

LaSalle Generating Station
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RA07-066

August 17, 2007

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: 2007 Triennial Chlorine Survey Report

Enclosed is the Exelon Generation Company, LLC, LaSalle County Station (LSCS) 2007 Triennial Chlorine Survey Report. The survey is submitted in accordance with the provisions of the April 11, 1986 letter transmitting Amendments 38 and 20 to the LSCS Facility Operating Licenses for Units 1 and 2, respectively.

Should you have any questions concerning this letter, please contact Mr. Terrence Simpkin, Regulatory Assurance Manager, at (815) 415-2800.

Respectfully,



for Susan R. Landahl
Site Vice President
LaSalle County Station

Attachment

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector - LaSalle County Station

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CHLORINE SURVEY IN THE VICINITY OF LASALLE COUNTY STATION

1. Executive Summary

A triennial survey of potential sources of chlorine was conducted by LaSalle County Station to ensure compliance with General Design Criteria (GDC) 19 of Appendix A of 10CFR 50. This three-year survey re-evaluates the use of chlorine within 5 miles of the plant's Control Room to ensure that a chlorine hazard does not exist. The survey also ensures compliance with Regulatory Guides (RG) 1.78, Revision 0, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release" and RG 1.95, Revision 0, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release."

A database of potential chlorine sources was developed based on facilities identified in previous surveys and was updated with information obtained from the Grundy and LaSalle County Emergency Services and Disaster Agencies (ESDA). The information contained in the database is limited to facilities located between the Marseilles and Dresden Island Locks and those that are within and outside the five-mile radius of LaSalle County Station. A total of fifteen facilities in Grundy and LaSalle counties fit the criteria and were included in this survey.

Data from seven controlling authorities and fifteen facilities was reviewed and follow-up contacts were made to confirm the information gathered. The 2007 survey identified four facilities that used and stored chlorine onsite. Two of the four chlorine sites identified are located within the five-mile radius of LaSalle County Station.

All four facilities reported their chlorine was stored in 150-lb. cylinders. Per Regulatory Guide 1.95, storage of single containers of chlorine exceeding 150 lbs. would require installation of chlorine detectors and automatic protective features located at the fresh air inlet of Control Room ventilation. The results of this survey indicate that chlorine is used and stored in cylinders that are not larger than 150 lbs. at facilities located within the vicinity of LaSalle County Station. There is also no chlorine transported on the Illinois River.

2. Introduction

LaSalle County Station is required to conduct a survey of industries and transportation routes in the vicinity of these sites that may use, store, and/or transport hazardous chemicals. The original survey conducted in 1975 revealed that anhydrous ammonia and possibly chlorine were transported by barge on the Illinois River. The information gathered was not complete enough to conclude that chlorine was not shipped in large quantities by barge on the Illinois River.

A follow-up survey was conducted in January-February 1986 to supplement the information obtained from the 1975 chlorine survey. The information collected by the 1986 survey concluded that no special chlorine protection provisions were required at LaSalle County Station. In the safety evaluation supporting Amendment No. 38 to Facility Operating License No. NPF-11 and Amendment No. 20 to Facility Operating License No. NPF-18, the U.S. Nuclear Regulatory Commission (NRC) agreed with this

conclusion, but recommended a three-year update for the Illinois River chlorine survey. Exelon Corporation committed to the survey update in a letter to the NRC dated March 5, 1986. Surveys have been conducted on a three-year frequency supporting the conclusion that chlorine is not shipped on the Illinois River in sufficient quantities to present a hazard to the Control Room at LaSalle County Station. In accordance with this commitment, a new survey has been conducted in 2007.

The following sections describe regulatory guides that form the basis of the Control Room habitability evaluation, results of previous surveys, the methods and results of current survey, and the conclusion regarding chlorine as a hazard. The results of the current survey and previous surveys fully support the 1986 conclusion that no special chlorine protection measures are required at LaSalle County Station.

3. Regulatory Guides

Regulatory Guide 1.78, Revision 0, "Assumption for Evaluating the Habitability of a Nuclear Power Plant Control Room during a Postulated Hazardous Chemical Release" identifies chlorine as a hazardous chemical that requires a Control Room habitability analysis in the event of an accidental chlorine release from stationary or mobile sources near the station. Regulatory Guide 1.95 specifically addresses onsite accidental chlorine release. However, it can also be used in analyzing effects of an offsite chlorine release.

Regulatory Position 1 of Regulatory Guide 1.78 states that chlorine stored or situated at greater distances than five miles from the Control Room need not be considered in evaluating habitability of the nuclear power plant's Control Room during a postulated chlorine release. Regulatory Guide 1.78 also specifies the frequency, distance, and quantity of chemicals transported or stored with respect to the Control Room that require a habitability analysis. The Regulatory Guide specifies three modes of transportation that must be considered for chlorine that is manufactured, stored or used by industries in the vicinity of the Control Room: railroads, highways, and waterways.

4. Earlier Surveys Of Chlorine Shipment

The LaSalle County Updated Final Safety Analysis Report (UFSAR), Section 2.1.1, describes the location of the plant and transportation routes near the plant. UFSAR Section 2.2.2 describes nearby industrial, transportation, and military facilities. All industrial facilities are located outside of a five-mile radius of the plant. Therefore, chlorine used or stored at these facilities need not be considered in evaluating Control Room habitability.

A survey of these industries was conducted in 1975 to determine the shipment of chlorine by three modes of transportation. U.S. Highway 6 and State Highway 47 are the nearest highways to the station used by these industries, and the Chicago Rock Island and Pacific, which is the nearest railroad, are located farther than five miles from the station. Therefore, transportation of chlorine by these two modes of transportation need not be considered in the Control Room habitability analysis.

UFSAR Section 2.2.2.4 describes river traffic on the Illinois River passing the site. Section 2.2.3.1.c concluded that the only transportation route potentially carrying chlorine within five miles of the station was the Illinois River, which is located approximately 4.7 miles north of the station. However, the available data on

commodities transported on the Illinois River (UFSAR Table 2.204) did not differentiate barge shipments of chlorine from other chemicals. The survey found a small quantity of chlorine was used by the Illinois Nitrogen Corporation, located at river mile 248.7, approximately five miles north of the station; however, there was not sufficient information available with regards to receiving chlorine supply by barge. In order to expedite the licensing process, chlorine detectors were provided in the Control Room HVAC system intake air ducts.

To supplement the 1975 survey and to obtain additional specific information on chlorine shipments, a survey was conducted during January-February 1986 to determine whether chlorine was, in fact, transported in barges on the Illinois River. Information was collected from the U.S. Army Corps of Engineers, the U.S. Coast Guard, and Lockmasters for Starved Rock and Dresden Dams. None of these sources had information suggesting chlorine is transported on the Illinois River. Since none of the barge operators, barge terminals, or chemical companies reported chlorine shipments on the Illinois River and neither of the lockmasters was aware of any chlorine passing through their locks, it was then concluded that chlorine was not shipped on the river in significant quantities.

5. Year 2007 Survey of Chlorine Shipments

The criteria used for the 2007 survey limited the sites of interest to those located between Marseilles and Dresden Island Locks, as well as facilities within and outside of the five-mile radius of LaSalle County Station. Previous surveys were reviewed and updated from reports obtained from Grundy and LaSalle County ESDAs.

Table 1 shows the results of the fifteen barge terminals, chemical companies, water treatment plants, and potential chlorine users that were contacted. None of the barge terminals located between the closest upstream and downstream dams handle chlorine. None of the chemical companies, water treatment plants or other potential chlorine users sends or receives chlorine via the Illinois River. Four facilities were identified using small quantities of chlorine. Two of those sites are located within five miles of LaSalle County Station. All four facilities stated their chlorine is transported and stored in 150-lb. cylinders. CSX operates the closest regularly traveled railroad to LaSalle County Station. The railroad is located outside the five-mile radius of the station.

Table 2 shows the results of seven government agencies, trade organizations and public officials contacted for the 2007 survey. The Chlorine Institute reported no chlorine is transported on the Illinois River, and has no knowledge of any chlorine producer or distributor that is located on the river. The United States Coast Guard stated that any company transporting chlorine on a barge is required to notify them and that they have not received such notification for the Illinois River. The Corps of Engineers provided information that, according to their records, no chlorine was moved on the Illinois River for the past five years. Although four facilities were identified using small amounts of chlorine, there was no indication chlorine is being transported on the Illinois River.

In addition, the LaSalle County Station HAZMAT Coordinator reported that no chlorine is used or stored on-site.

6. Conclusion

The 2007 survey concludes that chlorine is not being transported in significant quantities on the Illinois River or within a five-mile radius of LaSalle County Station. Small quantities of chlorine are used and stored in 150-lb. cylinders at four sites. Two of the four sites identified are within the five-mile radius of the station. Regulatory Guide 1.95, Position C.3 states that only single container quantities exceeding 150 lbs. need to be considered for Control Room ventilation requiring automatic chlorine protection features. Therefore, the 2007 survey concludes that chlorine detectors are not required for the LaSalle County Station.

Table 1. Barge Terminals Chemical Companies, Water Treatment Plants, and other Potential Chlorine Users in Towns on the Illinois River in the Vicinity of LaSalle County Station

Company	County	Address	Phone	Distance to LaSalle Station	Chlorine Identified?
Cargill Inc.	LaSalle	S. Main Street Seneca POC: Tom Cromwell	(815) 357-8760	<5 miles	None
Agrium US, Inc. (formerly Royster-Clark)	LaSalle	2100 E. Broadway Marseilles POC: Joe Moyer	(815) 795-4151	>5 miles	None
Morris Sewage Treatment Plant	Grundy	N. River Road Morris POC: Junior King	(815) 942-0643	>5 miles	Yes 20 – 150-lb cylinders
PCS Phosphates	LaSalle	P.O. Box 88 Marseilles POC: Bob Startzer	(815) 795-5111	>5 miles	None
Forbo Chemicals, Inc. (formerly Reichhold Chemicals, Inc.)	Grundy	DuPont Road Seneca POC: Dick Oberholtzer	(815) 357-6726	>5 miles	None
Shipyard Terminal and Industrial Park	LaSalle	P.O. Box 380 Seneca POC: George Lamb	(815) 357-6721	<5 miles	None
Marseilles Wastewater Treatment Facility	LaSalle	#2 Spicer Lane Marseilles POC: Don Christiansen	(815) 795-2150	>5 miles and < 5 miles	Yes, 150-lb Cyl. 2 stored inside 7 stored outside 5-mile radius
Village of Seneca Wastewater Treatment Facility	LaSalle	301 W. Union Seneca POC: Paul Rivett	(815) 357-8406	<5 miles	Yes 9 – 150-lb cylinders

Table 1 (continued)
Barge Terminals Chemical Companies, Water Treatment Plants, and Other Potential Chlorine Users in Towns on the Illinois River in the Vicinity of LaSalle County Station

Company	County	Address	Phone	Distance to LaSalle Station	Chlorine Identified?
ADM/Growmark	LaSalle	Towpath Road Ottawa POC: Gary Boyd	(815) 433-3635	>5 miles	None
Field Container Company (This facility was closed in 2006)	LaSalle	240 Main Street Marseilles POC: Don Frederick	(815) 795-2111	>5 miles	None
CF Industries, Inc	Grundy	737 E. DuPont Road Seneca POC: Ron Witalka	(815) 357-8811	>5 miles	None
Evenson Energies LLC	Grundy	2019 Dunn Road Morris POC: Becky Younker	(815) 942-5800	>5 miles	None
Explosive Energies, Inc (This facility was closed in 2006)	Grundy	7700 DuPont Road Morris POC: Becky Younker	(815) 942-5802	>5 miles	None
Orica Nitrogen, LLC (This facility closed in 2006)	Grundy	7700 W DuPont Road Morris POC: Nicholas Davies	(815) 357-8711	>5 miles	None
GE Plastics	LaSalle	2148 N. 2753rd Rd. Ottawa, IL POC: Dave Parrot	(815) 434-7000 Ext. 7621	> 5 miles	Yes 8 – 150-lb cylinders

Table 2. Government Agencies, Public Officials and Trade Organizations

Organization	Information that Chlorine is Transported on the Illinois River
Chlorine Institute, Rosslyn, VA	None
Illinois Department of Transportation, Hazardous Materials Division, Springfield, IL	None
Lockmaster, Marseilles, Illinois	None
Emergency Services and Disaster Agency of LaSalle County, Ottawa IL	None
Emergency Services and Disaster Agency of Grundy County, Morris IL	None
U.S. Army Corps of Engineers, Planning Division, Rock Island, IL	None
U.S. Coast Guard, Chicago IL.	None

7. References

Chlorine Institute, Rosslyn, VA, Mr. Frank Reiner, personal conversation with Exelon Corporation on 06/20/07, (703) 741-5762

Illinois Department of Transportation, Hazardous Materials Division, Springfield, Illinois, (217) 785-3064, Mr. Tom Wise, personal conversation with Exelon Corporation on 06/13/07.

Assistant Lockmaster, Marseilles Lock and Dam, Marseilles, Illinois, (815) 795-2593, Mr. Larry Rodriguez, personal conversation with Exelon Corporation on 06/13/07.

U.S. Army Corps of Engineers, Planning Division, Rock Island, Illinois, (309) 794-5366, Mr. Jack Karr, personal conversation with Exelon Corporation on 07/02/07.

Grundy County Emergency Services and Disaster Agency, (815) 941-3212, Ms. Bridget Ahlgrim, personal conversation with Exelon Corporation on 06/13/07 and fax received on 06/22/07.

LaSalle County Emergency Services and Disaster Agency, (815) 433-5622, Mr. Mike Jobst, personal conversation with Exelon Corporation on 06/13/07.

Cargill, Inc., Seneca, Illinois, (815) 357-8741, Mr. Tom Cromwell, personal conversation with Exelon Corporation on 06/13/07.

Agrium US, Inc (formerly Royster-Clark), Marseilles, Illinois, (815) 795-4151, Mr. Joe Moyer, personal conversation with Exelon Corporation on 06/20/07.

Morris Sewage Treatment Plant, Morris, Illinois, (815) 942-0643, Mr. Junior King, personal conversation with Exelon Corporation on 06/13/07.

PCS Phosphates, Marseilles, Illinois, (815) 795-5111, Mr. Bob Startzer, personal conversation with Exelon Corporation on 06/13/07.

Forbo Chemicals, Inc. (formerly Reichold Chemicals, Inc.), Seneca, Illinois, (815) 357-6726, Mr. Dick Oberholtzer, personal conversation with Exelon Corporation on 06/13/07.

Shipyard Terminal and Industrial Park, Seneca, Illinois, (815) 357-6721, Mr. George Lamb, personal conversation with Exelon Corporation on 06/13/07.

Wastewater Treatment Facility, Marseilles, Illinois, (815) 795-2150, Mr. Don Christiansen, personal conversation with Exelon Corporation on 06/13/07.

Village of Seneca Wastewater Treatment Facility, Seneca, Illinois, (815) 357-8406, Mr. Paul Rivett, personal conversation with Exelon Corporation on 06/13/07.

ADM/Growmark, Ottawa, Illinois, (815) 433-3635, Mr. Gary Boyd, personal conversation with Exelon Corporation on 06/13/07.

Field Container Company, Marseilles, Illinois, (815) 795-2111 (disconnected), spoke with HQ in Elk Grove, IL (847) 437-1700, personal conversation with Exelon Corporation on 06/20/07.

CF Industries, Inc., Seneca, Illinois, (815) 357-8811, Mr. Ron Witalka, personal conversation with Exelon Corporation on 06/13/07.

Evenson Energies, LLC, Morris, Illinois, (815) 942-5800, Ms. Becky Younker, personal conversation with Exelon Corporation on 06/13/07.

Explosive Energies, Inc., Morris, Illinois, (815) 942-5802, Ms. Becky Younker, personal conversation with Exelon Corporation on 06/13/07.

Orica Nitrogen LLC, Morris, Illinois, (815) 357-8711, Mr. Nicholas Davies, personal conversation with Exelon Corporation on 07/02/07.

US Coast Guard, Chicago, Illinois, (630) 986-2155, Officer Stpedoske, Marine Safety Unit – Chicago, personal conversation with Exelon Corporation on 07/02/07.

GE Plastics, Ottawa, Illinois, (815) 434-7000 ext. 7621, Mr. Dave Parrot, personal conversation with Exelon Corporation on 07/02/07.