

Commonwealth Edison Company
1400 Opus Place
Downers Grove, IL 60515-5701



March 12, 1999

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN-456 and STN 50-457

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN-454 and STN 50-455

Dresden Nuclear Power Station, Units 1, 2, and 3
Facility Operating License Nos. DPR-2, DPR-19, and DPR-25
NRC Docket Nos. 50-010, 50-237 and 50-249

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

Quad Cities Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Zion Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-39 and DPR-48
NRC Docket Nos. 50-295 and 50-304

Subject: Offsite Dose Calculation Manual Changes for 1998

Pursuant to 10 CFR 50.4, a summary of the changes made to the Commonwealth Edison (ComEd) Company Offsite Dose Calculation Manual (ODCM) during the period of January through December 1998 is provided in Attachment I. Technical Specification (TS) 5.5.1 for Braidwood and Byron Stations, TS 6.14 for Dresden and Quad Cities Nuclear Power Stations, TS 6.8 for LaSalle County Station, and TS 6.7 for Zion Nuclear Power Station require a copy of the entire ODCM to be submitted to the NRC as a part of, or concurrent with, the Radioactive Effluent Release Report. A copy of the entire ComEd ODCM, current as of December 31, 1998, is provided in Attachment II. The Radioactive Effluent Release Reports are being submitted separately.

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March 12, 1999
U. S. Nuclear Regulatory Commission
Page 2

Should you have any questions concerning this letter, please contact Mr. J. A. Bauer at (630) 663-7287.

Respectfully,

K. A. Ringer for

R. M. Krich
Vice President - Regulatory Services

Attachment I: Summary of Changes to Site Annexes of the ODCM
Attachment II: ComEd ODCM

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector - Braidwood Station
NRC Senior Resident Inspector - Byron Station
NRC Senior Resident Inspector - Dresden Nuclear Power Station
NRC Senior Resident Inspector - LaSalle County Station
NRC Senior Resident Inspector - Quad Cities Nuclear Power Station

ATTACHMENT I

Summary of Changes to Site Annexes of the ODCM

ATTACHMENT I

Summary of Offsite Dose Calculation Manual (ODCM) Changes by Station:

<u>Station</u>	<u>Chapter, Revision Number</u>	<u>Revision Date</u>
Braidwood	Chapter 10, Revision 2	August 1998
	Chapter 11, Revision 2	August 1998
	Chapter 12, Revision 4	August 1998
	Appendix F, Revision 3	August 1998
Byron	Chapter 10, Revision 1.4	October 1998
	Chapter 11, Revision 1.6	October 1998
Dresden	Chapter 11, Revision 1.4	May 1998
	Chapter 12, Revision 1.7	April 1998
	Chapter 12, Revision 1.8	July 1998
LaSalle	Chapter 10, Revision 1.9	April 1998
	Chapter 11, Revision 2	April 1998
	Chapter 12, Revision 1.9	April 1998
Quad Cities	Chapter 11, Revision 1.9	December 1998
	Chapter 12, Revision 1.9	December 1998
Zion	Chapter 10, Revision 2	March 1998
	Chapter 12, Revision 2	March 1998
	Chapter 12, Revision 3	July 1998

BRAIDWOOD STATION

Braidwood Station
Chapter 10 Change Summary
ODCM Revision 2, August 1998

<u>Page</u>	<u>Change Description</u>
10-i	Updated revision number.
10-5	Removed volume of release tanks. The volume of the tanks is given in Updated Final Safety Analysis Report (UFSAR) Section 11.5.2.3.1 (i.e., 30,000 gallons).
10-13, 10-14, 10-15, 10-16, 10-17	Updated figures to electronic format.

Braidwood Station
Chapter 11 Change Summary
ODCM Revision 2, August 1998

<u>Page</u>	<u>Change Description</u>
11-i	Updated revision number.
11-5	Corrected sector location from "N" to "SSW."
11-6	Removed special interest Thermoluminescent Dosimeter (TLD) locations. These locations are not Radiological Environmental Monitoring Program (REMP) related and are for station information use only. Added address to sample sites BD-34, 35, 36, and 37 to ensure samples are taken from the correct location. Corrected estimated distance of sample site BD-22 from station.
11-7	Added address to sample sites BD-17 and 18 to ensure samples are taken from the correct location.
11-8	Added wording "if available" in case food products are not available.
11-10, 11-11, 11-12	Updated figures to electronic format.

Braidwood Station
Chapter 12 Change Summary
ODCM Revision 4, August 1998 (Page 1 of 3)

<u>Page</u>	<u>Change Description</u>
12-i	Added wording indicating how Improved Technical Specification is annotated and when the references become effective.
12-ii	Updated revision number.
12-iii, 12-iv	Updated page numbers to reflect changes in text.
12-1	Added Improved Technical Specification reference.
12-2, 12-3	Added Improved Technical Specification and/or Technical Requirements Manual reference. Corrected formatting of Code of Federal Regulations references.
12-4, 12-5, 12-6	Added definition for Continuous Sampling, this will allow for filter changes of Radiological Effluent Technical Specification (RETS) monitors without having to do alternate monitoring. Added Improved Technical Specification reference. Updated definition numbers.
12-7	Added Improved Technical Specification reference.
12-8	Corrected formatting of Code of Federal Regulations references.
12-10	Reworded for clarification when releases are to be suspended. Added notation to clarify that an explanation in the next Radioactive Effluent Report is required when the monitor is not operational within the time specified in the ODCM. Capitalized "OR" for better clarification.
12-12	Capitalized "OR" for better clarification.
12-13	Corrected formatting of Code of Federal Regulations references.
12-16	Reworded for clarification when releases are to be suspended. Added notation to clarify that an explanation in the next Radioactive Effluent Report is required when the monitor is not operational within the time specified in the ODCM.

Braidwood Station
Chapter 12 Change Summary
ODCM Revision 4, August 1998 (Page 2 of 3)

<u>Page</u>	<u>Change Description</u>
12-18	Added additional table notation to the Gas Decay Tank System to reference monitor loss of sample flow description.
12-19	Capitalized "OR" for better clarification. Removed reference to functional unit 6 for the RE-PR009 radiation monitor. Added channel check information.
12-20	Corrected formatting of Code of Federal Regulations references. Corrected numbering of surveillance requirements.
12-24, 12-25	Changed formatting of exponent in the lower limit of detection (LLD) equation.
12-26	Added additional information for the requirements or other gamma peaks that are identifiable. Corrected typographical error.
12-27	Corrected formatting of Code of Federal Regulations references. Changed reference to Technical Specification 6.9.2 to 10CFR50 Appendix I, Section IV.A.
12-29	Changed reference to Technical Specification 6.9.2 to 10CFR50 Appendix I, Section IV.A. Corrected formatting of Code of Federal Regulations references. Corrected numbering of surveillance requirements.
12-30	Corrected formatting of Code of Federal Regulations references.
12-31	Corrected numbering of surveillance requirements.
12-34	Changed formatting of exponent in the LLD equation.
12-35	Changed formatting of exponent in the LLD equation. Corrected typographical error.
12-37	Corrected formatting of Code of Federal Regulations references. Changed reference to Technical Specification 6.9.2 to 10CFR50 Appendix I, Section IV.A.
12-38	Corrected formatting of Code of Federal Regulations references.

Braidwood Station
Chapter 12 Change Summary
ODCM Revision 4, August 1998 (Page 3 of 3)

<u>Page</u>	<u>Change Description</u>
12-39	Corrected formatting of Code of Federal Regulations references. Changed reference to Technical Specification 6.9.2 to 10CFR50 Appendix I, Section IV.A.
12-40	Corrected formatting of Code of Federal Regulations references.
12-41	Changed reference to Technical Specification 6.9.2 to 10CFR50 Appendix I, Section IV.A. Corrected numbering of surveillance requirements.
12-42	Corrected formatting of Code of Federal Regulations references.
12-43	Corrected numbering of surveillance requirements. Removed reference to Technical Specification 6.9.2. This is a 10CFR20 special report. Added information regarding storage of the Unit 1 Old Steam Generators.
12-44, 12-45	Added information regarding storage of the Unit 1 Old Steam Generators. Corrected formatting of Code of Federal Regulations references.
12-46	Removed reference to Technical Specification. This is governed by 10CFR20 and 40CFR190. Added limit of 2 mrem in 12.4.6.A.2.
12-47	Changed reference to Technical Specification 6.9.2 to 10CFR50 Appendix I, Section IV.A.
12-48	Corrected formatting of Code of Federal Regulations references.
12-60	Corrected formatting of Code of Federal Regulations references.
12-61	Corrected formatting of Code of Federal Regulations references.
12-62	Added Improved Technical Specification reference.
12-63	Corrected formatting of Code of Federal Regulations references.
12-64	Added Improved Technical Specification reference.
12-65	Added reference to UFSAR Chapter 17.
12-66	Corrected punctuation.

Braidwood Station
Appendix F Change Summary
ODCM Revision 3, August 1998

<u>Page</u>	<u>Change Description</u>
F-i	Updated revision number.
F-2	Added Improved Technical Specification for Limits on Radioactivity in Unprotected Outdoor Tanks.
F-5	Added "vent" to Note b to ensure consistency of mixed mode release definition. Updated notation of exponent "***" to "^."
F-6, F-7	Added "vent" to Note to ensure consistency of mixed mode release definition. Updated notation of exponent "***" to "^."
F-8	Added "vent" to table header to ensure consistency of mixed mode release definition. Updated notation of exponent "***" to "^."
F-24	Added "vent" to Note b to ensure consistency of mixed mode release definition.
F-45, F-46	Updated figures to electronic format.

BYRON STATION

Byron Station
Chapter 10 Change Summary
ODCM Revision 1.4, October 1998

<u>Page</u>	<u>Change Description</u>
10-i	Updated revision number.
10-ii	Updated page number references.
10-iii	Updated page number references.
10-3	Removed Component Cooling Water Monitor description from Section 10.1.2, Airborne Process Radiation Monitors.
10-7	Added Component Cooling Water Monitor description to Section 10.2, Liquid Process Radiation Monitors.
10-9	Added dual reference to applicable Technical Requirements Manual and Administrative Technical Requirements Table.

Byron Station
Chapter 11 Change Summary
ODCM Revision 1.6, October 1998

<u>Page</u>	<u>Change Description</u>
11-i	Updated revision number.
11-2 thru 11-8	Miscellaneous format changes incorporated to maintain consistency throughout the Chapter.
11-7	Removed dairy sample site BY-27 from REMP Sampling Program. The dairy is no longer active, and no samples can be obtained.
11-13	Deleted sample site BY-27 from Figure 11-4, "Ingestion and Waterborne Exposure Pathway Sample Locations."

DRESDEN STATION

Dresden Station
Chapter 11 Change Summary
ODCM Revision 1.4, May 1998

<u>Page</u>	<u>Change Description</u>
11-i	Updated revision number, date and file designator.
11-2	Added air sample site D-53 and a notation that sample site D-6 will be deleted once sample site D-53 operational status is established.
11-9	Added sample site D-53 to Figure 11-1 and moved number designator for sample site D-7. Actual sample location for sample site D-7 did not change.

Dresden Station
Chapter 12 Change Summary
ODCM Revision 1.7, April 1998

<u>Page</u>	<u>Change Description</u>
12-i	Updated revision number in header and file designator.
12-ii	Updated revision number.
12-39	Added "M" to the column for Minimum Analysis Frequency for tritium samples.

Dresden Station
Chapter 12 Change Summary
ODCM Revision 1.8, July 1998

<u>Page</u>	<u>Change Description</u>
All	Changed header revision number and date to Revision 1.8, July 1998.
12-2	Inserted the definition of "Public Dose" (i.e., definition 12.1.13).
12-63	New wording was added to section, in 12.6.3.2.(2), to reflect the new requirement for Independent Technical Review and PORC.
12-64	12.6.4.1 was modified to change "On-Site Review and Investigative Function" to "Independent Technical Review."
12-64	12.6.4.1.(7) was modified to change "On-Site Review and Investigative Function" to "Independent Technical Review."
12-64	12.6.4.2 was modified to change "On-Site Review and Investigative Function" to "Independent Technical Review."

LASALLE STATION

LaSalle Station
Chapter 10 Change Summary
ODCM Revision 1.9, April 1998

<u>Page</u>	<u>Change Description</u>
10-i	Updated revision number. Added file designator identification to bottom of page.
10-ii	Updated page numbers.
10-iii	Corrected title for Section 10.2.5 in Table of Contents to match that on page 10-12 and updated page numbers.
10-iv	Updated page number for Table 10-1.
10-v	Updated page numbers for Figures 10-1 through 10-4.
10-1	Changed date for start of oil burning to Fall of 1998.
10-4	Revised the wording for Section 10.1.3.1.2 to reflect the method for establishing setpoints for the condenser air ejector monitors.
10-7	Corrected typographical error of monitor equipment piece number (EPN).
10-10	Revised the wording for Section 10.2.4 to clarify the allocation of liquid releases from the Station.
10-15	Revised Figure 10-3 to indicate a generic symbol for the flow element and deleted obsolete EPN.

LaSalle Station
Chapter 11 Change Summary
ODCM Revision 2, April 1998

<u>Page</u>	<u>Change Description</u>
11-i	Updated revision number and file designator.
11-2	Corrected sampling locations for sample sites L-01 and L-03.
11-6	Corrected typographical error describing the distance for the drinking water sampling location.
11-7	Added clarifying statement to the sampling requirement for food products.

LaSalle Station
Chapter 12 Change Summary
ODCM Revision 1.9, April 1998 (Page 1 of 2)

<u>Page</u>	<u>Change Description</u>
12-i	Added file designator identification to bottom of page.
12-ii	Updated revision number.
12-iii	Updated page numbers.
12-iv	Updated page numbers.
12-8	Added clarifier to Applicability statement to define that the requirement is applicable only when there is flow in the system.
12-9	Deleted EPNs for the Cooling Pond Blowdown Pipe.
12-10	Added clarifying statement to Action 101 defining requirements if action exceeds 30 days.
12-15	Added note to bottom of table notations explaining actions required if 30 day period is exceeded.
12-23	Corrected Table number designator and corrected typographical error.
12-25	Corrected typographical error in Operability Requirement section. Amended ACTION defining requirements when the limits are exceeded to reference the appropriate reporting requirement in 10CFR50.
12-27	Added wording to Bases to allow for system bypass to portable waste treatment equipment.
12-34	Corrected typographical error.
12-37	Amended ACTION defining requirements when the limits are exceeded to reference the appropriate reporting requirements in 10CFR50.
12-38	Amended ACTION defining requirements when the limits are exceeded to reference the appropriate reporting requirements in 10CFR50.

LaSalle Station
Chapter 12 Change Summary
ODCM Revision 1.9, April 1998 (Page 2 of 2)

<u>Page</u>	<u>Change Description</u>
12-47	Deleted "... " in front of "≥" in the equation.
12-54	Added qualifying statements to sampling requirements for food products.
12-55	Corrected typographical error.
12-57	Changed the tritium (i.e., H-3) LLD for water to 2,000 pCi/l to be consistent with the Generic Letter 89-01 requirements for environmental samples.
12-59	Added notation (7) defining that an LLD of 200 pCi/l for H-3 will still be required for off-site analyses.
12-62	Corrected typographical error.

QUAD CITIES STATION

Quad Cities Station
Chapter 11 Change Summary
ODCM Revision 1.9, December 1998 (Page 1 of 2)

Page Change Description

11-1 Editorial change made to point out the fact that Uniform Radiological Effluent Monitoring Program (UREMP) will be implemented effective with the first sampling period of 1999.

11-1 thru 11-7 The distances that are listed in Table 11-1 for the air sampling and TLD locations from the site have been updated based on geographical positioning system (GPS) data obtained by station personnel. Approximately 70% of the distances have been slightly changed.

11-2 The following air sampling sites have been removed from Table 11-1 based on needs for UREMP:

Q-05;
Q-06;
Q-08;
Q-09;
Q-10;
Q-11;
Q-12;
Q-14; and
Q-15.

In addition, air sampling site Q-7 was moved to be designated as the "control."

11-2 New sampling sites Q-37 (i.e., Meredosia Road) and Q-38 (i.e., Fuller Road) were added as "Far Field" air sampling sites.

11-3 The following Inner ring TLD locations have been deleted due to the fact that they are not in the desired locations/sectors per the GPS data:

Q-102-2;
Q-106-1;
Q-107-3; and
Q-116-2.

Quad Cities Station
Chapter 11 Change Summary
ODCM Revision 1.9, December 1998 (Page 2 of 2)

<u>Page</u>	<u>Change Description</u>
11-3	The following TLD locations are new and they will replace the above-mentioned deleted locations. These are placed in the desired sectors: Q-102-3; Q-106-3; Q-107-3; and Q-116-3.
11-6	Sample site Q-18 (i.e., milk) has been removed from Table 11-1. The site is out of business.
11-6	Sample site Q-27 (i.e., bottom sediment) has been removed from Table 11-1. (No longer required.)
11-5	Sampling sites Q-21 and Q-22 (i.e., cooling water) have been removed from Table 11-1. (No longer required.)
11-5	Sample sites Q-19 and Q-20 (i.e., public water) have been removed from Table 11-1. (Not required since farther than 6.2 miles from station.)
11-5, 11-6	Sample sites Q-33 and Q-34 (i.e., surface water) have been added to Table 11-1.
11-5	Sample sites Q-35 and Q-36 (i.e., well water) have been added to Table 11-1.
11-9 thru 11-11	Figures 11-1, 11-2 and 11-3 were recreated to update information and to improve readability.
	Tables 11-2 and 11-3 have been deleted. This information is available in Chapter 12, Revision 1.9.

Quad Cities Station
Chapter 12 Change Summary
ODCM Revision 1.9, December 1998

<u>Page</u>	<u>Change Description</u>
12-15	The functional test for the Main Chimney Flow Rate Monitor was N/A'd in Table 12.2-4 since this monitor does not have any alarms or trips to functionally test.
12-39	The number of sampling locations and the distances were updated to reflect UREMP.

ZION STATION

Zion Station
Chapter 10 Change Summary
ODCM Revision 2, March 1998

<u>Page</u>	<u>Change Description</u>
10-i	Updated revision number and file designator.
10-ii, 10-1, 10-2	Changed "Vent" to "Ventilation" to avoid confusion with the Containment Vent.
10-13	Deleted ORT-PR14 from Figure 10-1. This instrument has been abandoned. Deleted "A" from EPNs for 1RE-0015 and 2RE-0015.
10-13, 10-15	Enlarged figures for better legibility

Zion Station
Chapter 12 Change Summary
ODCM Revision 2, March 1998

Page	Change Description
12-ii	Updated revision number and file designator.
12-1	Added definition for CONTINUOUS SAMPLING FREQUENCY to identify allowances for sampling interruptions of short duration. Corrected capitalization.
12-7	Corrected section reference for independent sampling requirement. Corrected punctuation.
12-13, 12-23, 12-26, 12-27, 12-28, 12-32, 12-34, 12-35, 12-46	Corrected punctuation and capitalization errors.
12-27, 12-35	Changed wording to be consistent with that in NUREG-1301, "Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors."
12-12, 12-17, 12-29	Changed "Vent" to "Ventilation" to avoid confusion with the Containment Vent.
12-29	Added footnote notation to Continuous Sampling Frequency for Continuous Releases, Ventilation Stack.
12-30	Added footnote (h) clarifying CONTINUOUS SAMPLING FREQUENCY exceptions.

Zion Station
Chapter 12 Change Summary
ODCM Revision 3, July 1998 (Page 1 of 2)

<u>Page</u>	<u>Change Description</u>
12-i	Updated revision number, revision date, and electronic file designator. This information is for administrative tracking.
12-7	Changed ACTION 2 to require grab samples to be obtained once per day rather than once per shift. The change in frequency is intended to adjust compensatory actions commensurate with the risk of Zion Station's defueled operational status and activities. In the permanently defueled condition of Zion Station, there is no chance for a tube rupture/significant primary-to-secondary leak. The monitor is available to detect any minor leaching of contamination from the low source term present in the secondary system from past in-leakage. There is no reduction in safety in changing from a shiftly sample to daily sample.
12-10	Deleted, from Table 12.2-3, all of the information pertaining to the radiation monitors which detect radioactive noble gases and iodine during Containment Venting and Purging operations (1(2)RT-PR09A, 1(2) RTPR09B, 1(2)RIA-PR40E (Channel 5), and 1(2) RIA-PR40C (Channel 3)). All nuclear fuel has been permanently removed from both Zion Station Containment Buildings. The possibility of releasing nuclear-fuel-related radioactive noble gases or iodine during Containment Venting or Purging operations has been significantly reduced. As determined by Zion Station Calculation number 22S-0-110X-0057 (3/24/98), there are no radioactive iodine isotopes remaining in the spent nuclear fuel.
12-11	Changed the compensatory action statement for 0RE-0014 in Table 12.2-3 from Action 6 to Action 13. The proposed change to the surveillance actions for inoperable 0RE-0014 is intended to set consistent compensatory actions for 0RE-0014 and 1(2)RIA-PR49E (Channel 5) because these radiation detectors perform similar functions. They monitor Fuel Handling Building and Auxiliary Building ventilation for radioactive noble gases.
12-11	Deleted from Table 12.2-3 all of the information pertaining to 1(2)RT-PR25. Radiation monitors 1(2)RT-PR25 detect radioactive noble gases in Fuel Handling Building and Auxiliary Building ventilation and perform actions which are redundant to other radiation monitors (0RE-0014 and 1(2)RIA-PR49E (Channel 5)).

<u>Page</u>	<u>Change Description</u>
12-13	Changed ACTION 6 to require grab samples to be obtained once per day rather than once per shift. The change in frequency is intended to adjust compensatory actions commensurate with the risk of Zion Station's defueled operational status and activities. Currently, the compensatory action requires samples to be obtained once per 12 hours and ANALYZED within 24 hours. That analysis requirement could be implemented such that every other sample is analyzed within 12 hours, which would effectively make analysis data available once per 24 hours. The proposed change requires a sample to be obtained and analyzed once per 24 hours. The ability to trend data is not significantly reduced by decreasing the sampling frequency from once per 12 hours to once per 24 hours.
12-13	Changed ACTION 13 to require grab samples to be obtained once per day rather than once per shift. The change in frequency is intended to adjust compensatory actions commensurate with the risk of Zion Station's defueled operational status and activities. Currently, the compensatory actions for 0RE-0014 and 1(2)RIA-PR49E (Channel 5) require samples to be obtained once per 12 hours and ANALYZED within 24 hours. That analysis requirement could be implemented such that every other sample is analyzed within 12 hours, which would effectively make analysis data available once per 24 hours. The proposed change requires a sample to be obtained and analyzed once per 24 hours. The ability to trend data is not significantly reduced by decreasing the sampling frequency from once per 12 hours to once per 24 hours.