3.1 Plant Design and Operation

Changes in station design or operation, tests and experiments made in accordance with subsection 3.1 which involve a potentially significant unreviewed environmental issue.

NONE

IE 25
1/16

4.2.1 Vegetative Integrity on Cooling Pond Dike

The vegetative integrity of the cooling pond dike was inspected in accordance with LaSalle County Station procedure LTS-1000-5 on the following dates: April 27, 1984; May 31, 1984; June 31, 1984; July 29, 1984; August 30, 1984; September 29, 1984; and October 28, 1984. The above inspections resulted in the following concerns:

1) The crown vetch, especially along the southern dike, does not grow well during dry summer months. The crown vetch is thick, along the dike and still provides adequate ground cover to prevent erosion. At the end of dry periods, the crown vetch comes back very well.

2) A bare spot was noted by the Make-up discharge structure during the June inspection. This area re-seeded and the ground cover grew back.

3) Canadian Thistle, a noxious weed, was found growing along the cooling lake dikes. The Canadian thistle was picked and bagged, prior to seeding, by station personnel and no longer poses a problem.

March 11, 1985

4.2.2. Monitoring of Fog and Ice Due to the Cooling Pond

The following is a summary of the data for 1984 of the operational fog and rime ice observations in the vicinity of the cooling pond including an analysis of the data and comparison to the 1983 and 1982 operating experience, and 1981 and 1980 baseline. This is in accordance with the Environmental Protection Plan, Appendix B, Section 4.2.2 which is part of the operating license for LaSalle County Station Unit 1 and 2.

Included are: Attachment 1, which includes all reported incidences of fog which restricted visibility to 1/4 miles or less and rime ice observed on station property in 1984; Attachment 2, which consists of copies of the four quarterly summaries of fog and rime ice observations for 1984; Attachment 3, which includes the annual summaries of observations for the years 1980 through 1983; Attachment 4, which is the correlation of Rime Ice observations on vegetation for the winter of 1983-4; and Attachment 5, the report of the "Inspection for Environmental Impact of Rime Icing, which was conducted by a consulting plant pathologist in May, 1984 to assess the effects of the rime ice that formed on vegetation during the winter of 1983-1984.

In summary, there were seven days out of the 249 observation days during 1984 where visibility was restricted to less than 1/4 mile. There were no observations of ice build-up occurring off the station property. There were, however, ten cases of on-site rime ice reported during the year.

Analysis of the seven off-site 1984 occurrences of reduced visibility shows that there were no observations of reduced visibility that may have been enhanced by the pond.

On site, during the cold weather, dense steam fog occurred in the area of the condensing cooling water discharge, reducing the visibility along the driveway to the main gate and over part of the parking lot. This is a localized effect, entirely on-site, not involving any of the observation points on the public roads around the perimeter of the site, and has not been consistently reported in the monitoring program.

All ten 1984 rime ice observations were in the same localized area near the circulating water discharge. Rime ice was observed on vegetation and on vertical surfaces. There were no off-site observations of rime ice in 1984. Rime ice formed on the vegetation, guard rails, fences and automobiles in the parking lot and during the extremely cold weather the ice persisted. As with the steam fog in the same area, this effect has occurred entirely on-site, not involving any of the observation points on the public roads around the perimeter of the site and, therefore, has not been reported on a regular basis in the monitoring program. An "Inspection for Environmental Impact of Rime Icing" will be made during the 1985 spring growing season of the on-site areas which were subject to the rime ice occurrences.

Analysis shows that the 1984 data had two more observations of fog causing reduced visibilities than in 1983 but fewer than in previous years 1982, 1981, and 1980. As shown below, there were seven observations in 1984, five in 1983, 12 in 1982, 11 in 1981 and 10 in 1980.

Year	Total Observations, Visibility Less Than 1/4 Mile	Visibility Less Than 1/4 Mile Downwind Only
1984	7	0
1983	5	1
1982	12	0
1981	11	1
1980	10	0

It is apparent that there was little or no enhancement of off-site fog conditions that could be attributed to the heat rejected to the cooling pond. There have been only two times in the five years of observations that a visibility reduction under a 1/4 mile occurred downwind of the pond without any similar upwind or cross wind fog observations.

All the rime ice observations in 1984, 1983 and 1982 were localized to the same area where the entrance road crosses the cooling water discharge canal. In the pre-operational period there were two observations which occurred during a period of extremely cold weather in January, 1982, which was before fuel loading. There was one observation in 1981 in late December under conditions which combined very cold air temperatures and an area wide light fog which resulted in a natural rime ice formation off site but was apparently not influenced by the cooling pond.

There were four incidences of rime ice reported in 1983, and more were expected in 1984 with both units operating. This has proved to be true and during the prolonged period of cold weather, the ice has persisted and built up.

An inspection for "Environmental Impact of Rime Icing" was conducted by a consulting plant pathologist, Dr. Barry J. Jacobsen on May 14, 1984. The vegetation in the affected area was inspected and found not to have suffered any observable effects from the rime icing that occurred during the winter of 1983-84. Attachment 5 is a copy of the report of the inspection.

As a result of the occurences of steam fog and rime ice along the on site access road corrective action is being planned. Under consideration is a proposal to reroute the channel carrying the condensor cooling water discharge and to cover it for part of the way to increase the distance between the point where the steam fog is formed and the access road. The rerouting of the channel would be across an on site area which has been previously disturbed by construction. Any action taken on this matter will be evaluated and recorded as specified in Section 3.1 of the EPP.

The experience through 1984 of precperational, 1 unit operation and, in 1984, of 2 unit operation has demonstrated that operation of the station and the cooling pond has not been a major contributor to the frequency, extent or density of fog in the observation areas along the public roads surrounding the station nor has operation caused any off-site incidences of rime ice formation. Section 6.2.1 of the LSCNPP Final

Environmental Statement requires the monitoring program to continue through at least one 12 month period of reasonably complete two-unit operation. In keeping with this requirement the 1984 power production history for Units 1 and 2 was as follows:

1984 Power History for LaSalle

Gross Pwr (MWhrs.)

Capacity Factor = $\frac{\text{Gross PWR}}{1130 \times \text{hours in month}}$

		Unit 1	Unit 2
Jan.			
	Gross Pwr.	- 347662	- 0
	Cap. Factor	- 41.3%	- 0
Feb.			
	Gross Pwr.	- 229288	- 0
	Cap. Factor	- 29.1%	- 0
Mar.			
	Gross Pwr.	- 182356	- 0
	Cap. Factor	- 21.6%	- 0
Apr.			
	Gross Pwr.	- 692699	- 16683
	Cap. Factor	- 77.3%	- 2%
May			
	Gross Pwr.	- 777907	- 110201
	Cap. Factor	- 92.5%	- 13.1%
Jun.			
	Gross Pwr.	- 583251	- 249632
	Cap. Factor	- 71.6%	- 29.6%
Jul.			
	Gross Pwr.	- 756661	- 400934
	Cap. Factor	- 90%	- 47.6%
Aug.			
	Gross Pwr.	- 713445	- 137874
	Cap. Factor	- 84.8%	- 16.3%
Sep.			
	Gross Pwr.	- 456560	- 502128
	Cap. Factor	- 56.1%	- 61.7%
Oct.			
	Gross Pwr.	- 0	- 723745
	Cap. Factor	- 0	- 86%
Nov.			
	Gross Pwr.	- 66600	- 628250
	Cap. Factor	- 8.1%	- 77.2%
Dec.			
	Gross Pwr.	- 664254	- 586372
	Cap. Factor	- 79%	- 69.7%

Based on this experience the applicant proposes to terminate the off-site fog and rime ice monitoring program at the end of May, 1985.

4286E/BBB:dd

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

1984

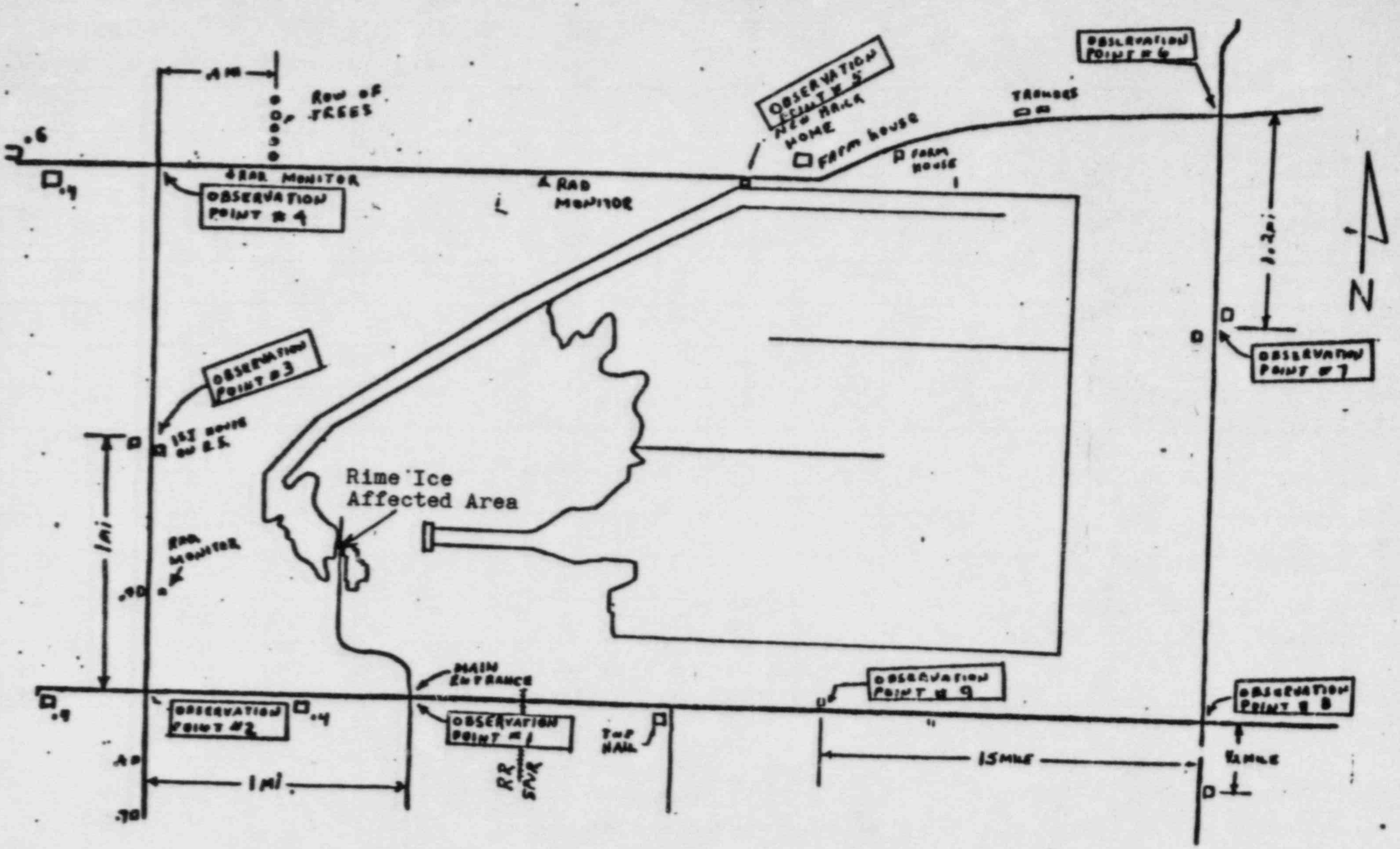
249 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
1/10	7:30a	360°										Rime Ice (¼") along shore, near discharge
1/11	7:30a	60°										Rime Ice (trace) along shore, near discharge
1/17	6:55a	210°										Rime Ice (3/4") on bushes and fence near discharge
1/19	7:10a	230°										Rime Ice (3/4") on bushes and fences near discharge and on cars in parking lot.
1/20	7:00a	294°										Rime Ice (3/4") on bushes and fences near discharge and on cars in parking lot.
1/31	7:20a	210°										Rime Ice (¼") on vegetation & guardrail near discharge.
2/1	7:10a	213°	1300	1000	1000	1000	1000*	1000*	1000*	1000	1000	Fog over general area, Rime Ice (½") on plants guardrails and fences near discharge.
2/6	7:15a	300°										Rime Ice (½") on bushes and fences near discharge and on cars in parking lot.

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)



OBSERVATION POINT #6
TROMBES
N
OBSERVATION POINT #5
NEW MAICK HOME
FARM HOUSE
FARM HOUSE
ROW OF TREES
RAD MONITOR
RAD MONITOR
OBSERVATION POINT #4
OBSERVATION POINT #7
OBSERVATION POINT #3
1ST HOUSE ON R.S.
1 MI
RAD MONITOR
Rime Ice
Affected Area
MAIN ENTRANCE
OBSERVATION POINT #9
OBSERVATION POINT #8
OBSERVATION POINT #2
OBSERVATION POINT #1
TWP HALL
RR SPUR
1 MI
15 MILE

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

1984

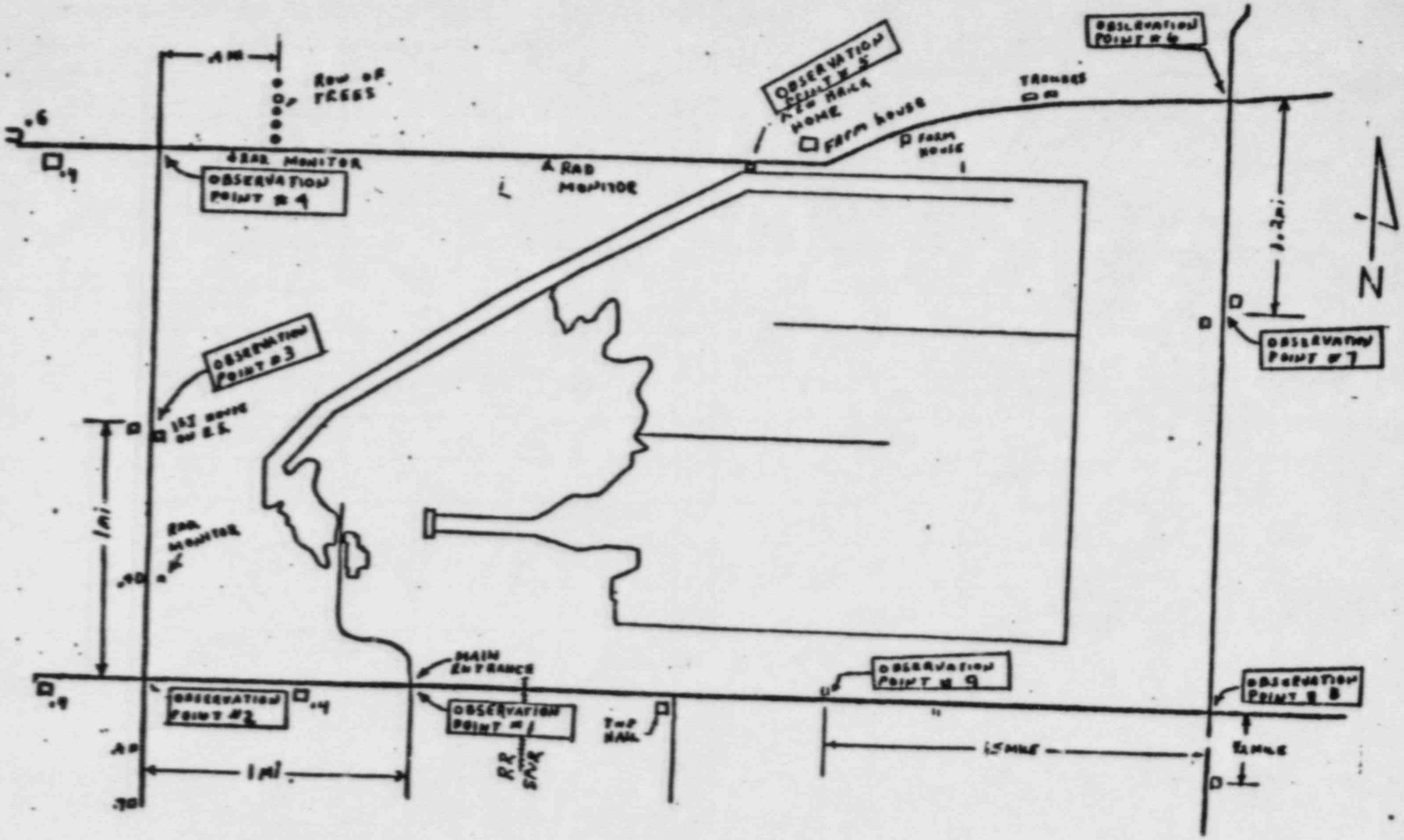
249 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
2/7	7:15a	315°										Rime Ice (½") on bushes, guardrail and fence near discharge and on cars in parking lot.
2/10	4:00p	225°	200	200	200	200	200*	200*	200*	200	200	Heavy fog over general area.
3/15	4:05p	185°	250	250	250	250	250*	250	250	250	250	Heavy fog over general area.
9/28	6:30a	110°					500*	500	500			Fog
10/9	7:00a	90°	1000	1000	1000*	1000*	1000*	1000	1000	1000	1000	General overcast, mist and fog
10/10	7:00a	64°	700	700*	700	700	700	700	700	700	700	General overcast, mist and fog
11/12	7:00a	315°										Rime Ice (1/16") on vegetation in area from discharge to past main gate.
12/10	7:00a	315°	100*	100	100	100	100	200	200*	200*	100*	Fog, general area

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)



N
OBSERVATION POINT #1
OBSERVATION POINT #2
OBSERVATION POINT #3
OBSERVATION POINT #4
OBSERVATION POINT #5
OBSERVATION POINT #6
OBSERVATION POINT #7
OBSERVATION POINT #8
OBSERVATION POINT #9
MAIN ENTRANCE
ROW OF TREES
RAD MONITOR
FARM HOUSE
FARM HOUSE
TRAILERS
TWP HALL
RR SPUR
1 MI
1 MI
1.5 MILE

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

First Quarter, 1984

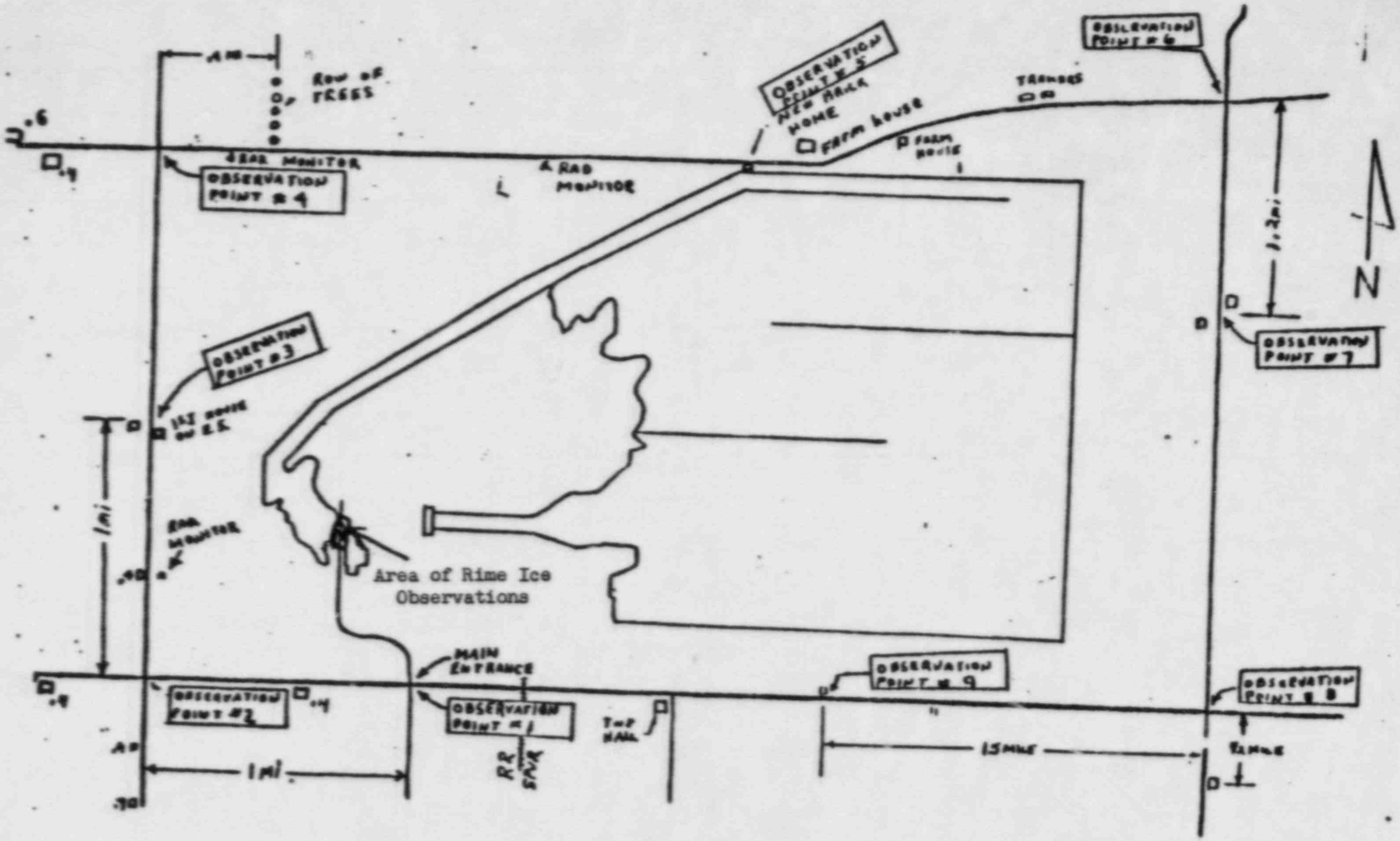
62 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
1/03	7:30a	207°										Fog over general area. No visibility restriction.
1/10	7:30a	360°										Rime Ice (1") along shore near discharge.
1/11	7:30a	60°										Rime Ice (trace) along shore near discharge.
1/17	6:55a	210°										Rime Ice (3/4") on bushes and fence near discharge.
1/19	7:10a	230°										Fog over pond only. Rime Ice (3/4") on bushes and
												fences near discharge and on cars in parking lot.
1/20	7:00a	295°										Fog over pond only. Rime Ice (3/4") on bushes and
												fences near discharge and on cars in parking lot.
1/31	7:20a	210°										Rime Ice (1/4") on vegetation and guard rail near
												discharge.
2/01	7:10a	213°	1300	1000	1000	1000	1000*	1000*	1000*	1000	1000	Fog over general area. Rime Ice (1/2") on plants,
												guard rails and fence near discharge.
2/06	7:15a	300°										Rime Ice (1/2") on bushes and fence near discharge and on cars in parking lot.

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)


Observation Point #1
Observation Point #2
Observation Point #3
Observation Point #4
Observation Point #5
New Mobile Home
Farm House
Observation Point #6
Trailers
Observation Point #7
Observation Point # 8
Observation Point # 9
Row of Trees
Rad Monitor
Main Entrance
1 mi
15 mile
Area of Rime Ice Observations
N

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

First Quarter, 1981

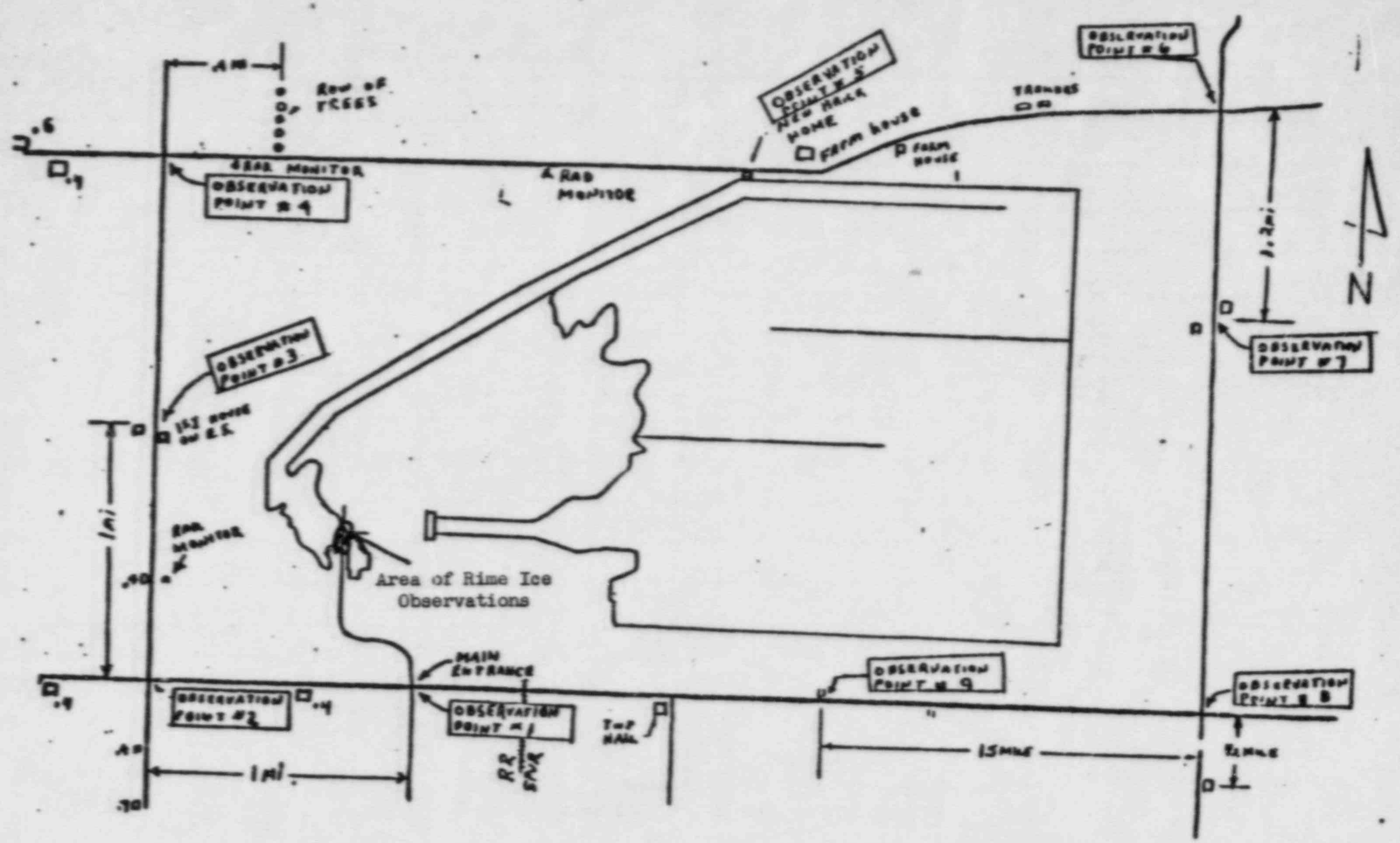
62 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
2/07	7:15a	315°										Rime Ice (1/2") on bushes, guard rail and fence near discharge and on cars in parking lot.
2/08	6:50a	165°										Fog over pond only.
2/10	4:00p	225°	200	200	200	200	200*	200*	200*	200	200	Heavy Fog over general area.
2/17	7:30p	293°										Fog over general area, no visibility restrictions.
2/17	5:00p	293°										Fog over general area, no visibility restrictions.
3/15	4:05p	185°	250	250	250	250	250*	250	250	250	250	Heavy Fog over general area.
3/20	6:50a	185°										Heavy fog over pond, light fog over general area, no visibility restrictions.

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)


N
OBSERVATION POINT #4
OBSERVATION POINT #5
OBSERVATION POINT #6
OBSERVATION POINT #7
OBSERVATION POINT #8
OBSERVATION POINT #9
OBSERVATION POINT #1
OBSERVATION POINT #2
OBSERVATION POINT #3
ROW OF TREES
RAD MONITOR
FARM HOUSE
MAIN ENTRANCE
Area of Rime Ice Observations
1 mi
15 mile
RR

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

Third Quarter, 1984

62 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
7-20	7:00a	211°										Fog, no visibility restrictions
8-10	7:25a	80°										Fog, no visibility restrictions
8-17	7:00a	298°										Fog, no visibility restrictions
9-5	7:00a	40°										Fog, no visibility restrictions
9-6	7:00a	130°										Fog, no visibility restrictions
9-24	7:00a	180°										Fog, no visibility restrictions
9-27	4:00p	154°										Fog, no visibility restrictions
9-28	6:30a	110°					500*	500	500			Fog

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

Fourth Quarter, 1984

62 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
10-9	7:00a	90°	1000*	1000	1000*	1000*	1000*	1000	1000	1000	1000	General overcast, mist and fog
10-10	7:00a	64°	700	700*	700	700	700	700	700	700	700	General overcast, mist and fog
10-11	7:00a	88°										Fog, no visibility restrictions
10-12	7:00a	123°										Fog, no visibility restrictions
10-23	7:00a	5°										Fog, no visibility restrictions
11-12	7:00a	315°										Rime ice, 1/16" on vegetation from discharge past main gate
12-10	7:00a	315°	100*	100	100	100	100	200	200*	200*	100*	Fog, general area
12-11	7:00a	162°										Fog, no visibility restrictions
12-11	7:00a	216°										Fog, no visibility restrictions
12-11	4:00p	342°										Fog, no visibility restrictions
12-14	7:00a	99°										Fog, no visibility restrictions
12-21	7:00a	20°										Fog, no visibility restrictions

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation
1983

249 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
2/15	7:30 a	141°				400*						General light fog; low visibility area was about 1 mile east of Point 4.
3/22	7:25 a	234°										Rime ice (1/8") near guardhouse.**
3/23	7:20 a	325°										Rime ice (1/8") near guardhouse.**
4/06	7:00 a	125°	400	400	400	400	400	400	400*	400*	400*	Fog.
6/28	7:15 a	0°				500	400	500	600	600		Heavy fog over pond.
11/17	7:20 a	315°	400*	500	400	300						Heavy fog over pond.
12/05	7:00 a	250°	400	400	200	200	200	200*	200*	400	400	Could not see station lights from Points 2, 3, 4, or 5.
12/19	7:30 a	333°										Rime ice (1/4") on hand-rails and vegetation near circulating water discharge.**
12/23	7:30 a	260°										Rime ice (trace) on guard-rail and plants near circulating water discharge.**

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

**Rime ice on station site only. See map on reverse side for location.

(See Map on Reverse Side)

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

1982

249 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
1-14	7:12a	257°										Rime ice (1/16")near guardhouse**
1-26	6:59a	279°										Rime ice (light) along roadway into parking lot**
2-02	7:03a	125°	50	50	75*	50*	50*	50	50	50	50	
2-19	4:10p	261°			1000							
3-12	7:15a	145°				800*	800*	800				
6-29	7:15a	282°	200	200	200	200	400			600*	200*	
8-23	7:25a	18°	500*	500*	200	200	250	250	250	500	500*	
9-01	8:00a	171°				900*	800*	400				Fog rain
9-02	7:30a	279°	300	200	100	150	150	500	300*	200*	200	
9-08	7:30a	90°	900	900	400*	400*	400	400	400	400	900	Light fog-mist
9-09	7:10a	180°	1000					300				
9-27	7:00a	59°	200*	100*	100*	100	100	200	200	200	200*	Heavy fog over ganaral area
10:08	7:00a	20°		Fog density		200-400	feet	in all	directions			

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)

**Rime ice on station site only: see page 2 of Attachment 2 for location.

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

1982

249 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
11:30	7:20a	135*	800	800	800	800*	800*	800*	800	800	800	Fog over entire area

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

[redacted]

248 Days of Observations
During 1981

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									Remarks
Date	Time	Direction	1	2	3	4	5	6	7	8	9	
2-17	7:00p	205°		Fog	Density	400-600	feet in	all dir	ections			
2-18	7:15a	220°	1200	1200	800	800	600*	800*	1000*	1100	800	Fog over entire area
2-27	7:15a	126°										Ice over all areas
4-30	7:15a	135°	1000	800	1000*					1000	800	Rain, drizzle
8-21	7:12a	72°		1200*	1000*							Fog
9-14	7:05a	280°	200	200	225	250	250	250	250*	250*	250	Fog
10-05	7:05a	90°	600	600	600*	600*	600	600	800	600	600	
10-08	7:08a	10°	350*	350*	350	400	200	150	200	250	300*	
10-15	6:45a	235°	1200	1200	1000	1000	800*	600*	800	1200	1200	Heavy fog over entire area
10-16	6:45a	230°	1200	1200	1200	1200	1000*	800*	1000	1200	1200	Fog over entire area
11-04	7:12a	99°	800	600	500	400*	400*	400	600	600	800	
11-16	7:05a	250°	800	800	800	600	600*	600*	800	800	800	
12-29	7:00a	275°			< 1"	< 1"	< 1"	< 1"	< 1"	< 1"	< 1"	Rime ice at Stations 3-9; Light fog over area

* Denotes Fog Formation Downwind of Cooling Pond

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation
During 1980
249 Days of Observations

Fog/Rime Ice Observations		Wind	Visibility in Feet (less than 1/4 mile) at Observation Points									
Date	Time	Direction	1	2	3	4	5	6	7	8	9	Remarks
1-16	4:00P	171*					200*		1300	1300	1300	Pond frozen
2-20	6:30A	234*		500	500		200*		500	500	500	Pond 90% frozen
2-21	6:30A	90*	500	1000	1000*					1000	1000	Pond 90% frozen
5-19	7:00A	31*	200*	200*	200	200	200	300	300	300	250*	
8-11	7:20A	240*	1400	1400	1400	1000	1000*	1000	700*	800	800	Dense fog 5 mi. east of plant
8-18	7:07A	332*	800*	700	650	800	700	650	700*	750	700	Fog in entire area
8-28	7:06A	**	600	800	800	800	600	600	600	800	800	
9-05	7:15A	71*						1300	700	700	750	
12-01	4:30P	72*					800	800	800	800	800	Raining
12-31	7:00A	315*	1000	1000	1000	1000	1000	1000	1000	1000	1000*	

* Denotes Fog Formation Downwind of Cooling Pond

** Wind direction indicator not working

Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span	Obs.Pt.	Dir. Span
1	305°- 82°	4	90°-161°	7	197°-339°
2	27°- 85°	5	90°-240°	8	278°-351°
3	65°-112°	6	188°-262°	9	286°- 67°

(See Map on Reverse Side)

Date	Time	Dry Bulb Air Temp °F	Water Temp. °F	Thickness	Observer	Location
12/19/83	7:30a	-17	31	1/4"	Carpenter	Near circulating water discharge
12/23/83	7:30a	-14	31	Trace	Carpenter	Near circulating water discharge
01/10/84	7:30a	8	68	1/4"	Carpenter	Near circulating water discharge
01/11/84	7:30a	0	68	Trace	Carpenter	Near circulating water discharge
01/17/84	6:55a	-3	36	1/2-3/4"	Andrews	Near circulating water discharge and parking lot
01/19/84	7:10a	-14	35	1/2-3/4"	Andrews	Near circulating water discharge and parking lot
01/20/84	7:00a	-15	35	1/2-3/4"	Andrews	Near circulating water discharge and parking lot
01/31/84	7:20a	6	69	1/4"	Carpenter	Near circulating water discharge
02/01/84	7:10a	13	69	1/2"	Carpenter	Near circulating water discharge
02/06/84	7:15a	-1	66	1/2"	Andrews	Near circulating water discharge and parking lot
02/07/84	7:15a	-2	66	1/2"	Andrews	Near circulating water discharge and parking lot

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BBB:pp

RESULTS OF MAY 1984 SURVEY OF AREA INVOLVED IN REPORTED RIME ICE DEPOSITION AT THE LASALLE GENERATING STATION

Barry J. Jacobsen, Ph.D.

The area where rime ice was reported on December 19 and 23, 1983, January 10, 11, 17, 19, 20, and 31, 1984, and February 1, 5, 7, 1984 was surveyed for possible effects on vegetation in accordance with section 4.2.2 (d) of the LaSalle County Station Environmental protection plan. Similar plants in adjacent areas where no ice was reported were used for comparison purposes.

Areas where rime ice was reported were identified by Mr. Carrol Carpenter one of the trained observers who made the ice and fog reports. He identified that the area where rime icing occurred was between the circulating water discharge and the parking lot to the north. Woody plants growing in this area and in adjacent areas which were unaffected by rime ice included, willow, autumn olive, Siberean elm, and cottonwood. Common clover was a perrenial herbaceous plant common to both areas.

Tip dieback of willow, cottonwood, Siberean elm, and autumn olive was observed in areas where rime icing was reported and in adjacent areas where icing was not reported. There was slightly more tip dieback in willow in the area of reported rime icing than in non-iced adjacent areas. Common clover stands and plant health were similar in both areas.

Tip dieback and death of autumn olive was judged to be due to transplant failure associated with the dry conditions of the 1983 growing season and harsh winter of 1983-84. Tip dieback of willow and cottonwood is judged to be due to the drought conditions of the 1983 growing season and the severe cold of 1983-84 winter. Similar dieback was observed in crabapple, multiflora rose, Siberean elm and dogwood in areas where rime icing was not reported.

The observed slight increase in tip dieback in areas where rime icing was reported was likely due, not to icing effects, but to a delay in plant hardening due to warming from the adjacent discharge water. Plant tissue not adequately cold hardened will usually winter kill. This is particularly true for species such as willow. It is my judgement that icing was not involved since the ice was reportedly gone by noon each day it was reported. Also there was no evidence of mechanical damage associated with ice loads.

It is my opinion that rime icing reported during the winter of 1983-84 had no observable effect on vegetation.

5.4.1 EPP noncompliances and corrective action taken to remedy them

NONE

5.4.2 Nonroutine Reports

NONE

ATTACHMENT 6

Summary of NPDES noncompliances for 1984. These have been previously reported to the NRC at the time the report was submitted to the State of Illinois. These are not EPP noncompliances.

DOCUMENT ID 0001h/0040A

LASALLE COUNTY STATION
NPDES NON-COMPLIANCES
1984

DVR NUMBER	DATE	NON-COMPLIANCE	CORRECTIVE ACTION
1-1-84-003	01JAN84	Sanitary Treatment Plant effluent. No sample and analysis.	Sample will be collected from an alternate sample point when chlorinator pit is frozen.
1-1-84-98	06MAR84	Wastewater Treatment Facility effluent total suspended solids.	Clearwell was reprocessed. Work requests were written to repair alum injection pumps and damaged tank level probes on polymer injection skid.
1-1-84-134	30MAY84	Wastewater Treatment Facility pH.	The discharge was stopped. The clearwell was reprocessed. Discharge was recommenced when the clearwell and equalization tank pH again met specifications.
1-1-84-196	30JUN84	Cooling pond blowdown total suspended solids.	None taken.
1-1-84-178	18JUL84	Sewage Treatment Plant effluent fecal coliform.	Chlorinator tablet misfeed was corrected. Work request #L39127 was written to place metal cover over feeder. Operating personnel instructed to verify proper feeder operation.
1-1-84-201	11AUG84	Wastewater Treatment Facility effluent total iron.	None taken. Subsequent clearwell and effluent samples showed total iron less than 1.0 mg/l limit.
1-1-84-209	12SEP84	Wastewater Treatment Facility effluent pH.	The discharge was stopped. The clearwell was circulated back to the equalization tank and neutralized.
1-1-84-221	13AUG84	Wastewater Treatment Facility effluent manganese.	No corrective action taken.

Commonwealth Edison
LaSalle County Nuclear Station
Rural Route #1, Box 220
Marseilles, Illinois 61341
Telephone 815/357-6761

March 27, 1985

Mr. James G. Keppler
Regional Administrator
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: EPP Annual Operating Report
Appendix B to Facility License No. NPF-11 and No. NPF-18

Dear Mr. Keppler:

Attached is the Annual Operating Report for the year of 1984 for the Environmental Protection Plan as required by Section 5.4 of Appendix B to Facility License No. NPF-11 and No. NPF-18.

This report is contained in the following subsections:

3.1 Plant Design and Operation.

4.2.1 Vegetative Integrity on Cooling Pond Dike.

4.2.2 Monitoring of Fog and Ice Due to the Cooling Pond.

5.4.1 EPP Non-Compliance and Corrective Action Taken to Remedy Them.

5.4.2 Non-Routine Reports.

Section 3.2 of Appendix B requires submittal to the NRC of NPDES noncompliance reports which are required by the State of Illinois. These reports were previously submitted to the NRC at the time submittal was made to the state. Included as Attachment 6 of this Annual Operating Report is a summary of the NPDES noncompliances for 1984.

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In accordance with Regulatory Guide 10.1, one copy of this report is provided for your use and 18 copies are being submitted directly to the Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555.

Sincerely yours,

G. J. Diederich 1/31/95
G. J. Diederich
Station Manager
LaSalle County Station

GJD/FRL/jdp

Attach.

xc: J. M. Marshall, W/attach.
NRC Resident Inspector, w/attach.
Environmental Affairs, w/attach.
Document Control Desk (18 copies)

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