

WISCONSIN PUBLIC SERVICE CORPORATION
Kewaunee Nuclear Power Plant
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NO. EP-ENV-3A

REV. H

TITLE: Environmental Protection Director
Actions and Directives

DATE: JUN 21 1983

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REVIEWED BY

M. L. March 20/83

APPROVED BY

C. J. Nolan

1.0 APPLICABILITY

Upon the classification of an incident as a Site or General Emergency, or during an Alert if conditions warrant, the Environmental Protection Director (EPD) will execute this procedure.

2.0 PRECAUTIONS

- 2.1 Projected dose rates, concentrations and meteorological conditions must be known prior to dispatching the Environmental Monitoring Teams (EM Teams).
- 2.2 Ensure proper protective actions are taken for the Environmental Monitoring Team members prior to dispatch.
- 2.3 Utilize the Field Map with Plexiglass Cover in recording field results.

3.0 REFERENCES

- 3.1 EP-AD-11, Emergency Radiation Controls
- 3.2 EP-RET-2, Inplant Radiation Emergency Team

4.0 DIRECTIONS

Environmental Protection Director

4.1 If notified by pager, confirm contact with a telephone call to the control room at

4.2 If informed of EOF activation by the ERM:

- a. Notify members of the Environmental Monitoring Team per Form ENV-3A.1.

NOTE: If unable to contact a sufficient number of personnel from the group by using home or office telephone numbers, activate the pager system per attached Table ENV-3A.2 or call System Operating at and provide your name and title and the names and titles of the individuals you wish to page. Also provide a brief (20 seconds) message to be broadcast over the pagers. System Operating personnel will attempt to contact these individuals via the paging system.

- b. Proceed to the EOF.

8310120214 830929
PDR ADOCK 05000305
PDR

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- 4.3 Perform dose projection calculation via EP-ENV-3C, Primary Dose Projection Calculation - IBM Personal Computer and EP-ENV-3D, Primary Determination of Meteorological Data.

NOTE: If the IBM Personal Computer is not available for use, refer to EP-RET-5 and EP-RET-6.

NOTE: If the WPS IBM Computer is not available for use, refer to EP-ENV-3E, Manual Determination of X/Q-KNPP Meteorological Data; EP-ENV-3F, Manual Determination of XQ/-Green Bay Meteorological Data; and EP-ENV-3G, Manual Dose Projection Calculations as are appropriate.

- 4.4 Determine Protective Actions needed via EP-ENV-3G, Protective Action Recommendation Determinations.

NOTE: See Decision Flow Chart, Figure 3A.1.

- 4.5 Maintain a log of all significant events reported and directed.

5.0 PERSONNEL DISPATCH

- 5.1 Evaluate the radiological consequences in consultation with the Radiological Protection Director (RPD) from the above data and advise Environmental Monitoring Teams accordingly of the appropriate protective actions.

- 5.2 Dispatch Environmental Monitoring Teams, via the Environmental Monitoring Team Coordinator, to the projected plume path as follows:

NOTE: As Form ENV-3A.2 is initiated for Tracking EM Team Sampling, record Dose Projections (ENV-3C or 3G) for the sample points on the form.

- 5.2.1 Dispatch EM teams to predetermined sample points, TABLE ENV-3A, near the projected plume edges. Spacing the teams to define the plume shape and characteristics.

NOTE: If lake breeze effect exists as determined in Form ENV-3D.2, 3E.3 or 3F.3 refer to step 6.0 for guidance in directing environmental monitoring teams.

- 5.2.2 Observe caution when sending EM teams into a plume, especially to point near the centerline.

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5.2.3 After the plant has discontinued releases, continue tracking the plume to the perimeter of the EPZ.

5.2.4 Record sampling results and locations on Form ENV-3A.2, using Base Map sector designate and predetermined sample location number.

EXAMPLE: Log: Sector "A" at "point 122"

5.3 Record the following data for each environmental sample location on Form ENV-3A, when received from EMT Coordinator.

5.3.1 Date and Time results received.

5.3.2 Direct radiation readings.

5.3.3 Particulate activity.

5.3.4 I-131 concentration.

5.3.5 Noble gas concentration.

5.4 Mark the most recent results on the plexiglass covered field maps.

5.5 Transmit the most current data recorded on the field maps to the Technical Support Center Director.

5.6 Redirect the Environmental Monitoring Teams to take subsequent samples as necessary.

5.7 Transmit the measured data, and any plume track changes, to the Radiological Protection Director promptly.

NOTE: Meteorological conditions should be checked periodically.

5.8 Direct the Environmental Monitoring Team Coordinator to take appropriate precautions for the collection of samples and the storage of all environmental samples obtained at the Site Access Facility.

5.9 Continue to update plume path sample results on the Field Map as results are reported.

5.10 Transmit results and recommendations to the Emergency Response Manager.

5.11 Keep the SAF and EM team informed on plant conditions.

6.0 EFFECT OF LAKE BREEZE ON PROJECTED EXPOSURES

- 6.1 Actual dose rates west of the Lake Breeze "front" (where the lake breeze meets the prevailing wind) will be lower than projected.
- 6.2 Exposure from the plume may occur in areas not encompassed by the X/Q or Xu/Q overlays since the plume is directed back toward the lake in the direction of the prevailing wind.

6.3 Monitoring Considerations

Figure ENV-3A.2 shows a method for determining the location of the Lake Breeze front. Following the guidelines below and Figure ENV-3A.2 will aid in determining the radiological effects of the lake breeze on the plume track.

- 6.3.1 One team should be sent to the predicted lake breeze front position via the plume edge downwind of the prevailing wind. The team should then begin searching for the lake breeze front to verify the predicted lake breeze position. Once discovered the team should be sent downwind of the projected plume with respect to the prevailing wind. The objective is to look for radiation or plume recirculation in the lake breeze.
- 6.3.2 The other team should sample the plume between the lake shore and the lake breeze front.

FIGURE ENV-3A.1
DECISION FLOW CHART

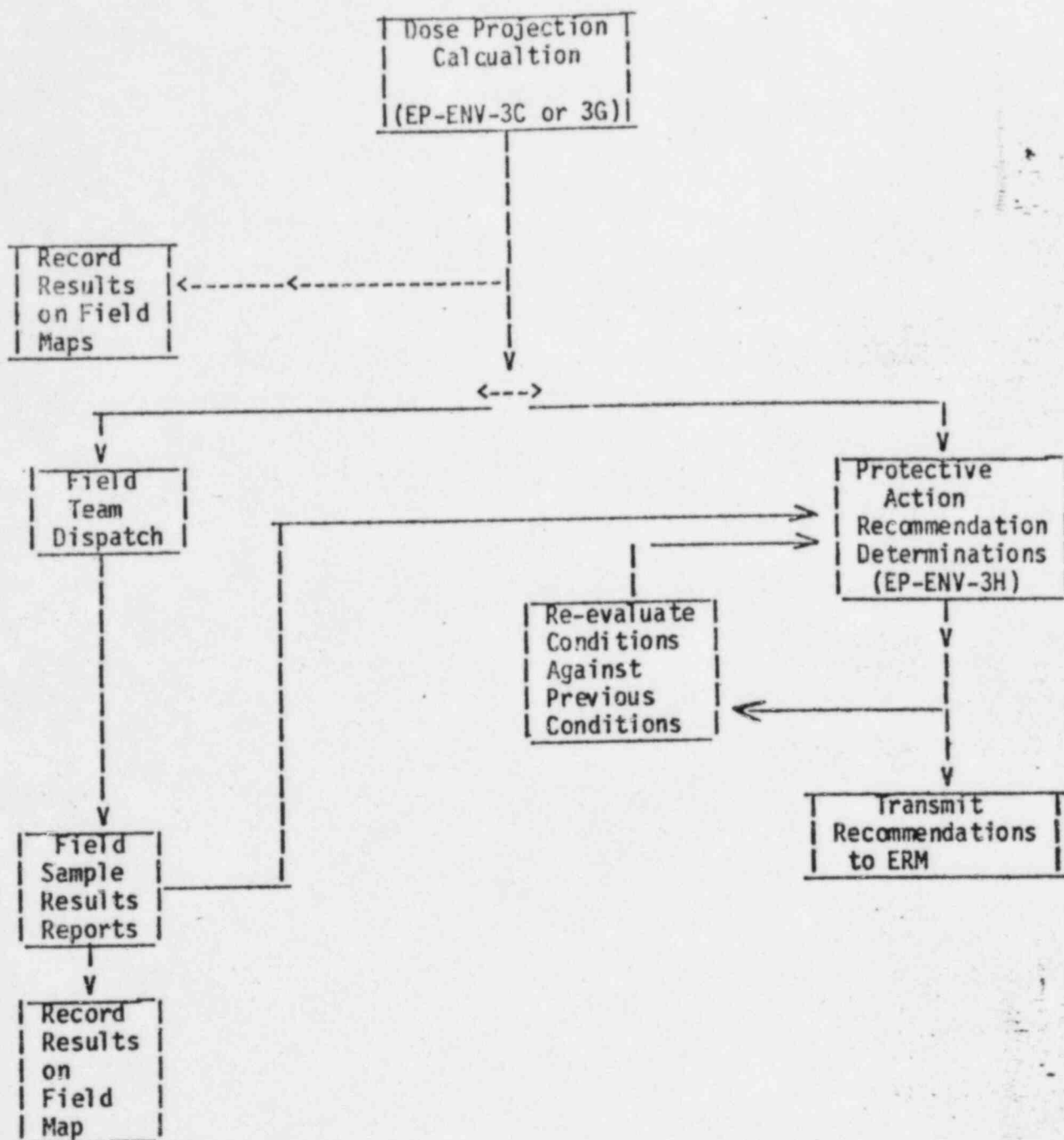
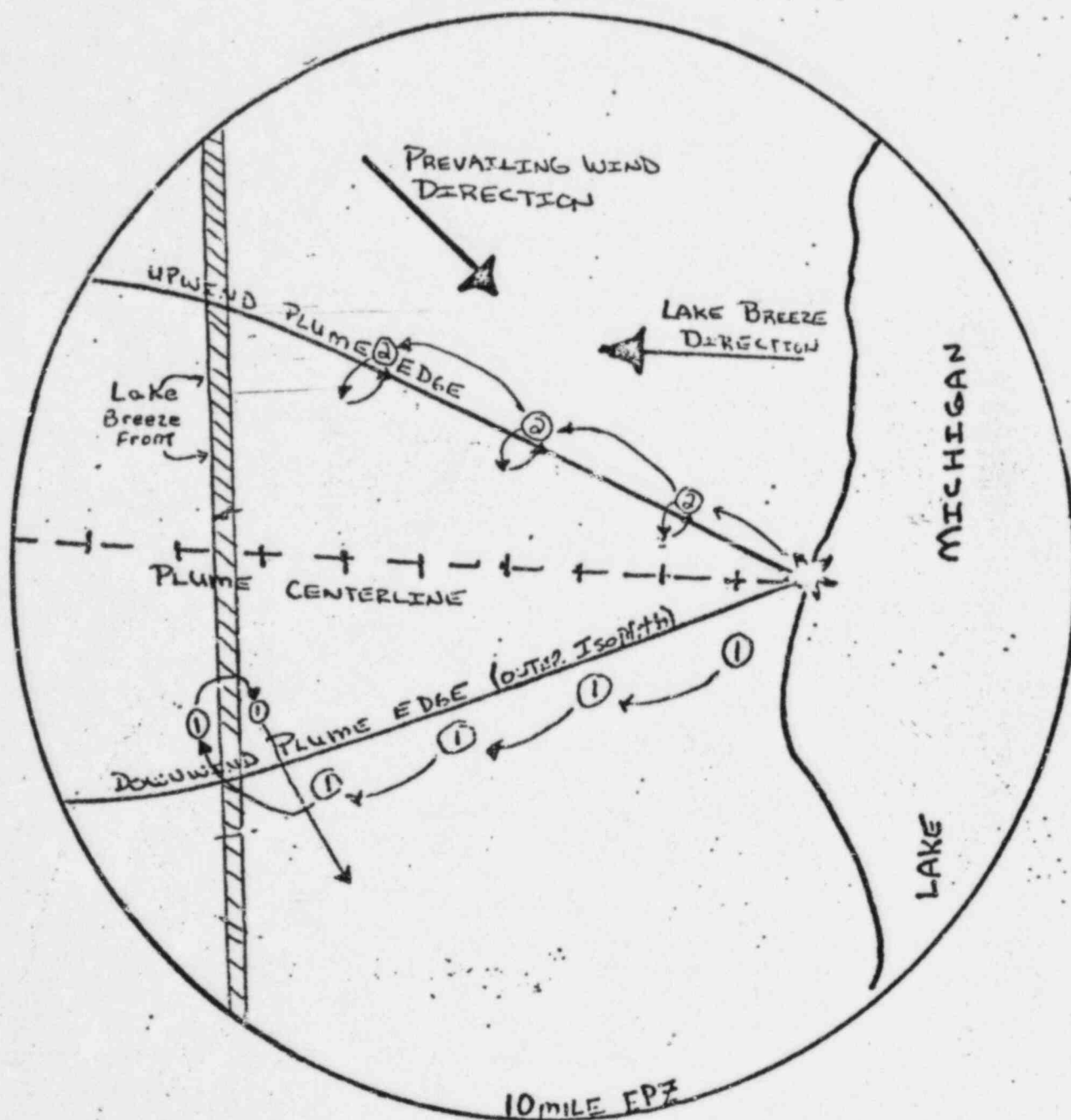


FIGURE ENV-3A.2
LAKE BREEZE EFFECTS DIAGRAM



1. Team Dispatched to Sample lake breeze front and return flow.
2. Team Dispatched to Sample plume between plant and lake breeze front.

NOTE: This Drawing is for Illustration Only.
The Actual sampling points are designated by the Environmental Protection Director.

FORM ENV-3A.1

TIME	INITIALS	NAME	OFFICE #	HOME #	PAGER
11:00					
11:05					
11:10					
11:15					
11:20					
11:25					
11:30					
11:35					
11:40					
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TABLE ENV-3A.1

TLD MONITORING AND SAMPLING LOCATIONS
(1 of 7)

1. Lake Shore Rd (M) 1/4 mile north of Zander Rd
2. Lake Shore Rd (M) 1/4 mile south of Two Creeks Rd
3. Hwy 42 1/4 mile North of Two Creeks Rd Intersection
4. Two Creeks Rd 3/4 mile west of Hwy 42, 1/4 mile N. on Blaha Road
5. County BBB and County BB Intersection
6. County DBB 1/2 mile south of BB
7. 3/4 mile west and 1/2 mile south of County Hwys. BB and BBB inersection (trailer park)
8. County BB 1/4 mile east of Saxonburg Rd
9. County BB 1/2 mile east of State Hwy 163
10. County B 1/4 mile north of Zander Rd
11. Saxonburg Rd 1/2 mile north of Zander Rd
12. Two Creeks Rd 1/2 mile west of Saxonburg Rd
13. Two Creeks Rd 1/4 mile east of State Hwy 163
14. Two Creeks Rd 1/2 mile east of Saxonburg Rd
15. Tannery Rd 3/4 mile north of Tappawingo Rd
16. Access Rd off of Tappawingo Rd 1/4 mile eas of Tannery Rd
17. Tappawingo Rd 3/4 mile west of Tannery Rd
18. Tappawingo Rd 1/4 mile west of Saxonburg Rd
19. Tappawingo Rd 1/4 mile west of State Hwy 163
20. Tappawingo rd and Jambo Creek Rd Intersection
21. Jambo Creek Rd 1/4 mile north of Holmes Rd
22. County Hwy BB 1/2 mile west of State Hwy 163
23. Lakeshore Rd (M) 1/4 mile north of Nuclear Rd (M)
24. Nuclear Rd (M) 1/2 mile eas of State Hwy 42

(K) - Kewaunee County
(M) - Manitowoc County

TABLE ENV-3A.1 (cont'd)
(2 of 7)

25. Lakeshore Rd (M) and Nuclear Rd (M) Intersection
26. Irish Rd 1/4 mile east of Meyer Rd
27. State Hwy 177 1/4 mile west of County Hwy. 0
28. Elmwood Rd and Ravine Rd Intersection
29. Tannery Rd 1/4 mile north of Elmwood Rd
30. 1/4 mile east of County Hwy V and State Hwy 42 Intersection
31. State Hwy 42 1/2 mile north of Irish Rd
32. Benzinger Rd 1/4 mile west of Tannery Road
33. County Hwy V and Saxonburg Rd Intersection
34. Corners Rd and Division Dr. Intersection
35. State Hwy 42 1/4 mile north of Rawley Rd
36. South entrance road to Point Beach State Park, 1/4 mile east of County Hwy. 0
37. Nuclear (M) 3/4 mile west of Tannery Rd
38. 1/4 mile south and 1/4 mile west of Saxonburg Rd and Nuclear Rd (M) Intersection
39. Tappawingo Rd 0.1 mile east of State Hwy 42
40. State Hwy 163 and State Hwy 147 Intersection
41. Prince Rd 1/4 mile north of Rockledge Rd
42. Jambo Creek Rd 1/4 mile north of Rockledge Rd
43. County Hwy Q and Intersection with Factory Rd
44. County Hwy Q 1/4 mile north of Zander Rd
45. County Hwy BB 0.4 mile east of Harpt Lake Rd
46. Nuclear Rd (K) 0.4 mile west of State Hwy 42
47. Nuclear Rd (K) 1/2 mile west of Hwy 42
48. County Hwy BB and state Hwy 42 Intersection
49. German Lane 1/4 mile west of State Hwy. 42

(K) - Kewaunee County
(M) - Manitowoc County

TABLE ENV-3A.1 (cont'd)
(3 of 7)

50. State Hwy 42 1/4 mile south of Nuclear Rd (K)
51. State Hwy 42 and Nuclear Rd (K) Intersection
52. State Hwy 42 and Nuclear Rd (K) Intersection
53. State Hwy 42 and Intersection of Nuclear Rd (K)
54. State Hwy 42 0.4 mile north of Nuclear Rd (K)
55. State Hwy 42 1/4 mile south of Sandy Bay Rd
56. State Hwy 42 and Intersection of Sandy Bay Rd
57. Sandy Bay Rd and Intersection of Cemetery Rd
58. Cemetery Rd 1/4 mile north of Sandy Bay Rd.
59. Lake shore Rd (K) and Intersection of Cemetery Rd
60. Lake Shore Rd (K) 1/2 mile east of State Hwy 42
61. Lake Shore Rd (K) and State Hwy 42 Intersection
62. Lake Shore Rd (K) 1/2 mile west of State Hwy 42
63. Sandy Bay Rd 1/2 mile west of State Hwy 42
64. Sandy Bay Rd and Intersection of Woodside Rd
65. Woodside Rd 1/2 mile north of Nuclear Rd (K)
66. Woodside Rd and Intersection of Nuclear Rd (K)
67. Woodside Rd 1/4 mile south of Nuclear Rd (K)
68. Woodside Rd 3/4 mile north of County Hwy BB
69. Town Hall Rd 1/4 mile north of County Hwy BB
70. Town Hall Rd 1/4 mile north of Nuclear Rd (K)
71. Town Hall Rd 3/8 mile south of Sandy Bay Rd
72. Town Hall Rd 1/2 mile south of County Hwy G
73. County Hwy G 1/2 mile east of town Hall Rd

(K) - Kewaunee County
(M) - Manitowoc County

TABLE ENV-3A.1 (cont'd)
(4 of 7)

74. Woodside Rd and County Road G Intersection
75. Old Settlers Rd and Cemetary Rd Intersection
76. Old Settlers Rd and Hwy 42 Intersections
77. Old Settlers Rd 1/4 mile east of Woodside Rd
78. Woodside Rd. 1/2 mile south of Old Settlers Road
79. Old Settlers Rd. and Town Hall Road Intersection
80. Norman Road 1/4 mile north of County Hwy. G
81. County Hwy B 1/4 mile west of Norman Rd
82. Saint Peters Rd 1/4 mile north of Old Settlers Rd
83. Wochos Rd and intersection of Old settlers Rd
84. North Intersection of Range Line Rd and County Hwy G
85. County Hwy B 1/4 mile north of County Hwy G
86. Norman Rd 1/4 mile north of Sandy Bay Rd
87. Sandy Bay Rd and Intersection of Saint Peters Rd
88. County Hwy B 1/2 mile south of Sandy Bay Rd
89. Nuclear Rd (K) 1/2 mile east of Range Line Rd
90. Nuclear Rd (K) and Norman Rd Intersection
91. Norman Rd 1/4 mile north of County Hwy BB
92. County Hwy B 1/4 mile north of County hwy BB
93. Range Line Rd 1/4 mile north of County hwy BB
94. Collegiate Rd 1/2 mile west of Range Line Rd
95. State Hwy 163 1/4 mile west of Sleepy Hollow Rd
96. Bolt Rd and County Hwy Q intersection
97. Bolt Rd 1/4 mile west of Collegiate Rd
98. Knutson Rd and State Hwy 96 Intersection
99. Manitowoc Rd and Langes Corners Rd Intersection

TABLE ENV-3A.1 (cont'd)
(5 of 7)

100. State Hwy 163 1/4 mile south of Old Settlers Rd
101. County Hwy J 1/4 mile west of State Hwy 163
102. Sleepy Hollow Rd and Kassner Rd Intersection
103. Church Rd 1/2 mile north of County Hwy J
104. Saint Peters Rd and Town Line Rd Intersections
105. County hwy B 1/4 mile South of County Hwy J
106. County Hwy J 1/4 mile west of Town Hall Rd
107. Town Hall Rd and Town Line Rd Intersections
108. Town Line Rd 1/2 mile west of Woodside Rd
109. Town Line Rd and State Hwy 42 Intersection
110. Town Line Rd 0.3 mile east of Mile Rd
111. Lake Rd 1/2 mile east of State Hwy 42
112. County hwy J 1/2 mile west of State Hwy 42
113. County hwy J 1/2 mile east of Town Hall Rd
114. Krok Rd 1/4 mile west of Sleepy Hollow Rd
115. Krok Rd 1/4 mile west of Church Rd
116. Krok Rd 1/4 mile east of Saint Peters Rd
117. 1/4 mile south of Angle Rd and Krok Rd Intersections
118. State Hwy 42 1/4 mile south of Hospital Rd
119. State Hwy 42 3/4 mile south of County hwy F
120. County Hwy C 1/2 mle west of Kewaunee City
121. County Hwy C 1/2 mile north of County Hwy F
122. Birchwood Rd and County Hwy F Intersection
123. Lilac Lane 1/4 mile north of County F

(K) - Kewaunee County
(M) - Manitowoc County

TABLE ENV-3A.1 (cont'd)
(6 of 7)

124. State Hwy 29 and County hwy B Intersection
125. Church Rd 1/4 mile north of State Hwy 29
126. Town Hall Rd 1/2 mile south of State Hwy 29
127. Angle Rd 1/4 mile south of State Hwy 29
128. Hospital Rd 3/4 mile north of State Hwy 42
129. East end of Krok Rd, along the Lakeshore
130. Old Settlers Rd 1/2 mile east of Town Hall Rd
131. 1204 Milwaukee St., Kewaunee
132. County Hwy. O, 1 1/2 miles south of County Hwy. VV
133. Lake Shore Rd 1/2 mile north of Kewaunee City
134. Lakeshore Rd (K) 1/2 mile north of First Road (Barnett Sub.)
135. County Hwy F 1 1/4 miles west of State Hwy 42
136. Maple Lane 1/2 mile west of County Hwy C
137. Church Rd and Town Line Rd Intersection (northeast of Ellisville)
138. Sleepy Hollow Rd 1/4 mile north of Hwy 29
139. Reckelberg Rd 1/4 mile south of Krok Rd
140. Schweiner Rd 1/2 mile south of County hwy J
141. Schultz Rd and State Hwy 96
142. Lyons Rd 1/4 mile south of Zander Rd
143. County hwy Q 1/4 mile north of State Hwy 147
144. Fisherville Rd and Cherney Rd Intersection
145. Steiners Corners Rd. 1/2 mile west of State Hwy. 147

(K) - Kewaunee County

(M) - Manitowoc County

TABLE ENV-3A.1 (cont'd)
(7 of 7)

- 146. Meadow Dr. 1/4 mile north of E. Hillcrest Rd.
- 147. County Hwy. O 1/2 mile south of County Hwy. VV
- 148. Coast Guard Station, Two Rivers
- 149. WPS Operations Building, Two Rivers
- 150. City Hall Roof, Manitowoc

Table ENV-3A.2
PAGING SYSTEM OPERATION

- A.1 Tone and Voice Radio Pagers are assigned to personnel as shown with call numbers on the Emergency Call List. (See EP-AD-17).
- A.2 Whenever it is necessary to contact a person on the Emergency Call List and he is not on site, the home telephone number should be called first. If he cannot be reached at home, contact should then be attempted by using the person's individual call number. A group of individuals may be contacted by using the group call number. Tone and voice contact by pagers is effective within a 15 mile radius of the transmitting station. Only tone contacts can be made outside the 15 mile radius.

A.3 How to Place a Page

- 3.1 Determine the two digit pager code for the party or group you wish to contact from the pager assignment list.

PLANT EXTENSION PHONES

- 3.2 Dial the terminal access code on any plant extension.

Kewaunee site transmitter -

Green Bay transmitter -

- a. When the terminal answers and responds with a beep, go to step 3.3.
b. If you hear a "busy" signal, hang up and try again.

- 3.3 Dial the two digit pager code for the party or group you wish to contact from the pager assignment list.

NOTE: This number must be preceded by a "1" when using the Green Bay transmitter.

- 3.4 Listen for the acknowledge (beeping) tone, indicating page being transmitted.

- 3.5 When the beeping tone stops, speak your message to the called party. You have about 20 seconds to talk. A "click" signals that your allotted time has expired.

TABLE ENV-3A.2 (cont'd)

GREEN BAY EXTENSION PHONES

3.6 Dial:

- a. For Kewaunee site transmitter -
- b. For Green Bay transmitter -

3.7 When the terminal answers and responds with a beep, go to step 3.8.

- a. If you hear a "busy" signal, hang up and try again.

3.8 Dial the two digit pager code for the party or group you wish to contact from the pager assignment list.

NOTE: This number must be preceded by a "1" when using the Green Bay transmitter.

3.9 Listen for the acknowledge (beeping) tone, indicating page being transmitted.

3.10 When the beeping tone stops, speak your message to the called party. You have about 20 seconds to talk. A "click" signals that your allotted time has expired.