LaSalle Generating Station
2601 North 21st Road
Marseilles, IL 61341-9757

www.exeloncorp.com

Exelon Nuclear

RA07-041

10 CFR 50 Appendix I

May 15, 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: 2006 Annual Radiological Environmental Operating Report

Enclosed is the Exelon Generation Company, LLC, LaSalle County Station 2005 Annual Radiological Environmental Operating Report, submitted in accordance with Technical Specification 5.6.2, "Annual Radiological Environmental Operating Report." This report contains the results of the Radiological Environmental and Meteorological Monitoring Programs. This report is enclosed as an Attachment.

In addition, this Attachment contains the results of groundwater monitoring conducted in accordance with Exelon's Radiological Groundwater Protection Program, which is a voluntary program implemented in 2006. This information is being reported in accordance with a nuclear industry initiative.

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

Respectfully,

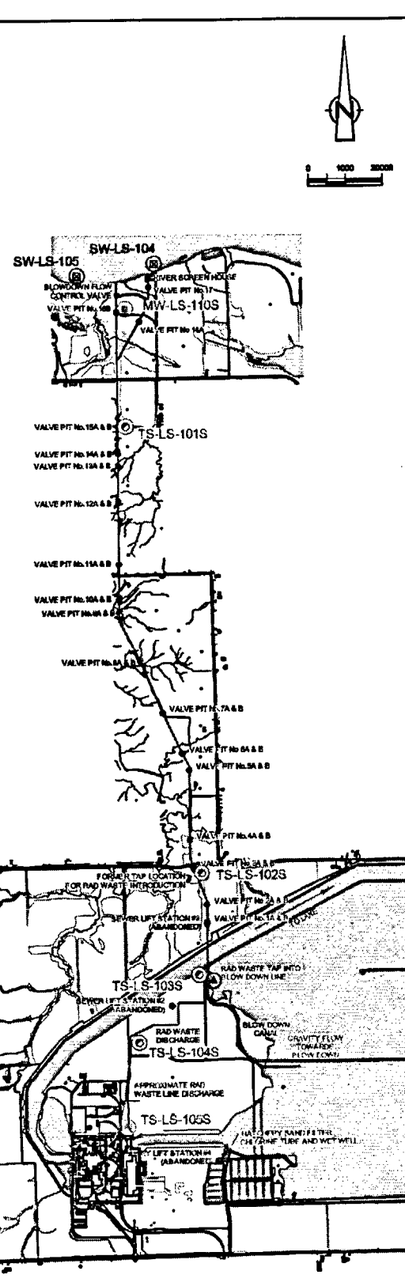
Susan R Landahl

Susan R. Landahl
Site Vice President
LaSalle County Station

Attachment

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

IE25



ADDITIONAL MONITORING WELLS :

MW-LS-110S

ADDITIONAL TEMPORARY SAMPLING LOCATIONS :

TS-LS-101S
TS-LS-102S
TS-LS-103S
TS-LS-104S
TS-LS-105S

SEE INSET:
" ADDITIONAL MONITORING WELL KEYPLAN "
FOR LOCATION OF MONITORING WELLS

LEGEND

- EDGE OF WATER
- CULTIVATED FIELD
- TRANSMISSION TOWER
- MONITORING WELL LOCATION
- ABANDONED MONITORING WELL LOCATION
- PROPOSED ADDITIONAL MONITORING WELL LOCATION
- PROPOSED ADDITIONAL TEMPORARY GROUNDWATER SAMPLING LOCATION
- PROPOSED SURFACE WATER SAMPLE LOCATION
- EXISTING STAFF GAUGE SAMPLE LOCATION
- GROUNDWATER CONTOURS
- GROUNDWATER FLOW DIRECTION

SOURCE	AREAS OF FURTHER EVALUATION
1	HPCSRI
2	REACTOR / TURBINE / AUXILIARY BUILDINGS
3	CY SYSTEM
4	VALVE PIT 3S
5	VALVE PIT 16S
6	VALVE PIT 16S
7	RAD WASTE LINE

NOTE: AFE 4, 5, & 6 ARE NOT SHOWN ON THIS FIGURE.

FINAL DRAFT

PRIVILEGED AND CONFIDENTIAL
ATTORNEY-CLIENT COMMUNICATION
ATTORNEY WORK PRODUCT

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE TRITIUM ASSESSMENT

MONITORING WELL AND SAMPLING LOCATIONS
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Exelon. CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BDI CONSULTANTS, ALTA/ACSM LAND TITLE SURVEY
LASALLE NUCLEAR STATION, 8-16-2005

Project Manager:	Reviewed By:	Date:	
S. GUIGLEY	M. KELLY	MAY 2006	
Scale: AS SHOWN	Project N°: 45136-24	Report N°: 016	Drawing N°: figure 4.1

45136-24(016)GN-WA001 MAY 23/2006

APPENDIX B

DATA TABLES

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER AND SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE		
HP-10		05/24/06	< 165	
HP-10		10/04/06	< 182	*
HP-2		05/24/06	< 164	
HP-2		10/03/06	< 186	*
HP-5		05/24/06	< 163	
HP-5		10/03/06	< 185	*
HP-7		05/24/06	< 165	
HP-7		10/04/06	< 189	*
MS-LS-101S		05/24/06	185 ± 111	
MS-LS-103S		05/23/06	< 160	
MS-LS-104S		05/26/06	< 170	
MS-LS-105S		05/26/06	1280 ± 184	
MS-LS-106S		05/25/06	< 167	
MS-LS-107S		05/26/06	< 171	
MS-LS-108S		05/25/06	< 172	
MS-LS-109S		05/26/06	< 170	
MS-LS-110S		05/25/06	188 ± 114	
MS-LS-111S	ORIG	05/30/06	< 169	
MS-LS-111S DUP	DUP	05/30/06	< 166	
MS-LS-112S	ORIG	05/30/06	< 168	
MS-LS-112S DUP	DUP	05/30/06	< 170	
MW-LS-101S		10/05/06	< 167	*
MW-LS-102S		10/05/06	< 188	*
MW-LS-103S		10/04/06	< 185	*
MW-LS-104S		10/04/06	< 186	*
MW-LS-105S		07/05/06	766 ± 153*	
MW-LS-105S		10/05/06	1720 ± 240*	
MW-LS-105S	RERUN	10/05/06	1940 ± 255*	
MW-LS-106S		10/05/06	< 185	*
MW-LS-107S		10/04/06	< 181	*
MW-LS-109S		10/04/06	< 184	*
MW-LS-111S		10/05/06	< 182	*
MW-LS-112S		10/06/06	< 187	*
MW-LS-113S		10/06/06	< 188	*
MW-LS-114S		10/05/06	< 184	*
MW-LS-115S		10/05/06	< 183	*
SW-LS-101		05/23/06	232 ± 116	
SW-LS-101		10/05/06	< 187	*
SW-LS-102		05/23/06	177 ± 111	
SW-LS-102		10/05/06	< 168	*
SW-LS-103		05/23/06	< 167	
SW-LS-103		10/05/06	< 179	*
SW-LS-104		05/25/06	< 165	
SW-LS-104		10/05/06	721 ± 147*	
SW-LS-104	RERUN	10/05/06	713 ± 151*	
SW-LS-105	ORIG	05/25/06	173 ± 116	
SW-LS-105 DUP	DUP	05/25/06	< 166	
SW-LS-105		10/05/06	< 176	*
SW-LS-106		05/24/06	219 ± 113	
SW-LS-106		10/05/06	< 178	*

* INDICATES DISTILLED ANALYSIS

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER AND SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	
TS-LS-101S	05/09/06	< 168
TS-LS-102S	05/05/06	183 ± 105
TS-LS-103S	05/05/06	< 166
TS-LS-104S	05/05/06	< 167
TS-LS-105S	05/09/06	< 167

TABLE B-I.2 **HIGHEST TO LOWEST CONCENTRATIONS OF TRITIUM IN GROUNDWATER AND SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE		
MW-LS-105S	RERUN	10/05/06	1940 ± 255	*
MW-LS-105S		10/05/06	1720 ± 240	*
MS-LS-105S		05/26/06	1280 ± 184	
MW-LS-105S		07/05/06	766 ± 153	*
SW-LS-104		10/05/06	721 ± 147	*
SW-LS-104	RERUN	10/05/06	713 ± 151	*
SW-LS-101		05/23/06	232 ± 116	
SW-LS-106		05/24/06	219 ± 113	
HP-7		10/04/06	< 189	*
MS-LS-110S		05/25/06	188 ± 114	
MW-LS-102S		10/05/06	< 188	*
MW-LS-113S		10/06/06	< 188	*
MW-LS-112S		10/06/06	< 187	*
SW-LS-101		10/05/06	< 187	*
HP-2		10/03/06	< 186	*
MW-LS-104S		10/04/06	< 186	*
MS-LS-101S		05/24/06	185 ± 111	
HP-5		10/03/06	< 185	*
MW-LS-103S		10/04/06	< 185	*
MW-LS-106S		10/05/06	< 185	*
MW-LS-109S		10/04/06	< 184	*
MW-LS-114S		10/05/06	< 184	*
TS-LS-102S		05/05/06	183 ± 105	
MW-LS-115S		10/05/06	< 183	*
HP-10		10/04/06	< 182	*
MW-LS-111S		10/05/06	< 182	*
MW-LS-107S		10/04/06	< 181	*
SW-LS-103		10/05/06	< 179	*
SW-LS-106		10/05/06	< 178	*
SW-LS-102		05/23/06	177 ± 111	
SW-LS-105		10/05/06	< 176	*
SW-LS-105	ORIG	05/25/06	173 ± 116	
MS-LS-108S		05/25/06	< 172	
MS-LS-107S		05/26/06	< 171	
MS-LS-104S		05/26/06	< 170	
MS-LS-109S		05/26/06	< 170	
MS-LS-112S DUP	DUP	05/30/06	< 170	
MS-LS-111S	ORIG	05/30/06	< 169	
MS-LS-112S	ORIG	05/30/06	< 168	
SW-LS-102		10/05/06	< 168	*
TS-LS-101S		05/09/06	< 168	
MS-LS-106S		05/25/06	< 167	
MW-LS-101S		10/05/06	< 167	*
SW-LS-103		05/23/06	< 167	
TS-LS-104S		05/05/06	< 167	
TS-LS-105S		05/09/06	< 167	
MS-LS-111S DUP	DUP	05/30/06	< 166	
SW-LS-105 DUP	DUP	05/25/06	< 166	
TS-LS-103S		05/05/06	< 166	
HP-10		05/24/06	< 165	

* INDICATES DISTILLED ANALYSIS

TABLE B-I.2 **HIGHEST TO LOWEST CONCENTRATIONS OF TRITIUM IN GROUNDWATER AND SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	
HP-7	05/24/06	< 165
SW-LS-104	05/25/06	< 165
HP-2	05/24/06	< 164
HP-5	05/24/06	< 163
MS-LS-103S	05/23/06	< 160

TABLE B-I.3 **CONCENTRATIONS OF STRONTIUM IN GROUNDWATER AND SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	
HP-2		05/24/06	1.8 ± 0.8
MS-LS-107S		05/26/06	0.9 ± 0.5
MS-LS-111S	ORIG	05/30/06	1.9 ± 1.0
SW-LS-104		05/25/06	1.1 ± 0.6

TABLE B-I.4 **HIGHEST TO LOWEST CONCENTRATIONS OF STRONTIUM IN GROUNDWATER AND SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	
MS-LS-111S	ORIG	05/30/06	1.9 ± 1.0
HP-2		05/24/06	1.8 ± 0.8
SW-LS-104		05/25/06	1.1 ± 0.6
MS-LS-107S		05/26/06	0.9 ± 0.5

TABLE B-I.5 **CONCENTRATIONS OF GAMMA EMITTERS IN GROUNDWATER AND SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	Be-7	K-40
HP-10		10/04/06	-	175 ± 51
MS-LS-101S		05/24/06	-	44 ± 41
MS-LS-106S		05/25/06	-	72 ± 38
MS-LS-107S		05/26/06	-	92 ± 37
MS-LS-108S		05/25/06	-	69 ± 44
MS-LS-111S	ORIG	05/30/06	-	61 ± 48
MS-LS-111S DUP	DUP	05/30/06	-	47 ± 40
MS-LS-112S	ORIG	05/30/06	-	91 ± 46
MS-LS-112S DUP	DUP	05/30/06	-	50 ± 43
MW-LS-105S		10/05/06	-	174 ± 79
MW-LS-109S		10/04/06	-	978 ± 129
MW-LS-113S		10/06/06	-	83 ± 59
MW-LS-115S		10/05/06	-	64 ± 52
SW-LS-105	ORIG	05/25/06	-	41 ± 32
SW-LS-105		10/05/06	-	187 ± 48
TS-LS-101S		05/09/06	-	41 ± 33
TS-LS-102S		05/05/06	-	434 ± 44
TS-LS-103S		05/05/06	-	245 ± 41
TS-LS-104S		05/05/06	-	75 ± 32
TS-LS-105S		05/09/06	-	190 ± 37

TABLE B-I.6 **HIGHEST TO LOWEST CONCENTRATIONS OF GAMMA EMITTERS IN GROUNDWATER AND SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF LASALLE COUNTY STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	K-40
MW-LS-109S		10/04/06	978 ± 129
TS-LS-102S		05/05/06	434 ± 44
TS-LS-103S		05/05/06	245 ± 41
TS-LS-105S		05/09/06	190 ± 37
SW-LS-105		10/05/06	187 ± 48
HP-10		10/04/06	175 ± 51
MW-LS-105S		10/05/06	174 ± 79
MS-LS-107S		05/26/06	92 ± 37
MS-LS-112S	ORIG	05/30/06	91 ± 46
MW-LS-113S		10/06/06	83 ± 59
TS-LS-104S		05/05/06	75 ± 32
MS-LS-106S		05/25/06	72 ± 38
MS-LS-108S		05/25/06	69 ± 44
MW-LS-115S		10/05/06	64 ± 52
MS-LS-111S	ORIG	05/30/06	61 ± 48
MS-LS-112S DUP	DUP	05/30/06	50 ± 43
MS-LS-111S DUP	DUP	05/30/06	47 ± 40
MS-LS-101S		05/24/06	44 ± 41
TS-LS-101S		05/09/06	41 ± 33
SW-LS-105	ORIG	05/25/06	41 ± 32