NOTICE

CERTAIN DATA CONTAINED IN THIS DOCUMENT MAY BE DIFFICULT TO READ IN MICROFICHE PRODUCTS.

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ENHANCING THE USE OF COALS BY GAS REBURNING-SORBENT INJECTION

DE-FC22-87PC79796

Environmental Monitoring Report
Quarterly Report No. 8
For the Period
April 1 - June 30, 1992

Prepared for
U.S. Department of Energy
Gas Research Institute
State of Illinois Department of
Energy and Natural Resources

Prepared by
Energy and Environmental Research Corporation
18 Mason
Irvine, California 92718

July 27, 1992

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 ENVIRONMENTAL MONITORING 12
2.1 Compliance Monitoring 12
2.1.1 Hennepin 12
2.1.2 Lakeside 12
2.2 Supplemental Monitoring 13
2.2.1 Hennepin 13
2.2.2 Lakeside 13

3.0 DATA DISCUSSION 15
3.1 Compliance Monitoring 15
3.1.1 Hennepin 15
3.1.2 Lakeside 15
3.2 Supplemental Monitoring 16
3.2.1 Hennepin 16
3.2.2 Lakeside 16

4.0 PERMIT STATUS 17
4.1 Hennepin 17
4.2 Lakeside 17

5.0 MODIFICATIONS TO MONITORING PLAN 18
5.1 Hennepin 18
5.2 Lakeside 18

Table 1 Hennepin Project Monitoring in Phases I and II 4
Table 2 Hennepin Project Monitoring in Phase III 5
Table 3 Lakeside Project Monitoring in Phases I and II 8
Table 4 Lakeside Project Monitoring in Phase III 10
Table 5 Continuous Emission Monitoring Data for Gaseous Emissions 14

APPENDIX A: Hennepin Discharge Monitoring and Coal Analysis Reports
APPENDIX B: Lakeside Discharge Monitoring and Excess Opacity Reports
APPENDIX C: Hennepin Draft NPDES Permit

1.0 INTRODUCTION

Clean Coal Technology implies the use of coal in an environmentally acceptable manner. Coal combustion results in the emission of two types of acid rain precursors: oxides of sulfur (SO_x) and oxides of nitrogen (NO_x). This Clean Coal Technology project will demonstrate a combination of two developed technologies to reduce both NO_x and SO_x emissions: gas reburning and calcium based dry sorbent injection. The demonstrations will be conducted on two pre-NSPS utility boilers representative of the U.S. boilers which contribute significantly to the inventory of acid rain precursor emissions: tangentially and cyclone fired units. Because of cost growth and lack of available funding, no further work has been done after Phase I at site B; the wall fired unit.

Gas reburning is a combustion modification technique that consists of firing 80-85 percent of the fuel (corresponding to the total heat release) in the lower furnace. Reduction of NO_x to molecular nitrogen (N_2) is accomplished via the downstream injection of the remaining fuel requirement in the form of natural gas (which also reduces the total SO_x emissions). In a third stage, burnout air is injected at lower temperatures in the upper furnace to complete the combustion process without generating significant additional NO_x.

Dry sorbent injection consists of injecting calcium based sorbents (such as limestone, dolomite, or hydrated lime) into the combustion products. For sulfation of the sorbent to $CaSO_4$, an injection temperature of about 1230°C is optimum, but calcium-sulfur reactions can also take place at lower temperatures. Thus, the sorbent may be injected at different locations, such as with the burnout air, at the exit from the superheater, or into the ducting downstream of the air heater with H_2O added for humidification. The calcium sulfate or sulfite products are collected together with unreacted sorbent and fly ash by the electrostatic precipitator. The specific goal of this project is to demonstrate NO_x and SO_x emission reductions of 60 percent and 50 percent, respectively, on two coal fired utility boilers having the design characteristics mentioned above.

At the inception of the project, Host Site Agreements were signed by EER and three utility companies in the State of Illinois: Site A, Illinois Power Company (Hennepin Unit 1, 71MW (net) tangentially fired boiler in Hennepin); Site B, Central Illinois Light Company (Edwards Unit 1, 117 MW (net) front wall fired boiler in Bartonville); and Site C, City Water Light and Power (Lakeside Unit 7, 33 MW (net) cyclone fired boiler in Springfield).

Funding for this project is provided by the Department of Energy (DOE), the Gas Research Institute (GRI), and the State of Illinois Department of Energy and Natural Resources (ENR)--the other funding participants. GRI and ENR are responsible for funding approximately one-third and one-sixth, respectively, of the total project costs.

To achieve the objectives of the project, it is conducted in the following three phases at each site:

Phase I: Design and Permitting
Phase II: Construction and Startup
Phase III: Operation, Data Collection, Reporting and Disposition

Phase I work has been completed for all three sites. Because of cost growth and lack of available funding, no further work has been done after Phase I at Site B, the wall fired unit. At Site A, Phase II has been completed and Phase III long-term tests are currently underway. Site C is currently in Phase II of the program.

In accordance with the cooperative agreement, EER has prepared an Environmental Monitoring Plan to verify that no adverse environmental impacts would be associated with the project, to determine if projected emission control levels are being met, and to maintain a data base for future development of GR-SI technology. Tables 1 through 4 show the environmental monitoring to be conducted at Sites A and C, (Hennepin and Lakeside) during Phases I, II and III of the project.

The following section provides a description of the monitoring which has been conducted during the previous quarter at the host sites. A discussion of the monitoring results is presented in Section 3. Section 4 provides a status report of permits obtained for the project at each facility, and Section 5 discusses any proposed changes in the original monitoring plan based on available information.

TABLE 1. HENNEPIN PROJECT MONITORING IN PHASES I AND II

MEASUREMENT	SAMPLE TYPE	FREQUENCY	LOCATION
		COMPLIANCE	
WATER			
Flow Rate	single reading estimate	once/wk	existing ash pond discharge
pH	grab sample	once/wk	existing ash pond discharge
Total Suspended Solids	24 hr composite	once/wk	existing ash pond discharge
Oil and Grease	grab sample	twice/mo	existing ash pond discharge
GASEOUS EMISSIONS			
Coal Composition sulfur, ash, Btu, moisture	24 hr composite	daily	coal hopper
Coal Flow	24 hr composite	daily	coal feed belt
		SUPPLEMENTAL	
WATER			
General Use Water Quality Standards	composite	once	Illinois River - 100 ft upstream and downstream of ash pond discharge
GASEOUS EMISSIONS			
NOx	continuous	(1)	economizer inlet
CO	continuous	(1)	economizer inlet
O2	continuous	(1)	economizer inlet
SO2	continuous	(1)	economizer inlet
WORKER HEALTH			
Hearing		once (2)	TBD
Pulmonary Function		once (2)	TBD
TSP		once (2)	TBD

1. Two-week period in Phase I.
2. Must occur prior to initiation of Phase III.

TABLE 2. HENNEPIN PROJECT MONITORING IN PHASE III-page 1 of 3

MEASUREMENT	SAMPLE TYPE	FREQUENCY	LOCATION
	COMPLIANCE		
WATER			
Flow Rate	24 hr total	daily	ash pond discharge
pH	grab sample	once/wk	ash pond discharge
Total Suspended Solids	24 hr composite	once/wk	ash pond discharge
Oil and Grease	grab sample	once/mo	ash pond discharge
Groundwater (pH, TDS, S, B, Mn, Ca, Chloride, Nitrate, Nitrite, Sulfite, Sulfate)	grab sample	(1)	groundwater monitoring wells
GASEOUS EMISSIONS			
Coal Composition (sulfur, ash, Btu, moisture)	24 hr composite	daily	coal hopper
Coal Flow	24 hr composite	daily	coal feed belt
	SUPPLEMENTAL		
WATER			
Ill. River General Use Water Quality Standards (35 ill. Adm. Code 302)	grab sample	once (4)	Illinois River - 100 ft upstream and downstream of ash pond discharge
Sluice water analyses(2)	grab sample	monthly (3)	ash sluice line to existing ash pond
GASEOUS EMISSIONS			
NOx	extractive probe/ chemiluminescent	(8) continuous	stack breeching
SOx	extractive probe/ NDUV	(8) continuous	stack breeching
CO	extractive probe/ NDIR	(8) continuous	stack breeching
CO2	extractive probe/ NDIR	(8) continuous	stack breeching
O2	extractive probe/ paramagnetic	(8) continuous	stack breeching
HC	extractive probe/ FID	(8) continuous	stack breeching

TABLE 2. HENNEPIN PROJECT MONITORING IN PHASE III
page 2 of 3

MEASUREMENT	SAMPLE TYPE	FREQUENCY	LOCATION
GASEOUS EMISSIONS			
Particulate Loading	Method 17	(4)	ESP inlet
	Method 5	(4)	ESP outlet
Particle Size Distribution	cascade impactors	(4)	ESP inlet and outlet
Resistivity	cyclonic flow probe	(4)	ESP inlet
N2O	extractive	(5)	stack breeching
SOLID BY-PRODUCTS			
Ash (6)	composite of	(7)	bottom ash hopper, economizer, and ESP hoppers #1 and #2
WORKER HEALTH			
Hearing	N/A	once/yr	TBD
Pulmonary Function	N/A	once/yr	TBD
TSP	N/A	once/yr	TBD
AIR			
Noise	single reading	once (4)	near equipment installation
Ambient Dust	single reading-Hi-Volume Sampler	once (4)	upwind and downwind of sorbent silo

TABLE 2. FOOTNOTES- HENNEPIN PROJECT MONITORING IN PHASE III

1. Monitoring will occur once prior to GR-SI operation, quarterly until the program is completed, and quarterly through closure and post-closure periods.
2. Water will be analyzed for arsenic, barium, boron, cadmium, chromium, iron, lead, mercury, oil and grease, pH, selenium, silver, sulfates, TDS, TSS, zinc, and flow rate.
3. Sampling will be conducted once prior to Phase III, then monthly for the first six months of long-term testing.
4. Measurements will be taken once prior to Phase III, then once during long term testing.
5. Samples will be collected once prior to Phase III, and once during long-term testing. Additional testing will then be done if the N2O concentration is greater than 5 ppm.
6. Ash will be monitored for mineral analysis, free CaO, total organic carbon, sulfate, COD, phenol, cyanide, nitrate, chloride sulfide, specific gravity, fineness, pozzolanic activity, soundness, PAH and pH. Paint filter and TCLP tests will also be conducted.
7. Sampling will be conducted once prior to Phase III. During long-term testing sampling and analysis will be conducted monthly for the first 3 months.
8. Sampling will occur once prior to Phase III, and CEM data will be reported during long-term testing.

TABLE 3. LAKESIDE PROJECT MONITORING IN PHASES I AND II

MEASUREMENT	SAMPLE TYPE	FREQUENCY	LOCATION
	COMPLIANCE		
WATER			
Flow Rate	single reading estimate	once/wk	ash pond discharge
pH	grab sample	twice/wk	ash pond discharge
Total Suspended Solids	24 hr composite	twice/wk	ash pond discharge
Oil and Grease	grab sample	twice/mo	ash pond discharge
Flow Rate	single reading estimate	once/wk	outfall 008
pH	grab sample	once/wk	outfall 008
Total Suspended Solids	8 hr composite	once/wk	outfall 008
Oil and Grease	grab sample	once/wk	outfall 008
Iron	8 hr composite	once/wk	outfall 008
GASEOUS EMISSIONS			
Opacity	in-situ optical	continuous	stack
	SUPPLEMENTAL		
GASEOUS EMISSIONS			
NOx	extractive probe/ chemiluminescent	continuous (2)	air heater inlet
CO	extractive probe/ NDIR	continuous (2)	air heater inlet
O2	extractive probe/ paramagnetic	continuous (2)	air heater inlet
SO2	extractive probe/ NDUV	continuous (2)	air heater inlet
CO2	extractive probe/ NDIR	continuous (2)	air heater inlet
HC	extractive probe/ FID	continuous (2)	air heater inlet
Particulate Loading	Method 17	see note 2	ESP inlet
	Method 5	see note 2	ESP outlet
Particle Size Distribution	cascade impactors	see note 2	ESP inlet and outlet
Resistivity	cyclonic flow probe	see note 2	ESP inlet
N2O	extractive	see note 2	air heater inlet

TABLE 3. LAKESIDE PROJECT MONITORING IN PHASES I AND II
page 2 of 2

MEASUREMENT	SAMPLE TYPE	FREQUENCY	LOCATION
		SUPPLEMENTAL	
<u>WATER</u>			
pH, sulfates	grab sample	once	sluice line discharge
pH, sulfates	grab sample	once	sluice water intake (Lake Springfield)
<u>SOLID BY-PRODUCTS</u>			
Ash (1)	grab sample	(2)	Ash Hoppers
<u>WORKER HEALTH</u>			
Hearing	NA	once (3)	TBD
Pulmonary Function	N/A	once (3)	TBD
TSP	N/A	once (3)	TBD
<u>AIR</u>			
Noise	single reading	once (3)	near equipment installation
Ambient Dust	single reading	once (3)	near coal pile

1. Ash will be monitored for the following parameters: mineral analysis, TCLP, total organic carbon, cyanide chloride, sulfide, specific gravity, fineness, PAH, and pH.
2. Measurements will be taken once during Phase I.
3. Must occur prior to initiation of Phase III.

TABLE 4. LAKESIDE PROJECT MONITORING IN PHASE III
page 1 of 2

MEASUREMENT	SAMPLE TYPE	FREQUENCY	LOCATION
	COMPLIANCE		
WATER			
Flow Rate	single reading estimate	once/wk	ash pond discharge
pH	grab sample	twice/wk	ash pond discharge
Total Suspended Solids	24 hr composite	twice/wk	ash pond discharge
Oil and Grease	grab sample	twice/mo	ash pond discharge
Flow Rate	single reading estimate	once/wk	outfall 008
pH	grab sample	once/wk	outfall 008
Total Suspended Solids	8 hr composite	once/wk	outfall 008
Oil and Grease	grab sample	once/wk	outfall 008
Iron	8 hr composite	once/wk	outfall 008
GASEOUS EMISSIONS			
Opacity	in-situ optical	continuous	stack
	SUPPLEMENTAL		
WATER			
pH, sulfate	grab sample	see note 1	sluice line discharge
pH, sulfate	grab sample	see note 1	sluice water intake (Lake Springfield)
GASEOUS EMISSIONS			
NOx	extractive probe/ chemiluminescent	continuous	air heater inlet
SOx	extractive probe/ NDUV	continuous	air heater inlet
CO	extractive probe/ NDIR	continuous	air heater inlet
CO2	extractive probe/ NDIR	continuous	air heater inlet
O2	extractive probe/ paramagnetic	continuous	air heater inlet
HC	extractive probe/ FID	continuous	air heater inlet
Particulate Loading	Method 17	see note 1	ESP inlet
	Method 5	see note 1	ESP outlet

TABLE 4. LAKESIDE PROJECT MONITORING IN PHASE III, continued

MEASUREMENT	SAMPLE TYPE	FREQUENCY	LOCATION
GASEOUS EMISSIONS			
Particle Size Distribution	cascade impactors	see note 1	ESP inlet and outlet
Resistivity	cyclonic flow probe	see note 1	ESP inlet
N2O	extractive	see note 2	air heater inlet
SOLID BY-PRODUCTS			
Ash	grab sample	see note 3	ESP hopper
WORKER HEALTH			
Hearing	N/A	once/yr	TBD
Pulmonary Function	N/A	once/yr	TBD
AIR			
Noise	single reading	once (1)	near equipment installation
Ambient Dust	single reading	once (1)	near coal pile

1. Measurements taken once during Phase III long-term testing.
2. N2O measurements taken once during long-term testing. Additional testing will then be done if the N2O concentration is greater than 5 ppm.
3. Ash sampling will be conducted monthly for the first three months of the long-term testing period.

2.0 ENVIRONMENTAL MONITORING

Both compliance and supplemental monitoring was conducted at the Hennepin site during the previous quarter. At the Lakeside site, only compliance monitoring was conducted during the previous quarter. The monitoring results from Hennepin and Lakeside are presented in the following sections.

2.1 Compliance Monitoring

Compliance monitoring is that monitoring required by Federal, State or local authorities.

2.1.1 Hennepin

The compliance monitoring conducted at Hennepin during the quarter which directly influences this project includes NPDES permit monitoring, coal quality reports, and groundwater monitoring data. Illinois Power submits NPDES Discharge Monitoring Reports to the Illinois EPA, on a monthly basis. Coal quality reports are submitted to Illinois EPA on a quarterly basis. Copies of the discharge monitoring and coal quality reports for April, May, and June are included in Appendix A of this report. Groundwater monitoring results for this quarter were unavailable; they will be reported in the October, 1992 quarterly report.

2.1.2 Lakeside

The compliance monitoring conducted at Lakeside during the quarter which directly influences this project includes NPDES permit monitoring and gaseous emissions opacity reports. Copies of the NPDES and excess opacity reports for April, May, and June are included in Appendix B of this report.

2.2 Supplemental Monitoring

2.2.1 Hennepin

The supplemental monitoring reported during this quarter consisted only of Continuous Emission Monitor daily averages for SO_2, NO_x, CO_2, CO, O_2, and HC. The results of the continuous emission monitoring are outlined in Table 5.

2.2.2 Lakeside

No supplemental monitoring was conducted at Lakeside during this quarter.

Table 5. Continuous Emission Monitoring Data for Gaseous Emissions*

Emissions Process:	CEMs O_2 % Dry**	CO ppm @ 3% O_2	CO_2 % @ 3% O_2	NO_x ppm @ 3% O_2	NO_x lb/mBtu	SO_2 ppm @ 3% O_2	SO_2 lb/mBtu	HC ppm @ 3% O_2	Duration in Hours
Baseline w/ OFA Off	6.15	8.2	15.5	409	0.557	2753	5.25	3.2	1.0
Baseline w/ OFA On	6.32	3.5	15.5	299	0.495	2763	5.27	2.6	18.3
Gas Reburn***	6.38	4.4	14.6	227	0.304	2352	4.40	2.7	8.6
Sorbent Injection	6.41	21.5	15.5	377	0.514	1556	2.97	1.5	18.9
Gas Reburn w/Sorbent Injection***	5.97	61.6	14.6	194	0.260	1337	2.51	1.5	77.7

* CEM averages were taken under to following process conditions: baseline with overfire air off, baseline with overfire air on, gas reburning, sorbent injection, and gas reburning with sorbent injection.

** CEMs Sampling was performed at the stack breeching.

*** Data include: (1) Results from parametric runs under a variety of test conditions, and
(2) Results obtained during load following operation
During load swings, due to sluggish boiler combustion controls, the excess air levels deviate significantly from the set point which affects NO_x and CO levels.

3.0 DATA DISCUSSION

3.1 Compliance Monitoring

3.1.1 Hennepin

The discharge monitoring reports for April through June indicated that no effluents were discharged from the ash pond to the Illinois River. The gaseous emissions for the coal composition did not exceed the regulatory emission rate of 17,050 lbs. of SO_2 per hour. The average lbs. of SO_2 per MBTU for this quarter was 5.30, based on the coal analysis. The GR-SI demonstration program substantially reduced the SO_2 emissions during the process operational hours.

3.1.2 Lakeside

The discharge monitoring reports for the ash pond outfall structure and the coal pile runoff during the months of April through June indicate that the ash pond outfall did not exceed the NPDES permit limitations. The coal pile runoff did not produce a discharge stream during this quarter.

The gaseous emissions opacity reports for April through June indicate that the opacity limit of 30 percent was exceeded during each of the three months. April exceedances were due startup, shutdown, precipitator failure, maintenance repairs, or unknown causes. Excess opacity readings in May were attributed to startup, shutdown, unit trip, precipitator field trip, air damper malfunction, and switching precipitator fields. June excess opacity measurements were due to startup, shutdown, precipitator malfunction, or unknown causes.

3.2 Supplemental Monitoring

3.2.1 Hennepin

Continuous Emission Monitoring averages were taken under the following process conditions: baseline with over fire air off; baseline with over fire air on; gas reburning, sorbent injection, gas reburning with sorbent injection. These averages show that there was a 53 percent reduction in NO_x from baseline with overfire air off, when implementing gas reburning with sorbent injection. In addition, there was a 51 percent reduction in SO_2 from baseline with overfire air off, when implementing gas reburning with sorbent injection.

3.2.2 Lakeside

No supplemental monitoring was conducted at Lakeside during this quarter.

4.0 PERMIT STATUS

Permits have been obtained for construction and operation of the GR-SI system at Hennepin. At Lakeside, construction is in progress, and operating permits have not been obtained yet. The following sections describe the permits obtained at each host site.

4.1 Hennepin

IP applied for a construction permit for the GR-SI project at Hennepin on July 7, 1989, and Illinois Environmental Protection Agency granted that permit on October 18, 1989. A modification to the construction permit for operation of the GR-SI demonstration for a period of 270 days was requested. This permit was granted June 21, 1990. A permit also was required to install the pH adjustment system for the GR-SI ash transport water to the existing ash pond. This permit was granted on July 25, 1990. Negotiations between Illinois Power, the Illinois EPA, and the U.S. EPA has resulted in the issuance of a revised draft Hennepin NPDES permit. During August, compliance monitoring will be performed on the unit's air emissions per requirements of the draft permit. A copy of this draft permit is included in Appendix C of this report.

4.2 Lakeside

On January 8, 1990, CWLP submitted a PSD permit application for the GR-SI demonstration at Lakeside Unit 7. On July 5, 1990, CWLP granted the Illinois Environmental Protection Agency a waiver from its statutory deadline to review the permit application (180 days) for a period of 120 days. Permit approval was received November 16, 1990. EER is in the process of applying for a Special Waste Permit through the Christian County Landfill for the future disposal of the Lakeside fly ash waste stream. A pre-permit for the disposal of special waste at the Christian County Landfill was obtained on March 18, 1992.

5.0 MODIFICATIONS TO MONITORING PLAN

5.1 Hennepin

There are no recommended modifications to the proposed monitoring plan as outlined in Table 1 and 2.

5.2 Lakeside

There are no recommended modifications to the proposed monitoring plan as listed in Tables 3 and 4.

APPENDIX A

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT

PERMITTEE NAME: ILLINOIS POWER COMPANY

ADDRESS: 500 South 27th Street
Decatur, IL 62525

PHONE: (217) 424-6833

Hennepin Power Plant
Ash Lagoon 1 & 3 Discharge

COMMENTS

* No discharge April, 1992.

STATE	PERMIT NUMBER	DISCHARGE NUMBER	SIC	LATITUDE	LONGITUDE
IL	IL0001554	005			

REPORTING PERIOD FROM: YEAR 92 MO 04 DAY 01 TO: YEAR 92 MO 04 DAY 30

30-Day Daily

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	NO. EX.	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
50050 * Flow	REPORTED				MGD								
	PERMIT CONDITION											1/week	est.
00400 pH	REPORTED												
	PERMIT CONDITION						6.0		9.0			1/week	Grab
00530 TSS	REPORTED												
	PERMIT CONDITION							15.0	30.0	mg/l		1/week	24 hour composite
00556 Oil & Grease	REPORTED												
	PERMIT CONDITION							15.0	20.0	mg/l		2/month	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Connell W. (LAST, FIRST, MI)

TITLE OF THE OFFICER: Vice-President (TITLE)

DATE: YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate

E.F. Abell

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

This Agency is authorized to require this information under Illinois Revised Statutes 1979, Chapter 111 1/2, Section 1042. Disclosure of this information

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT

PERMITTEE NAME: ILLINOIS POWER COMPANY

ADDRESS: 500 South 27th Street
Decatur, IL 62525

PHONE: (217) 424-6833

Hennepin Power Plant
Ash Lagoon 1 & 3 Discharge

COMMENTS

* No discharge in May, 1992.

IL. (ST)	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
IL	IL0001554	005			

REPORTING PERIOD FROM 92 05 01 TO 92 05 31
(YEAR MO DAY)

30-Day Daily

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	NO EX	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
50050 * Flow	REPORTED				MGD								
	PERMIT CONDITION											1/week	est.
00400 pH	REPORTED												
	PERMIT CONDITION						6.0		9.0			1/week	Grab
00530 TSS	REPORTED												
	PERMIT CONDITION							15.0	30.0	mg/l		1/week	24 hour composite
00556 Oil & Grease	REPORTED												
	PERMIT CONDITION							15.0	20.0	mg/l		2/month	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Connell W. (LAST, FIRST, MI)

TITLE OF THE OFFICER: Vice-President (TITLE)

DATE (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

EPA 3320-1 (11-79)

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 per

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM COMMENTS

DISCHARGE MONITORING REPORT

PERMITTEE NAME: ILLINOIS POWER COMPANY

ADDRESS: 500 South 27th Street
Decatur, IL 62525

PHONE: (217) 424-6833

Hennepin Power Plant
Ash Lagoon 1 & 3 Discharge

COMMENTS

* No discharge, June 1992.

STATE	PERMIT NUMBER	DIS	SIC	LATITUDE	LONGITUDE
IL	IL0001554	005			

REPORTING PERIOD FROM: YEAR 92 MO 06 DAY 01 TO: YEAR 92 MO 06 DAY 30

30-Day Daily

PARAMETER		QUANTITY MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	NO EX	CONCENTRATION MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
50050 * Flow	REPORTED				MGD								
	PERMIT CONDITION											1/week	est.
00400 pH	REPORTED												
	PERMIT CONDITION						6.0		9.0			1/week	Grab
00530 TSS	REPORTED												
	PERMIT CONDITION							15.0	30.0	mg/l		1/week	24 hour composite
00556 Oil & Grease	REPORTED												
	PERMIT CONDITION							15.0	20.0	mg/l		2/month	Grab
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Connell W. (LAST, FIRST, MI)

TITLE OF THE OFFICER: Vice-President

TITLE

DATE: YEAR MO DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate

E.F. Abell

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

...is authorized to require this information under Illinois Revised

ILLINOIS POWER COMPANY
HENNEPIN POWER STATION
COAL ANALYSIS REPORT FOR THE PERIOD 040192 TO 043092
FOR THE VENDOR : COAL TO BUNKERS

SAMPLE DATE	TONS TO BUNKERS	% MOISTURE (AR)	% ASH (AR)	% SULFUR (AR)	BTU/LB (AR)	BTU/LB (DRY)	BTU/LB (M.A.F.)	UNIT COAL BTU/LB	POUNDS SO2 PER MBTU	SO2 LIMIT EXCEEDED
04/01/92	540.00	13.38	10.29	2.94	10,899	12,583	14,361	14,532	5.26	
04/02/92	714.00	13.22	9.54	2.91	10,949	12,617	14,174	14,429	5.18	
04/03/92	622.00	14.63	10.08	2.83	10,704	12,538	14,217	14,484	5.16	
04/08/92	1,665.00	12.91	10.22	2.91	10,907	12,524	14,189	14,454	5.20	
04/11/92	1,591.00	14.16	10.49	2.85	10,692	12,455	14,188	14,462	5.29	
04/12/92	571.00	14.47	11.52	2.76	10,456	12,225	14,129	14,416	5.15	
04/13/92	1,209.00	12.38	11.63	3.15	10,754	12,344	14,246	14,551	5.71	
04/14/92	603.00	15.10	11.99	2.96	10,393	12,241	14,252	14,566	5.55	
04/15/92	1,053.00	14.57	11.86	2.93	10,504	12,295	14,277	14,586	5.44	
04/16/92	1,503.00	13.98	10.63	3.01	10,704	12,443	14,198	14,480	5.48	
04/17/92	1,383.00	13.97	10.55	3.00	10,761	12,508	14,258	14,538	5.44	
04/18/92	2,537.00	15.67	10.12	2.86	10,543	12,501	14,205	14,479	5.29	
04/19/92	1,539.00	13.56	10.41	2.92	10,799	12,494	14,204	14,476	5.27	
04/20/92	1,611.00	13.98	10.64	2.93	10,684	12,421	14,174	14,452	5.35	
04/21/92	1,178.00	12.57	10.90	2.95	10,874	12,438	14,209	14,488	5.29	
04/22/92	687.00	13.44	10.31	2.79	10,829	12,510	14,202	14,466	5.02	
04/24/92	602.00	12.82	11.12	3.14	10,817	12,408	14,221	14,515	5.66	
04/25/92	516.00	12.55	10.60	3.31	10,925	12,493	14,215	14,505	5.91	
04/26/92	1,717.00	13.03	10.55	2.92	10,872	12,500	14,225	14,501	5.24	
04/29/92	1,748.00	13.07	10.66	2.90	10,831	12,459	14,200	14,475	5.22	
04/30/92	1,766.00	13.07	10.96	2.84	10,921	12,563	14,208	14,469	5.07	

WEIGHTED AVERAGES FOR THE PERIOD 040192 TO 043092

TOTAL TONS	MOISTURE (AR)	ASH (AR)	SULFUR (AR)	BTU/LB (AR)	BTU/LB (DRY)	BTU/LB (M.A.F.)	UNIT COAL BTU/LB	LBS. SO2 PER MBTU
25,378.00	13.73	10.60	2.93	10,754	12,465	14,219	14,488	5.31

... END OF REPORT RUN ON 05/05/92 AT 16.18.50

ILLINOIS POWER COMPANY
HENNEPIN POWER STATION
COAL ANALYSIS REPORT FOR THE PERIOD 050192 TO 053192
FOR THE VENDOR : COAL TO BUNKERS

SAMPLE DATE	TONS TO BUNKERS	% MOISTURE (AR)	% ASH (AR)	% SULFUR (AR)	BTU/LB (AR)	BTU/LB (DRY)	BTU/LB (M.A.F.)	UNIT COAL BTU/LB	POUNDS SO2 PER MBTU	SO2 LIMIT EXCEEDED
05/01/92	2,105.00	14.12	10.57	2.82	10,650	12,379	14,116	14,386	5.17	
05/02/92	2,394.00	11.02	10.55	2.91	10,761	12,515	14,263	14,510	5.27	
05/03/92	1,433.00	13.03	10.75	2.90	10,898	12,531	14,270	14,578	5.19	
05/05/92	1,924.00	12.39	10.75	2.76	10,821	12,481	14,155	14,415	4.98	
[illegible]	2,330.00	12.34	10.34	2.82	[illegible]	12,445	14,130	14,395	5.11	
05/07/92	1,267.00	13.25	10.36	2.88	10,825	12,478	14,157	14,435	5.19	
[illegible]	3,244.00	13.36	10.51	2.88	10,781	12,443	14,162	14,433	5.21	
[illegible]	1,778.00	13.05	11.47	[illegible]	[illegible]	12,387	[illegible]	14,471	5.11	
[illegible]	1,537.00	[illegible]	10.75	[illegible]	10,826	12,377	14,129	14,404	5.26	
[illegible]	[illegible]	12.91	[illegible]	2.76	10,871	12,435	14,169	14,473	5.33	
[illegible]	[illegible]	[illegible]	10.73	2.99	10,799	12,442	14,277	14,438	5.40	
[illegible]	1,719.00	[illegible]	11.15	2.91	10,716	12,375	14,269	14,477	5.30	
05/14/92	3,256.00	13.46	10.64	2.89	10,916	12,489	14,238	14,514	5.21	
05/15/92	1,869.00	14.03	11.33	2.91	10,610	12,341	14,211	14,597	5.35	
[illegible]	3,205.00	13.73	11.25	2.88	10,629	12,333	14,131	14,468	5.27	
[illegible]	1,634.00	13.85	11.55	2.83	10,610	12,317	14,224	14,517	5.20	
[illegible]	[illegible]	13.97	11.30	2.70	10,640	12,369	14,253	14,545	5.31	
[illegible]	1,676.00	13.91	10.51	2.79	10,801	12,551	14,297	14,579	5.04	
[illegible]	3,225.00	13.94	10.70	2.94	10,738	12,471	14,249	14,531	5.35	
[illegible]	[illegible]	13.86	10.79	2.91	10,756	12,483	14,275	14,558	5.27	
[illegible]	1,717.00	13.91	[illegible]	2.89	[illegible]	12,451	[illegible]	14,557	5.25	
[illegible]	[illegible]	14.60	11.24	2.86	[illegible]	12,413	14,309	14,574	5.26	
[illegible]	[illegible]	13.37	[illegible]	2.87	10,764	12,424	14,265	14,552	5.19	
[illegible]	[illegible]	13.78	10.72	2.81	10,782	12,506	14,291	14,559	5.08	
[illegible]	2,132.00	13.71	[illegible]	2.75	[illegible]	12,522	14,249	14,537	5.20	
[illegible]	[illegible]	[illegible]	[illegible]	2.96	[illegible]	12,662	[illegible]	14,511	5.31	
[illegible]	850.00	12.33	[illegible]	3.07	11,026	12,576	14,309	14,559	5.43	
[illegible]	2,992.00	[illegible]	[illegible]	3.01	[illegible]	12,630	14,278	14,571	5.36	
[illegible]	[illegible]	12.80	[illegible]	2.94	[illegible]	[illegible]	[illegible]	[illegible]	5.22	
[illegible]	1,881.00	12.51	10.34	3.06	11,003	12,580	14,266	14,543	5.42	

WEIGHTED AVERAGES FOR THE PERIOD 050192 TO 053192

TOTAL TONS	MOISTURE (AR)	ASH (AR)	SULFUR (AR)	BTU/LB (AR)	BTU/LB (DRY)	BTU/LB (M.A.F.)	UNIT COAL BTU/LB	LBS. SO2 PER MBTU
[illegible]	13.53	10.72	2.91	10,782	12,469	14,225	14,511	5.25

... END OF REPORT RUN ON 06/04/92 AT 14.26.14

ILLINOIS POWER COMPANY
HENNEPIN POWER STATION
COAL ANALYSIS REPORT FOR THE PERIOD 060192 TO 063092
FOR THE VENDOR : COAL TO BUNKERS
(COMPLETED SAMPLES)

SAMPLE DATE	TONS TO BUNKERS	% MOISTURE (AR)	% ASH (AR)	% SULFUR (AR)	BTU/LB (AR)	BTU/LB (DRY)	BTU/LB (M.A.F.)	UNIT COAL BTU/LB	POUNDS SO2 PER MBTU	ABOVE 5.8 POUNDS SO2
06/01/92	902.00	12.52	10.93	2.99	10,842	12,394	14,163	14,443	5.38	
06/02/92	662.00	12.86	11.28	2.97	10,755	12,343	14,179	14,466	5.38	
06/03/92	354.00	13.51	10.50	3.02	10,704	12,443	14,176	14,455	5.47	
06/04/92	1,514.00	13.62	10.91	3.02	10,695	12,381	14,171	14,456	5.51	
06/05/92	1,469.00	14.60	9.93	2.88	10,684	12,510	14,156	14,420	5.26	
06/06/92	1,295.00	14.65	9.93	2.88	10,666	12,496	14,135	14,397	5.27	
06/07/92	1,647.00	14.30	10.58	2.94	10,541	12,387	14,131	14,408	5.44	
06/08/92	1,343.00	14.63	10.32	3.04	10,632	12,454	14,168	14,445	5.58	
06/11/92	643.00	11.11	10.28	3.08	11,140	12,533	14,172	14,438	5.39	
06/12/92	2,128.00	12.22	10.17	3.05	10,989	12,519	14,159	14,425	5.41	
06/13/92	1,364.00	12.98	10.44	2.96	10,897	12,508	14,212	14,483	5.30	
06/14/92	1,766.00	13.41	10.75	2.90	10,765	12,432	14,195	14,471	5.25	
06/15/92	1,772.00	13.52	11.19	2.96	10,676	12,345	14,179	14,469	5.41	
06/16/92	1,775.00	12.81	10.63	3.04	10,842	12,435	14,161	14,438	5.47	
06/17/92	3,327.00	13.04	11.16	3.01	10,768	12,382	14,204	14,492	5.44	
06/18/92	1,774.00	12.92	10.96	2.99	10,818	12,409	14,193	14,475	5.39	
06/19/92	1,581.00	13.79	10.79	2.93	10,721	12,435	14,213	14,494	5.33	
06/21/92	1,594.00	12.46	10.69	2.98	10,903	12,454	14,187	14,462	5.33	
06/22/92	1,567.00	13.76	10.50	2.92	10,793	12,515	14,250	14,527	5.28	
06/23/92	1,710.00	12.55	10.38	2.96	10,969	12,543	14,233	14,503	5.26	
06/24/92	1,592.00	12.74	10.09	2.94	10,910	12,503	14,138	14,399	5.26	
06/25/92	3,406.00	13.20	10.15	2.89	10,915	12,576	14,242	14,507	5.17	
06/26/92	1,431.00	13.15	10.10	2.87	10,945	12,603	14,262	14,526	5.11	
06/27/92	1,126.00	13.41	10.21	2.93	10,870	12,553	14,232	14,501	5.26	
06/28/92	1,899.00	12.23	10.16	3.05	11,021	12,557	14,201	14,469	5.40	
06/29/92	1,987.00	12.59	10.55	2.97	10,937	12,500	14,213	14,486	5.30	
06/30/92	2,172.00	12.76	10.67	3.01	10,922	12,520	14,265	14,544	5.37	

WEIGHTED AVERAGES FOR THE PERIOD 060192 TO 063092

TOTAL TONS	MOISTURE (AR)	ASH (AR)	SULFUR (AR)	BTU/LB (AR)	BTU/LB (DRY)	BTU/LB (M.A.F.)	UNIT COAL BTU/LB	LBS. SO2 PER MBTU
43,900.00	13.17	10.53	2.97	10,833	12,475	14,197	14,471	5.34

... END OF REPORT RUN ON 07/07/92 AT 11.25.34

APPENDIX B

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT

PERMITTEE NAME: City Water, Light & Power
ADDRESS: Seventh & Monroe
Springfield, IL 62757
PHONE (217) 786-4052

COMMENTS

(2-3) ST: IL
(4-16) PERMIT NUMBER: IL 0024767
(17-19) DIS: 004
SIC:
LATITUDE:
LONGITUDE:

REPORTING PERIOD FROM (20-21) YEAR 92 (22-23) MO 04 (24-25) DAY 01 TO (26-27) YEAR 92 (28-29) MO 05 (30-31) DAY 01

(32-37) PARAMETER		3 card only (38-45) QUANTITY MINIMUM	QUANTITY AVERAGE (46-53)	QUANTITY MAXIMUM (54-61)	UNITS	(62-63) NO EX	4 card only (38-45) CONCENTRATION MINIMUM	CONCENTRATION AVERAGE (46-53)	CONCENTRATION MAXIMUM (54-61)	UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
Flow	REPORTED	4.556	5.640	6.629	MGD							1/7	EST
	PERMIT CONDITION											1/7	EST
pH	REPORTED						7.4	7.7	8.1			2/7	GRAB
	PERMIT CONDITION						6.0		9.0			2/7	GRAB
Total Suspended Solids	REPORTED						7	13	26	mg/l		2/7	COMP
	PERMIT CONDITION							15	30			2/7	COMP
Oil and Grease	REPORTED						.1	.6	1.0	mg/l		2/30	GRAB
	PERMIT CONDITION							15	20			2/30	GRAB
Boron	REPORTED						4.6	5.4	6.3	mg/l		2/30	GRAB
	PERMIT CONDITION											2/30	GRAB
Copper	REPORTED						.01	.01	.01	mg/l		2/30	COMP
	PERMIT CONDITION											2/30	COMP
Silver	REPORTED						.003	.003	.004	mg/l		2/30	COMP
	PERMIT CONDITION											2/30	COMP
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Frasco, Lynn A. (LAST, FIRST, MI)
TITLE OF THE OFFICER: General Manager, Public Utilities (TITLE)
DATE: 92 05 15 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

S. David Davies
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL 532-0092
EPA WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 per [illegible] fine up to $25,000.00 per day of violation and imprison-

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM COMMENTS

DISCHARGE MONITORING REPORT

PERMITTEE NAME: City Water, Light & Power
ADDRESS: Seventh & Monroe
Springfield, IL 62757
PHONE (217) 786-4052

COMMENTS

No discharge during this period.

(2-3) ST	(4-16) PERMIT NUMBER	(17-19) DIS	SIC	LATITUDE	LONGITUDE
IL	IL 0024767	008			

REPORTING PERIOD FROM (20-21 YEAR) 92 (22-23 MO) 04 (24-25 DAY) 01 TO (26-27 YEAR) 92 (28-29 MO) 05 (30-31 DAY) 01

(32-37) PARAMETER		3 card only (38-45) QUANTITY MINIMUM	(46-53) QUANTITY AVERAGE	(54-61) QUANTITY MAXIMUM	QUANTITY UNITS	(62-63) NO EX	4 card only (38-45) CONCENTRATION MINIMUM	(46-53) CONCENTRATION AVERAGE	(54-61) CONCENTRATION MAXIMUM	CONCENTRATION UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
Flow	REPORTED				MGD								EST
	PERMIT CONDITION											1/7	EST
pH	REPORTED												GRAB
	PERMIT CONDITION						6.0		9.0			1/7	GRAB
Total Suspended Solids	REPORTED												COMP
	PERMIT CONDITION							15	30	mg/1		1/7	COMP
Oil and Grease	REPORTED												GRAB
	PERMIT CONDITION							15	20	mg/1		1/7	GRAB
Total Iron	REPORTED												COMP
	PERMIT CONDITION							2.0	4.0	mg/1		1/7	COMP
Dissolved Iron	REPORTED												COMP
	PERMIT CONDITION								1	mg/1		1/7	COMP
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Fraseo, Lynn A.	General Manager, Public Utilities	92 05 15	*I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.*
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

S. Lynn Harris

IL 532-0092

This Agency is authorized to require this information under Illinois Revised

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM COMMENTS

DISCHARGE MONITORING REPORT

PERMITTEE NAME: City Water, Light & Power
ADDRESS: Seventh & Monroe
Springfield, IL 62757
PHONE: (217) 786-4038

COMMENTS

(2-3) IL ST | (4-18) IL 0024767 PERMIT NUMBER | (17-19) 004 DIS | SIC | LATITUDE | LONGITUDE

REPORTING PERIOD: FROM (20-21) 92 YEAR (22-23) 05 MO (24-25) 01 DAY TO (26-27) 92 YEAR (28-29) 06 MO (30-31) 01 DAY

(32-37) PARAMETER		3 card only (38-45) QUANTITY MINIMUM	QUANTITY AVERAGE (46-53)	QUANTITY MAXIMUM (54-61)	UNITS	(62-63) NO EX	4 card only (38-45) CONCENTRATION MINIMUM	CONCENTRATION AVERAGE (46-53)	CONCENTRATION MAXIMUM (54-61)	UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
Flow	REPORTED	5.194	6.538	7.701	MGD							1/7	EST
	PERMIT CONDITION											1/7	EST
pH	REPORTED						7.4		8.0			2/7	GRAB
	PERMIT CONDITION						6.0		9.0			2/7	GRAB
Total Suspended Solids	REPORTED						7	15	29			2/7	COMP
	PERMIT CONDITION							15	30	mg/l		2/7	COMP
Oil and Grease	REPORTED						2	2	2			2/30	GRAB
	PERMIT CONDITION							15	20	mg/l		2/30	GRAB
Boron	REPORTED						6.53	6.74	6.94			2/30	GRAB
	PERMIT CONDITION									mg/l		2/30	GRAB
Copper	REPORTED						.009	.030	.051			2/30	COMP
	PERMIT CONDITION									mg/l		2/30	COMP
Silver	REPORTED						.001	.001	.001			2/30	COMP
	PERMIT CONDITION									mg/l		2/30	COMP
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Frasco, Lynn A. (LAST, FIRST, MI)

TITLE OF THE OFFICER: General Manager, Public Utilities (TITLE)

DATE: 92 YEAR 06 MO 08 DAY

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

D. Farris
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL 532-0092
WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 per

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM COMMENTS

DISCHARGE MONITORING REPORT

PERMITTEE NAME: City Water, Light & Power
ADDRESS: Seventh & Monroe
Springfield, IL 62757
PHONE: (217) 786-4038

COMMENTS

No discharge during this period.

(2-3) ST: IL
(4-16) PERMIT NUMBER: IL 0024767
(17-19) DIS: 008
SIC:
LATITUDE:
LONGITUDE:

REPORTING PERIOD: FROM (20-21) YEAR 92 (22-23) MO 05 (24-25) DAY 01 TO (26-27) YEAR 92 (28-29) MO 06 (30-31) DAY 01

(32-37) PARAMETER		3 card only (38-45) QUANTITY MINIMUM	(46-53) QUANTITY AVERAGE	(54-61) QUANTITY MAXIMUM	QUANTITY UNITS	(62-63) NO EX	4 card only (38-45) CONCENTRATION MINIMUM	(46-53) CONCENTRATION AVERAGE	(54-61) CONCENTRATION MAXIMUM	CONCENTRATION UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
Flow	REPORTED				MGD								EST
	PERMIT CONDITION											1/7	EST
pH	REPORTED												GRAB
	PERMIT CONDITION						6.0		9.0			1/7	GRAB
Total Suspended Solids	REPORTED												COMP
	PERMIT CONDITION							15	30	mg/l		1/7	COMP
Oil and Grease	REPORTED												GRAB
	PERMIT CONDITION							15	20	mg/l		1/7	GRAB
Total Iron	REPORTED												COMP
	PERMIT CONDITION							2.0	4.0	mg/l		1/7	COMP
Dissolved Iron	REPORTED												COMP
	PERMIT CONDITION								1	mg/l		1/7	COMP
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Frasco, Lynn A. (LAST, FIRST, MI)
TITLE OF THE OFFICER: General Manager, Public Utilities (TITLE)
DATE: YEAR 92 MO 06 DAY 08

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL 532-0092
WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1042. Disclosure of this information

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

DISCHARGE MONITORING REPORT

PERMITTEE NAME: City Water, Light & Power
ADDRESS: Seventh & Monroe
Springfield, IL 62757
PHONE: (217) 786-4038

COMMENTS

(2-3) ST: IL
(4-10) PERMIT NUMBER: IL 0024767
(17-19) DIS: 004
SIC:
LATITUDE:
LONGITUDE:

REPORTING PERIOD: FROM (20-21) YEAR 92 (22-23) MO 06 (24-25) DAY 01 TO (26-27) YEAR 92 (28-29) MO 07 (30-31) DAY 01

(32-37) PARAMETER		3 card only (38-45) QUANTITY MINIMUM	QUANTITY AVERAGE (46-53)	QUANTITY MAXIMUM (54-61)	UNITS (62-63)	NO EX	4 card only (38-45) CONCENTRATION MINIMUM	CONCENTRATION AVERAGE (46-53)	CONCENTRATION MAXIMUM (54-61)	UNITS (62-63)	NO EX	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
Flow	REPORTED	5.194	6.091	6.629	MGD							1/7	EST
	PERMIT CONDITION											1/7	EST
pH	REPORTED						7.8		8.3			2/7	GRAB
	PERMIT CONDITION						6.0		9.0			2/7	GRAB
Total Suspended Solids	REPORTED						5	14	30	mg/l		2/7	COMP
	PERMIT CONDITION							15	30			2/7	COMP
Oil and Grease	REPORTED						1	2	2			2/30	GRAB
	PERMIT CONDITION							15	20	mg/l		2/30	GRAB
Boron	REPORTED						5.9	6.0	6.1			2/30	GRAB
	PERMIT CONDITION								9	mg/l		2/30	GRAB
Copper	REPORTED						0.004	0.011	0.018			2/30	COMP
	PERMIT CONDITION									mg/l		2/30	COMP
Silver	REPORTED						0.002	0.002	0.002			2/30	COMP
	PERMIT CONDITION									mg/l		2/30	COMP
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER	TITLE OF THE OFFICER	DATE	
Frasco, Lynn A.	General Manager, Public Utilities	92 07 15	I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.
LAST FIRST MI	TITLE	YEAR MO DAY	SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

IL 532-0092
WPC 242 11/79

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1042. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $10,000.00 per

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM COMMENTS

DISCHARGE MONITORING REPORT

PERMITTEE NAME: City Water, Light & Power
ADDRESS: Seventh & Monroe
Springfield, IL 62757
PHONE: (217) 786-4038

COMMENTS

No discharge during this period.

(2-3) ST: IL
(4-10) PERMIT NUMBER: IL 0024767
(17-19) DIS: 008
SIC:
LATITUDE:
LONGITUDE:

REPORTING PERIOD: FROM (20-21) YEAR: 92 (22-23) MO: 06 (24-25) DAY: 01
TO (26-27) YEAR: 92 (28-29) MO: 07 (30-31) DAY: 01

(32-37) PARAMETER		3 card only (38-45) QUANTITY MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX	4 card only (38-45) CONCENTRATION MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(62-63) NO EX	(64-68) FREQUENCY OF ANALYSIS	(68-70) SAMPLE TYPE
Flow	REPORTED				MGD								EST
	PERMIT CONDITION											1/7	EST
pH	REPORTED												GRAB
	PERMIT CONDITION						6.0		9.0			1/7	GRAB
Total Suspended Solids	REPORTED												COMP
	PERMIT CONDITION							15	30	mg/1		1/7	COMP
Oil and Grease	REPORTED												GRAB
	PERMIT CONDITION							15	20	mg/1		1/7	GRAB
Total Iron	REPORTED												COMP
	PERMIT CONDITION							2.0	4.0	mg/1		1/7	COMP
Dissolved Iron	REPORTED												COMP
	PERMIT CONDITION								1	mg/1		1/7	COMP
	REPORTED												
	PERMIT CONDITION												
	REPORTED												
	PERMIT CONDITION												

NAME OF PRINCIPAL EXECUTIVE OFFICER: Frasco, Lynn A. (LAST, FIRST, MI)
TITLE OF THE OFFICER: General Manager, Public Utilities (TITLE)
DATE: 92 07 15 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

D Farris
SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: Lakeside

Month/Year: April 1992

Day	Start-End	Component	Cause	Corrective Action Taken
4/1/92	12:00A	Clock Board	Loose Wire	
4/30/92	23:54	Transmissometer		

IEPA contacted & notified on inoperativeness of Lakeside Opacity Monitor.

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: Lakeside

Month/Year: April 1992

Opacity Limit: 30%

BOILER HOURS
Unit #7 - 720
Unit #8 - 720

ay	Start	Opacity %	Cause	Corrective Action Taken

Data Not Available

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: 31

Month/Year: April 1992

ay	Start-End	Component	Cause	Corrective Action Taken
/1/92	12:00-08:50	Chart Recorder	Paper Jam	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: 31

Month/Year: April 1992

Opacity Limit: 30%

Day	Start	Opacity %	Cause	Corrective Action Taken
4-6	08:54	42.0	Unknown	
	09:00	42.0	"	
4-11	02:24	68.0	Maintenance Repair	
	02:30	44.0	on boiler forcing	
	02:36	31.0	precip. off.	
	03:12	41.0	"	
4-12	12:00	63.0	Startup	
	:06	54.0	"	
	:12	45.0	"	
	:18	61.0	"	
	:24	65.0	"	
	:30	67.0	"	
	:36	68.0	"	
	:42	71.0	"	
	:48	73.0	"	
	:54	75.0	"	
	13:00	76.0	"	
	:06	78.0	"	
	:12	75.0	"	
	:18	79.0	"	
	:24	78.0	"	
	:30	77.0	"	
	:36	76.0	"	
	:42	74.0	"	
	:48	72.0	"	
	:54	69.0	"	
	14:00	66.0	"	
	:06	63.0	"	
	:12	60.0	"	
	:18	57.0	"	
	:24	53.0	"	
	:30	50.0	"	
	:36	47.0	"	
	:42	44.0	"	
	:48	42.0	"	
	:54	39.0	"	
	15:00	36.0	"	
	:06	48.0	"	
	:12	67.0	"	
	:18	59.0	"	
	:24	44.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
4-12	15:30	46.0	Startup	
	:36	43.0	"	
	:42	40.0	"	
	:48	50.0	"	
	:54	41.0	"	
	16:00	43.0	"	
	:06	32.0	"	
	:42	43.0	"	
	:48	35.0	"	
	18:42	47.0	"	
	:48	43.0	"	
	:54	32.0	"	
	19:00	46.0	"	
	:06	71.0	"	
	;12	60.0	"	
	:18	66.0	"	
	:24	64.0	"	
	:30	64.0	"	
	:36	65.0	"	
	;42	68.0	"	
	:48	77.0	"	
	:54	74.0	"	
	20:00	71.0	"	
	:06	67.0	"	
	:12	67.0	"	
	:18	67.0	"	
	:24	67.0	"	
	:30	67.0	"	
	:36	57.0	"	
4-24	20:36	37.0	Shutdown	
4-26	01:00	45.0	Startup	
	:06	79.0	"	
	:12	85.0	"	
	:18	53.0	"	
	:24	37.0	"	
	:30	35.0	"	
	:36	34.0	"	
	:42	33.0	"	
	:48	32.0	"	
	:54	31.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
4-26	02:36	61.0	Startup	
	:42	53.0	"	
	:48	49.0	"	
	:54	47.0	"	
	03:00	48.0	"	
	04:00	51.0	"	
	:06	70.0	"	
	:12	73.0	"	
	:18	67.0	"	
	;24	36.0	"	
	:30	45.0	"	
	:36	41.0	"	
	:42	38.0	"	
	:48	37.0	"	
	:54	35.0	"	
	05:06	35.0	"	
	:12	34.0	"	
	06:00	38.0	"	
	:12	43.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: 32

Month/Year: April 1992

Day	Start-End	Component	Cause	Corrective Action Taken

N O N E

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: 32

Month/Year: April 1992

Opacity Limit: 30%

Day	Start	Opacity %	Cause	Corrective Action Taken
4-6	08:30	72.0	Precipitator Malfunction	
	:36	72.0	"	
	:42	72.0	"	
	:48	72.0	"	
	:54	72.0	"	
4-27	16:42	55.0	Unknown	
	24:36	40.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: 33

Month/Year: April 1992

Day	Start-End	Component	Cause	Corrective Action Taken
		UNIT OUTAGE		

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: 33

Month/Year: April 1992

Opacity Limit: 30%

Day	Start	Opacity %	Cause	Corrective Action Taken
			UNIT OUTAGE	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: Lakeside

Month/Year: May 1992

ay	Start-End	Component	Cause	Corrective Action Taken
1	12:00A-	Transmissometer	Cal Fail	Measured stack & recali-
4	07:30			brated instrument
29	09:24-11:00	Opacity Recorder	Stuck in Cal	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: Lakeside

Month/Year: April 1992

Opacity Limit: 30%

BOILER HOURS
Unit #7 - 619
Unit #8 - 608

ay	Start	Opacity %	Cause	Corrective Action Taken
-13	18:54	41.0	Unit 7 Trip	
	19:00	74.0	"	
	:06	74.0	"	
	:12	66.0	"	
-17	12:18	64.0	Precip. field tripped	Reset field
	:24	76.0	"	
	:30	32.0	"	
-18	11:18	31.0	Unknown	
-21	21:36	41.0	Equip. Malf./Air	Placed in manual
	:42	46.0	Damper	control until repairs
	:48	42.0	"	were completed
	22:00	57.0	"	"
	:06	76.0	"	"
	:12	61.0	"	
	:24	36.0	"	"
	:48	47.0	"	"
	:54	37.0	"	"
	23:00	31.0	"	"
	:06	42.0	"	"
	:12	55.0	"	"
	:18	40.0	"	"
-29	18:54	63.0	Startup 7&8	
	19:30	74.0	"	
	:36	80.0	"	
	:42	80.0	"	
	:48	78.0	"	
	:54	71.0	"	
	20:00	75.0	"	
	:06	75.0	"	
	:12	76.0	"	
	:18	78.0	"	
	:24	79.0	"	
	:30	71.0	"	
	:36	63.0	"	
	:42	61.0	"	
	:48	55.0	"	
	:54	52.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
29	21:00	52.0	Startup 7&8	
	:06	34.0	"	
	:12	31.0	"	
	:18	45.0	"	
	:24	47.0	"	
	:30	42.0	"	
	:36	37.0	"	
	:42	41.0	"	
	:48	34.0	"	
	22:24	40.0	"	
	:30	57.0	"	
	:36	57.0	"	
	:42	48.0	"	
	:48	54.0	"	
	:54	42.0	"	
	23:00	35.0	"	
	:24	39.0	"	
	:36	32.0	"	
	:42	50.0	"	
	:54	34.0	"	
-30	00:36	37.0	Startup 7&8	
	:54	43.0	"	
	01:12	32.0	"	
	:30	45.0	"	
	:54	42.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: 31

Month/Year: May 1992

ay	Start-End	Component	Cause	Corrective Action Taken

N O N E

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: 31

Month/Year: May 1992

Opacity Limit: 30%

ay	Start	Opacity %	Cause	Corrective Action Taken
-11	00:06	49.0	Switched Precip. Fields	
	:12	58.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

nit: 32

onth/Year: May 1992

y	Start-End	Component	Cause	Corrective Action Taken

N O N E

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: 32

Month/Year: May 1992

Opacity Limit: 30%

ay	Start	Opacity %	Cause	Corrective Action Taken
-12	00:06	50.0	Switched Precip. Fields	
	:12	89.0	"	
-21	02:48	62.0	Startup	
	03:00	33.0	"	
	:06	36.0	"	
	06:54	60.0	"	
	07:00	64.0	"	
	:06	54.0	"	
	:12	47.0	"	
	:18	52.0	"	
	:24	63.0	"	
	:30	65.0	"	
	:36	59.0	"	
	:42	55.0	"	
	:48	53.0	"	
	:54	53.0	"	
	08:00	53.0	"	
	:06	35.0	"	
	:42	59.0	"	
	09:12	70.0	"	
	:18	89.0	"	
	10:36	35.0	"	
5-25	08:54	71.0	Startup	
	09:00	40.0	"	
	:06	49.0	"	
	:12	49.0	"	
	:18	46.0	"	
	:24	43.0	"	
	:30	40.0	"	
	:36	36.0	"	
	11:12	31.0	"	
5-29	10:00	79.0	Startup	
	:06	73.0	"	
	:12	58.0	"	
	:18	53.0	"	
	:24	49.0	"	
	:30	41.0	"	
	:36	49.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
29	10:42	41.0	"	
	:48	37.0	"	
	:54	36.0	"	
	11:00	33.0	"	
	:06	32.0	"	
	:12	31.0	"	
	:18	31.0	"	
	:30	32.0	"	
	:36	38.0	"	
	13:30	85.0	"	
	:36	47.0	"	
	:42	37.0	"	
	15:18	39.0	"	
	:24	56.0	"	
	:30	51.0	"	
	:36	51.0	"	
	:42	54.0	"	
	:48	84.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: 33

Month/Year: May 1992

ay	Start-End	Component	Cause	Corrective Action Taken
/20	15:00-20:00	Opacity Recorder	Paper Jam	
/23 /26	22:54 12:00	Transmissometer	Malfunctioning chopper motor	Replaced motor & recalibrated

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

nit: 33

onth/Year: May 1992

pacity Limit: 30%

	Start	Opacity %	Cause	Corrective Action Taken
1	04:18	43.0	Startup & Shutdown after outage	
	:24	43.0	"	
	:30	31.0	"	
	:36	55.0	"	
	:42	40.0	"	
	:48	35.0	"	
	:54	33.0	"	
	05:00	35.0	"	
	:06	33.0	"	
	:12	32.0	"	
	:18	37.0	"	
	:24	32.0	"	
	:30	32.0	"	
	:36	32.0	"	
	:42	31.0	"	
	:48	31.0	"	
	:54	31.0	"	
	06:00	31.0	"	
	:06	30.0	"	
	:12	30.0	"	
	:18	30.0	"	
	:24	30.0	"	
	:30	30.0	"	
	:36	30.0	"	
	:42	30.0	"	
	:48	30.0	"	
	:54	30.0	"	
	07:00	33.0	"	
	:06	99.0	"	
	:12	99.0	"	
	:18	61.0	"	
	:24	31.0	"	
	:30	30.0	"	
	:36	53.0	"	
	:42	31.0	"	
	:48	30.0	"	
	:54	30.0	"	
	08:00	30.0	"	
	:06	30.0	"	
	:12	30.0	"	
	:18	30.0	"	
	:24	30.0	"	
	:30	30.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
11	08:36	30.0	Startup & Shutdown after outage	
	:42	29.0	"	
	:48	29.0	"	
	:54	29.0	"	
	09:00	29.0	"	
	:06	34.0	"	
	:12	34.0	"	
	:18	32.0	"	
	:24	32.0	"	
	:30	32.0	"	
	:36	32.0	"	
	:42	32.0	"	
12	05:00	26.0	"	
	:06	37.0	"	
	:12	31.0	"	
	:18	30.0	"	
	:24	30.0	"	
	:30	30.0	"	
	:36	30.0	"	
	:42	30.0	"	
	:48	30.0	"	
	:54	30.0	"	
	06:00	30.0	"	
	:12	30.0	"	
	:18	30.0	"	
	:29	30.0	"	
	:30	30.0	"	
	:36	30.0	"	
	:42	30.0	"	
	:48	30.0	"	
	:54	30.0	"	
	07:00	30.0	"	
	:06	30.0	"	
	:12	30.0	"	
	:18	30.0	"	
	:24	30.0	"	
	:30	29.0	"	
	:36	29.0	"	
	:42	29.0	"	
	:48	29.0	"	
	:54	29.0	"	
	08:00	29.0	"	
	:06	29.0	"	
	:12	29.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
-12	08:18	29.0	Startup & Shutdown after outage	
	:29	29.0	"	
	:30	29.0	"	
	:36	29.0	"	
	:42	29.0	"	
	:48	29.0	"	
	:54	29.0	"	
	09:00	29.0	"	
	:06	29.0	"	
	:12	29.0	"	
	:18	29.0	"	
	:24	29.0	"	
	:30	29.0	"	
-15	12:18	47.0	Startup	
	:24	82.0	"	
	:30	73.0	"	
	:36	33.0	"	
	;42	27.0	"	
	:48	23.0	"	
	14:42	23.0	"	
	:48	25.0	"	
	18:24	21.0	"	
	19:48	21.0	"	
	20:00	24.0	"	
	21:36	21.0	"	
	:42	22.0	"	
	22:18	23.0	"	
	:54	21.0	"	
-16	00:06	22.0	Startup	
	:12	22.0	"	
	:18	22.0	"	
	01:42	21.0	"	
	:48	21.0	"	
	:54	21.0	"	
	02:00	21.0	"	
	12:18	23.0	"	
	:24	23.0	"	
	:30	23.0	"	
	:36	23.0	"	
	:42	23.0	"	
	:48	23.0	"	
	:54	23.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
16	13:00	23.0	Startup	
	:06	23.0	"	
	:12	22.0	"	
	14:06	23.0	"	
18	21:36	31.0	"	
	:42	82.0	"	
	:48	77.0	"	
	:54	73.0	"	
	22:00	68.0	"	
	:06	75.0	"	
	;12	51.0	"	
	:18	45.0	"	
	:24	47.0	"	
	:30	42.0	"	
	:36	42.0	"	
	:42	36.0	"	
	:48	35.0	"	
	:54	47.0	"	
	23:00	48.0	"	
	:06	33.0	"	
	:12	30.0	"	
	:18	30.0	"	
	:24	32.0	"	
	:30	29.0	"	
	:36	26.0	"	
	:42	28.0	"	
	:48	76.0	"	
	:54	59.0	"	
19	00:00	35.0	Startup	
	:06	40.0	"	
	:12	43.0	"	
	:18	32.0	"	
	:24	21.0	"	
	03:30	24.0	"	
	:36	23.0	"	
	:42	41.0	"	
	:48	41.0	"	
	:54	41.0	"	
	04:00	41.0	"	
	:06	45.0	"	
	:12	46.0	"	
	:18	44.0	"	
	;24	42.0	"	
	04:48	45.0	"	
	:54	45.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
19	05:00	41.0	Startup	
	:06	39.0	"	
	:12	39.0	"	
	:18	39.0	"	
	:24	39.0	"	
	:30	37.0	"	
	:36	29.0	"	
	06:24	26.0	"	
	:30	67.0	"	
	:36	30.0	"	
	:48	28.0	"	
	07:18	44.0	"	
	;24	61.0	"	
	:30	48.0	"	
	:36	45.0	"	
	13:18	46.0	"	
	:24	37.0	"	
	:30	46.0	"	
	:36	30.0	"	
	:42	25.0	"	
	:48	35.0	"	
	:54	22.0	"	
	14:06	28.0	"	
	:12	24.0	"	
	:18	22.0	"	
	15:00	29.0	"	
	:06	87.0	"	
	;12	77.0	"	
	:18	73.0	"	
	:24	69.0	"	
	:30	30.0	"	
	:36	26.0	"	
	:42	30.0	"	
	:48	32.0	"	
	:54	40.0	"	
	16:00	42.0	"	
	:06	39.0	"	
	:12	39.0	"	
	:18	25.0	"	
	:24	21.0	"	
	:30	25.0	"	
	:36	65.0	"	
	:42	55.0	"	
	:48	66.0	"	
	:54	63.0	"	

ess Opacity Report
t 33 - May 1992
e -6-

)ay	Start	Opacity %	Cause	Corrective Action Taken
19	17:00	63.0	Startup	
	:06	66.0	"	
	:12	72.0	"	
	:18	75.0	"	
	:24	75.0	"	
	:30	80.0	"	
	:36	83.0	"	
31	16:42	74.0	Startup	
	:48	93.0	"	
	:54	85.0	"	
	17:00	79.0	"	
	:06	90.0	"	
	:12	100.0	"	
	:18	100.0	"	
	:24	100.0	"	
	:30	55.0	"	
	:36	38.0	"	
	:42	35.0	"	
	:48	31.0	"	
	:54	48.0	"	
	18:00	33.0	"	
	:06	43.0	"	
	:12	36.0	"	
	:18	42.0	"	
	:24	33.0	"	
	:30	32.0	"	
	:36	37.0	"	
	:42	55.0	"	
	:48	50.0	"	
	:54	53.0	"	
	19:00	53.0	"	
	:06	46.0	"	
	:12	32.0	"	
	:18	28.0	"	
	:24	28.0	"	
	:30	28.0	"	
	:36	27.0	"	
	:42	28.0	"	
	:48	33.0	"	
	:54	29.0	"	
	20:00	28.0	"	
	:06	24.0	"	
	:12	23.0	"	
	:18	36.0	"	
	:24	50.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
31	20:30	88.0	Startup	
	:36	83.0	"	
	:42	25.0	"	
	:48	22.0	"	
	:54	22.0	"	
	21:00	22.0	"	
	:06	21.0	"	
	:30	21.0	"	
	:36	21.0	"	
	:42	22.0	"	
	:48	22.0	"	
	:54	44.0	"	
	22:00	51.0	"	
	:06	88.0	"	
	:12	90.0	"	
	:18	96.0	"	
	:24	30.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: Lakeside

Month/Year: June 1992

Start-End	Component	Cause	Corrective Action Taken

N O N E

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: Lakeside

Month/Year: June 1992

Opacity Limit: 30%

BOILER HOURS
Unit #7 - 199
Unit #8 - 141

ay	Start	Opacity %	Cause	Corrective Action Taken
-16	00:42	39.0	Startup 7&8	
	:48	56.0	"	
	:54	55.0	"	
	01:00	50.0	"	
	:06	45.0	"	
	:12	43.0	"	
	:18	41.0	"	
	:24	42.0	"	
	:30	44.0	"	
	:36	47.0	"	
	:42	49.0	"	
	:48	50.0	"	
	:54	50.0	"	
	02:00	50.0	"	
	:06	47.0	"	
	:12	62.0	"	
	:18	75.0	"	
	:24	74.0	"	
	:30	72.0	"	
	:36	70.0	"	
	:42	67.0	"	
	:48	64.0	"	
	:54	62.0	"	
	03:00	68.0	"	
	:06	49.0	"	
	:12	42.0	"	
	:18	38.0	"	
	:24	34.0	"	
	:30	44.0	"	
	:36	50.0	"	
	:42	45.0	"	
	:48	73.0	"	
	:54	33.0	"	
	04:00	38.0	"	
	:06	47.0	"	
	:18	66.0	"	
	:30	58.0	"	
	05:00	51.0	"	
	:06	46.0	"	
	:12	34.0	"	
	:42	50.0	"	
	:54	41.0	"	
	06:24	36.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
-16	08:48	38.0	"	
	09:30	31.0	"	
	10:18	57.0	"	
	:24	63.0	"	
	:30	60.0	"	
	:36	45.0	"	
-24	03:12	62.0	Startup 7	
	:18	52.0	"	
	05:54	41.0	"	
	06:00	55.0	"	
	:06	58.0	"	
	:12	47.0	"	
	:18	40.0	"	
	:24	37.0	"	
	:30	34.0	"	
	:36	33.0	"	
	07:00	32.0	"	
	:06	62.0	"	
	:12	48.0	"	
	:18	39.0	"	
	:24	32.0	"	
	:30	31.0	"	
	:48	46.0	"	
	:54	35.0	"	
	08:12	57.0	"	
	:18	51.0	"	
	:24	53.0	"	
	:36	36.0	"	
	:48	55.0	"	
	:54	33.0	"	
	09:00	57.0	"	
	:06	49.0	"	
	:12	51.0	"	
	:18	35.0	"	
	:24	49.0	"	
	:30	57.0	"	
	:36	75.0	"	
	:42	73.0	"	
	:48	72.0	"	
	:54	50.0	"	
6-29	05:48	48.0	Startup 7	
	:54	56.0	"	
	06:00	31.0	"	
	:30	42.0	"	
	07:18	34.0	"	
	:36	31.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
-29	07:42	55.0	Startup 7	
	08:06	35.0	"	
	:30	47.0	"	
	:36	54.0	"	
	:54	40.0	"	
	21:12	60.0	Shutdown 7	
	:18	36.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: 31

Month/Year: June 1992

Day	Start-End	Component	Cause	Corrective Action Taken

N O N E

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: 31

Month/Year: June 1992

Opacity Limit: 30%

Day	Start	Opacity %	Cause	Corrective Action Taken
6-5	07:36	46.0	Unknown	
	:42	44.0	"	
	:48	37.0	"	
	:54	33.0	"	
	08:00	31.0	"	
6-21	20:48	31.0	Shutdown	
	:54	49.0	"	
	21:00	33.0	"	
6-24	15:36	54.0	Startup	
	:42	35.0	"	
6-25	06:06	31.0	Startup	
	:12	57.0	"	
	:18	57.0	"	
	:24	42.0	"	
	11:24	33.0	"	
	12:24	54.0	"	
6-29	22:00	49.0	Startup	
	:06	60.0	"	
	:12	57.0	"	
	:18	55.0	"	
	:24	53.0	"	
	:30	57.0	"	
	:36	41.0	"	
	:42	31.0	"	
	23:12	54.0	"	
	:24	59.0	"	
	:30	55.0	"	
	:36	53.0	"	
	:42	54.0	"	
	:48	46.0	"	
	:54	31.0	"	

Excess Opacity Report
Unit 31 - June 1992

Day	Start	Opacity %	Cause	Corrective Action Taken
6-30	00:18	52.0	Startup	
	:24	50.0	"	
	:30	49.0	"	
	:36	48.0	"	
	:42	47.0	"	
	09:24	45.0	"	
	:30	50.0	"	
	:36	48.0	"	
	:48	31.0	"	
	05:30	60.0	"	
	:36	63.0	"	
	:42	61.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: 32

Month/Year: June 1992

Day	Start-End	Component	Cause	Corrective Action Taken

N O N E

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

Unit: 32

Month/Year: June 1992

Opacity Limit: 30%

Day	Start	Opacity %	Cause	Corrective Action Taken
6-2	14:36	42.0	Startup	
	:42	40.0	"	
	:48	41.0	"	
	:54	36.0	"	
	15:00	36.0	"	
6-5	06:36	42.0	Shutdown	
	:42	42.0	"	
	07:12	45.0	"	
	:18	52.0	"	
	:24	61.0	"	
	:30	56.0	"	
	:36	46.0	"	
	15:00	55.0	"	
	:06	79.0	"	
	:12	79.0	"	
	:18	35.0	"	

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

UNIT OPACITY CEM
DOWNTIME REPORT

Unit: 33

Month/Year: June 1992

Day	Start-End	Component	Cause	Corrective Action Taken
6/22	09:00-16:00	Opacity Recorder	Stuck in Cal.	
6/26	00:00	Transmissometer	Malfunctioning	Replaced Board
6/29	10:00			

CITY WATER, LIGHT & POWER
3100 Stevenson Drive

EXCESS OPACITY REPORT

it: 33

nth/Year: June 1992

acity Limit: 30%

Start	Opacity %	Cause	Corrective Action Taken
00:06	21.0	The load had dropped after boiler adjustments, the opacity alarms did not seem to be functioning. Therefore, the Operator did not realize the opacity had exceeded 20%	The procedures have been changed for the Operators to inspect the opacity strip charts.
:12	21.0		
:18	21.0		
:24	21.0		
:30	21.0		
:36	22.0		
:42	22.0		
:48	23.0		
:54	23.0		
01:00	23.0		
:06	23.0		
:12	23.0		
:18	24.0		
:24	24.0		
:30	24.0		
:36	24.0		
:42	24.0		
:48	24.0		
:54	24.0		
02:00	24.0		
:06	24.0		
:12	24.0		
:18	24.0		
:30	24.0		
:36	35.0		
:42	25.0		
:48	25.0		
:54	25.0		
03:00	24.0		
:06	25.0		
:12	25.0		
:18	25.0		
:24	25.0		
:30	25.0		
:36	25.0		
:42	25.0		
:48	25.0		
:54	25.0		

Day	Start	Opacity %	Cause	Corrective Action Taken
6	04:00	25.0	The load had dropped after boiler adjustments, the opacity alarms did not seem to be functioning. Therefore, the Operator did not realize the opacity had exceeded 20%	The procedures have been changed for the Operators to inspect the opacity strip charts.
	:06	25.0		
	:12	25.0		
	:18	25.0		
	:24	25.0		
	:30	25.0		
	:36	25.0		
	:42	25.0		
	:48	25.0		
	:54	25.0		
	05:00	25.0		
	:06	25.0		
	:12	25.0		
	:18	25.0		
	:24	26.0		
	:30	26.0		
	:36	24.0		
	:42	24.0		
	:48	24.0		
	:54	22.0		
	06:06	22.0		
	:12	22.0		
	:24	22.0		
	:30	22.0		
	:36	21.0		
	:42	22.0		
	:48	21.0		
	07:00	21.0		
	17:42	23.0	Precip. Malfunction	Reset field
	:48	23.0	"	"
	18:00	22.0	"	"
-21	05:00	65.0	Startup	
	:06	65.0	"	
	:12	88.0	"	
	:24	63.0	"	
	:30	63.0	"	
	:36	22.0	"	
	:42	22.0	"	
	:48	61.0	"	
	:54	61.0	"	
	06:00	66.0	"	
	:06	66.0	"	
	:12	63.0	"	
	:18	63.0	"	
	:24	73.0	"	
	:30	73.0	"	
	:36	61.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
21	06:42	61.0	Startup	
	:42	61.0	"	
	:48	65.0	"	
	:54	65.0	"	
	07:00	44.0	"	
	:06	44.0	"	
	:12	44.0	"	
	:18	44.0	"	
	:24	30.0	"	
	:30	30.0	"	
	:36	30.0	"	
	:42	30.0	"	
	:48	26.0	"	
	:54	26.0	"	
	08:00	27.0	"	
	:06	27.0	"	
	:12	28.0	"	
	:18	28.0	"	
	:24	26.0	"	
	:30	26.0	"	
	:36	25.0	"	
	:42	25.0	"	
	:48	25.0	"	
	:54	25.0	"	
	09:00	25.0	"	
	:06	25.0	"	
	:12	25.0	"	
	:18	25.0	"	
	:24	25.0	"	
	:30	25.0	"	
	:36	25.0	"	
	:42	25.0	"	
	:48	25.0	"	
	:54	21.0	"	
	10:00	30.0	"	
	:06	30.0	"	
	:12	21.0	"	
	:18	21.0	"	
	:24	21.0	"	
	:30	21.0	"	
	:36	21.0	"	
	:42	21.0	"	
	:48	21.0	"	
	11:36	22.0	"	
	:42	22.0	"	
	:48	23.0	"	
	:54	23.0	"	

Day	Start	Opacity %	Cause	Corrective Action Taken
21	12:00	22.0	Startup	
	:06	24.0	"	
	:12	22.0	"	
	:18	22.0	"	
	:36	22.0	"	
	:42	22.0	"	
	:48	34.0	"	
	:54	34.0	"	
	13:00	27.0	"	
	:06	27.0	"	
	:12	22.0	"	
	:18	22.0	"	
	:24	21.0	"	
	:30	21.0	"	
	:36	21.0	"	
	:42	21.0	"	
	:48	21.0	"	
	:54	21.0	"	
	14:00	21.0	"	
	:06	21.0	"	
	:12	82.0	"	
	:18	82.0	"	
	:48	26.0	"	
	:54	26.0	"	
	19:24	44.0	"	
	:30	44.0	"	
	:36	66.0	"	
	:42	66.0	"	

APPENDIX C

DRAFT

NPDES Permit No. IL0001554

Illinois Environmental Protection Agency

Division of Water Pollution Control

2200 Churchill Road

P.O. Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date: July 1, 1997

Issue Date:
Effective Date:

Name and Address of Permittee:

Illinois Power Company
500 South 27th Street
Post Office Box 511
Decatur, Illinois 62525-1805

Facility Name and Address:

Illinois Power Company
Hennepin Power Plant
Hennepin, Illinois 61327
Putnam County

Discharge Number and Name:

No. 001 Condenser Cooling Water
No. 001(a) Boiler Blowdown
No. 001(b) Intake Screen Backwash
No. 001(c) Roof Drain Discharge
No. 003 Ash Lagoon #2 and #4 Discharge
No. 005 Ash Lagoon #1 and #3 Discharge
No. 005(a) Chemical Metal Cleaning Waste Treatment System Effluent

Receiving Waters

Illinois River

In compliance with the provisions of the Illinois Environmental Protection Act, Subtitle C Rules and Regulations of the Illinois Pollution Control Board, and the FWPCA, the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:TRK:jd/0495E/3

DRAFT

NPDES Permit No. IL0001554

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 001 Condenser Cooling Water

	This discharge consists of: 1. Condenser Cooling Water 2. House Service Water 3. Boiler Blowdown 4. Intake Screen Backwash 5. Roof Drain Discharge				Approximate Flow 153.26 MGD 7.0 MGD 0.027 MGD 0.258 MGD Intermittent	
Flow					Daily	24-Hour Total
Total Residual Chlorine	See Special Condition No. 3				1/Week	*
Temperature	See Special Condition No. 4				Daily	Continuous

*See Special Condition No. 3

Outfall(s): 001(a) Boiler Blowdown

					Approximate Flow 0.027 MGD	
Flow					1/Week	Single Reading-Estimate
Total Suspended Solids			15.0	30.0	1/Week	24-Hour Composite

DRAFT

NPDES Permit No. IL0001554

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 001(b) Intake Screen Backwash

				Approximate Flow 0.26 MGD		
Flow					1/Week	Single Reading Estimate

So as to minimize adverse impacts, for purposes of this permit, the intake structure operation and maintenance shall include, but not be limited to, the following:

1. Outer bar racks shall be routinely cleaned and collected debris properly disposed.
2. The traveling screens shall commence operating whenever the head loss across the screens exceeds four (4) inches.
3. The traveling screens shall be operated at least once per 8 hour shift, provided, however, that this requirement shall be inapplicable when the generating units are not operating.

Outfall(s) 001(c) Roof Drain Discharge

This discharge consists of: 1. Power Block Building Roof Drains					Approximate Flow Intermittent	

See Standard Condition No. 17

DRAFT

NPDES Permit No. IL0001554

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 003 Ash Lagoon #2 and #4 Discharge

This discharge consists of:	Approximate Flow
1. Unit 2 Bottom Ash and Fly Ash	2.9 MGD
2. Demineralizer Regenerate Wastes	0.035 MGD
3. Unit 2 Non-chemical Metal Cleaning Washwater	Intermittent
4. Unit #1 and Unit #2 Ash Hopper Overflow**	0.20 MGD
5. Fly Ash Air Separator Overflow	Intermittent
6. Ash Hopper Tank Emergency Overflow	Intermittent
7. Demineralizer Room Floor Drainage	Intermittent
8. Power Block Building Floor Drains and Sump Discharges	0.1 MGD
9. Reverse Osmosis Unit Concentrate	0.036 MGD

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE
Flow					1/Week	Single Reading Estimate
pH	See Special Condition No. 1				1/Week	Grab
Total Suspended Solids			15.0	30.0	1/Week	24 Hour*** Composite
Oil and Grease			15.0	20.0	2/Month	Grab

**This wastestream may be discharged to the East (Outfall 003) or West (Outfall 005) Ash Pond System.

***See Special Condition No. 6

DRAFT

NPDES Permit No. IL0001554

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 005 Ash Lagoon #1 and #3 Discharge

This discharge consists of:	Approximate Flow
1. Unit #1 Bottom Ash and Fly Ash Transport Water	0.21 MGD
2. Unit #1 and #2 Ash Hopper Overflow****	0.2 MGD
3. Coal Breaker Building Drain Sump	Intermittent
4. Illinois River Dredge Spoils	Intermittent
5. Unit #1 Non-chemical Metal Cleaning Washwater	Intermittent
6. Chemical Metal Cleaning Waste Treatment System Effluent	Intermittent
7. Coal Pile Runoff	Intermittent
8. Unit #1 and Unit #2 Ash Line Low Point Drainoff	Intermittent
9. Crib House Sump	Intermittent
10. Well Water Drain Line	Intermittent
11. Water Treatment Plant Sump	Intermittent
12. Boiler Drum Chemical Tank Drainage	Intermittent
13. Gas Reburning/Sorbent Injection Waste	0.96 MGD

Flow					1/Week	Single Reading Estimate
pH	See Special Condition No. 1				1/Week	Grab
Total Suspended Solids		15.0		30.0	1/Week	24 Hr***** Composite
Oil and Grease		15.0		20.0	2/Month	Grab

****This wastestream may be directed to the East Ash Pond System (Outfall 003).
***** See Special Condition No. 6

DRAFT

NPDES Permit No. IL0001554

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE
1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:						
Outfall(s): 005(a) Chemical Metal Cleaning Waste Treatment System Effluent						
Flow					Approximate Flow Intermittent	
					Daily When Discharging	24 Hour Total
Iron (Total)				1.0	Daily When Discharging	24 Hour Composite
Copper (Total)				1.0	Daily When Discharging	24 Hour Composite

DRAFT

NPDES Permit No. IL0001554

Special Conditions

1. The pH shall be in the range 6.0 to 9.0.

2. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

3. A. During times when the condenser cooling water is chlorinated intermittently, total residual chlorine (TRC) may not be discharged from the station for more than three hours per day or from any single generating unit's main cooling condensers for more than two hours per day. The discharge limit is 0.2 mg/l, measured as an instantaneous maximum.

   1. Continuous TRC monitoring throughout a representative chlorination period shall be performed once per week in the cooling water discharge flume during the respective chlorination period of one condenser half allowing for lag time between the initiation of chlorination and the time of sampling. For continuous chlorine monitoring, analytical data from only two representative monitoring periods each month need be reported on the monthly discharge monitoring report. The time of sampling, the time and duration of the chlorine dosing period, and the amount of chlorine applied shall be reported.

   2. If continuous monitoring cannot be performed, a minimum of three grab samples shall be collected in the discharge flume at five minute intervals or less, once per week during a representative chlorination period, allowing for lag time between the initiation of chlorination and the time of sampling, to develop a chlorine concentration curve. The time of sampling, the time and duration of the chlorine dosing period, and the amount of chlorine applied shall be reported.

   B. During times when the condenser cooling water is chlorinated continuously, the discharge limit is 0.05 mg/l, measured as an instantaneous maximum.

   C. Chlorination of house service water is authorized by this permit, provided that the discharge limits above are not exceeded at Outfall 001.

4. Discharge of wastewater from this facility must not alone or in combination with other sources cause the receiving stream to violate the following thermal limitations at the edge of the mixing zone which is defined by Section 302.211, Illinois Administrative Code, Title 35, Chapter I, Subtitle C, as amended:

   A. Maximum temperature rise above natural temperature must not exceed 5°F (2.78°C).

   B. Water temperature at representative locations in the main river shall not exceed the maximum limits in the following table during more than one (1) percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the following table by more than 3°F (1.67°C). (Main river temperatures are temperatures of those portions of the river essentially similar to and following the same thermal regime as the temperatures of the main flow of the river.)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
°F	60	60	60	90	90	90	90	90	90	90	90	60
°C	15.6	15.6	15.6	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	15.6

   C. At times when the river water intake temperature is less than or equal to 41°F, the discharge temperature shall not exceed the intake temperature by more than 18°F.

5. There shall be no discharge of polychlorinated biphenyl compounds.

6. If inclement weather prohibits the collection of a 24-hour composite sample for five consecutive days, sampling shall consist of a grab sample.

7. Illinois Power Company has complied with Section 302.211(f) of Title 35, Chapter 1, Subtitle C: Water Pollution Regulations and Section 316(a) of the CWA by demonstrating that thermal discharge from Hennepin Power Plant has not caused and cannot reasonably be expected to cause significant ecological damage to the Illinois River as approved by the IPCB in PCB 78-8 on [illegible] 35 Ill. Adm. Code 302.211(c) no additional monitoring or

DRAFT

NPDES Permit No. IL0001554

Special Conditions

8. Illinois Power Company's demonstration for the Hennepin Power Plant in accordance with Section 316(b) of the CWA has been approved by this Agency by letter dated December 29, 1978. It is determined that no additional intake monitoring or modification is being required for reissuance of this NPDES permit.

9. Standard Condition No. 9 shall not constitute a waiver of any constitutional rights of the permittee.

10. The provisions contained in Standard Condition No. 17 shall not prejudice permittee's right to obtain or be granted a reasonable time in which to comply, but in no event shall such time be later than any applicable Federal or State of Illinois statutory or regulatory compliance date, in connection with any modification made pursuant thereto.

11. Standard Condition 11(a) of Attachment H is rewritten as follows:

An application submitted by a corporation shall be signed by a principal executive officer of at least the level of vice president, or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the application form originates. In the case of a partnership or a sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively. In the case of a publicly owned facility, the application shall be signed by either the principal executive officer, ranking elected official, or other duly authorized employee.

12. Standard Condition 11(b) of Attachment H is rewritten as follows:

Pursuant to 40 CFR 122.22(b) all reports required by permits, other information requested by the Director, and all permit applications submitted for Group II storm water discharges under 122.26(b)(3) shall be signed by a person described in 40 CFR 122.22(a), or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and

(3) The written authorization is submitted to the Director.

13. Disposal of GR-SI Residues in the West Ash Pond System shall be monitored and limited in accordance with the following Best Management Practices Plan:

a) Authorization to dispose GR-SI Residues in the West Ash Pond System is granted only for the term of the demonstration project. The Agency shall be notified on the date the demonstration project begins.

b) The raw residue transport water shall be pH adjusted to approximately 9.0 prior to discharge into the West Ash Pond System using carbon dioxide, acetic acid or other approved chemicals which will not contribute chlorides or sulfates to the wastestream.

c) Groundwater monitoring shall be conducted during the demonstration project and for six months thereafter. Quarterly sampling of all four existing downgradient wells for Boron, Calcium, Chloride, Manganese, Nitrate, Nitrite, pH, Sulfate, Sulfite and Total Dissolved Solids is required. Analytical data shall be submitted to the Agency within 60 days after sample collection. The first samples shall be collected upon commencement of the demonstration project.

d) Modeling or dye tracing to identify the West Ash Pond System effluent mixing characteristics with the Illinois River shall be conducted and the point in the river where the sulfate water quality standard will be met identified. This information shall be submitted to the Agency within six months after commencement of the demonstration

DRAFT

NPDES Permit No. IL0001554

Special Conditions

14. Sludge generated by the pretreatment of chemical metal cleaning waste in the chemical metal cleaning waste treatment tank at Hennepin Power Plant may be disposed of on the active area of the coal pile at the Hennepin Power Plant within the following guidelines:

    1. Chemical metal cleaning waste treatment tank sludge shall not exceed the Toxicity Characteristic regulatory levels when subjected to the Toxicity Characteristic Leaching Procedure for the 25 organic constituents and 8 metals regulated under the Toxicity Characteristic Rule (FR Vol. 55, No. 61/March 29, 1990, 11798-11877.

    2. Sludge shall be applied on the active area of the coal pile.

    3. Sludge shall be applied on the active area of the coal pile at a controlled rate to prevent coal pile runoff.

    4. Sludge application shall not be permitted if the coal pile has been wetted by rainfall within the 24-hour period preceding the intended application time.

    5. Sludge application shall not be permitted on the coal pile during precipitation or when precipitation is imminent.

    6. The filter cake from the portable sock filter may be disposed on site with the sludge generated by the chemical metal cleaning wastewater treatment process.

    7. Sludge or filter cake which is a hazardous waste shall not be placed on the coal pile.

    This Special Condition does not relieve the permittee of any State or federal requirements for management of hazardous waste. Documentation to support a hazardous waste determination pursuant to 40 CFR 262.11 shall be maintained by the permittee.

15. The permittee shall record monitoring results on Discharge Monitoring Report Forms using one such form for each discharge each month.

    The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 15th day of the following month, unless otherwise specified by the permitting authority.

    Discharge Monitoring Reports shall be mailed to the IEPA at the following address:

    Illinois Environmental Protection Agency
    Division of Water Pollution Control
    2200 Churchill Road
    Springfield, Illinois 62706

    Attention: Compliance Assurance Section

16. Within 180 days after the beginning of a discharge from the ash ponds (Outfalls 003 and 005), a 2 C application form shall be completed as required by 40 CFR 122.21(g)(7) and submitted to IEPA. The monitoring must include at least three samples for the required metals, ammonia, and cyanide. This permit may be modified, following public notice and opportunity for hearing, based on the monitoring results if necessary to prevent violations of water quality standards.

17. During the time period of the GR-SI demonstration project, the following additional monitoring shall be done on Outfall 005 if a discharge from this outfall occurs:

    a. Chemical-Specific Testing

    On a quarterly basis, a grab sample of the discharge shall be analyzed for the following parameters, and the results reported with the Discharge Monitoring Report for the month in which the samples are collected:

Antimony	Nickel
Arsenic	Selenium
Beryllium	Silver
Cadmium	Thallium
Chromium	Zinc
Copper	Sulfates
[illegible]	Total Dissolved Solids

DRAFT

NPDES Permit No. IL0001554

Special Conditions

b. Biomonitoring

The permittee shall prepare a preliminary plan for biomonitoring and submit the plan to IEPA for review and approval within 90 days of the effective date of this permit. The permittee shall begin biomonitoring of the effluent discharge within 90 days after approval of the biomonitoring plan or other such date as contained in the Agency's notification letter.

1. Acute Toxicity — Standard definitive acute toxicity tests shall be run on two trophic levels of aquatic species representative of the aquatic community of the receiving stream. Except as noted here and in the IEPA document "Effluent Biomonitoring and Toxicity Assessment," testing must be consistent with Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms EPA-600/4-85-013. Unless substitute tests are pre-approved, the following tests are required:

   a. Invertebrate 48-hour static LC_{50} Bioassay using Ceriodaphnia.

   b. Fish 96-hour static renewal LC_{50} Bioassay using fathead minnow.

2. Testing Frequency — The above tests shall be conducted on a monthly basis for three months within 90 days following approval of the biomonitoring plan or other such date as contained in the Agency's notification (approval) letter. Results shall be reported according to EPA/600/4-85/014, Section 10, Report Preparation, and shall be submitted to IEPA within 1 week of becoming available to the permittee.

   Should the results of any two months of sampling indicate toxicity for each month, the permittee shall submit within 90 days of the second toxicity event a plan for a toxicity identification evaluation (TIE) to the Agency. The Agency should be contacted at that time.

3. Toxicity Assessment — Should the review of the results of the biomonitoring program identify toxicity, the Agency may require that the permittee prepare a plan for toxicity reduction evaluation and identification. This plan shall include an evaluation to determine which chemicals have a potential for being discharged in the plant wastewater, a monitoring program to determine their presence or absence and to identify other compounds which are not being removed by treatment, and other measures as appropriate. The permittee shall submit to the Agency its plan for toxicity reduction evaluation within 90 days following notification by the Agency. The permittee shall implement the plan within 90 days or other such date as contained in a notification letter received from the Agency.

   The Agency may modify this permit during its term to incorporate additional requirements or limitations based on the results of the biomonitoring. In addition, after review of the monitoring results, the Agency may modify this permit to include numerical limitations for specific pollutants. Modifications under this condition shall follow public notice and opportunity for hearing.

c. Benthic and Sediment Monitoring

Within 90 days after the effective date of this permit, the permittee shall prepare a plan for benthic and sediment monitoring of the receiving stream in the immediate vicinity of Outfall 005, and submit the plan to IEPA for review and approval. The monitoring program should be designed to document any instream chemical or biological impacts from the discharge, and should include monitoring prior to, during, and after discharges associated with the GR-SI project.

18. During the winter season (December 1 - March 15), a summary of winter operating conditions shall be prepared. The summary shall include daily average and maximum "Delta T" and discharge temperatures, and shall be submitted to IEPA for review by May 15 of each year.

ATTACHMENT H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, Ch. 111 1/2 Ill. Rev. Stat., Sec. 1001-1051 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L. 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24 Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8 Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity, in order to maintain compliance with the conditions of this permit.

(4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency, upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency, upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records.**

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. This period may be extended by request of the Agency at any time.

(c) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) The date(s) analyses were performed;

(4) The individual(s) who performed the analyses;

(5) The analytical techniques or methods used; and

(6) The results of such analyses.

(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.

(a) **Application.** All permit applications shall be signed as follows:

(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a), and

(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and

(3) The written authorization is submitted to the Agency.

(c) **Changes of Authorization** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative

(12) **Reporting requirements**

(a) **Planned Changes** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility

(b) **Anticipated noncompliance** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements

(c) **Compliance schedules** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date

(d) **Monitoring reports** Monitoring results shall be reported at the intervals specified elsewhere in this permit

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR)

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit

(e) **Twenty-four hour reporting** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24 hours:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(2) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit to be reported within 24 hours.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24 hours

(f) **Other noncompliance** The permittee shall report all instances of noncompliance not reported under paragraphs (12)(c), (d), or (e), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12)(e)

(g) **Other information** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information

(13) **Transfer of permits** A permit may be automatically transferred to a new permittee if

(a) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date.

(b) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittees, and

(c) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit if this notice is not received, the transfer is effective on the date specified in the agreement

(14) All *manufacturing, commercial, mining* and *silvicultural* dischargers must notify the Agency as soon as they know or have reason to believe

(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels

(1) One hundred micrograms per liter (100 ug/l)

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony

(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or

(4) The level established by the Agency in this permit.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application

(15) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following

(a) Any new introduction of pollutants into that POTW from an indirect discharger which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and

(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW

(16) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:

(1) User charges pursuant to Section 204(b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;

(2) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and

(3) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act

(17) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation

(18) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(19) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit

(20) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, or 308 of the Clean Water Act is subject to a fine of not less than $2,500, nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both

(21) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both

(22) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance, shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both

(23) Collected screenings, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(24) In case of conflict between these standard conditions and any other conditions included in this permit, the other conditions shall govern

(25) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board

(26) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the remaining provisions of this permit shall continue in full force and effect.

END

DATE FILMED

12/22/92