

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 and 1985 through 1989 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 true 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 2.3-301](#) and [Table 2.3-302](#) and [Table 2.3-378](#) and [Table 2.3-379](#).

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 or personnel air locks are administratively controlled to remain closed.

2A.3 COL Information

- | | |
|-------------------------|---|
| EF3 COL 2A.2-1-A | 2A.2-1-A Confirmation of the ESBWR χ/Q Values
This COL item is addressed in Subsection 2.3.4.3 and in Subsection 2A.2.4 . |
| EF3 COL 2A.2-2-A | 2A.2-2-A Confirmation of the Reactor Building χ/Q Values
This COL item is addressed in Subsection 2A.2.5 . |

Table 2A-4R ARCON 96 Input-Receptor 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	235
PCCS to CBL	328
PCCS to EN	304
PCCS to ES	323
PCCS to N	327
PCCS to TSCB	233
PCCS to TSCA	236
TB to CBL	2
TB to EN	343
TB to ES	350
TB to N	355
TB to TSCB	251
TB to TSCA	255
TB-TD to CBL	360
TB-TD to EN	350
TB-TD to TSCB	296
FB to CBL	247
FB to EN	253
FB to ES	267
FB to N	271
RW to N	323
RB-VS to CBL	266
RB-VS to ES	280
RB-VS to N	281
TB-VS to CBL	15
TB-VS to EN	360
TB-VS to N	7
RW-VS to CBL	321
RW-VS to EN	309
RW-VS to N	323
BPN to CBL	341
BPN to EN	304
BPN to ES	325

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

Source\Receptor	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