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

April 23, 1986

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 1985 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 1985.

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DOCUMENT ID 0134h

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
Station Manager
LaSalle County Station

GJD/LRA/jdp

Attach.

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

DOCUMENT ID 0134h

3.1 Plant Design and Operation

No changes in station design or operation, tests and experiments were made in accordance with subsection 3.1 which involve a potentially significant unreviewed environmental issue.

A modification to the condenser cooling water discharge canal to correct an on-site fog and ice problem was evaluated for potential environmental impacts in accordance with subsection 3.1. This evaluation delineated that no significant environmental impact would occur based on the following conclusions:

1. The fog and ice problem that the modification is intended to correct occurred entirely on-site in the immediate vicinity of the condenser cooling water discharge.

2. The modification will not enhance any off-site fogging and icing (this based on past winters experience of the fog and ice forming on the easterly side of the discharge area).

3. There will be no discernable impact on the water quality of the cooling pond due to temperature increase.

4. The construction of the modification will not result in an increase in suspended solids in the cooling pond.

5. The modification and excavation spoiling areas are within the area previously disturbed by site preparation.

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: March 9, 1985; April 30, 1985; May 31, 1985; June 29, 1985; July 31, 1985; August 30, 1985; September 30, 1985; and October 17, 1985. The above inspections resulted in the following concerns:

1) One area at station marker 301 was noted in the March inspection as not doing well and reseeding in May was recommended. However, during the April inspection, this area had recovered and was no longer of concern.

2) In July, work was contracted out to apply the herbicide Round-up to the outer dike face in order to control the Canadian Thistle growth. This killed a majority of the Canadian Thistle and plans are to reapply the herbicide in 1986.

3) The crown vetch along the east side of the outer dike was noted as being dried out and not doing well during the July inspection. After some rain, this area recovered and was no longer of concern.

No other items of concern were noted during the 1985 cooling pond dike inspections.

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

The following is a summary of the data for 1985 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 1984, 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 Units 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 observations in 1985; Attachment 2, which consists of copies of the four quarterly summaries of fog and rime ice observations for 1985; Attachment 3, which includes the annual summaries of observations for the years 1980 through 1984; Attachment 4, which is the correlation of rime ice observations on vegetation for the winter of 1984-1985; and Attachment 5, the report of the "Inspection for Environmental Impact of Rime Icing", which was conducted by a consulting plant pathologist in May, 1985, to assess the effects of the rime ice that formed on vegetation during the winter of 1984-1985.

In summary, there were six days out of the 238 observation days during 1985, where visibility was restricted to less than 1/4 mile. There was one observation of rime ice build-up occurring off the station property. There was a period of continuous observation of on-site rime ice reported during a period of extremely cold weather in January.

Analysis of the six off-site 1985 occurrences of reduced visibility shows that there was one observation of reduced visibility that may have been enhanced by the pond. It occurred on the morning of February 8th and was limited to two downwind observation points.

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.

There was one off-site observation of rime ice in 1985; it was reported on the morning of February 8th, at two downwind observation points. The ice build-up was light, reported as 1/16 inch, and was not reported during the afternoon inspection.

All of the on-site rime ice observations were in the same localized area near the circulating water discharge. Rime ice was observed on vegetation and on vertical surfaces. 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 1986 spring growing season of the areas which were subject to the rime ice occurrences during the 1985-1986 winter season.

Analysis shows that the 1985 data had one less observation of fog causing reduced visibilities than in 1984 and one more than in 1983, but fewer than in the years 1982, 1981, and 1980. As shown below, there were six observations in 1985, seven in 1984, five in 1983, twelve in 1982, eleven in 1981, and ten in 1980.

Year	Total Observations, Visibility Less Than 1/4 Mile	Visibility Less Than 1/4 Mile Downwind Only
1985	6	1
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 three times in the six 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.

In 1985, there was one off-site observation of rime ice, downwind of the cooling pond. It was light (1/16 inch) and did not persist. There was a period of continuous on-site rime ice build-up in the area of the cooling water discharge, where the entrance road crosses the discharge. All the rime ice observations in 1984, 1983 and 1982 were also 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 in 1984 and 1985 and during the prolonged periods 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 15, 1985. 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 1984-1985. Attachment 5 is a copy of the report of the inspection.

As a result of the occurrences of steam fog and rime ice along the on-site access road, corrective action has been taken. The channel carrying the condenser cooling water discharge was rerouted and it is planned 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 is across an on-site area which was previously disturbed by construction. This action was evaluated and recorded as specified in Section 3.1 of the EPP.

The experience through 1984 of pre-operational, one unit operation and, in 1984 and 1985, of two 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 persistant 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. This requirement has been fulfilled and the applicant has requested termination of the off-site fog and rime ice monitoring program.

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Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

1985

238 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	
1/21	7:30a	270°										Fog & Rime Ice (3") on site in area of con-
1/21	4:00p	270°										densing cooling water discharge. Fog con-
1/22	7:30a	300°										tinues through morn- ing of 1/22/85. Rime
												ice persisted for ex- tended period through
												1/31/85.
1/24	7:30a	250°										Fog & Rime Ice on site in area of cool-
												ing water discharge.
1/31	7:00a	332°										Fog & Rime Ice on site in area of cool-
												ing water discharge.
2/08	7:00a	359°							*1000	*1000		Fog & Rime Ice (1/16") observed on trees at
												points 7 & 8.
2/22	7:00a	210°	1300	1300	1300	1300	*1300	*1300	*1300	1300	1300	General fog and drizzle.
2/22	4:30p	170°	700	700	700	700	* 700	700	700	700	700	General fog and drizzle.

* 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°

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

1985

238 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
7/03	7:30a	50°	*1200	*1200	1200	1200	1200	800	800	1200	1200	General fog over entire area.
8/26	7:00a	319°	* 500	500	500	500	500	500	*500	* 500	* 500	General fog over entire area.
9/27	7:30a	30°	1000	1000	1000	1000	1000	1000	1000	1000	1000	General 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°

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

1st Quarter, 1985

60 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
1-21	7:30a	270°										Fog & Rime Ice (3") on site in area of condensing Cooling water discharge
1-21	4:00p	270°										Fog continuous through morning of 1-22-85.
1-22	7:30a	300°										Rime Ice persisted for extended period through 1-31-85.
1-24	7:30a	250°										Fog & Rime Ice on Site in area of cooling water discharge.
1-31	7:00a	332°										Fog & Rime Ice on Site in area of cooling water discharge.
2-8	7:00a	359°							*1000	*1000		Fog, Rime Ice (1/16") observed on tree branches at observation points 7 and 8.
2-22	7:00a	210°	1300	1300	1300	1300	*1300	*1300	*1300	1300	1300	General fog & drizzle
2-22	4:30p	170°	700	700	700	700	*700	700	700	700	700	General fog & drizzle
3-11	6:00a	135°										Fog reported, no visibility restrictions
3-11	6:00p	248°										Fog reported, 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)

Commonwealth Edison
72 West Adams Street, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690 - 0767

August 12, 1985

M. Jordan
Senior Resident Inspector
LaSalle County Station
U.S. Nuclear Regulatory Commission

Subject: LaSalle County Station Units 1 and 2
Operational Fog and Ice Observation Program
(NRC Docket No's. 50-373 and 50-374)

Dear Mr. Jordan:

In accordance with the Environmental Protection Plan, Appendix B, Section 4.2.2 which is part of the operating license for LaSalle County Station Units 1 and 2 the following is a summary of the data for the second quarter of 1985 of the operational fog and rime ice observations in the vicinity of the cooling pond.

During the second quarter of 1985, there were 63 observation days. During that period there were no occurrences where the visibility was restricted to less than 1/4 mile by fog and there were no occurrences of rime ice.

If you have any questions regarding this matter, please address them to this office.

Sincerely,

G. J. Diederich
Station Superintendent

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cc: M. J. Oestmann - Region III

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

Third Quarter, 1985

58 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	
7-3	7:30a	50°	1200*	1200*	1200	1200	1200	800	800	1200	1200	General fog over entire area.
8-5	7:00a	240°										Light fog, no visibility restrictions.
8-6	7:00a	200°										Light fog, no visibility restrictions.
8-26	7:00a	319°	500*	500	500	500	500	500	500*	500*	500*	General fog over entire area.
8-29	7:00a	206°										Light fog, no visibility restrictions.
8-30	7:00a	324°										Light fog, no visibility restrictions.
9-27	7:30a	30°	1000*	1000*	1000	1000	1000	1000	1000	1000	1000	

* 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)

Commonwealth Edison
72 West Adams Street, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690 - 0767

January 16, 1986

M. Jordan
Senior Resident Inspector
LaSalle County Station
U.S. Nuclear Regulatory Commission

Subject: LaSalle County Station Units 1 and 2
Operational Fog and Ice Observation Program
(NRC Docket No's. 50-373 and 50-374)

Dear Mr. Jordan:

This is a summary of the fourth quarter data for 1985 of the operational fog and rime ice observations in the vicinity of the cooling pond. 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 Units 1 and 2.

During the fourth quarter of 1985, there were no days out of 57 observation days where the visibility was restricted to less than 1/4 mile.

There were no occurrences of rime ice during the period. Daily observations were not made on the dates of October 1, 2, 3 and 4 due to inspector illness.

If you have any questions concerning this matter, please address them to this office.

Sincerely,

G. J. Diederich
Station Manager

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cc: M. J. Oestmann - Region III w/att.

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 Date	Time	Wind Direction	Visibility in Feet (less than 1/4 mile) at Observation Points 1	2	3	4	5	6	7	8	9	Remarks
1/10	7:30a	360°										Rime Ice (1/8") 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 (1/8") 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 (1/2") on plants guardrails and fences near discharge.
2/6	7:15a	300°										Rime Ice (1/2") 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)

Fog and Rime Ice Monitoring Program Summary
LaSalle County Generating Station

Incidence of Fog/Rime Ice Formation

1984

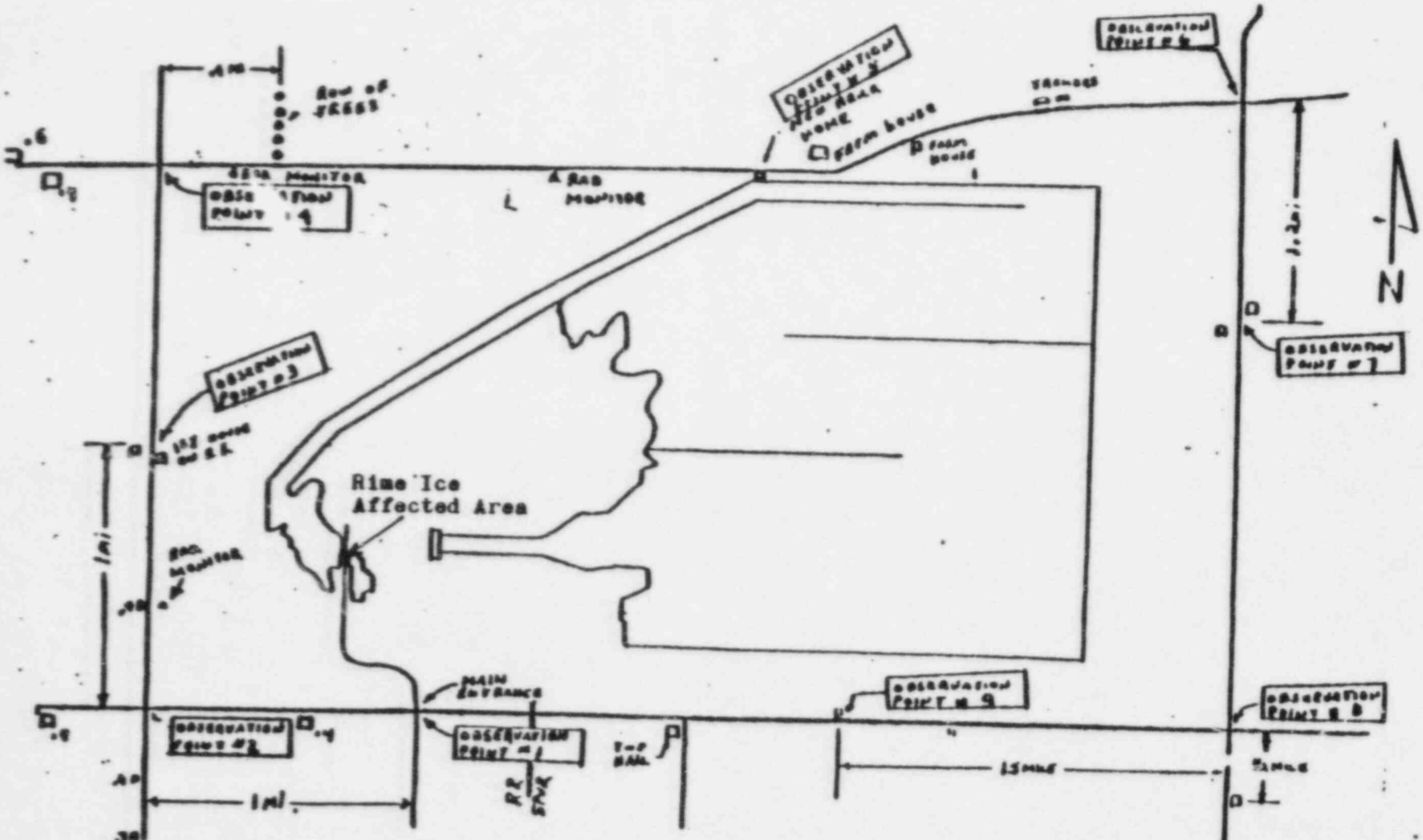
249 Days of Observations

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)


Rime Ice
Affected Area
N
OBSERVATION POINT #3
OBSERVATION POINT #1
OBSERVATION POINT #2
OBSERVATION POINT #9
OBSERVATION POINT #7
MAIN ENTRANCE
RAD MONITOR
FARM HOUSE
ROW OF TREES
1 MI
1 MI

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 handrails and vegetation near circulating water discharge.**
12/23	7:30 a	260°										Rime ice (trace) on guardrail 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°

(See Map on Reverse Side)

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

**Rime ice on station site only: see page 2 of Attachment 2 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	
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°-319°
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 directions							
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 Discharge Temp °F	Thickness	Observer	Location
11/12/84	7:00a	25	72	1/16"	J. Land	Near circulating water discharge.
1/21/84 through 1/31/85	7:30a	1	78	3"	C. Carpenter	Near circulating water discharge ice persisted and built-up during period of extremely cold weather.
2/08/85	7:00a	-2	71	1/16"	J. Land	Off-site at Observation Point 7 and .7 mile west of Observation Point 8. Build-up estimated at 1/1 covering all tree branches.

4785E
888:dd

RESULTS OF FOLIAR SURVEY OF THE LASALLE COUNTY GENERATING STATION FOR RIME ICE DEPOSITION DAMAGE

Prepared for

Commonwealth Edison Company

by

Barry J. Jacobsen, PhD

Vegetation in the vicinity of the LaSalle County Generating Station was surveyed for damage caused by rime ice deposition during the winter of 1984-85. This survey was done in accordance with section 4-2-2(d) of the LaSalle County Station Environmental Protection Plan on the 15th of May, 1985 with the assistance of Mr. B.B. Barrickman of the Commonwealth Edison Company and is the second survey of this site done by Barry J. Jacobsen, Ph.D. Summaries of the 4th quarter of 1984 and 1st quarter of 1985 of the Fog and Rime Ice Monitoring Program for the LaSalle Station were utilized to identify areas of most likely damage. The survey area is shown in Figure 1 (attached). Also shown in this figure are specific sites mentioned in this report. The survey area was sufficiently large so that similar plants could be observed in areas reported to be with and without rime ice.

Site #1 located around the cooling water discharge was the site where rime ice was reported most frequently during January of 1985. Cottonwood, willow, autumn olive and sweet clover observed at this site did not show evidence of ice damage. However, willows located north of the cooling water discharge did show more winter injury and canker disease (Venturia and Cytospora) than other willows in the survey area. Winter injury was diagnosed based on tip dieback and one sided cambium necrosis and bud death. This winter injury is thought to be due to the warm discharge water delaying the vernalization process. This delay in vernalization does not allow the plant tissues to harden off enough to prevent freezing injury when extreme cold occurs. The winter injury noted was relatively minor in nature. Willows growing 25-50 yards north of the cooling water discharge also had wood borer damage.

Autumn olive plantings in this area also displayed some dieback. However, the distribution and type of dieback is suggestive of problems relating to transplanting and plant establishment.

Sweet clover growing in this area showed no evidence of smothering such as would be expected from ice damage.

Site #2 located to the west of the cooling water discharge had apple and oak trees which showed winter damage. This damage is thought to relate to the vernalization problem mentioned above and not ice damage.

Dogwood standings at this site showed evidence of transplant damage again in 1985, although most plants show evidence of recovery.

Sweet clover and crown vetch growing at this site showed no signs of ice smothering.

Site #3 was characteristic of crown vetch growing on the banks of the pond containment dike. Growth was excellent and there was little sign of the Volutella canker disease seen in the 1984 survey.

Site #4 was contiguous with observation site #7 used in the fog and rime ice monitoring reports. Dieback was noted only in a row of old Osage orange trees growing adjacent to a pasture.

Dieback was not characteristic of ice or winter damage. Dieback was characteristic of root damage and/or canker or decay problems.

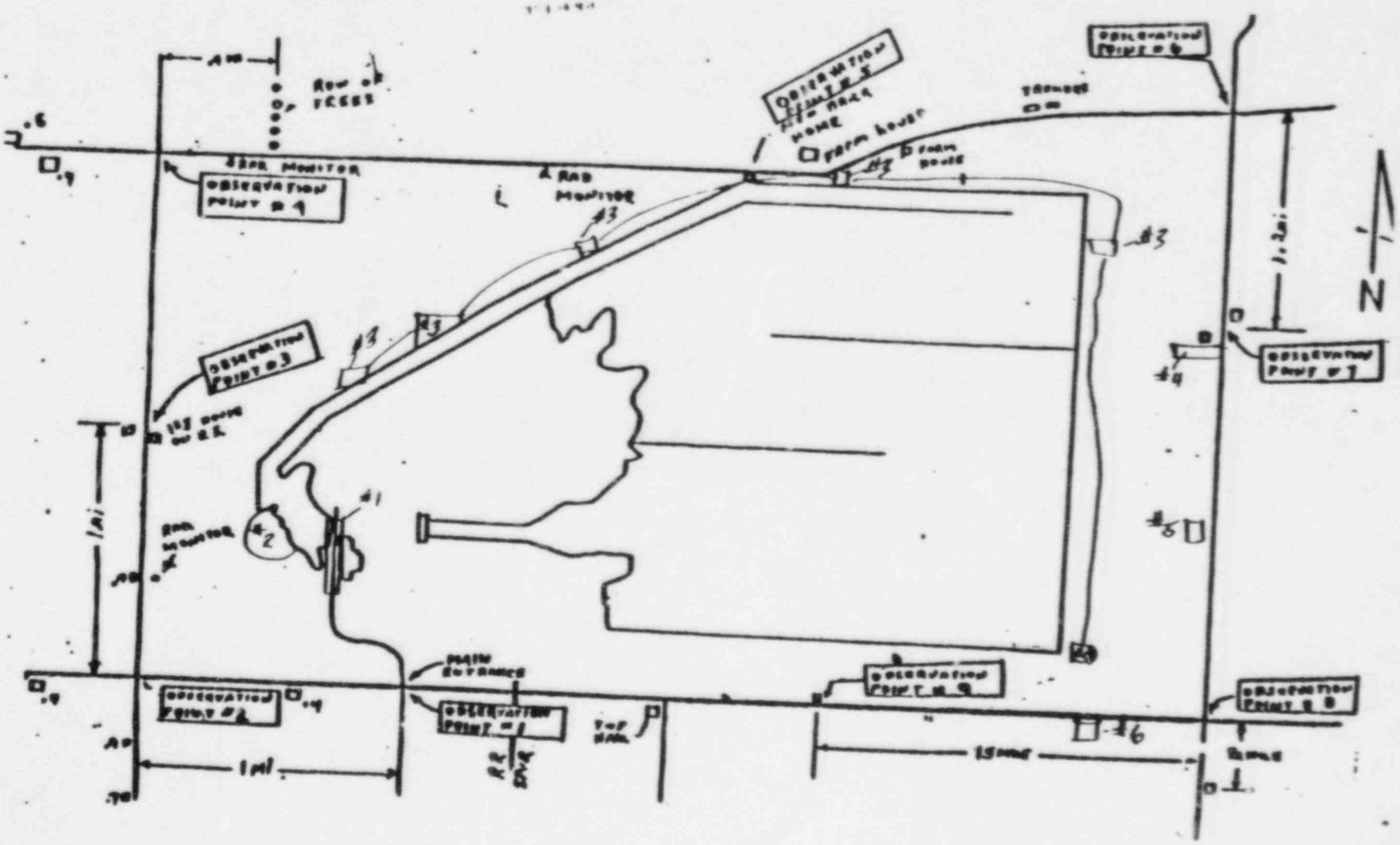
Site #5 was located between fog and rime ice observation sites #7 and #8. A new home with new landscape tree plantings was located at this site. These plantings occurred in 1984 and did not show ice or winter damage.

Site #6 was located at 0.7 miles west of fog and rime ice observation site #8. An old planting of hard maples showed evidence of dieback relating to decay at this abandoned building site. There was no evidence of ice damage.

Conclusion

Rime icing was not a factor in vegatation injury in and around the LaSalle County Generating Station during the winter of 1984-85. Dieback associated with delayed vernalization near the cooling water discharge site can be associated with plant operation. However, this damage is minor and is limited only to willows which often show winter injury.

Commonwealth Edison Co LaSalle County Generating Station
In 1985 Specific survey sites mentioned in the report are
marked in blue ink.



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 1985. 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 0134h

LASALLE COUNTY STATION
NPDES NON-COMPLIANCES
1985

DVR NUMBER	DATE	NON-COMPLIANCE	CORRECTIVE ACTION
1-1-85-09	10 Jan 85	001 (a) Demineralizer Regenerant Wastes pH(1)	Discharge was discontinued following confirmation of the 9.2 pH result.
1-1-85-57	27 Feb 85	001 Cooling Pond Blowdown Total Iron (1)	None taken.
1-1-85-66	13 Mar 85	001 (b) Sewage Treatment Plant Effluent Fecal Coliform (2)	Efforts made to sample Sewage Treatment Plant effluent after more contact time with chlorine.
1-1-85-88	4 Apr 85	001 Cooling Pond Blowdown Total Iron (4)	Requesting NPDES permit modification.
1-1-85-97	26 Apr 85	001 Cooling Pond Blowdown Total Iron (2)	Requesting NPDES permit modification.
1-1-85-121	3 Jun 85	001 (c) Wastewater Treatment Facility pH (1)	Discharge was isolated. Clearwell pumped back to equalization tank and neutralized.
1-1-85-122	4 Jun 85	001 (a) Regenerative Wastes Solution Discharge Tank pH and Total Suspended Solids (2).	Discharge was isolated. Possible inadequate mixing due to low flow through transfer pumps to be investigated.
1-1-85-143	01 Jul 85	001 (a) Regenerative Wastes Solution Discharge Tank TSS (1)	0WM03T and 0WM12T Tanks were drained, inspected, and cleaned since solids had accumulated in the tanks.
1-1-85-144	03 Jul 85	001 (c) Wastewater Treatment System Effluent Oil and Grease (3)	Oil and Grease was pumped out of clarifiers, equalization tank, and oil separator pit. Oil absorbent booms in clearwell and effluent chamber were replaced.
1-1-85-160	29 Jul 85	001 (c) Wastewater Treatment Facility Total Suspended Solids and Oil and Grease (4)	Discharge isolated. Media filter 'A' replaced. Oil pumped out of equalization tank, clarifiers, clearwell, and effluent compartment. Oil absorbent booms replaced. Polymer was replaced. Inspection of oil trough.

LASALLE COUNTY STATION
NPDES NON-COMPLIANCES
1985

DVR NUMBER	DATE	NON-COMPLIANCE	CORRECTIVE ACTION
1-1-85-172	19 Sep 85	001(a) Demineralizer Regenerant Waste TSS (1)	Composite sampler previously out of service has been repaired and put into use.
1-1-85-180	4 Oct 85	001 (c) Wastewater Treatment System Effluent Oil and Grease (3) 2 daily, 1 monthly.	Replaced oil booms in clarifier and eq. tank. Media filter 'A' changed out on 25 Sep 85. AIR's written to pump sludge out of oil separator and increase polymer concentration to equal vendor's recommendations.
1-1-85-185	11 OCT 85	001 (a) Demineralizer Regenerant Wastes TSS (1)	Discharge at low flow rate as not to dislodge accumulated solids in low point of piping. Clean standstill acid sump and area around sump.
1-1-85-189	16 Oct 85	001 (c) Wastewater Treatment System TSS (1)	Anthracite coal added to media filter 'B' to bring it to correct level on 18 Oct 85. Anionic polymer skid put back into service on 17 Oct 85. Polymer manually mixed. Composite sampler has been reprogrammed to sample correct volume.
1-1-85-191	15 Oct 85	001 (c) Wastewater Treatment System Oil & Grease (1)	AIR written to identify source of oil and correct problem. Effluent chamber boom removed and not replaced. AIR 373-200-85-18001 tracking new tube bundles for oil separator.
1-1-85-192	31 Oct 85	001 (a) Demineralizer Regenerant Wastes TSS (30-day avg)(1)	Discharge at low flowrate only. Caution card hung on crosstie valve OWM213. Clean standstill acid sump and areas around sump.
1-1-85-193	31 Oct 85	001 (c) Wastewater Treatment System TSS (30-day avg) (1)	Anthracite coal added to media filter 'B' to bring it to correct level on 18 Oct 85. Anionic polymer skid put back into service on 17 Oct 85. Polymer manually mixed. Composite sampler has been reprogrammed to sample correct volume.
1-1-85-207	12 Nov 85	001 Cooling Pond Blowdown Total Iron (2)	None taken (heavy rainfall).

DOCUMENT 0309h