
	N. Gas	Peaking		250						9	0.036	
	N. Gas	Peaking		250						9	0.036	
		Peaking										
	N.Gas	Peaking	40	247.5						25	0.1	
297(1)333(2)	N. Gas Only	Base	216.8(CT-1) 219.6(CT-2)	1911.5					40CFR60.44a(d)(1)			
	N. Gas Only	Peaking	60	245		6600				25(G),42(O)	0.10(g)-0.168(o)	
	N. Gas Only	Peaking	80	245		6600				25(G),42(O)	0.1 (G)	
	N. Gas Only	Peaking	80	245		6600				25(G),42(O)	0.1 (G)	
	N.Gas	Peaking								25	0.1	
	N.Gas	Peaking								9	0.036	
	N.Gas	Base	31.6							3.5	0.014	

	N. Gas	Peaking	60	426.4				3300	26400	12(monthly)1	0.037(annual), 0.048(monthly	
350	N. Gas Only	Base/Peaking	188.7 (SCT) 36 (CCT)	99 (SCT), 630.7 (CCT)				1048 (SCT)		25 (SCT), 4.5 -G(S	0.0166(CCT), 0.0936 (SCT)	
	JP-4, N.G.	Peaking		No Limit						110(JP-4) 70 (	0.44 (o) 0.28(g)	
	N.Gas	Peaking								9	0.036	
	N.Gas/Oil (ba	Peaking	81(g) 321 (o)	697.5				2300(500-oil)	11500	12(monthly)1	0.058(hourly)	
	N.Gas	Peaking	100.9(7FA); 54.1(7EA)	245		8313, Alt. 6888				15	0.056	
	N.Gas/Oil	Base/Peaking	36(g) 139(o)	630.8				2000 as SCT	2453 (g) 96(o	42(o),CCT- 4.5(g)(SCR)		
	N.Gas/Oil	Peaking								12	0.0545	
	N.Gas	Peaking								25	0.1	
	N.Gas	Peaking	105	248	14500	14500				9	0.036	
489	N.Gas, Refinery Gas	Base	31.7(w/DB) 25.3(w/o DB)	330.5						3.5 (8 hr) 4.5(1	0.013	
	Oil	Peaking	No Limit	No Limit			No Limit	No Limit	No Limit	110	0.44	
	N.G./Dis. O	Peaking	136(g) 242(o	245			37			25(G),42(O)	0.1 (G)	
	N.Gas	Peaking	89.5	349.3		4032				40	0.16	
	N.Gas	Peaking				4032						
	N.Gas	Peaking	57							35	0.14	
	N.Gas	Peaking										
	N.Gas	Peaking										
	N.Gas	Base	35	306.6						4.5	0.019	
	N.G./#2 Oil	Peaking	750	249						75(G),75(O)	0.3	
	N.Gas/Oil	Peaking								About 175	0.7	
	N.Gas/Oil	Peaking								148	0.59	
	N.Gas Only	Peaking	40	198		4186				25	0.09	
776	NG/Oil (CT), N	Base	41.7	342				DB<1500, o<1000	4.5(hrly)	3.5(24 hr);16	0.02(g),0.04(o)	
	N.Gas Only	Peaking	50	197		4250				25	0.1	
	N.Gas	Peaking										
	N.Gas	Peaking	125.47	245		6040				25	0.07	r than normal
	N.Gas	Peaking	64.8	217.56				3200		9	0.037	
	N.Gas	Peaking	64.8	326.34				3200		9	0.037	
	N.G./Ethan	Peaking	108	1565.7				Peaking Use Only		15	0.061	
??	N.G./Ethan	Base	32.4	1565.7				6000		4.5	0.0184	

	N.Gas	Peaking		245						25	0.1	
	N.Gas	Peaking		419.4				3250		9(yrly),12(monthly)1	0.037(annual), 0.048(monthly if	
	N.Gas	Peaking						3250				
	N.Gas	Peaking	30	245		4443				25	0.1	
	N. Gas	Peaking								25 (WI) 5(WI+S	0.1(scr) 0.02(WI+SCR)	
	N.Gas/Oil	Peaking								15(g),42 (o)	0.06(g).17 (o)	
	N.Gas	Peaking	40	198		4186				25	0.1	
	N.Gas	Peaking		199						15	0.06	
				16311.6								

Startup Time min	Acid Rain Monitoring 40CFR75*2	PS Monitor CFR60.334 Others sect	ner Monitoring ly, annual etc.) ecordkeepi	pplicable Ru	Review/ Const./Oper. Status	
37	**38**	**39**	**40**	**41**	**42**	
				Major-PSD	Under Review	
				NSPS	Under Review	
				NSPS	Under Review	
				NSPS	Under Review	
				None	Existing Peaker	
If 3 yr. avg. C.F.>		fuel usage,	fuel usage,B	NSPS	Const. Pending	
If 3 yr. avg. C.F.>		fuel usage,	fuel usage,B	NSPS	Const. Initiated	
			fuel use,Btu,	Major	Under Review	
				NSPS	Under Review	
				NSPS	Under Review	
tup/shut dow	Yes	Yes	fuel usage,B	PSD/BACT	Under Review	
If 3 yr. avg. C.F.>		fuel usage,	fuel usage,B	NSPS	Const. Initiated	
If 3 yr. avg. C.F.>		fuel usage,	fuel usage,B	NSPS	Const. Initiated	
	Yes		fuel usage,	PSD/BACT	Const. Pending	
20	r. avg. C.F.>	fuel usage,	fuel usage,B	NSPS	Const. Pending	
20	r. avg. C.F.>	fuel usage,	fuel usage,B	NSPS	Const. Initiated	
If 3 yr. avg. C.F.>		fuel usage,	fuel usage,B	NSPS	Operating	
				NSPS	Under Review	
				NSPS	Under Review	
				PSD Minor	Under Review	
If 3 yr. avg. C.F.>		fuel usage,	fuel usage,B	NSPS	Under Review	
	Yes	Yes	fuel use,Btu,	NSPS	Const. Initiated	
If 3 yr. avg. C.F.>		fuel usage	Fuel usage,	NSPS	Operating	
If 3 yr. avg. C.F.>		fuel usage	Fuel usage,	NSPS	Operating	
20	r. avg. C.F.>	fuel usage	Fuel usage,	NSPS	Operating	
				NSPS	Under Review	
				NSPS	Under Review	
	Yes	Yes	fuel use,Btu,	Major	Under Review	

y if operated	If 3 yr. avg. C.F.>	Yes	Fuel usage,	PSD/BACT	Const. Pending
	Yes	Yes	fuel use,Btu,	PSD/BACT	Const. Pending
				None	Existing Peaker
				NSPS	Under Review
		Yes	Fuel usage,	PSD/BACT/	Under Review
	If 3 yr. avg. C.F.>	fuel usage,	Fuel consum	NSPS	Under Review
	Yes	Yes	fuel use,Btu,	PSD/NSPS	Const. Pending
				PSD/BACT	Const. Pending
	Yes	Yes		NSPS	Const. Pending
	Yes	Yes	Fuel usage	PSD/BACT	Const. Pending
	Yes	Yes	fuel use,Btu,	PSD/BACT	Const. Pending
	No	No		None	Operating
	Yes	Yes	fuel use,Btu,	NSPS	Const. Initiated
				Netted	Operating
				Netted	Operating
				NSPS	Operating
				NSPS	Under Review
				NSPS	Under Review
	Yes	Yes	fuel use,Btu,	PSD/BACT	Const. Pending
	Yes		fuel usage,B	NSPS	Operating
				old unit	Operating
				old unit	Under Review
	Yes	Yes	Fuel usage,	NSPS	Operating
	Yes	Yes	fuel use,Btu,	PSD/BACT	Const. Initiated
				NSPS	Operating
				NSPS	Under Review
Explain if >20	r. avg. C.F.>	fuel usage,	Fuel usage,	NSPS	Under Review
	Yes	Fuel usage	Fuel usage,	Major-PSD	Const. Pending
	Yes	Fuel usage	Fuel usage,	Major-PSD	Const. Pending
	Yes	Yes	fuel usage, E	PSD/BACT	Operating
	Yes	Yes	fuel use,Btu,	PSD/BACT	Const. Pending

Yes		Yes		NSPS	Under Review
f oper'd >250	Yes		Fuel usage,	PSD/BACT	Operating
	Yes		Fuel usage,	PSD/BACT	Under Review
Explanation i	r. avg. C.F.>	fuel usage,	fuel usage,B	NSPS	Const. Initiated
				NSPS	Under Review
				Netting	Under Review
	Yes	Yes	Fuel usage,	NSPS	Const. Pending
				NSPS	Operating

EXHIBIT 3

This exhibit is a computer disk containing the Microsoft Excel spreadsheet printed in Exhibit 2.

EXHIBIT 4

Explanation of Certain Columns in Exhibit 1 Spreadsheet

Column 7: Identifies whether the site is an existing site, *i.e.*, the site already has electric generating units (EGUs) located there, or a new site, *i.e.*, the site has never been used for EGUs previously.

Column 10: Identifies the type of permit: construction (C), operating (O), or Title V.

Column 13: Identifies the date that the operating permit for the facility expires. In most cases, the new EGUs are still operating under their construction permits, which they may do for a period of time.

Column 15: Identifies the type of turbine: simple cycle turbine ("SCT") or combined cycle turbine ("CCT"). Note that the rows addressing combined cycle turbine facilities are highlighted to make them easily distinguishable from the simple cycle facilities. The Agency left the two types of turbine facilities intermixed on this table so that the Board could see more easily where simple cycle turbines and combined cycle turbines are intermingled at a single site.

Column 16: Identifies the number of identical turbines located at the site. In some instances, a site will have a number of turbines that are not identical or where the conditions or other specifics for the turbines are different, in which case the Agency has provided more than one row for that facility. And example is Rows 23 through 25, where there are a total of four turbines, but they are three different types of turbines, as indicated in Columns 17 and 18.

Column 21: Identifies the type of NOx control employed at the turbine: dry low NOx burners ("DLN"), water injection ("WI"), or selective catalytic reduction ("SCR"). Heat recovery steam generators ("HRSG") are found only on combined cycle units and are sometimes referred to as the waste heat boilers.

Column 25: Identifies the types of fuel for which the unit(s) is/are permitted. Where a second fuel is indicated, it is the back-up fuel. "JP-4" refers to jet fuel.

Column 26: Identifies whether the unit is a peaking unit or will operate as more than a peaking unit. Operating "more than a peaking unit" means that the unit may be a baseload unit, expected to run almost continuously, or a cyclic unit that will run for longer periods of

time than a peaker but not to full baseload timeframes. These last two types are generally the combined cycle units, and the table identifies them as "base." In actuality, the Agency is not provided the information as to whether the owner/operator considers the unit a baseload unit or some other cyclic unit, other than any information provided that limits hours of operation. The Agency has just called them all "base" for simplicity's sake.

Column 39: Identifies the type of monitoring required if Part 75 monitoring is not required. In some cases, the construction permit is not sufficiently developed to determine the appropriate type of monitoring to be required.

EXHIBIT 5

Due to the size of this exhibit, it is not provided in this Adobe Acrobat file.