Appendix 2A ARCON96 Source/Receptor Inputs

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

2A.2.1 Meteorological Data

Add the following as the last sentence of this section.

EF3COL 2A.2-1-A

Instrumentation heights used in the analysis are described in Subsection 2.3.3.1.1 Meteorological data from 2001 through 2007 is used in the analysis

2A.2.3 ARCON96 ESBWR Inputs

Replace the last sentence of the first paragraph with the following.

EF3COL 2A.2-1-A

These directions are adjusted by the difference in angle (approximately 19 degrees counterclockwise) between the ESBWR plant north and the Fermi 3 plant north; Fermi 3 receptor to source directions are shown in Table 2A-4R analysis.

2A.2.4 Confirmation of the ESBWR χ/Q Values

Replace this section with the following.

EF3COL 2A.2-1-A

DCD Figure 2A-1 shows the locations of the sources and receptors for ESBWR control room determinations, also used in the Fermi 3 evaluations. The dimensions of the diffuse source planes provided in DCD Table 2A-3 are determined as directed by RG 1.194, Regulatory Position 3.2.4.5, for the nearest receptor locations. ARCON96 calculations are performed for source/receptor pairs listed in DCD Table 2A-3 and Table 2A-4R using site-specific meteorological data. Results of the site-specific analysis are provided in Table 2.3-203 and Table 2.3-304.

[START COM 2.3-204] The atmospheric dispersion factors (X/Qs) calculated for the Control Room and Technical Support Center using ARCON96 are currently under revision as part of the effort described in Detroit Edison letter NRC3-10-003, dated February 8, 2010. Detroit Edison will provide the COLA revision to reflect the new atmospheric dispersion factors (X/Qs) calculated for the Control Room and Technical Support Center under separate correspondence to the NRC by March 25, 2010. **[END COM 2.3-204]**

2A.2.5 Confirmation of the Reactor Building χ/Q Values

Replace this section with the following.

During refueling, doors or personnel air locks on the east sides of the Reactor Building or Fuel Building could act as a point source that could result in control room χ/Q values that are higher than the ESBWR χ/Q values for a release in the Reactor Building. Therefore, the doors are administratively controlled prior to and during movement of irradiated fuel bundles. The administrative controls are such that the doors and personnel air locks on the East sides of the Reactor Building or Fuel Building are promptly closed under conditions indicative of a fuel handling accident.

2A.3 COL Information

2A.2-1-A Confirmation of the ESBWR χ/Q Values

EF3 COL 2A.2-1-A This COL item is addressed in Subsection 2.3.4.3 and in Subsection 2A.2.4.

2A.2-2-A Confirmation of the Reactor Building χ/Q Values

EF3 COL 2A.2-2-A This COL item is addressed in Subsection 2A.2.5.

Table 2A-4R ARCON 96 Input-Recptor to Source Direction [EF3 COL 2A.2-1-A]

Source|Receptor	Receptor to Source Direction {deg.}
RB to CBL	289
RB to EN	279
RB to ES	299
RB to N	303
RB to TSCB	231
RB to TSCA(1)	219
PCCS to CBL	328
PCCS to EN	304
PCCS to ES	323
PCCS to N	327
PCCS to TSCB	233
PCCS to TSCA(1)	220
TB to CBL	2
TB to EN	343
TB to ES	350
TB to N	355
TB to TSCB	251
TB to TSCA(1)	233
TB-TDto eB	360
TB-TDto EN	350
TB-TD to TSCB	296
FB to eBL	247
FBto EN	253
FB to ES	267
FBtoN	271
RWtoN	323
RB-VS to eBL	266
RB-VS to ES	280
RB-VS to N	281
TB-VS to eBL	15
TB-VS to EN	360
TB-VS to N	7
RW-VS to eBL	321
RW-VS to EN	309
RW-VS to N	323
BPNto eBL	341
BPN to EN	304
BPNto ES	325

Table 2A-4R ARCON 96 Input-Recptor to Source Direction [EF3 COL 2A.2-1-A]

SourcelReceptor	Receptor to Source Direction {deg.}
BPNto N	334
BPS to CBL	238
BPS to EN	248
BPS to ES	274
BPS to N	278
Fermi 3 to Fermi 2	48
Fermi 2 to Fermi 3	228

1. **[START COM 2.3-204]** The atmospheric dispersion factors (X/Qs) calculated for the Control Room and Technical Support Center using ARCON96 are currently under revision as part of the effort described in Detroit Edison letter NRC3-10-003, dated February 8, 2010. Detroit Edison will provide the COLA revision to reflect the new atmospheric dispersion factors (X/Qs) calculated for the Control Room and Technical Support Center under separate correspondence to the NRC by March 25, 2010. **[END COM 2.3-204]**