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52.17

November 16, 2004

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Corrections / Clarifications to the Exelon Early Site Permit (ESP) Application Environmental Report for the Clinton ESP Site (TAC No. MC1122)

Enclosed are corrections and clarifications being made to the Environmental Report of the Exelon ESP Application. These corrections and clarifications have generally come about as a result of the NRC site audit in March 2004 to the EGC ESP site and Exelon's SSAR RAI responses.

Please contact Bill Maher of my staff at 610-765-5939 if you have any questions regarding this submittal.

Sincerely yours,

Marilyn C. Kray

Marilyn C. Kray
Vice President, Project Development

WDM/wdm

cc: U.S. NRC Regional Office (w/ enclosures)
Mr. Thomas Kenyon (w/ enclosures)

D073

AFFIDAVIT OF MARILYN C. KRAY

State of Pennsylvania

County of Chester

The foregoing document was acknowledged before me, in and for the County and State aforesaid, by Marilyn C. Kray, who is Vice President, Project Development, of Exelon Generation Company, LLC. She has affirmed before me that she is duly authorized to execute and file the foregoing document on behalf of Exelon Generation Company, LLC, and that the statements in the document are true to the best of her knowledge and belief.

Acknowledged and affirmed before me this 16th day of November, 2004.

My commission expires 10-6-07.

Vivia V. Gallimore

Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Vivia V. Gallimore, Notary Public
Kennett Square Boro, Chester County
My Commission Expires Oct. 6, 2007
Member, Pennsylvania Association Of Notaries

Enclosure 1: Corrections / Clarifications to the Environmental Report of the Exelon ESP

EGC REVISION ID: E9-1

BASIS FOR CHANGE:
Change is being made to be consistent with changes to the SSAR as described in our response to NRC RAI 2.3.1-5 (EGC RAI ID: R8-5).

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.7.3.3, page 2.7-9, from:

The 100-yr return period snowpack, as obtained from the ANSI building code requirements (American National Standards Institute [ANSI], 1972), is 22 pounds per square foot (psf), which corresponds to approximately 22 in. of snowpack.

The weight of the accumulation of winter precipitation from a single storm is 13 psf. This is based on the assumption that the worst case storm event would be consistent with the maximum monthly snowfall observed in the Springfield/Peoria area over the past 100 yrs. The maximum recorded monthly snowfall in the area is 24.7 in. (Peoria, January of 1979) and 24.4 in. (Springfield, February of 1900). This translates to the equivalent of about 2.5 in. of precipitable water, and is assumed to be representative of a worst case storm event during the winter months. Thus, a conservative estimate of the accumulated weight of snow and ice that could have occurred (based on actual observations) after a worst case winter storm event is conservatively calculated to be 35 psf (i.e., 22 psf + 13 psf).

To read:

The 100-yr return period snowpack, as obtained from the American Society of Civil Engineers (ASCE) building code requirements (ASCE, 2000), is 24.4 pounds per square foot (psf), which corresponds to approximately 24 in. of snowpack.

The weight of the accumulation of winter precipitation from a single storm is 15.6 psf. This is based on the assumption that the worst case storm event would be consistent with the maximum monthly snowfall observed in the Springfield/Peoria area over the past 100 yrs. The maximum recorded monthly snowfall in the area is 26.5 in. (Peoria, February of 1900), 24.4 in. (Springfield, February of 1900), and 30.5 inches (Decatur, March of 1906). The maximum of 30.5 inches translates to the equivalent of about 3 in. of equivalent water, and is assumed to be representative of a worst case storm event during the winter months. Thus, a conservative estimate of the accumulated weight of snow and ice that could have occurred (based on actual observations) after a worst case winter storm event is conservatively calculated to be 40 psf (i.e., 24.4 psf + 15.6 psf).

2. Revise ER, Chapter 2, Section 2.7 References, page 2.R-8, from:

American National Standards Institute, Inc. (ANSI). Building Code Requirements for Minimum Design Loads in Buildings and Other Structures. ANSI A58.1-1972. American National Standards Institute, Inc. New York, New York. 1972.

To read (and move to place in correct alphabetical order):

American Society of Civil Engineers (ASCE). *Minimum Design Loads for Buildings and Other Structures.* ASCE-7-98. March 2000.

EGC REVISION ID: E10-1

BASIS FOR CHANGE:
The reference was cited incorrectly in the text. The actual reference used was Illinois State Water Survey (ISWS), 2003, not Changnon 1995; Changnon was cited within the Illinois State Water Survey reference. The text was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.7.3.1, page 2.7-5, from:

The maximum number of hail days in a year for Peoria and Springfield is seven (1927, 1950, 1954) and eight (1975), respectively (Changnon, 1995).

To read:

The maximum number of hail days in a year for Peoria and Springfield is seven (1927, 1950, 1954) and eight (1975), respectively (ISWS, 2003).

2. Revise ER, Chapter 2, Section 2.7 References, page 2.R-8, from:

Changnon, S.A., "Temporal Fluctuations of Hail in Illinois." Misc. Publication 167. Illinois State Water, pp. 19, 1995.

To read (and move to place in correct alphabetical order):

Illinois State Water Survey. "Temporal Fluctuations of Hail in Illinois." Available at: www.sws.uiuc.edu/atmos/statecli/Hail/hail.htm. July 31, 2003.

EGC REVISION ID: E12-1

BASIS FOR CHANGE:
This reference was cited incorrectly in the text. The author did not use the original 1987 Fujita reference; this reference was taken from the 2003 Fujita article found on the NOAA web site. The text was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.7.3.2, Page 2.7-6, from:

Based on a statistical analysis of tornado occurrences in the U.S. over a 70-yr period, Fujita (1987) concluded that the indicated increase in tornado occurrences was a result of increased reporting efficiency and confirmation skill, and that F0 and F1 class tornadoes were typically overlooked during the early data-collection years.

To read:

Based on a statistical analysis of tornado occurrences in the U.S. over a 70-yr period, Fujita (2003) concluded that the indicated increase in tornado occurrences was a result of increased reporting efficiency and confirmation skill, and that F0 and F1 class tornadoes were typically overlooked during the early data-collection years.

2. Revise ER, Chapter 2, Section 2.7 References, page 2.R-8, from:

Fujita, T.T. *U.S. Tornadoes, Part One, &0-Year Statistics.* AMRP Research Paper Number 218. Published by the University of Chicago. Chicago, Illinois, 1987.

To read (and move to place in correct alphabetical order):

Fujita, T.T., *U.S. Tornadoes, Part 1, 70-year Statistics. Satellite and Mesometeorology Research Project (SMRP).* Research Paper 218. Published by University of Chicago, Illinois. 1987 in The Fujita Tornado Scale. Available at: http://lwf.ncdc.noaa.gov/oa/satellite/satelliteseye/educational/fujita.html. August 04, 2003.

EGC REVISION ID: E13-1

BASIS FOR CHANGE:
The reference was cited incorrectly in the text. The Grazulis reference was not used; the reference document used by the author was Gaya et al. The text was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.7.3.2, page 2.7-6, from:

Additionally, research conducted by Grazulis (1993) concluded that the increase in urbanization over the past 50 years has effectively resulted in an increase in the number of reported tornadoes, if for no other reason than there are more targets destroyed or damaged by a tornado in an urban area than in rural areas.

To read:

Additionally, research conducted by Grazulis (Gaya et al., 2003) concluded that the increase in urbanization over the past 50 years has effectively resulted in an increase in the number of reported tornadoes, if for no other reason than there are more targets destroyed or damaged by a tornado in an urban area than in a rural area.

2. Revise ER, Chapter 2, Section 2.7 References, page 2.R-9, from:

Grazulis, T.P. 110-Year Perspective of Significant Tornadoes. Paper in: The Tornado: Its Structure, Dynamics, Prediction, and Hazards. Geophysical Monograph 79, Published by the American Geophysical Union, Washington, D.C. 1993.

To read (and move to place in correct alphabetical order):

Gaya, M., C. Ramis, R. Romero, C.A. Doswell III. "Tornadoes in the Balearic Islands (Spain): Meteorological Setting." August 04, 2003.

EGC REVISION ID: E14-1

BASIS FOR CHANGE:
The reference was cited incorrectly in the text. "Fluvial Forms and Processes A New Prospective" by David Knighton was the actual reference used by the author. The Hjulstrom reference was cited within the Knighton reference. The text was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 5, Section 5.3.1.1.1, page 5.3-2, from:

Velocities in this range are below the erosion velocity for structures and soils (Hjulstrom, 1935) present at this location (see Table 5.3-1). Design of the intake structure will include features that maintain an even distribution of intake flows. Where necessary, the intake area will be protected to prevent local areas of erosion.

To read:

Velocities in this range are below the erosion velocity for structures and soils (Knighton, 1998) present at this location (see Table 5.3-1). Design of the intake structure will include features that maintain an even distribution of intake flows. Where necessary, the intake area will be protected to prevent local areas of erosion.

2. Revise ER, Chapter 5, Section 5.3 References, page 5.R-2, from:

Hjulstrom, F. "Studies of the Morphological Activity of Rivers as Illustrated by the River Fyris." Bulletin of Geological Institute University of Uppsala 25, 221-527.1935.

To read (and move to place in correct alphabetical order):

Knighton, D. "Fluvial Forms & Processes, A New Perspective." Department of Geography, University of Sheffield, UK. 1998.

EGC REVISION ID: E15-1

BASIS FOR CHANGE:
The reference was cited incorrectly in the text. "Effects of Ionizing Radiation on Terrestrial Plants and Animals – A Workshop Report" was taken from workshop held at Oak Ridge National Laboratory (in 1995) where they discussed the IAEA 1992 report. This 1995 workshop report was the actual reference document used by the author. The text was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 5, Section 5.4.4.3, page 5.4-6, from:

An international consensus has been developing with respect to permissible dose exposures to biota. The International Atomic Energy Agency (IAEA, 1992) evaluated available evidence including the Recommendations of the International Commission on Radiological Protection (ICRP, 1977).

To read:

An international consensus has been developing with respect to permissible dose exposures to biota. The International Atomic Energy Agency (IAEA) evaluated available evidence (ORNL, 1995) including the Recommendations of the International Commission on Radiological Protection (ICRP, 1977).

2. Revise ER, Chapter 5, Section 5.4.4.3, page 5.4-7, from:

The calculated total body doses for biota are compared in Table 5.4-20 to the dose criteria evaluated in the Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards (IAEA, 1992). The biota doses meet the dose guidelines by a large margin. In these cases, the annual dose to biota is much less than the daily allowable doses to aquatic and terrestrial organisms.

To read:

The calculated total body doses for biota are compared in Table 5.4-20 to the dose criteria evaluated in the Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards (ORNL, 1995). The biota doses meet the dose guidelines by a large margin. In these cases, the annual dose to biota is much less than the daily allowable doses to aquatic and terrestrial organisms.

3. Revise ER, Chapter 5, Section 5.4 References, page 5.R-2, from:

International Atomic Energy Agency (IAEA). *Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards.* Report Series No. 332. 1992.

To read (and move to place in correct alphabetical order):

Oak Ridge National Laboratory (ORNL). *Workshop Discussion of "International Atomic Energy Agency (IAEA) Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards."* Oak Ridge National Laboratory. 1995.

4. Revise ER, Chapter 5, Table 5.4-20 Title, page 5.T-14 from:

Comparison of Biota Doses to IAEA 1992 Evaluated Daily Limits

To read:

Comparison of Biota Doses to ORNL 1995 Evaluated Daily Limits

EGC REVISION ID: E16-1

BASIS FOR CHANGE:
The 1993 reference date was incorrectly stated in the text. A hard copy of the reference was received from the USEPA in September 2003; the document is dated 1988. The USEPA verified that 1988 is the most recent version of this document. The text was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 7, Section 7.1.2, page 7.1-4, from:

The accident doses are expressed as total effective dose equivalents (TEDEs) consistent with 10 CFR 50.34. The TEDE consists of the sum of the committed effective dose equivalent (CEDE) from inhalation and the deep dose equivalent (DDE) from external exposure. The CEDE is determined using dose conversion factors in Federal Guidance Report 11 (USEPA, 1993).

To read:

The accident doses are expressed as total effective dose equivalents (TEDEs) consistent with 10 CFR 50.34. The TEDE consists of the sum of the committed effective dose equivalent (CEDE) from inhalation and the deep dose equivalent (DDE) from external exposure. The CEDE is determined using dose conversion factors in Federal Guidance Report 11 (USEPA, 1988).

2. Revise ER, Chapter 7, Section 7.1 References, page 7.R-1, from:

U.S. Environmental Protection Agency (USEPA). *Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion.* Federal Guidance Report 11. EPA-520/1-88-020. 1993.

To read (and move to place in correct alphabetical order):

U.S. Environmental Protection Agency (USEPA). *Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion.* Federal Guidance Report 11. EPA-520/1-88-020. 1988.

EGC REVISION ID: E17-1

BASIS FOR CHANGE:
The reference was stated incorrectly in the text. The report referenced in the Chapter 9 reference section was not the report used to prepare the section. The correct report was "U.S. Nuclear Regulatory Commission (USNRC) Final Environmental Statement Related to Operation of Quad Cities Nuclear Power Station, Units 1 & 2, Docket Nos. 50-254 and 50-265," dated September 1972. The text was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 9, Section 9.3.3.3.3.1, page 9.3-15, from:

The top of the Cambrian-Ordovician aquifer is 500- to 800-ft below the surface and use of surface water for cooling and other activities at a new plant would not affect aquifer levels. However, shallow aquifers were affected by initial construction of the units in the late 1960's and EGC assumes that the same effect would occur if a new facility were built at the site. Some change in the pattern of surface water runoff was noted, although the impacts were considered indiscernible (USNRC, 1973).

To read:

The top of the Cambrian-Ordovician aquifer is 500- to 800-ft below the surface and use of surface water for cooling and other activities at a new plant would not affect aquifer levels. However, shallow aquifers were affected by initial construction of the units in the late 1960's and EGC assumes that the same effect would occur if a new facility were built at the site. Some change in the pattern of surface water runoff was noted, although the impacts were considered indiscernible (USNRC, 1972a).

2. Revise ER, Chapter 9, Section 9.3.3.3.4.2, page 9.3-17, from:

None of these threatened or endangered species occur on the site, since there is no suitable habitat available in the site boundaries. There are no records of endangered aquatic species on this stretch of the Illinois River (USNRC, 1973).

To read:

None of these threatened or endangered species occur on the site, since there is no suitable habitat available in the site boundaries. There are no records of endangered aquatic species on this stretch of the Illinois River (USNRC, 1972a).

3. Revise ER, Chapter 9, Section 9.3 References, page 9.R-4, from:

U.S. Nuclear Regulatory Commission (USNRC). *Final Environmental Statement Related to Operation of Quad Cities Nuclear Power Station Units 2 and 3.* Docket Nos. 50-237 and 50-249. Washington, D.C. September 1973.

To read (and move to place in correct alphabetical order):

U.S. Nuclear Regulatory Commission (USNRC). *Final Environmental Statement Related to Operation of Quad Cities Nuclear Power Station Units 1 and 2.* Docket Nos. 50-254 and 50-265. Washington, D.C. September 1972a.

EGC REVISION ID: E20-1

BASIS FOR CHANGE:
This section was changed for clarification. The author didn't specifically use analytical methods from either of the two documents referenced in the text. Rather, the intent was to mention two resources that will/can be used when ultimately developing the monitoring program. The text was changed to reflect this.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 6, Section 6.6.1.2, page 6.6-2/3 (last paragraph), from:

Analytical methods will follow *Standard Methods for the Examination of Water and Wastewater* (APHA et al., 1989) or *Methods for Chemical Analysis of Water and Wastes* (USEPA, 1983).

To read:

Analytical methods will follow standard analytical protocols such as those listed in the *Standard Methods for the Examination of Water and Wastewater* (APHA et al., 1989) or *Methods for Chemical Analysis of Water and Wastes* (USEPA, 1983).

EGC REVISION ID: E21-1

BASIS FOR CHANGE:
This reference was cited on Figure 2.2-3 through 2.2-8 but not included in Section 2.2, References. This reference was added to Section 2.2.

EGC ESP APPLICATION REVISION:
1. Add new reference to ER, Chapter 2, Section 2.2 References, page 2.R-2 (and place in correct alphabetical order):

U.S. Census Bureau. Census 2000 County and County Equivalent Areas of Illinois Generalized Boundary File. Available at: http://www.census.gov/geo/www/cob/co2000.html. June 26, 2002a.

EGC REVISION ID: E22-1

BASIS FOR CHANGE:
This reference was cited incorrectly in the text. To comply with the latest edition of the Chicago Style Manual, "et al." should be fully cited (spell out all names) in reference sections, and referenced as Herzog et al., instead of IDNR in the text. The report was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.3.3.3.2, page 2.3-22, from:

General groundwater chemistry of the Glasford sand and gravel aquifers, within the Illinoian deposits of southwest McLean and southeast Tazewell counties, have been summarized by the ISWS (IDNR et al., 1995) and are provided in Table 2.3-22.

To read:

General groundwater chemistry of the Glasford sand and gravel aquifers, within the Illinoian deposits of southwest McLean and southeast Tazewell counties, have been summarized by the ISWS (Herzog, et al., 1995) and are provided in Table 2.3-22.

2. Revise ER, Chapter 2, Section 2.3.3.3.3, page 2.3-22, from:

Regional water quality data from DeWitt County, collected as part of the Mahomet Aquifer Study being conducted by the ISWS, and for the Sankoty-Mahomet Sand aquifer of southwest McLean and southeast Tazewell counties (IDNR et al., 1995) are presented in Table 2.3-24 and Table 2.3-25, respectively.

To read:

Regional water quality data from DeWitt County, collected as part of the Mahomet Aquifer Study being conducted by the ISWS, and for the Sankoty-Mahomet Sand aquifer of southwest McLean and southeast Tazewell counties (Herzog et al., 1995) are presented in Table 2.3-24 and Table 2.3-25, respectively.

3. Revise ER, Chapter 2, Section 2.3 References, page 2.R-3, from:

Illinois Department of Natural Resources (IDNR), et. al. "Hydrogeology and Groundwater Availability in Southwest McLean and Southeast Tazewell Counties." *Part 1: Aquifer Characterization. Cooperative Groundwater Report 17.* 1995.

To read (and move to place in correct alphabetical order):

Herzog, Beverly L., S. D. Wilson, D. R. Larson, E. C. Smith, T. H. Larson, and M. L. Greenslate. "Hydrogeology and Groundwater Availability in Southwest McLean and Southeast Tazewell Counties. *Part 1: Aquifer Characterization." Illinois Department of Natural Resources (IDNR)/Illinois State Geological Survey (ISGS)/Illinois State Water Survey (ISWS). Cooperative Groundwater Report 17.* 1995.

4. Revise ER, Chapter 2, Section 2.3, Table 2.3-22, page 2.T-21, from:

Source: IDNR et al., 1995

To read:

Source: Herzog et al., 1995

5. Revise ER, Chapter 2, Section 2.3, Table 2.3-25, page 2.T-24, from:

Source: IDNR et al., 1995

To read:

Source: Herzog et al., 1995

EGC REVISION ID: E23-1

BASIS FOR CHANGE:
This reference was cited incorrectly in the text. To comply with the latest edition of the Chicago Style Manual the "et al." should be fully cited (spell out all names), and referenced as Masters et al., not ISGS in the text. The report was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.2.1, page 2.2-2, from:

There are no known significant mineral resources (e.g., sand and gravel, coal, oil, natural gas, and ores) within the vicinity (ISGS, 1999).

To read:

There are no known significant mineral resources (e.g., sand and gravel, coal, oil, natural gas, and ores) within the vicinity (Masters et al., 1999).

2. Revise ER, Chapter 2, Section 2.2.2, page 2.2-3, from:

There are no known significant mineral resources (sand and gravel, coal oil, natural gas, and ores) within the transmission corridor (ISGS, 1999).

To read:

There are no known significant mineral resources (sand and gravel, coal oil, natural gas, and ores) within the transmission corridor (Masters et al., 1999).

3. Revise ER References, Chapter 2, Section 2.2, page 2.R-2, from:

Illinois State Geological Survey (ISGS). Masters, John M., et al. *1997 Directory of Illinois Mineral Producers, and Maps of Extraction Sites.* 1999.

To read:

Masters, John M., V. C. Ipe, L. R. Smith, and M. Falter. *"1997 Directory of Illinois Mineral Producers, and Maps of Extraction Sites."* Illinois State Geological Survey (ISGS). 1999.

4. Revise ER, Chapter 4, Section 4.1.1.1, page 4.1-1, from:

The EGC ESP Site has no special agricultural resources (such as prime or unique farmland) because there is no land classified as agricultural within the site boundary. There are no known significant mineral resources (sand and gravel, coal oil, natural gas, and/or ores) within the site (ISGS, 1999).

To read:

The EGC ESP Site has no special agricultural resources (such as prime or unique farmland) because there is no land classified as agricultural within the site boundary. There are no known significant mineral resources (sand and gravel, coal oil, natural gas, and/or ores) within the site (Masters et al., 1999).

5. Revise ER, Chapter 4, Section 4.1.1.2, page 4.1-2, from:

There are no known significant mineral resources (sand and gravel, coal oil, natural gas, and ores) within the vicinity (ISGS, 1999).

To read:

There are no known significant mineral resources (sand and gravel, coal oil, natural gas, and ores) within the vicinity (Masters et al., 1999).

6. Revise ER, Chapter 4, Section 4.1.2.2.1, page 4.1-8, from:

The transmission corridor will not cause long-term changes to special agricultural resources, such as prime or unique farmland, since the transmission corridor will be constructed in existing right-of-way. There are no known significant mineral resources (sand and gravel, coal oil, natural gas, and ores) within the transmission corridor (ISGS, 1999).

To read:

The transmission corridor will not cause long-term changes to special agricultural resources, such as prime or unique farmland, since the transmission corridor will be constructed in existing right-of-way. There are no known significant mineral resources (sand and gravel, coal oil, natural gas, and ores) within the transmission corridor (Masters et al., 1999).

7. Revise ER, Chapter 4, Section 4.1 References, page 4.R-1, from:

Illinois State Geological Survey (ISGS). Masters, John M., et al. *1997 Directory of Illinois Mineral Producers, and Maps of Extraction Sites.* 1999.

To read (and move to place in correct alphabetical order):

Masters, John M., V. C. Ipe, L. R. Smith, and M. Falter. *"1997 Directory of Illinois Mineral Producers, and Maps of Extraction Sites."* Illinois State Geological Survey (ISGS). 1999.

EGC REVISION ID: E27-1

BASIS FOR CHANGE:
ER, Chapter 5, Figure 5.1-1 cited an IDOT, 2000 reference; however, the Section 5.1 list of references does not include IDOT, 2000 for highway bridges. This reference was added to Section 5.1 References.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 5, Section 5.1 References, page 5.R-1, to add (and place in correct alphabetical order):

Illinois Department of Transportation (IDOT). GIS Layer of Highway Bridges. 2000.

EGC REVISION ID: E28-1

BASIS FOR CHANGE:
References were incorrectly omitted from the reference list for Section 5.1. The text was revised to correct the error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 5, Section 5.1 References to add (and place in correct alphabetical order):

U.S. Census Bureau. Census 2000 TIGER/Line Files (machine-readable data files). Roads, Railroads and Water Features. Washington D.C. 2000.

U.S. Census Bureau. Census 2000 Incorporated/Census Designated Places of Illinois Generalized Boundary File. Available at: http://www.census.gov/geo/www/cob/pl2000.html. June 26, 2002a.

U.S. Census Bureau. Census 2000 County and County Equivalent Areas of Illinois Generalized Boundary File. Available at: http://www.census.gov/geo/www/cob/co2000.html. June 26, 2002b.

EGC REVISION ID: E31-1

BASIS FOR CHANGE:
Water table elevations shown on the figure were incorrect (not consistent with the flow arrow). Elevations on Figure 2.3-16 were modified by switching the "715" and "725" contour levels.

EGC ESP APPLICATION REVISION:
1. Replace ER, Chapter 2, Section 2.3, Figure 2.3-16 with Attachment 1

EGC REVISION ID: E43-1

BASIS FOR CHANGE:
The reference date was cited incorrectly in the text. The document date for Revision 1 is April 1977. Revised reference for RG 1.113, Rev. 1 from 1978 to 1977 in the text.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 5, Section 5.4.4.1, page 5.4-5, from:

The concentrations of radioactive effluents in Clinton Lake are estimated using a partially mixed impoundment model (USNRC, 1978).

To read:

The concentrations of radioactive effluents in Clinton Lake are estimated using a partially mixed impoundment model (USNRC, 1977b).

2. Revise ER, Chapter 5, Section 5.4. References, page 5.R-2, from:

U.S. Nuclear Regulatory Commission (USNRC). Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing. Regulatory Guide 1.113. Appendix I. Revision 1. 1978.

To read (and move to place in correct alphabetical order):

U.S. Nuclear Regulatory Commission (USNRC). Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I. Regulatory Guide 1.113. Revision 1. April 1977b.

EGC RAI ID: E44-1

BASIS FOR CHANGE:
The reference was cited incorrectly in the text. USNRC, 1972 had already been used in the ER, Chapter 9, Section 9.3 for the Dresden FES; thus, the Zion FES reference should be USNRC, 1972a. Revised to avoid duplication of USNRC, 1972 reference already used for Dresden FES.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 9, Section 9.3.3.3.6.1, page 9.3-21, from:

The domestic water was obtained from the City of Zion's system. It is assumed that for a new plant, consumptive water use would also come from the City of Zion (USNRC, 1972).

To read:

The domestic water was obtained from the City of Zion's system. It is assumed that for a new plant, consumptive water use would also come from the City of Zion (USNRC, 1972a).

2. Revise ER, Chapter 9, Section 9.3.3.3.6.6, page 9.3-22, from:

Nothing in the USNRC's environmental statement or the decommissioning SAR indicate that operation of a facility at the site would adversely affect aquatic environments (USNRC, 1972; EGC, 1998).

To read:

Nothing in the USNRC's environmental statement or the decommissioning SAR indicate that operation of a facility at the site would adversely affect aquatic environments (USNRC, 1972a; EGC, 1998).

3. Revise ER, Chapter 9, Section 9.3.3.3.6.7, page 9.3-23, from:

The estimated population within 5 mi of the site for the year 2000 was 88,700 persons (USNRC, 1972).

To read:

The estimated population within 5 mi of the site for the year 2000 was 88,700 persons (USNRC, 1972a).

4. Revise ER, Chapter 9, Section 9.3 References, page 9.R-4, from:

U.S. Nuclear Regulatory Commission (USNRC). *Final Environmental Statement Related to Operation of Zion Nuclear Power Station Units 2 and 3.* Docket Nos. 50-295 and 50-304. Washington, D.C. December 1972.

To read (and move to place in correct alphabetical order)

U.S. Nuclear Regulatory Commission (USNRC). *Final Environmental Statement Related to Operation of Zion Nuclear Power Station Units 1 and 2.* Docket Nos. 50-295 and 50-304. Washington, D.C. December 1972a.

EGC REVISION ID: E54-1

BASIS FOR CHANGE:
An error was discovered during the site audit in March 2004. The YSI Multiprobe or Multiparameter Instrument referred to in Section 6.7 should be a Survey Rod (or equivalent instrument) instead. The text was changed to correct the error.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 6, Section 6.7, Table 6.7-2 (2nd to the last item on the table with reference to Instrumentation Used), page 6.T-13, from:

YSI Multiprobe or Multiparameter Instrument

To read:

Survey Rod (or equivalent instrument)

EGC REVISION ID: E55-1

BASIS FOR CHANGE:
The reference was incorrectly stated in the text. The temperature values were taken from CPS NPDES summer temperature monitoring data reports, not USGS, 2002 data related to the Rowell station as previously stated. The text was changed to correct the error.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 2, Section 2.3, Table 2.3-11, page 2.T-9, from:

Source: USGS, 2002

To read:

Source: CPS 1994, 1995, 1996,1997, 1998, 2000, 2001a

EGC REVISION ID: E61-1

BASIS FOR CHANGE:
As a result of discussions with the NRC during the March 2004 ER Audit, two references -- Campbell's Environmental Operating Report and Campbell's Effluent Release Report were renumbered as shown below:

- Campbell, Robert J. Annual Radiological Environmental Operating Report for the CPS, January 1, 2001 through December 31, 2001 - formerly Campbell 2002; now to be Campbell 2002a.

- Campbell, Robert J. Annual Radioactive Effluent Release Report for the CPS, January 1, 2001 through December 31, 2001. Formerly Campbell 2002a, now to be Campbell 2002b.

The original Application reference was Campbell 2002, Environmental Operating Report (EOR); the NRC RAI No. E1.0-1[4] (EGC R4-4) incorrectly changed it to the Effluent Release Report (ERR). This change recognizes and supersedes the R4-4 response.

The correct reference numbering is: Campbell 2002a for the Environmental Operating Report; and Campbell 2002b for the Effluent Release Report (ERR).

Therefore ER, Chapter 4, Section 4.5 text and references have been revised.

EGC ESP APPLICATION REVISIONS:

1. Revise ER, Ch.4, Section 4.5.3, Pg. 4.5-1, 1st sentence from:

Environmental radiological monitoring data obtained from the Annual Radiological Environmental Operating Report (Campbell, 2002) was used to assess any radiological impact upon the surrounding environment due to the operation of the CPS Facility.

To read:

Environmental radiological monitoring data obtained from the Annual Radiological Environmental Operating Report (Campbell, 2002a) was used to assess any radiological impact upon the surrounding environment due to the operation of the CPS Facility.

2. Revise ER, Chapter 4, Section 4.5.3.1, page 4.5-2, from:

As stated in the Annual Radioactive Effluent Release Report for the CPS Facility (Campbell, 2002a):

To read:

As stated in the Annual Radioactive Effluent Release Report for the CPS Facility (Campbell, 2002b):

3. Revise ER, Chapter 4, Section 4.5.3.1, page 4.5-2, from:

In addition, the 2001 Annual Radioactive Effluent Release Report (Campbell, 2002a) calculated total body, skin, and thyroid doses to the public from CPS gaseous effluents.

To read:

In addition, the 2001 Annual Radioactive Effluent Release Report (Campbell, 2002b) calculated total body, skin, and thyroid doses to the public from CPS gaseous effluents.

4. Revise ER, Ch.4, Section 4.5.3.2, Pg. 4.5-2, 1st paragraph. Note that this text was incorrectly revised by the response to RAI E1.0-1[4] from:

These quarterly measurements ranged from 13.1 mrem to 21.9 mrem for indicator TLDs and 15.0 mrem to 19.5 mrem for control TLDs (Campbell, 2002).

To read:

These quarterly measurements ranged from 13.1 mrem to 21.9 mrem for indicator TLDs and 15.0 mrem to 19.5 mrem for control TLDs (Campbell, 2002a).

This sentence will now be correct (due to the revision to the reference list) as follows:

These quarterly measurements ranged from 13.1 mrem to 21.9 mrem for indicator TLDs and 15.0 mrem to 19.5 mrem for control TLDs (Campbell, 2002a).

5. Revise ER, Ch.4, Section 4.5.3.2, Pg. 4.5-2, 1st paragraph. Note that this text was incorrectly revised by the response to RAI E1.0-1[4] from:

From these observations, when factoring in the statistical variances, it is concluded that there was no increase in environmental gamma radiation levels resulting from unit operations at the CPS (Campbell, 2002).

To read:

From these observations, when factoring in the statistical variances, it is concluded that there was no increase in environmental gamma radiation levels resulting from unit operations at the CPS (Campbell, 2002a).

This sentence will now be correct (due to the revision to the reference list) as follows:

From these observations, when factoring in the statistical variances, it is concluded that there was no increase in environmental gamma radiation levels resulting from unit operations at the CPS (Campbell, 2002a).

6. Revise ER, Chapter 4, Section 4.5 References, page 4.R-3, from:

Campbell, Robert J. Annual Radioactive Effluent Release Report for the Clinton Power Station, January 1, 2001 through December 31, 2001. Attached to AmerGen letter from Michael J Pacilio to the NRC Document Control Desk, Clinton letter reference number U-603543, NRC Adams Accession Number ML020800817 and ML020800855, March 8, 2002a.

Campbell, Robert J. Annual Radiological Environmental Operating Report for the CPS, January 1, 2001 through December 31, 2001. Attached to Amergen letter from Michael J. Pacilio to the NRC Document Control Desk, Clinton letter reference number U-603551, NRC Adams Accession Number ML021290197, April 29, 2002.

To read (and move to place in correct alphabetical order):

Campbell, Robert J. Annual Radiological Environmental Operating Report for the CPS, January 1, 2001 through December 31, 2001. Attached to Amergen letter from Michael J. Pacilio to the NRC Document Control Desk, Clinton letter reference number U-603551, NRC Adams Accession Number ML021290197, April 29, 2002a.

Campbell, Robert J. Annual Radioactive Effluent Release Report for the Clinton Power Station, January 1, 2001 through December 31, 2001. Attached to AmerGen letter from Michael J Pacilio to the NRC Document Control Desk, Clinton letter reference number U-
603543, NRC Adams Accession Number ML020800817 and ML020800855, March 8, 2002b.

EGC REVISION ID: E62-1

BASIS FOR CHANGE:
The U.S. Census Bureau references were cited incorrectly throughout some sections of the ER (e.g., Chapter 2, Section 2.5; Chapter 4, Section 4.4; Chapter 5, Section 5.8). Changes were made in the text to correct these errors.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.5.1.3.2, paragraph 2, pages 2.5-4 from:

Within the low population zone, the minority population is 4.3 percent. Within the EPZ, the minority population is 3.6 percent. Within the region, the minority population is 13 percent (U.S. Census Bureau, 2001 and 2001a). The national average for minority population is 37 percent. Therefore, minority population in the region is well below the national average.

To read:

Within the low population zone, the minority population is 4.3 percent. Within the EPZ, the minority population is 3.6 percent. Within the region, the minority population is 13 percent (U.S. Census Bureau, 2001). The national average for minority population is 37 percent. Therefore, minority population in the region is well below the national average.

2. Revise ER, Chapter 2, Section 2.5.1.3.3, page 2.5-4 from:

Within the low population zone, 3.4 percent of the population had a 1999 income below the poverty level. Within the EPZ, 8 percent of the population had a 1999 income below the poverty level. Within the region, 10 percent of the population had a 1999 income below the poverty level (U.S. Census Bureau, 2001 and 2001a). The national average of population below the poverty level is 11.3 percent (U.S. Census Bureau, 2001b). Other income distributions for the exclusion area, low population zone, EPZ, and region is provided in Table 2.5-7.

To read:

Within the low population zone, 3.4 percent of the population had a 1999 income below the poverty level. Within the EPZ, 8 percent of the population had a 1999 income below the poverty level. Within the region, 10 percent of the population had a 1999 income below the poverty level (U.S. Census Bureau, 2001 and 2002b). The national average of population below the poverty level is 11.3 percent (U.S. Census Bureau, 2001a). Other income distributions for the exclusion area, low population zone, EPZ, and region is provided in Table 2.5-7.

3. Revise ER, Chapter 2, Section 2.5.2.3, paragraph 2, page 2.5-6 from:

Most of the population enjoys a rural quality of life, unencumbered travel, and easy access to outdoor activities. The population is fairly homogeneous, largely white, and not dominated by a particular ethnic group (U.S. Census Bureau, 2001a).

To read:

Most of the population enjoys a rural quality of life, unencumbered travel, and easy access to outdoor activities. The population is fairly homogeneous, largely white, and not dominated by a particular ethnic group (U.S. Census Bureau, 2002b).

4. Revise ER, Chapter 2, Section 2.5.4.1, paragraph 1, page 2.5-13 from:

According to the U.S. Census Bureau data from 2000, 97.1 percent of DeWitt County is white, 0.5 percent is African American, 0.2 percent is American Indian, 1.3 percent is of Hispanic origin, and 0.9 percent is classified as other races. Figure 2.5-8 identifies the minority populations in the region (U.S. Census Bureau, 2001a).

To read:

According to the U.S. Census Bureau data from 2000, 97.1 percent of DeWitt County is white, 0.5 percent is African American, 0.2 percent is American Indian, 1.3 percent is of Hispanic origin, and 0.9 percent is classified as other races. Figure 2.5-8 identifies the minority populations in the region (U.S. Census Bureau, 2002b).

5. Revise ER, Chapter 2, Section 2.5.4.2, page 2.5-13 from:

A block census evaluation of household income was performed to identify low income populations, as defined by the Department of Health and Human Services. Within the vicinity, 8 percent of the population had a 1999 income below the poverty level. Within the region, 10 percent of the population had a 1999 income below the poverty level. In DeWitt County, 8 percent of the population is considered low income. For perspective, the national average of low income population is 11.3 percent (U.S. Census Bureau, 2001b). Figure 2.5-9 shows the population below the poverty level within each census block (U.S. Census Bureau, 2001 and 2001b).

To read:

A block census evaluation of household income was performed to identify low income populations, as defined by the Department of Health and Human Services. Within the vicinity, 8 percent of the population had a 1999 income below the poverty level. Within the region, 10 percent of the population had a 1999 income below the poverty level. In DeWitt County, 8 percent of the population is considered low income. For perspective, the national average of low income population is 11.3 percent (U.S. Census Bureau, 2001a). Figure 2.5-9 shows the population below the poverty level within each census block (U.S. Census Bureau, 2001 and 2001a).

6. Revise ER, Chapter 2, Section 2.5 References, page 2.R-7 from:

U.S. Census Bureau. Census 2000 Summary File 3. 2001a.

To read (and move to place in correct alphabetical order):

U.S. Census Bureau. Census 2000 Summary File 3. 2002b.

7. Revise ER, Chapter 2, Section 2.5 References, page 2.R-7 from:

U.S. Census Bureau. Poverty in the United States: 2000. September 2001b.

To read (and move to place in correct alphabetical order):

U.S. Census Bureau. *Poverty in the United States: 2000.* September 2001a.

8. Revise ER, Chapter 2, Section 2.5, Table 2.5-6, page 2T-40 from:

Source: U.S. Census Bureau, 2001a

To read:

Source: U.S. Census Bureau, 2002b

9. Revise ER, Chapter 2, Section 2.5, Table 2.5-7, page 2.T-41 from:

Source: U.S. Census Bureau, 2001 and 2001b

To read:

Source: U.S. Census Bureau, 2001 and 2001a

10. Revise ER, Chapter 2, Section 2.5, Figure 2.5-8 from:

Data Sources:
U.S Census Bureau, 2000
U.S Census Bureau, 2001a
U.S Census Bureau, 2002
U.S Census Bureau, 2002a

To read:

Data Sources:
U.S Census Bureau, 2000
U.S Census Bureau, 2001
U.S Census Bureau, 2002

11. Revise ER, Chapter 2, Section 2.5, Figure 2.5-9 from:

Data Sources:
U.S Census Bureau, 2000
U.S Census Bureau, 2001b
U.S Census Bureau, 2002
U.S Census Bureau, 2002a

To read:

Data Sources:
U.S Census Bureau, 2000
U.S Census Bureau, 2002
U.S Census Bureau, 2002b

12. Revise ER, Chapter 4, Section 4.4.1.3, paragraph 1, page 4.4-2 from:

The proposed construction site is far removed from most of the permanent population that would view the construction activities. The closest residence is approximately 0.73 mi to the southwest (IDNR, 1998 and 1999), and the closest town is DeWitt, which is approximately 3 mi to the east (U.S. Census Bureau, 2001). Some recreational users of Clinton Lake will be able to view the construction areas. However, the construction area will not visually impact most recreational users and areas of the Clinton Lake. Therefore, overall aesthetic impacts during construction are minimal.

To read:

The proposed construction site is far removed from most of the permanent population that would view the construction activities. The closest residence is approximately 0.73 mi to the southwest (IDNR, 1998 and 1999), and the closest town is DeWitt, which is approximately 3 mi to the east (U.S. Census Bureau, 2002a). Some recreational users of Clinton Lake will be able to view the construction areas. However, the construction area will not visually impact most recreational users and areas of the Clinton Lake. Therefore, overall aesthetic impacts during construction are minimal.

13. Revise ER, Chapter 4, Section 4.4.2, paragraphs 3 and 4, page 4.4-6 from:

Figure 4.4-1 shows the location of minority and total population within each census block. In addition, Figure 4.4-1 and Figure 2.1-3 show that the closest minority population is proximate to the site (approximately 0.73 mi). Further investigation shows that this is a Native American person that lives directly southwest of the site. Since this person is the only resident within the census block, the percent minority for this block is 100 percent (U.S. Census Bureau, 2001a and 2001b). While the site may have a disproportionate impact on minorities in one census block, it in fact involved only one person; therefore, no mitigation is required.

The detailed analysis of the region shows no disproportionate impact to low income populations. Within the vicinity, 8 percent of the population had a 1999 income below the poverty level. Within the region, 10 percent of the population had a 1999 income below the poverty level. In DeWitt County, 8 percent of the population is considered low income. The average low income population in Illinois is 10.8 percent, and the national average is 11.3 percent (U.S. Census Bureau, 2001b). The vicinity, region, and county within which the site is located have low income populations that are below the state and national average. Therefore, it can be concluded that low income populations will not be disproportionately impacted by any operation of the EGC ESP Facility. Figure 4.4-2 shows the location of low income populations within each census block (U.S. Census Bureau, 2001 and 2001a).

To read:

Figure 4.4-1 shows the location of minority and total population within each census block. In addition, Figure 4.4-1 and Figure 2.1-3 show that the closest minority population is proximate to the site (approximately 0.73 mi). Further investigation shows that this is a Native American person that lives directly southwest of the site. Since this person is the only resident within the census block, the percent minority for this block is 100 percent (U.S. Census Bureau, 2001). While the site may have a disproportionate impact on minorities in one census block, it in fact involved only one person; therefore, no mitigation is required.

The detailed analysis of the region shows no disproportionate impact to low income populations. Within the vicinity, 8 percent of the population had a 1999 income below the poverty level. Within the region, 10 percent of the population had a 1999 income below the poverty level. In DeWitt County, 8 percent of the population is considered low income. The average low income population in Illinois is 10.8 percent, and the national average is 11.3 percent (U.S. Census Bureau, 2001a). The vicinity, region, and county within which the site is located have low income populations that are below the state and national average. Therefore, it can be concluded that low income populations will not be disproportionately impacted by any operation of the EGC ESP Facility. Figure 4.4-2 shows the location of low income populations within each census block (U.S. Census Bureau, 2002).

14. ER, Chapter 4, Section 4.4, References, page 4.R-2 from:

U.S. Census Bureau. Census 2000 Summary File 3. 2001a.

To read (and move to place in correct alphabetical order):

U.S. Census Bureau. Census 2000 Summary File 3. 2002.

15. ER, Chapter 4, Section 4.4, References, page 4.R-3, to add the following new reference (and move to place in correct alphabetical order):

U.S. Census Bureau. Census 2000 Incorporated/Census Designated Places of Illinois Generalized Boundary File. Available at: http://www.census.gov/geo/www/cob/pl2000.html. June 26, 2002a.

16. ER, Chapter 4, Section 4.4, References, page 4.R-3 from:

U.S. Census Bureau. *Poverty in the United States: 2000.* Current Population Reports – Consumer Income. September 2001b.

To read (and move to place in correct alphabetical order):

U.S. Census Bureau. *Poverty in the United States: 2000.* Current Population Reports – Consumer Income. September 2001a.

17. Revise ER, Chapter 4, Section 4.4, Figure 4.4-1 from:

Data Sources:
U.S Census Bureau, 2000
U.S Census Bureau, 2001
U.S Census Bureau, 2001a
U.S Census Bureau, 2002a

To read:

Data Sources:
U.S Census Bureau, 2000
U.S Census Bureau, 2001
U.S Census Bureau, 2002

18. Revise ER, Chapter 4, Section 4.4, Figure 4.4-2 from:

Data Sources:
U.S Census Bureau, 2000
U.S Census Bureau, 2001
U.S Census Bureau, 2001b
U.S Census Bureau, 2002

To read:

Data Sources:
U.S Census Bureau, 2000
U.S Census Bureau, 2001
U.S Census Bureau, 2002
U.S Census Bureau, 2002a

19. Revise ER, Chapter 5, Section 5.8, page 5.8-2, from:

The closest residence is approximately 0.73 mi to the southwest of the site (IDNR, 1998 and 1999), and the closest town is DeWitt, which is approximately 3 mi to the east (U.S. Census Bureau, 2001). Many recreational users of the Clinton Lake State Recreation Area will be able to view the operation areas.

To read:

The closest residence is approximately 0.73 mi to the southwest of the site (IDNR, 1998 and 1999), and the closest town is DeWitt, which is approximately 3 mi to the east (U.S. Census Bureau, 2002). Many recreational users of the Clinton Lake State Recreation Area will be able to view the operation areas.

20. Revise ER, Chapter 5, Section 5.8, paragraphs 3 and 4, page 5.8-6 from:

... Since this person is the only resident within the census block, the percent minority is 100 percent for this block (U.S. Census Bureau, 2001 and 2001a). While the site may have a disproportionate impact on minorities in one census block, it in fact involved only one person, therefore, no mitigation is required.

The detailed analysis of the region shows no disproportionate impact to low-income populations. Within the vicinity, 8 percent of the population had a 1999 income below the poverty level. Within the region, 10 percent of the population had a 1999 income below the poverty level. In DeWitt County, 8 percent of the population is considered low-income. The average low-income population in Illinois is 10.8 percent, and the national average is 11.3 percent (U.S. Census Bureau, 2001b). The vicinity, region, and county, in which the site is located, have low-income populations that are below the state and national average. Therefore, it can be concluded that low-income populations will not be disproportionately impacted by operation of the EGC ESP Facility. Figure 4.4-2 shows the location of low income populations within each census block (U.S. Census Bureau, 2001 and 2001a).

To read:

... Since this person is the only resident within the census block, the percent minority is 100 percent for this block (U.S. Census Bureau, 2001and 2002a). While the site may have a disproportionate impact on minorities in one census block, it in fact involved only one person, therefore, no mitigation is required.

The detailed analysis of the region shows no disproportionate impact to low-income populations. Within the vicinity, 8 percent of the population had a 1999 income below the poverty level. Within the region, 10 percent of the population had a 1999 income below the poverty level. In DeWitt County, 8 percent of the population is considered low-income. The average low-income population in Illinois is 10.8 percent, and the national average is 11.3 percent (U.S. Census Bureau, 2001a). The vicinity, region, and county, in which the site is located, have low-income populations that are below the state and national average. Therefore, it can be concluded that low-income populations will not be disproportionately impacted by operation of the EGC ESP Facility. Figure 4.4-2 shows the location of low income populations within each census block (U.S. Census Bureau, 2002b).

21. Revise ER, Chapter 5, Section 5.8 References, page 5.R-4 from:

U.S. Census Bureau. Census 2000 Summary File 3. 2001a.

To read (and move to place in correct alphabetical order):

U.S. Census Bureau. Census 2000 Summary File 3. 2002a.

22. Revise ER, Chapter 5, Section 5.8 References, page 5.R-4 from:

U.S. Census Bureau. *Poverty in the United States: 2000.* Current Population Reports – Consumer Income. September 2001b.

To read (and move to place in correct alphabetical order):

U.S. Census Bureau. *Poverty in the United States: 2000.* Current Population Reports – Consumer Income. September 2001a.

23. ER, Chapter 5, Section 5.8, References, page 5.R-4, to add the following new reference (and move to place in correct alphabetical order):

U.S. Census Bureau. Census 2000 Incorporated/Census Designated Places of Illinois Generalized Boundary File. Available at: http://www.census.gov/geo/www/cob/pl2000.html. June 26, 2002.

EGC REVISION ID: E63-1

BASIS FOR CHANGE:
The IDNR and CH2M Hill references were incorrectly cited; the text was revised to correct those errors.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.5.1.1, page 2.5-2, from:

Recreation Areas - Data was obtained from the IDNR on the number of visitors to state parks including Clinton Lake State Recreation Area (IDNR, 2002). These visitors were considered transients. Data was also obtained for smaller recreational facilities in the region by survey during August and September 2002 and verified by the DeWitt County Emergency Services and Disaster Agency Coordinator.

To read:

Recreation Areas - Data were obtained from the IDNR on the number of visitors to state parks including Clinton Lake State Recreation Area. These visitors were considered transients. Data were also obtained for smaller recreational facilities in the region by survey during August and September 2002 and verified by the DeWitt County Emergency Services and Disaster Agency Coordinator.

2. Revise ER, Chapter 2, Section 2.5.1.2, page 2.5-4, from:

Recreation Areas - Data was obtained from the IDNR on the number of visitors to state parks, which was then used to estimate transient population (IDNR, 2002). Visitors to local nature preserves and county or local parks were not included in estimates of transient population because it was assumed that these visitors would likely originate from the area encompassed by a 80-km (50-mi) radius.

To read:

Recreation Areas - Data were obtained from the IDNR on the number of visitors to state parks, which was then used to estimate transient population. Visitors to local nature preserves and county or local parks were not included in estimates of transient population because it was assumed that these visitors would likely originate from the area encompassed by a 80-km (50-mi) radius.

3. Revise ER Chapter 2, Section 2.5, Table 2.5-1, page 2.T-26, from:

Source: Residential Population is from U.S. Census Bureau, 2001. Transient Population is from U.S. Census Bureau, 2001; IDNR, 2002; USDOC, 2002

To read:

Source: Residential Population is from U.S. Census Bureau, 2001. Transient Population is from U.S. Census Bureau, 2001; USDOC, 2002

4. Revise ER Chapter 2, Section 2.5, Table 2.5-3, page 2.T-33, from:

Source: CH2M HILL, 2002. Residential Population is from U.S. Census Bureau, 2001. Transient Population is from U.S. Census Bureau, 2001; IDNR, 2002; USDOC, 2002

To read:

Source: Residential Population is from U.S. Census Bureau, 2001. Transient Population is from U.S. Census Bureau, 2001; USDOC, 2002

EGC REVISION ID: E64-1

BASIS FOR CHANGE:
Reference was cited incorrectly in the text. It should actually have been cited as two separate references: 1) DeWitt County Area Home Guide, 2002; and 2) DeWitt County (Planning and Zoning), 2002. Text was changed to correct error.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.5.2.4, page 2.5-6, end of 3rd paragraph to remove:

(DeWitt County, 2002)

2. Revise ER, Chapter 2, Section 2.5.2.4, page 2.5-6, 4th paragraph from:

Several local and regional newspapers were consulted to achieve a snapshot of the availability of rental units or houses for sale (Clinton Daily Journal, 2002; Herald & Review, 2002; State Journal Register, 2002; DeWitt County, 2002; Pantagraph, 2002).

To read:

Several local and regional newspapers were consulted to achieve a snapshot of the availability of rental units or houses for sale (Clinton Daily Journal, 2002; Herald & Review, 2002; State Journal Register, 2002; DeWitt County Area Home Guide, 2002; Pantagraph, 2002).

3. Revise ER, Chapter 2, Section 2.5 References, page 2.R-6, from:

DeWitt County. Area Home Guide – Rental and House sale Ads. August 8, 2002.

To read (and place in correct alphabetical order):

DeWitt County Area Home Guide. Rental and House Sale Ads. August 8, 2002.

4. Revise ER, Chapter 2, Section 2.5, Table 2.5-13, page 2.T-48, from:

Available Housing Within the Region

Area	Rental Property	Sale Property	Source
Clinton	3	2	Clinton Daily Journal, August 8, 2002
Decatur	58	55	Herald & Review, August 12, 2002
Springfield	68	16	State Journal Register, August 12, 2002
DeWitt County	0	56	DeWitt County, August 8, 2002
Central Illinois	23	33	Pantagraph, August 12, 2002

To read:

Available Housing Within the Region

Area	Rental Property	Sale Property	Source
Clinton	3	2	Clinton Daily Journal, August 8, 2002
Decatur	58	55	Herald & Review, August 12, 2002
Springfield	68	16	State Journal Register, August 12, 2002
DeWitt County	0	56	DeWitt County Area Home Guide, August 8, 2002
Central Illinois	23	33	Pantagraph, August 12, 2002

5. Revise ER, Chapter 4, Section 4.4.2.4, page 4.4-4, from:

The abundance of existing housing within the surrounding area will mitigate against effects on rents or prices produced by the construction (U.S. Census Bureau, 2001; Clinton Daily Journal, 2002; Herald & Review, 2002; State Journal Register, 2002; DeWitt County, 2002; Pantagraph, 2002).

To read:

The abundance of existing housing within the surrounding area will mitigate against effects on rents or prices produced by the construction (U.S. Census Bureau, 2001; Clinton Daily Journal, 2002; Herald & Review, 2002; State Journal Register, 2002; DeWitt County Area Home Guide, 2002; Pantagraph, 2002).

6. Revise ER, Chapter 4, Section 4.4, References, from:

DeWitt County. Area Home Guide – Rental and House sale Ads. August 8, 2002.

To read (and place in correct alphabetical order):

DeWitt County Area Home Guide. Rental and House Sale Ads. August 8, 2002.

EGC REVISION ID: E65-1

BASIS FOR CHANGE:
Reference was cited incorrectly in text; listed as IDDCA, 2002; should have been IDCCA, 2002. The text was changed to correct the error.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 2, Section 2.5, Table 2.5-9, page 2.T-45, from:

Source: IDDCA, 2002

To read:

Source: IDCCA, 2002

EGC REVISION ID: E66-1

BASIS FOR CHANGE:
This reference was cited incorrectly in the text. To comply with the latest edition of the Chicago Style Manual, the et al. should be fully cited (spell out all names) in Reference Section 2.3. The text was revised to correct the error.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 2, Section 2.3 References, page 2.R-4, from:

Kempton, John P., et al. "Topography, Glacial Drift Stratigraphy, and Hydrogeology." Geological Society of America Special Paper 258. Mahomet Bedrock Valley, East-Central Illinois. 1991.

To read (and move to place in correct alphabetical order):

Kempton, John P., P.C. Heigold, and K. Cartwright. "Topography, Glacial Drift Stratigraphy, and Hydrogeology." Geological Society of America Special Paper 258. Mahomet Bedrock Valley, East-Central Illinois. 1991.

2. Revise ER, Figure 2.3-14, Source from:

Kempton, 1991

To read:

Kempton et al., 1991

EGC REVISION ID: E67-1

BASIS FOR CHANGE:
The reference was cited incorrectly in the text (Association of American Railroads, Glaze Storm Loading Summary, 1955). The correct reference was substituted. The text was revised to reflect this change.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.7.3.3, page 2.7-8, from:

Strong winds during and after a glaze storm greatly increase the amount of damage to trees and power lines. In studying wind effects on glaze-loaded wires, the Association of American Railroads concluded that maximum wind gusts were not as significant (harmful) a measure of wind damage as were speeds sustained over 5-minute periods (Association of American Railroads, 1955).

To read:

Strong winds during and after a glaze storm greatly increase the amount of damage to trees and power lines. Moderate wind speeds (10-24 mph) occurring after glaze storms are most prevalent, although wind speeds of more than 25 mph are not unusual. Observations of 5-minute winds in excess of 40 mph with a glaze thickness of 0.25 in. or more have been reported by Changnon (1969). Table 2.7-6 presents specific glaze thickness data for the five fastest 5-minute speeds and the speeds with the five greatest measured glazed thicknesses for 148 glaze storms throughout the country during the period from 1926-1937. Although these data were collected from various locations throughout the U.S., they are considered applicable design values for locations in Illinois.

2. Revise ER, Chapter 2, Section 2.7 References, page 2.R-8, to remove:

Association of American Railroads. Glaze Storm Loading Summary, 1927-28 to 1936-37. 1955.

EGC REVISION ID: E68-1

BASIS FOR CHANGE:
It was noted during the March 2004 site audit that the Clinton School District was not included within the working file backup information. Another search of the reference source showed that several school districts were missing. This resulted in a change to the percentage following new calculations. The text was changed to correct this error.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 2, Section 2.5.2.5, page 2.5-7, from:

A survey of class size of schools in the region was performed, and 70 percent of schools have a class size at or below the national average.

To read:

A survey of class size of schools in the region was performed, and 67 percent of schools have a class size at or below the national average.

2. Revise ER, Chapter 4, Section 4.4.2.5, page 4.4-4, from:

A survey of class size of schools in the region was performed, and 70 percent of schools have class size at or below the national average.

To read:

A survey of class size of schools in the region was performed, and 67 percent of schools have class size at or below the national average.

3. Revise ER, Chapter 5, Section 5.8.2.5, page 5.8-4, from:

A survey of class size of schools in the region was performed, and 70 percent of schools have class size at or below the national average.

To read:

A survey of class size of schools in the region was performed, and 67 percent of schools have class size at or below the national average.

EGC REVISION ID: E77-1

BASIS FOR CHANGE:
This response supplements the SSAR response to NRC RAI 2.4.1-1 (EGC RAI ID: R9-1) states that the new intake structure is approximately 65 feet south of the existing CPS intake structure, which is a more accurate description.

This response supplements response to NRC RAI E3.4-1 (EGC RAI ID R3-2).

EGC ESP APPLICATION REVISION:
1. Revise ER, Ch.3, Section 3.3.1.1, 1st paragraph, Pg. 3.3-2 from:

Pumps for the makeup water will be located in a new intake structure positioned next to the CPS intake structure.

To read:

Pumps for the makeup water will be located in a new intake structure positioned approximately 65 feet south of the CPS intake structure.

2. Revise ER, Ch.3, Section 3.4.2.4, 1st paragraph, Pg. 3.4-4 from:

Pumps for the normal and emergency UHS makeup water will be located in a new intake structure, the same one used for the NHS cooling towers, and positioned next to the CPS intake structure.

To read:

Pumps for the normal and emergency UHS makeup water will be located in a new intake structure, the same one used for the NHS cooling towers, and positioned approximately 65 feet south of the CPS intake structure.

3. Revise ER, Ch.4, Section 4.2.1.2.1, second sentence, page 4.2-3, (note that this sentence was revised in the response to RAI E3.4-1 (R3-2) from:

The proposed location of the new intake structure is next to the existing intake structure for the CPS.

To read:

The proposed location for the new intake structure will be approximately 65 feet west of the existing structures to facilitate construction and maintain the independence of the systems. Figures 2.1-3 through 2.1-5 show the location of the new intake structure.

This sentence is now being revised to read:

The proposed location for the new intake structure will be approximately 65 feet south of the existing structures to facilitate construction and maintain the independence of the systems. Figures 2.1-3 through 2.1-5 show the location of the new intake structure.

4. Revise ER, Ch.5, Section 5.3, 1st paragraph, Pg. 5.3-1 from:

The makeup water for the normal (non-safety) plant operations will be taken up through a new intake structure located next to the CPS intake structure on the northern basin of Clinton Lake.

To read:

The makeup water for the normal (non-safety) plant operations will be taken up through a new intake structure located approximately 65 feet south of the CPS intake structure on the northern basin of Clinton Lake.

5. Revise ER, Ch.5, Section 5.10.3.9, 2nd paragraph, Pg. 5.10-10 from:

The makeup water for the normal (non-safety) plant operations will be obtained through a new intake structure located next to the CPS intake structure on the North Fork basin of Clinton Lake.

To read:

The makeup water for the normal (non-safety) plant operations will be obtained through a new intake structure located approximately 65 feet south of the CPS intake structure on the North Fork basin of Clinton Lake.

EGC REVISION ID: E78-1

BASIS FOR CHANGE:
The flood frequency estimations for the Rowell gauge were re-examined based on discussions with the NRC during their site audit and the SSAR RAIs where NRC noted minor discrepancies with the discharge data. EGC has reviewed the statistical analysis of the historical discharge data at the Rowell gauge and identified areas to be revised. In summary, the period of record for the historical data was updated as more data are now available than at the time of the original analysis (analysis now includes Water Years 1979 through 2003); and EGC has revised the latitude and longitude of the input to the USGS DOS-based program (Peak FQ) which is the Log Pearson Type III analysis as described in WRC Bulletin 17B to more closely reflect the location of the gauge.

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.3.1.1.3 and ER, Chapter 2, Section 2.3.1.1.4 from:

2.3.1.1.3 Floods
The review of postdam conditions indicates that the lake is significantly attenuating flood flows in Salt Creek. There have been no discharges over 10,000 cfs recorded at the Rowell gauging station after construction of the Clinton Lake Dam (USGS, 2002).

Flood frequency for the Rowell gauging station was analyzed based on the 22 years of records from January of 1978 to September of 2000. Figure 2.3-3 presents the peak flood frequency curve for Salt Creek at the gauging station under postdam conditions. The peak flows for various recurrence intervals at the gauging station and at the dam are also presented in Table 2.3-4. The discharges at the dam were derived using the drainage area ratio.

At the gauging station, the mean annual flood for postdam conditions is 3,600 cfs (recurrence interval of 2.3 years). The maximum postdam discharge of 7,810 cfs (April of 1994) has a recurrence interval of about 25 years (USGS, 2002).

As a result of the dam, the 10-yr recurrence interval flood flow at the Rowell gauging station has been reduced from 11,400 cfs to 6,200 cfs. The 100-yr recurrence flood flow has been reduced from 29,900 cfs to 10,400 cfs (see Table 2.3-4).

2.3.1.1.4 Droughts
Since construction of the dam in 1977, there have been significant dry periods. The most significant dry period was in 1988. The monthly runoff values at the Rowell gauging station in 1988 are provided in Table 2.3-5. The minimum postdam flow of 3.7 cfs was recorded at the Rowell gauging station on September 8, 1988 (USGS, 2002).

The Log-Pearson Type III method was used to analyze low-flow frequency for the Rowell gauging station under postdam conditions. The magnitudes and frequencies of low flows with a one-day duration at the gauging station are depicted in Figure 2.3-4. The low-flow rates for the dam derived using a drainage area ratio for the different frequencies and durations are presented in Table 2.3-6.

To read:

2.3.1.1.3 Floods
The review of post-dam conditions indicates that the lake is significantly attenuating flood flows in Salt Creek. There are no discharges over 10,000 cfs recorded at the Rowell gauging station after construction of the Clinton Lake Dam (USGS, 2002).

Flood frequency for the Rowell gauging station were calculated using a Log-Pearson Type III distribution based on the 25 years of records from Water Year 1979 through 2003. Figure 2.3-3 shows the peak flood frequency curve for Salt Creek at the gauging station under post-dam conditions. The peak flow for various recurrence intervals at the gauging station and at the dam are also shown in Table 2.3-4. The discharges at the dam site were derived using the drainage area ratio.

At the gauging station, the mean annual flood for post-dam conditions is 3,300 cfs (recurrence interval of 2.33 years). The maximum post-dam discharge of 7,810 cfs (April of 1994) has a recurrence interval of about 25 years (USGS, 2004).

As a result of the dam the 10-yr recurrence interval flood flow at the Rowell Gauging Station is reduced from 11,400 cfs to 6,000 cfs. The 100 yr recurrence flood flow is reduced from 29,900 cfs to 9,800 cfs (see Table 2.3-4).

2.3.1.1.4 Droughts
Since construction of the dam in 1977, there have been significant dry periods. The most significant dry period was in 1988. The monthly runoff values at the Rowell gauging station in 1988 are provided in Table 2.3-5. The minimum postdam flow of 3.7 cfs was recorded at the Rowell gauging station on September 8, 1988 (USGS, 2002).

A rank-order method was used to analyze low-flow frequency for the Rowell gauging station under postdam conditions. The magnitudes and frequencies of low flows with a one-day duration at the gauging station are summarized in Table 2.3-6 and graphically depicted in Figure 2.3-4.

2. *Replace Table 2.3-4 with:*

TABLE 2.3-4
Calculated Peak Flood Magnitudes and Frequencies at Rowell Gauging Station and at Dam Site

Recurrence Interval (year)	Postdam Flood Magnitude (cfs)	
	Rowell Gauge	Clinton Lake Dam
2.33	3,300	2,900
10	6,000	5,300
25	7,600	6,700
50	8,700	7,700
100	9,800	8,700

Source: USGS, 2004

3. *Replace Table 2.3-6 with:*

TABLE 2.3-6
Postdam Low Flow Rates for Various Frequencies for Salt Creek at Rowell Gauging Station

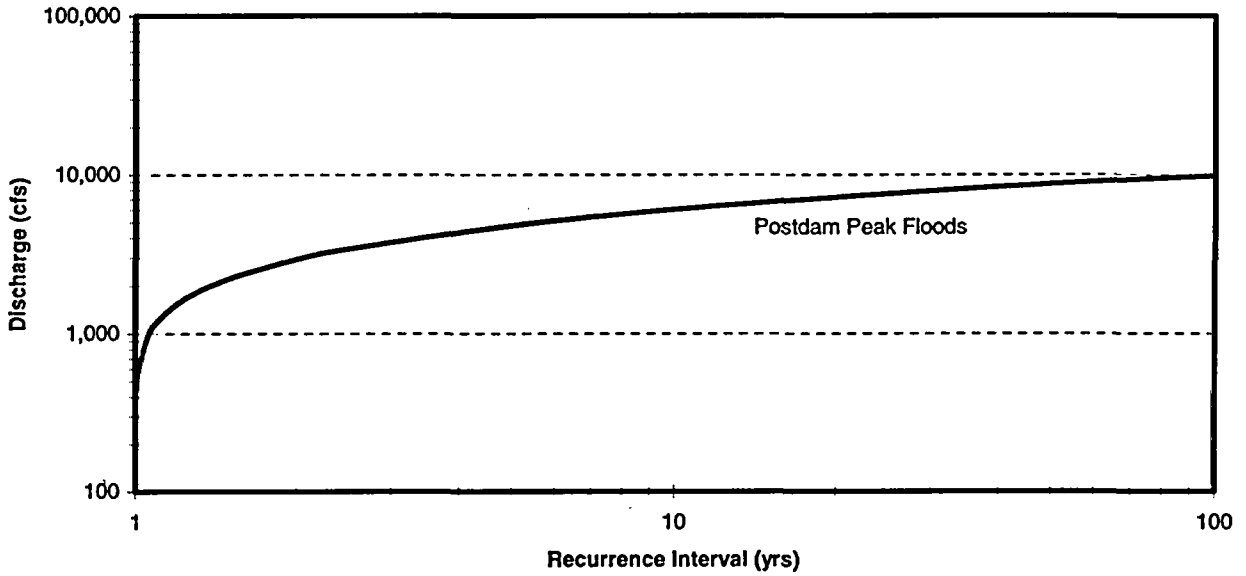
Recurrence Interval (year)	Low Flow Rate with One-Day Duration (cfs)
2	8.1
5	6.1
10	5.2
20	3.9
50	2.9
100	2.4

Source: USGS, 2002

4. Replace Figure 2.3-3 with:

Figure 2.3-3 Postdam Peak Flood Magnitudes and Frequencies for Salt Creek at Rowell Gauge Station

Source: USGS, 2004



Note: Based on daily mean discharge values.

EGC REVISION ID: E85-1

BASIS FOR CHANGE:
Change is being made to be consistent with changes to the SSAR as described in our response to NRC RAI 2.3.2-6 (EGC RAI ID: R8-16).

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.7.4.1.3.2 "Wet Bulb" in its entirety:

To Delete:
The entire text in Section 2.7.4.1.3.2 "Wet Bulb" and insert the words "Section Deleted" in place of the existing paragraph.

2. Revise Table 2.7-14 "Summary of Wet Bulb Temperature Measurements at Clinton Power Station (1972-1977)" in its entirety:

To Delete:
All of the information in Table 2.7-14 and insert the words "Information Deleted" in place of the contents of the table.

EGC REVISION ID: E86-1

BASIS FOR CHANGE:
Change is being made to be consistent with changes to the SSAR as described in our response to NRC RAI 2.3.3-2 (EGC RAI ID: R8-17).

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 2, Section 2.7.6.2 Chi/Q "Estimates From the CPS USAR", first paragraph, third from the last sentence from:

The Pasquill stability class was determined from the measured vertical temperature difference (delta temperature) and the variation of horizontal wind direction, according to Regulatory Guide 1.23 (USNRC, 1972).

To read:

The Pasquill stability class was determined from the measured vertical temperature difference and the variation of horizontal wind direction, according to ANS 2.5-1984 proposed as Regulatory Guide 1.23, Revision 1.

EGC REVISION ID: E90-1

BASIS FOR CHANGE:

Change is being made to be consistent with SSAR changes as described in our response to NRC RAI 2.3.1-6 (EGC RAI ID: R8-3) and NRC RAI 2.3.1-4 (EGC RAI ID: R8-4).

EGC ESP APPLICATION REVISION:

1. Revise ER, Chapter 2, Section 2.7.1.2 "Winds", first paragraph, last two sentences from:

Peak gusts during the period of 1941–1990 were 69 mph in Peoria (April of 1989) and 69 mph in Springfield (August of 1987). The fastest mile of wind was 75 mph in Peoria (July of 1953) and 75 mph in Springfield (June of 1957) (Gale Research Company, 1992a).

To read:

The highest recorded fastest mile/peak gust of wind was 75 mph in Peoria (July of 1953) and 75 mph in Springfield (June of 1957) (Gale Research Company, 1992a).

2. Revise ER, Chapter 2, Section 2.7.1.5 "Precipitation", last two sentences of the paragraph from:

The monthly maximum snowfall was 24.7 in. at Peoria (January of 1979) and 22.7 in. at Springfield (December of 1973). The 24-hr maximum snowfall was 12.2 in. at Peoria (January of 1979) and 10.9 in. at Springfield (December of 1973) (Gale Research Company, 1992a).

To read:

The monthly maximum snowfall was 26.5 in. at Peoria (February of 1900), 24.4 in. at Springfield (February of 1900), and 30.5 in. at Decatur (March of 1906). The 24-hr maximum snowfall was 18.0 in. at Peoria (February of 1900) and 15.0 in. at Springfield (February of 1900) (Gale Research Company, 1992a).

3. Add the following references to Section 2.7 (and move to place in correct alphabetical order):

National Oceanic and Atmospheric Administration (NOAA). National Weather Service. "Peoria Climate Records and Normals." Available at: http://www.crh.noaa.gov/ilx/clipia. Accessed June 2004a.

National Oceanic and Atmospheric Administration (NOAA). National Weather Service. "Springfield Climate Records and Normals." Available at: http://www.crh.noaa.gov/ilx/clispi. Accessed June 2004b.

4. Replace ER, Chapter 2, Table 2.7-1, Wind and Snowfall Sections, and Sources, with:

Wind		
Fastest Mile/Peak Gust:		
Speed (mph)	75 (July 1953)	75 (June 1957)
Direction	Northwest	Southwest
Snowfall (in.)		
Annual average	25.1	23.9
Monthly maximum	26.5 (February 1900)	24.4 (February 1900)
Maximum 24-hr	18.0 (February 1900)	15.0 (February 1900)

Source: Gale Research Company, 1985, 1992a, 1992b, and NOAA, 2004a and 2004b
Notes: These statistics are based on periods of record ranging from 22 to 50 years in length. The ranges span the years 1941 to 1990.

EGC REVISION ID: E92-1

BASIS FOR CHANGE:
Change is being made to be consistent with the changes to the SSAR as described in our response to NRC RAI 2.3.1-1 (EGC RAI ID: R8-1).

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.7.3.2 "Tornadoes and Severe Winds", selected text in paragraphs 1, 3, and 5 from:

1st paragraph, 2nd sentence:
During the period 1950 to 2002, the average number of tornadoes per year that have occurred in Illinois is 30 (NOAA, 2002). For this same period of record, Illinois tornado statistics, based on storm intensity, are summarized in Table 2.7-3 (NOAA, 2002a).

3rd paragraph, 4th and 5th sentences:
Three of these tornadoes were recorded in DeWitt County during the 54-yr period. For the period of 1950–2002, 11 tornadoes were recorded in DeWitt County and 188 tornadoes recorded in the 5-county area.

5th paragraph, last two sentences:
The distribution of tornadoes in Illinois by intensity, as shown in Table 2.7-3 during the period of 1950–2002, indicates that there were 43 occurrences of F4 and F5 tornadoes out of a total of 1,716 tornadoes (i.e., 2.51 percent). Applying this percentage to the range of annual tornado probabilities for the site area, the probability of occurrence of a worst tornado is therefore 0.000038 to 0.000078.

To read:

1st paragraph, 2nd sentence:
During the period 1950 to 2003, the average number of tornadoes per year that have occurred in Illinois is 33 (NOAA, 2004) based on the Illinois tornado statistics as summarized in Table 2.7-3 (NOAA, 2004a). For this same period of record, Illinois tornado statistics, based on storm intensity, are summarized in Table 2.7-3 (NOAA, 2004a).

3rd paragraph, 4th and 5th sentences:
Three of these tornadoes were recorded in DeWitt County during the 54-yr period. For the period of 1950–2003, 18 tornadoes were recorded in DeWitt County and 212 tornadoes recorded in the 5-county area.

5th paragraph, last two sentences:
The distribution of tornadoes in Illinois by intensity, as shown in Table 2.7-3 during the period of 1950–2003, indicates that there were 45 occurrences of F4 and F5 tornadoes out of a total of 1,793 tornadoes (i.e., 2.55 percent). Applying this percentage to the range of annual tornado probabilities for the site area, the probability of occurrence of a worst tornado is therefore 0.000038 to 0.000079.

2. Replace ER, Chapter 2, Table 2.7-3, 2nd column with:

Table 2.7-3

Number of Reported Occurrences January 1, 1950 – December 31, 2003
1793
1079
530
171
45
3

Source: NOAA, 2004a

3. Replace ER, Chapter 2, Table 2.7-4, 2nd column with:

Table 2.7-4

No. of Reported Tornadoes (1950 – 2003)
18
20
42
44
88

Source: NOAA, 2004a

4. Revise ER, Chapter 2, Section 2.7 References from:

National Oceanic and Atmospheric Administration (NOAA). "Storm Damage Reports in Illinois". National Climatic Data Center. Available at: http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storms. 2002a.

National Oceanic and Atmospheric Administration (NOAA). U.S. National Weather Service Public Information Statement. 10:00 AM CST Tuesday March 5, 2002. Available at: http://www.crh.noaa.gov/ilx/torstats.htm. 2002.

To read (and move to place in correct alphabetical order):

National Oceanic and Atmospheric Administration (NOAA). "Storm Damage Reports in Illinois". National Climatic Data Center. Information on tornado statistics for the period 1950 through 2003 available at: http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storms. 2004a.

National Oceanic and Atmospheric Administration (NOAA). U.S. National Weather Service Public Information Statement. Tornado statistics for the period 1950 through 2003 available at: http://www.crh.noaa.gov/ilx/torstats.htm. 2004b.

EGC REVISION ID: E93-1

BASIS FOR CHANGE:
Change is being made to be consistent with SSAR changes as described in our response to NRC RAI 2.3.3-2 *(EGC RAI ID: R8-17) and NRC RAI 2.3.3-3 (EGC RAI ID: R8-18).*

EGC ESP APPLICATION REVISIONS:
1. Revise ER, Chapter 2, Section 2.7.5.1 Instrumentation, first two paragraphs from:

The CPS meteorological monitoring tower is located approximately 3,200-ft south-southeast of the CPS containment structure, and approximately 1,800-ft south-southeast of the center of the EGC ESP Site. The tower is located in an open area with no trees. Tall obstructions or topographical features in the immediate vicinity of the tower could cause a bias in the measured values of the parameters. Soybeans and similar crops have historically been raised in the fields surrounding the plot that contains the tower. The ground immediately under the tower is covered with short natural grasses and weeds. Heating and ventilation are thermostatically controlled in the instrument shed to provide a controlled environment for the signal translating equipment. The location of the tower with respect to the CPS and the EGC ESP Facility is shown in Figure 2.7-2. The tower has been at this location since its original installation.

It is noted that some of the original monitoring equipment (i.e., sensors, data recorders, electronic data loggers, remote interrogation equipment) have undergone routine replacement, repair, and upgrade since the original installation of the system. Additionally, certain changes in the method of data reduction have been made since the original installation date, with a transition from a manual to an electronic based system with strip chart backup. However, the basic monitoring system hardware that is in use at the CPS is very similar to what was originally installed in 1972. The meteorological monitoring system has been demonstrated throughout this period to be compliant with Regulatory Guide 1.23 (USNRC, 1972).

To read:

The CPS meteorological monitoring tower is located approximately 3,200 ft south-southeast of the CPS containment structure, approximately 1,800 ft south-southeast of the center of the EGC ESP Facility, and approximately 2000 ft southeast of the center of the area proposed for the location of the EGC ESP normal heat sink. Given these large distances, no adverse impacts on the meteorological measurements are expected to occur as a result of the presence of any structures at the EGC ESP facility site. The tower is located in an open area with no trees. The ground immediately under the tower is covered with short natural grasses and weeds. Heating and ventilation are thermostatically controlled in the instrument shed to provide a controlled environment for the signal translating equipment. The location of the tower with respect to the CPS and the EGC ESP Facility is shown in Figure 2.7-2. The tower has been at this location since its original installation.

It is noted that some of the original monitoring equipment (i.e., sensors, data recorders, electronic data loggers, remote interrogation equipment) have undergone routine replacement, repair, and upgrade since the original installation of the system. Additionally, certain changes in the method of data reduction have been made since the original installation date, with a transition from a manual to an electronic based system with strip chart backup. However, the basic monitoring system hardware that is in use at the CPS is very similar to what was originally installed in 1972. Since it began operation, the meteorological monitoring system at CPS has been demonstrated to be compliant with NRC requirements.

It is noted that the CPS meteorological monitoring system currently meets the requirements of ANS 2.5-1984 proposed as Regulatory Guide 1.23, Revision 1, with the following exceptions:

1) Accuracy of dewpoint temperature;
2) Precipitation is not recorded on the digital portion of the data acquisition system;
3) Digital accuracies.

EGC REVISION ID: E94-1

BASIS FOR CHANGE:
Change is being made to be consistent with SSAR changes as described in our response to NRC RAI 2.3.4-1 (EGC RAI ID: R8-20).

EGC ESP APPLICATION REVISIONS:
1. Revise the end of Section 2.7.6.4, "Chi/Q Estimates for Short-Term Diffusion Calculations," page 2.7-22, to add the following new paragraph:

The 50 percent EAB and LPZ X/Q values are determined from the PAVAN output and by logarithmic interpolation. The 0 to 2 hour 50% values at the EAB and LPZ without building wake (3.56E-05 sec/m^3 and 5.10E-06 sec/m^3) are provided directly on the PAVAN output. The remaining values for the longer time periods for the LPZ are determined using the 0 to 2 hour 50% LPZ value and the LPZ average annual value of 4.72E-07 sec/m^3 from the PAVAN output by logarithmic interpolation at the intermediate time periods of 8 hours, 16 hours, 72 hours and 624 hours. The values are shown on Table 2.7-52.

2. Delete from ER, Table 2.7-52:

"Maximum Sector" *from the Table Heading.*

3. Revise ER Section 2, Table 2.7-52, 0 – 2 hr EAB χ/Q value from:

3.6 E-05

To read:

3.56 E-05

EGC RAI ID: E95-1

BASIS FOR CHANGE:
SSAR response to NRC RAI 3.3.2-1 (EGC RAI ID: R11-7) requested that a note be added to indicate that the 0 to 2 hour radioactivity released time interval is for any two hour period with the greatest EAB doses.

EGC ESP APPLICATION REVISION:
1. Revise ER, Ch. 7, Section 7.1.2, Pg. 7.1-4, paragraph 3, from:

The accident dose evaluations are performed using Chi/Qs and activity releases for the following intervals:

To read:

The 0- to 2-hour Chi/Q value is used for the 2-hour release duration with the greatest dose consequences at the EAB.

EGC RAI ID: E96-1

BASIS FOR CHANGE:
SSAR responses to RAI 3.3.1-1 and RAI 3.3.4-2 provided clarification and assessed the impact of the changes made by Westinghouse to the AP1000 X/Q values since the submittal of the EGC ESP Application. This change was also dictated by AP1000 receiving final design approval and quantifies the impact of the change in X/Q made by Westinghouse on the ESP DBA doses.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 7, Section 7.1.4, page from:

7.1.4 Postulated Accidents
This section identifies the DBAs, the resultant activity release paths, the important accident parameters and assumptions, and the credited mitigation features used in the site dose evaluations. An overall summary of the results of the evaluated accident doses is presented in Table 7.1-1 (USNRC, 2000 and USNRC, 1987). This table also compares the environmental doses to the recommended limits in Regulatory Guide 1.183 and NUREG-0800 Standard Review Plan. Table 7.1-2 shows that the evaluated dose consequences meet the accident-specific acceptance criteria invoked in Section 7.1.2.

To read:

7.1.4 Postulated Accidents
This section identifies the postulated accidents, the resultant activity release paths, the important accident parameters and assumptions, and the credited mitigation features used in the EGC ESP Site dose consequence assessments. An overall summary of the results of the evaluated accident doses appears in Table 7.1-2. This table also compares the environmental doses to the recommended limits based on Regulatory Guide 1.183 and NUREG-0800. Table 7.1-2 shows that the evaluated dose consequences meet the accident-specific acceptance criteria invoked in Section 7.1.2.

The analysis approach for evaluating the AP1000 design basis accidents discussed in the following subsections is based upon the EAB and LPZ doses provided by Westinghouse and given in Chapter 15 of the AP1000 Design Control Document, Tier 2, Revision 2 and the ratio of the ESP Site Chi/Q value to the AP1000 representative site Chi/Q value for each post accident time period. The AP1000 representative site Chi/Q values used in the evaluations are given in Table 7.1-2A. Based upon the revisions made to the Chi/Q values by Westinghouse to support the final AP1000 design certification, the EAB doses presented in Tables 7.1-2, 7.1-5, 7.1-6, 7.1-11, 7.1-13, 7.1-16, 7.1-17, 7.1-19, 7.1-23 and 7.1-31 will increase by approximately 3.6% and the LPZ doses will remain bounding.

2. Add to following:

TABLE 7.1-2A Ratio of EGC ESP 50% Accident Site Chi/Q Values to AP1000 Final Design Approval (FDA) Chi/Q Values			
Post Accident Time Period (hr)	*EGC ESP Site Chi/Q Values(sec/m^3)*	*AP1000 Chi/Q Values (sec/m^3)*	*Chi/Q Ratio EGC Site / AP1000 FDA*
EAB[1] 0 - 2	*3.56E-05*	*6.00E-04*	*5.93E-02*
LPZ			
0 - 8	*3.40E-06*	*1.35E-04*	*2.52E-02*
8 -24	*2.85E-06*	*1.00E-04*	*2.85E-02*
24 -96	*1.85E-06*	*5.40E-05*	*3.43E-02*
96 - 720	*1.00E-06*	*2.20E-05*	*4.55E-02*
Note 1: 2 hour period with greatest EAB dose consequences.			

EGC RAI ID: E103-1

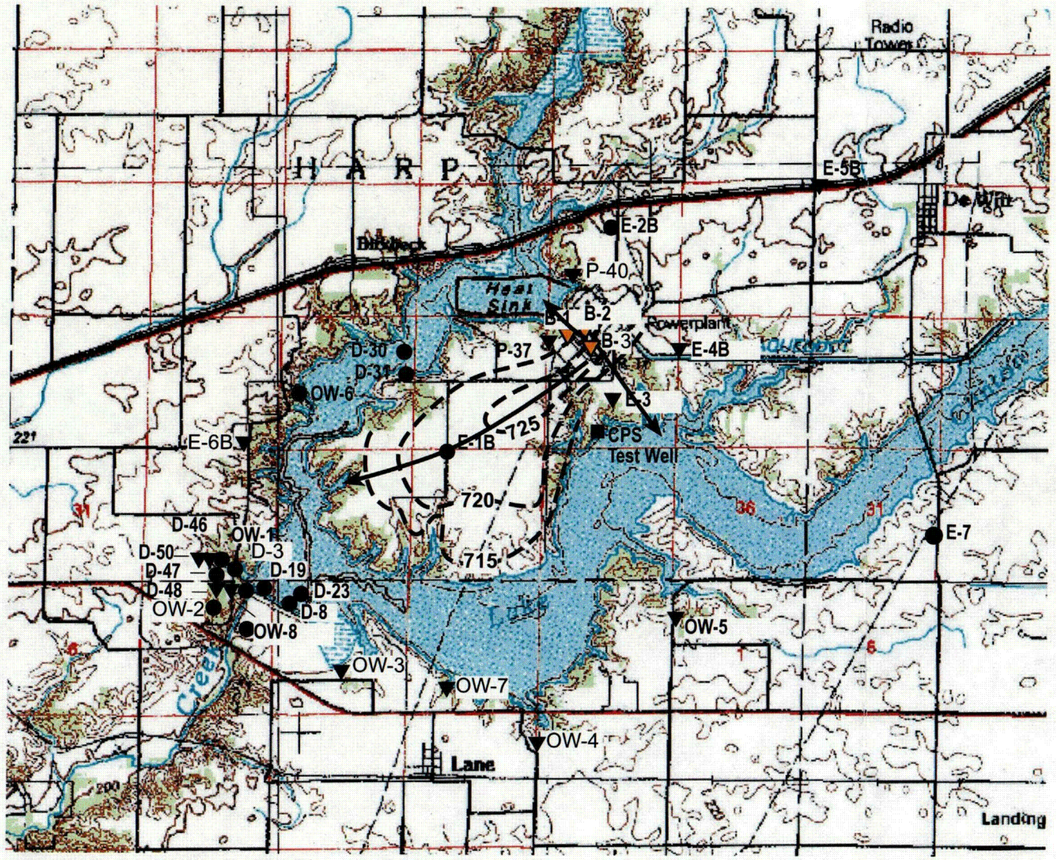
BASIS FOR CHANGE:
ER RAI response to NRC RAI NO. 5.3-1 (EGC RAI ID: R3-29) listed the incorrect sentence to be modified in the EGC ESP ER in its response. The corrected response is listed below.

EGC ESP APPLICATION REVISION:
1. Revise ER, Chapter 5, Section 5.3.4.1, page 5.3-11 from:
The increase in heat ejected to the lake due to the uprate would be greater than the increase due to the EGC ESP facility; therefore the EGC ESP Facility logically would not increase the risk significantly.

To read:

The potential increases in temperature within the mixing zone due to the EGC ESP Facility are discussed in Section 5.2.1.2.3. The increase in the average annual lake temperature within the mixing zone for wet cooling process was estimated to be 0.3 degrees F. This relatively small change in temperature would not increase the risk significantly.

Attachment 1: Figure 2.3-16, Location of Piezometers, CPS Test Well, and Water Table in Site Vicinity



Environmental Report for the EGC Early Site Permit

Figure 2.3-16
Location of Piezometers, CPS Test Well, and Water Table in Site Vicinity

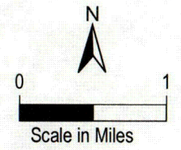
Legend

- CPS Test Well
- Functional Piezometer (As of 12 - 77)
- Non-Functional Piezometer (As of 12 - 77)
- Inferred Water Table Contour, Wisconsinan Deposits
- Piezometer Installed in July/August 2002
- Flow Line

NOTES

1. Datum is msl.
2. Piezometer installation data are listed in Table 2.3-15.

Data Source:
CPS, 2002



C01