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August 25, 1986

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Washington, D.C. 20555

Dr. A. Dixon Callihan
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Dr. Richard F. Cole
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Atomic Safety and Licensing
Board
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Washington, D.C. 20555

Re: Braidwood Station Units 1 and 2
Docket Nos. 50-456 and 50-457-OL

Gentlemen:

Enclosed is a copy of the Applicant's response to Inspection Report Nos. 50-456/86-021 and 50-457/86-019, which is the NRC Staff's onsite emergency preparedness appraisal and which was previously provided to the Board and parties.

Very truly yours,

Thomas A. Schmutz

Thomas A. Schmutz

Attorney for
Commonwealth Edison Company

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PDR ADOCK 05000456
Q PDR

Enclosure

cc: Service List

D503

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August 21, 1986

Mr. James G. Keppler
Regional Administrator
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Braidwood Station Units 1 and 2
Response to Inspection Report Nos.
50-456/86-021 and 50-457/86-019
NRC Docket Nos. 50-456 and 50-457

References: (a) W.D. Shafer letter to Cordell Reed
dated July 22, 1986

Dear Mr. Keppler:

This letter is in response to the inspection conducted by Messrs. T.J. Ploski and team on May 29 through June 13, 1986 of Emergency Preparedness activities at Braidwood Station. Reference (a) indicated that certain Emergency Preparedness activities appeared to be incomplete or would require improvement. The Commonwealth Edison Company response to these concerns are provided in the enclosure.

If you have any further questions on this matter, please direct them to this office.

Very truly yours,

David H Smith

for D.L. Farrar
Director of Nuclear Licensing

DLF/pav

Enclosure

cc: NRC Resident Inspector - Braidwood
2005K

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AUG 22 1986
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RESPONSE TO
INSPECTION REPORT 456/86-021 AND 457/86-019
OPEN ITEMS AND IMPROVEMENT ITEMS

Appendix A - Open Items

The following is a list of Open Items identified in the area of emergency preparedness which must be completed prior to fuel load, initial criticality, full power authorization, or in accordance with the schedules set forth in your NUREG-0737 correspondence and confirmed in the Safety Evaluation Report and Supplements:

1. Prior to Fuel Load, there must be at least three persons identified for all onsite emergency organization positions. (456/86021-01; 457/86019-01)

2. Prior to Fuel Load, the applicant must conduct a successful off-hours augmentation drill of the onsite emergency organization. (456/86021-02; 457/86019-02)

3. Prior to Fuel Load, the applicant must re-evaluate the Shift Foreman's multiple emergency assignments to ensure manning requirements are met during fires and/or other GSEP events which may warrant OSC activation. (456/86021-03; 457/86019-03)

4. Prior to Fuel Load, the GSEP Telephone Directory must be revised to include a priority notification scheme for members of the off-site emergency organization who would report to the Mazon EOF following an appropriate emergency declaration at the Braidwood Station. (456/86021-04; 457/86019-04)

5. Prior to Fuel Load, the applicant must complete the following tasks: implement and complete the GSEP testing program for Station Group Directors; establish and implement a required reading program for all members of the onsite emergency organization; establish a training method for non-licensee emergency augmentation personnel, establish and implement the Braidwood GSEP instruction selection/qualification program; and establish and implement the "Station Emergency Plan Training" program. (456/86021-05; 457/86019-05)

6. Prior to Fuel Load, the applicant must complete all initial GSEP training requirements for all members of the onsite emergency organization. (456/86021-06; 457/86019-06)

7. Prior to Fuel Load the applicant must create within the GSEP Training Program an integrated training section that provides CR personnel an opportunity to simultaneously practice both Reactor Plant Procedures for off-normal events and the GSEP Procedures. (456/86021-07; 457/86019-07)

8. Prior to Fuel Load, the Control Room must be completed. Specifically, the following items must be installed and operational: the ODCS A-model; Unit 1 SPDS; the RM-11 system; readouts from the Fire Detection System; digital and analog readouts of onsite meteorological measurements; the emergency ventilation system; the access control system; and readouts from the Seismic Monitoring System. (456/86021-08; 457/86019-08)

9. Prior to Fuel Load, the TSC must be completed. Specifically, the following items must be installed and operational: entry foyer portal monitors and decontamination facilities; microfiche printer/reader; emergency ventilation system and associated continuous air monitor; SPDS displays for Unit 1; a procedure for operation of the ventilation system, including operator action in the event of a CAM alarm; Point History/Point Trend computer software; and a copy of the approved Technical Specifications. (456/86021-09; 457/86019-09)

10. Prior to exceeding five percent rated power, the EOF must be completed. Specifically, the following must be completed: handling logistics and analysis of field monitoring samples at the EOF must be proceduralized and consistent with the emergency plan; a roster of trained individuals must be developed for the logistics and analysis of field monitoring samples at the EOF; and a copy of the approved Braidwood Technical Specifications must be available in the EOF.

11. Prior to exceeding five percent rated power, the CCC must be provided with the following items: a copy of the approved Braidwood Station Technical Specifications; a reference manual of computer point identifiers for the Point Trend and Point History programs relevant to the Braidwood Station; and copies of appropriate Braidwood Station layout, P&IDs and electrical systems diagrams. (456/86021-11; 457/86019-11)

12. Prior to Fuel Load, the applicant must satisfactorily demonstrate the use of the HRSS for primary coolant sampling under simulated accident conditions. (456/86021-12; 457/86019-12)

13. Prior to Fuel Load, the applicant must satisfactorily demonstrate the use of the Containment Air Sampling Panel under simulated accident conditions. (456/86021-13; 457/86019-13)

14. Prior to Fuel Load, the applicant must complete installation of: route designations delineating directions to all onsite assembly areas; emergency lighting for each of the three assembly areas intended for nonessential personnel; and card readers in the onsite assembly areas (456/86021-14; 457/86019-14)

15 Prior to Fuel Load, the medical treatment and decontamination facilities located on the 426 foot level of the auxiliary building must be completed, including installation of associated medical, decontamination, and communications equipment. (456/86021-15; 457/86019-15)

16. Prior to Fuel Load, the ambulance emergency kit must be positioned in the guardhouse, as stated in BwZP 500-8. All first aid kits and stretchers must also be positioned in predesignated inplant locations period to Fuel Load. (456/86021-16; 457/86019-16)

17. Prior to Fuel Load, the applicant must provide an approved means of determining containment humidity such that an emergency condition would be classifiable per the humidity criteria in EAL Condition No. 24. (456/86021-17; 457/86019-17)

18. Prior to Fuel Load, storage locations for protective clothing for emergency use must be determined, and the clothing must be in place. (456/86021-18; 457/86019-18)

19. Prior to Fuel Load, the following must be installed and operational: the public address system and the assembly/evacuation/fire alarms. (456/86021-19; 457/86019-19)

20. Prior to Fuel Load and in accordance with IE Bulletin 79-18, the applicant must develop and be ready to implement adequate interim measures for alerting personnel in high noise areas of a fire, assembly, evacuation, or local high radiation alarm. By the end of the first refueling outage, the applicant must have operable visual alarms for alerting persons in all identified high noise areas of such alarms. (456/86021-20; 457/86019-20)

21. Following installation of the ENS equipment in the Control Room and TSC, the applicant must complete the actions specified in IE Bulletin 80-15. (456/86021-21; 457/86019-21)

22. Prior to exceeding five percent power, procedural provisions must be established for ensuring that the GSEP van can be dispatched from the Mazon EOF during normal and off-hours. Also, procedural guidance must be established for ensuring that suitable station vehicles would be identified for off-site survey team use should the GSEP van and/or Rad/Chem Department vehicle not be available. (456/86021-22; 457/86019-22)

23. Prior to Fuel Load, the applicant must replace existing Figure 6.3-1 of BwZP 380-4 with a legible copy of this figure. (456/86021-23; 457/86019-23)

24. Prior to Fuel Load, the following inconsistencies and discrepancies in the EALs must be corrected:

    a. The wording of the Alert EAL for Condition 2 must be revised to include the words "and control is established from local control stations within 15 minutes".

    b. The wording of the General Emergency EAL for Condition 16 must be revised to repeat the wording currently for Site Emergency, as well as the existing words under General Emergency, in order that the General Emergency EAL will stand alone.

c. The applicant must re-evaluate EAL Condition 24 in light of a primary to secondary LOCA and an accompanying unisolable steam leak outside containment, which equates to two fission product barriers breached. The review should be directed at whether the use of existing EALs will result in a correct classification.

d. The applicant must resolve the apparent disparity in feedwater temperatures between the Braidwood EAL Condition 21 For an Unusual Event and the corresponding Byron EAL. (456/86021-24; 457/86019-24)

25. Prior to Fuel Load, the applicant must include the responsibility for requesting federal assistance, and the responsibility for authorizing emergency worker radiation exposures for vital equipment protection and saving of life to the list of non-delegable responsibilities of the Acting Station Director and Station Director in the appropriate BwZPs. (456/86021-25; 457/86019-25)

26. Prior to Fuel Load, the applicant must revise those BwZPs where reference to NRC notifications occurs to correctly reflect the current wording of 10 CFR 50.72(a)(3). (456/86021-26; 457/86019-26)

27. Prior to exceeding five percent power, the applicant must ensure that Control Room procedures yielding off-site PARs are in place and appropriate personnel are trained on the procedures so that all radiological accidents including unmonitored releases and/or the unavailability of specific instrumentation (e.g., containment radiation levels) are covered. (456/86021-27; 457/86019-27)

28. Prior to Fuel Load, the applicant must position the analytical counting equipment at its designated location on the 401 foot level of the Turbine Building to serve as a backup counting facility. Appropriate personnel must also have completed training on the use of the facility's equipment. (456/86021-28; 457/86019-28)

29. Prior to Fuel Load, the applicant must complete operator hands-on training on the seismic monitoring system. (456/86021-29; 457/86019-29)

30. Prior to Fuel Load, the applicant must complete operator hands-on training on the fire monitoring system. (456/86021-30; 457/86019-30)

31. Prior to Fuel Load, the applicant must revise appropriate BwZPs to include guidance regarding hazards which may exist and may warrant continued sheltering of nonessential onsite personnel in lieu of their evacuation following completion of assembly/accountability activities. (456/86021-31; 457/86019-31)

32. Prior to Fuel Load, the applicant must conduct a successful onsite assembly and accountability drill involving a total number of applicant, contractor, and construction personnel as may be expected onsite during a refueling outage. (456/86021-32; 457/86019-32)

33. Prior to Fuel Load, the applicant must develop procedural guidance to address the means of maintaining accountability once it has been established. (456/86021-33; 457/86019-33)

34. Prior to exceeding five percent power, the applicant must complete development of and any associated training on the "Communication Services Plan." (456/86021-34; 457/86019-34)

35. Unless otherwise directed by the ASLB, the next edition of the Braidwood Public Information Brochure must be distributed by April 30, 1987. (456/86021-35; 457/86019-35)

36. Prior to exceeding five percent power, the prompt notification (siren) system for the 10-mile EPZ must be fully operational, including completion of training by all persons responsible for system activation. (456/86021-36; 457/86019-36)

37. Prior to Fuel Load, additional emergency preparedness training must be completed by all Shift Engineers, Shift Foremen, and Station Control Room Engineers, with emphasis on the following: identification of Control Room shift personnel and completion of integrated training for each shift requiring the concurrent use of reactor plant procedures and EPIPs; understanding which emergency response facilities must be activated for each emergency class; understanding of off-site evacuation time estimate data in making PAR decisions; familiarity with the guidance provided in NRC Information Notice IN 85-78; and the ability of all persons who could become Acting Station Director to correctly classify emergencies. (456/86021-37; 457/86019-37)

38. Prior to Fuel Load, the applicant must complete remedial training on general and position-specific aspects of the Station's emergency preparedness program for the following types of Station Group directors: Station, Operations, Technical, and Maintenance Directors. (456/86021-38; 457/86019-38)

OPEN ITEMS - RESPONSES

Open Item #1

Prior to Fuel Load, there must be at least three persons identified for all onsite emergency organization positions. (456/86021-01; 457/86019-01)

Response

At least three people were identified for each onsite GSEP position at the end of the second quarter 1986. Individuals completed all required training during the third quarter, 1986 and they will be included in the fourth quarter staff augmentation list (BwZP 600-1) effective October 1, 1986.

This item is considered complete.

Open Item #2

Prior to Fuel Load, the applicant must conduct a successful off-hours augmentation drill of the onsite emergency organization. (456/86021-02; 457/86019-02)

Response

A successful unannounced off hours augmentation drill of the onsite emergency organization was conducted on 7/29/86. A minimum Technical Support Center staff, as defined in generic GSEP, would have been onsite within the 60 minute augmentation goal.

This item is considered complete.

Open Item #3

Prior to Fuel Load, the applicant must re-evaluate the Shift Foreman's multiple emergency assignments to ensure manning requirements are met during fires and/or other GSEP events which may warrant OSC activation. (456/86021-03; 457/86019-03)

Response

Braidwood Station has assigned three (3) Shift Foremen to each shift. This helps ensure manning requirements are met in the event of an emergency. The Shift Foremen from the unaffected unit are assigned Fire Chief and OSC Director responsibilities. If a GSEP condition were to occur and a Shift Foreman were unavailable to act as OSC Director, the Rad/Chem Foreman as OSC Supervisor would step in and fulfill the OSC Director responsibilities in accordance with the implementing procedures. All Rad/Chem Foremen have been trained to be OSC Directors in the event the Shift Foreman is unable to fill the position.

Further, there are three fire protection personnel who could be available to relieve the Shift Foremen at the fire scene. At least one Radwaste Foreman is also available to assist, where needed, in an emergency. This would free the Shift Foreman of the inplant duties and allow him to assume OSC responsibilities.

Lastly, if the event were to occur during off-hours, staff augmentation includes Rad/Chem support personnel, 2 at the Alert, 4 at Site or General Emergency. This list includes all the Rad/Chem Foremen. Upon their arrival in the OSC, one support person is assigned to assist in the OSC. Should the Shift Foreman be unavailable, and the on-shift Rad/Chem Foreman be the OSC Director, the support person fulfills the OSC Supervisor responsibilities, thereby ensuring adequate OSC supervision.

Although the Braidwood Technical Specifications and FSAR requirements state only one Shift Foreman, this is the minimum legal manning requirement for operating the unit. To restate, it is the intent of Braidwood to staff three Shift Foremen on each shift to ensure adequate coverage in an emergency.

No further actions are warranted at this time. This item is considered complete.

Open Item #4

Prior to Fuel Load, the GSEP Telephone Directory must be revised to include a priority notification scheme for members of the off-site emergency organization who would report to the Mazon EOF following an appropriate emergency declaration at the Braidwood Station.
(456/86021-04; 457/86019-04)

Response

The (3rd Quarter, July-September 1986) edition of the GSEP Telephone Directory has been revised to include a priority notification scheme for the members of the offsite emergency organization who would report to the Mazon EOF following an appropriate emergency declaration at the Braidwood Station.

This item is considered complete.

Open Item #5

Prior to Fuel Load, the applicant must complete the following tasks: implement and complete the GSEP testing program for Station Group Directors; establish and implement a required reading program for all members of the onsite emergency organization; establish a training method for non-licensee emergency augmentation personnel, establish and implement the Braidwood GSEP instruction selection/qualification program; and establish and implement the "Station Emergency Plan Training" program. (456/86021-05; 457/86019-05)

Response

Station Group Directors have begun the GSEP testing program. This program will be completed by 9/1/86 for this year's annual training. Testing is now incorporated into the annual training for all Station Group Directors.

BwTP 600-37, "Station Emergency Plan Training" is established and implemented. It requires evaluation of GSEP participants after training and implements the required reading program for these individuals. Revision 1 of this program is currently in effect.

Interim existing training for non-licensee emergency augmentation personnel will continue to be conducted ad hoc at the station or a nearby facility. A task force will be established by the Production Training Center (PTC) to determine future needs and a formal program is scheduled to be available by September 1, 1987. In the meanwhile, a corporate memo to Plant Managers will explain the interim role expected of their training departments in an emergency.

The Production Training Center (PTC) expects to have an instructor selection/qualification Matrix completed by September 30, 1986. This matrix will be used as criteria for developing GSEP instructor selection/qualification programs at the station.

Open Item #6

Prior to Fuel Load, the applicant must complete all initial GSEP training requirements for all members of the onsite emergency organization. (456/86021-06; 457/86019-06)

Response

All Braidwood Station GSEP participants are expected to have completed initial and annual training requirements prior to September 1, 1986.

Open Item #7

Prior to Fuel Load the applicant must create within the GSEP Training Program an integrated training section that provides CR personnel an opportunity to simultaneously practice both Reactor Plant Procedures for off-normal events and the GSEP Procedures. (456/86021-07; 457/86019-07)

Response

An integrated training section has been created within the GSEP Training Program. Beginning with the next Braidwood licensed operator qualification training class, slated for the beginning of September 1986, a GSEP Exercise will be included prior to reaching certification. For those operators previously certified, we will include an additional day in their 1987 simulator requalification program devoted to the practice of both reactor plant procedures for off-normal events as well as GSEP procedures. This additional training is scheduled to commence in October, 1986.

In addition, licensed Control Room personnel will participate in a table-top drill which will integrate plant procedures with GSEP procedures. Table-top drills are expected to be completed by 9/30/86.

Open Item #8

Prior to Fuel Load, the Control Room must be completed. Specifically, the following items must be installed and operational: the ODCS A-model; Unit 1 SPDS, the RM-11 system; readouts from the Fire Detection System; digital and analog readouts of onsite meteorological measurements; the emergency ventilation system; the access control system; and readouts from the Seismic Monitoring System. (456/86021-08; 457/86019-08)

Response

The A-Model software is currently loaded on the station computer and associated hardware is in the process of being connected to the station process computer. A-Model validation/verification testing is scheduled for mid-September and fully implemented by 9/30/86.

Unit 1 SPDS is scheduled to be fully implemented by 9/30/86.

The RM-11 system is currently undergoing tests prior to the release of the system to the station. The RM-11 system is expected to be available by 9/30/86.

Fire protection panel 1PM09J is installed and considered operable. Testing of the panel and detector zones is in progress. Panel testing is expected to be completed by 9/30/86. Detector zone installation and testing is expected to be complete by fuel load.

Digital and analog readouts of meteorological measurements should be available in the Control Room by 9/30/86.

The Control Room ventilation system completion schedule is constantly being re-evaluated. Commonwealth Edison will keep the NRC Resident Inspector informed of changes to this schedule. Since this system is required for a Fuel Load License, completion progress will be handled through the Nuclear License Administrator to NRR. One train of the CR ventilation system will be complete by Fuel Load.

The access control system is installed and currently being tested. Full operation is scheduled following Release To Operation (RTO) which is expected by 9/30/86.

Seismic monitoring system vendor modifications are complete. Re-installation and testing are scheduled to begin in August, 1986. The system is expected to be fully operational by 9/30/86.

Open Item #9

Prior to Fuel Load, the TSC must be completed. Specifically, the following items must be installed and operational: entry foyer portal monitors and decontamination facilities; microfiche printer/reader; emergency ventilation system and associated continuous air monitor; SPDS displays for Unit 1; a procedure for operation of the ventilation system, including operator action in the event of a CAM alarm; Point History/Point Trend computer software; and a copy of the approved Technical Specifications. (456/86021-09; 457/86019-09)

Response

The TSC portal monitors are scheduled for operation by 9/30/86. The small decontamination room has been cleaned and is currently complete. An aperture card reader/printer was ordered in August; delivery and installation is expected to be complete by 9/15/86.

The TSC emergency ventilation system is currently undergoing filter testing. System testing of HVAC is expected to be completed by 9/30/86.

The area radiation monitors (ARMS) associated with the TSC have been calibrated and are functioning. Currently, both ARMS are undergoing preoperational testing which is expected to be completed by 9/30/86. The continuous air monitor (CAM) is also undergoing preoperational testing. Tests are expected to be completed by 9/30/86.

SPDS is currently loaded on the station computer and is scheduled to be fully implemented by 9/30/86.

Appropriate procedures are currently under revision to address operator response to an ARM alarm and to a CAM alarm. Procedures are expected to be approved and implemented by 9/30/86.

The Point History/Point Trend computer software is currently loaded on the station Prime computer. The program is expected to be fully implemented by 9/30/86.

Open Item #10

Prior to exceeding five percent rated power, the EOF must be completed. Specifically, the following must be completed: handling logistics and analysis of field monitoring samples at the EOF must be proceduralized and consistent with the emergency plan; a roster of trained individuals must be developed for the logistics and analysis of field monitoring samples at the EOF; and a copy of the approved Braidwood Technical Specifications must be available in the EOF.

Response

The handling logistics and analysis of field samples is covered in the NST-EOF-LAB procedure series.

Emergency Planning personnel at the corporate level have determined a roster and are expected to implement a training program for the radioanalytical personnel listed on the roster by December 31, 1986 or prior to exceeding five percent power, whichever is first.

Provisions have been made to provide the EOF with a copy of the Braidwood Technical Specifications when they are approved.

Open Item #11

Prior to exceeding five percent rated power, the CCC must be provided with the following items: a copy of the approved Braidwood Station Technical Specifications; a reference manual of computer point identifiers for the Point Trend and Point History programs relevant to the Braidwood Station; and copies of appropriate Braidwood Station layout, P&IDs and electrical systems diagrams. (456/86021-11; 457/86019-11)

Response

Documents pertaining to Braidwood Station will be placed in the CCC consistent with those provided for other stations. Specifically, the approved Braidwood Station Technical Specification, computer point identifiers for Point History and Point Trending programs and copies of appropriate Braidwood Station layout, P&IDs and electrical systems diagrams will be provided. The CCC is included on normal distribution for the initial and changes to Computer point identifiers. Drawings stored in the CCC are for information only and are used to familiarize CCC personnel with systems during discussions with the TSC and EOF. If CCC personnel require access to updated drawings, they will be obtained on an as needed basis from Drawing Management Services located on the 10th floor of the Edison Building.

This item will be complete prior to exceeding five percent rated power.

Open Item #12

Prior to Fuel Load, the applicant must satisfactorily demonstrate the use of the HRSS for primary coolant sampling under simulated accident conditions. (456/86021-12; 457/86019-12)

Response

The HRSS is currently undergoing preoperational testing. Tests are scheduled for completion by mid-September and the system released to operation by 9/30/86.

A demonstration of the use of HRSS for primary coolant sampling under simulation accident conditions will be conducted before initial criticality but not prior to fuel load. Detailed training on the Radiation/Chemistry use of the HRSS equipment was initiated for all technicians and is scheduled to be complete by 8/29/86.

Open Item #13

Prior to Fuel Load, the applicant must satisfactorily demonstrate the use of the Containment Air Sampling Panel under simulated accident conditions. (456/86021-13; 457/86019-13)

Response

The Containment Air Sampling Panel is currently undergoing preoperational testing. Tests are scheduled for completion by mid-September and the system released to operation by 9/30/86. At that time, preparations for a demonstration of the Containment Air Sampling Panel under simulated accident conditions can begin. The demonstration will be conducted before initial criticality but not prior to fuel load.

Open Item #14

Prior to Fuel Load, the applicant must complete installation of: route designations delineating directions to all onsite assembly areas; emergency lighting for each of the three assembly areas intended for nonessential personnel; and card readers in the onsite assembly areas (456/86021-14; 457/86019-14)

Response

Assembly route signs have been installed throughout the plant delineating directions to all onsite assembly areas. This was completed 7/31/86.

Emergency lighting is currently being installed in the three designated assembly areas. Installation is expected to be completed by 9/30/86.

Card readers are installed, tested, and scheduled to be fully operable in all onsite assembly areas by 9/15/86.

Open Item #15

Prior to Fuel Load, the medical treatment and decontamination facilities located on the 426 foot level of the auxiliary building must be completed, including installation of associated medical, decontamination, and communications equipment. (456/86021-15; 457/86019-15)

Response

The medical treatment and decontamination facility is scheduled to be completed, including installation of associated medical, decontamination and communications equipment by 9/15/86.

Open Item #16

Prior to Fuel Load, the ambulance emergency kit must be positioned in the guardhouse, as stated in BwZP 500-8. All first aid kits and stretchers must also be positioned in predesignated inplant locations prior to fuel load. (456/86021-16; 457/86019-16)

Response

The ambulance emergency kit was positioned in the Main Access Facility (guardhouse) on July 26, 1986.

Twenty-four first aid kits were positioned in designated inplant positions during July. Final verification that all kits were available was received July 23, 1986. To ensure supplies are available, a quarterly inventory surveillance, BwZP 500-6 was prepared and has been implemented.

First aid stretchers and blankets will be positioned in designated areas in the plant by fuel load. BwRP 1630-1, a quarterly surveillance procedure, will be prepared to ensure supplies are available.

This procedure will be available prior to fuel load.

Open Item #17

Prior to Fuel Load, the applicant must provide an approved means of determining containment humidity such that an emergency condition would be classifiable per the humidity criteria in EAL Condition No. 24. (456/86021-17; 457/86019-17)

Response

The curves used to determine containment humidity were reviewed and approved on 7/31/86. Approved copies of these curves are currently available in the Control Room curve book.

This item is considered complete.

Open Item #18

Prior to Fuel Load, storage locations for protective clothing for emergency use must be determined, and the clothing must be in place. (456/86021-18; 457/86019-18)

Response

In addition to supplies maintained in the Operational Support Center and Braidwood Storeroom, ample supplies will be stored in the Auxiliary Building, 426 ft. level near the laundry facility. This area is expected to be fully stocked by 9/22/86.

Open Item #19

Prior to Fuel Load, the following must be installed and operational: the public address system and the assembly/evacuation/fire alarms. (456/86021-19; 457/86019-19)

Response

The public address system and the assembly and fire alarms are being installed and will be tested as soon as the systems are released by construction. Completion is currently scheduled for September 30, 1986.

Open Item #20

Prior to Fuel Load and in accordance with IE Bulletin 79-18, the applicant must develop and be ready to implement adequate interim measures for alerting personnel in high noise areas of a fire, assembly, evacuation, or local high radiation alarm. By the end of the first refueling outage, the applicant must have operable visual alarms for alerting persons in all identified noise areas of such alarms. (456/86021-20; 457/86019-20)

Response

Visual alarms are being installed and are on schedule to meet the completion schedule by the end of the first refueling outage.

In the interim, measures will be taken to assure personnel in high noise areas are alerted to fire, assembly and local high radiation alarms, prior to fuel load.

Open Item #21

Following installation of the ENS equipment in the Control Room and TSC, the applicant must complete the actions specified in IE Bulletin 80-15. (456/86021-21; 457/86019-21)

Response

IE Bulletin 80-15 specifies actions required in the event of a loss of offsite power. The ENS telephones will be fed from the Security bus. Should this bus fail, the security diesel will start and supply adequate power to the system. This satisfies the IE Bulletin ENS power requirements.

This item is considered complete.

Open Item #22

Prior to exceeding five percent power, procedural provisions must be established for ensuring that the GSEP van can be dispatched from the Mazon EOF during normal and off-hours. Also, procedural guidance must be established for ensuring that suitable station vehicles would be identified for off-site survey team use should the GSEP van and/or Rad/Chem Department vehicle not be available. (456/86021-22; 457/86019-22)

Response

Environs team personnel are originally dispatched from the station using station vehicles. To facilitate the Environs Director in obtaining suitable field team vehicles, BwZP 100-9 has been revised to include a list of station vehicles suitable for the job.

The purpose of the GSEP van is to provide long-term environs monitoring and to relieve station personnel of these activities. With the activation of the EOF, detailed plans for monitoring the environment are determined. If the accident situation warrants, any or all of the GSEP vans could be dispatched to Braidwood, through the direction of the Environmental Emergency Coordinator at the EOF.

This item is considered complete.

Open Item #23

Prior to Fuel Load, the applicant must replace existing Figure 6.3-1 of BwZP 380-4 with a legible copy of this figure. (456/86021-23; 457/86019-23)

Response

Copies of Figure 6.3-1 as well as Table 6.3-1 are being prepared by a printer in lieu of a xerox. Legible copies will be available by 9/15/86.

Open Item #24

Prior to Fuel Load, the following inconsistencies and discrepancies in the EALs must be corrected:

a. The wording of the Alert EAL for Condition 2 must be revised to include the words "and control is established from local control stations within 15 minutes".

Response

Condition 2 will be revised to include the desired wording prior to fuel load.

Open Item #24 (Continued)

b. The wording of the General Emergency EAL for Condition 16 must be revised to repeate the wording currently for Site Emergency, as well as the existing words under General Emergency, in order that the General Emergency EAL will stand alone.

Response

Prior to fuel load, Condition 16 for General Emergency will be revised to repeat the wording currently utilized for Site Emergency.

Open Item #24 (Continued)

c. The applicant must re-evaluate EAL Condition 24 in light of a primary to secondary LOCA and an accompanying unisolable steam leak outside containment, which equates to two fission product barriers breached. The review should be directed at whether the use of existing EALs will result in a correct classification.

Response

"A PWR steam line break with greater than 50 gpm primary to secondary leakage and indication of fuel damage" is listed in NUREG 0654 as a Site Area Emergency. Condition 16, 17, or 19 could be used to classify the described concern as a Site Area Emergency. Condition 17 specifically addresses the NUREG example. In addition, the Braidwood GSEP Annex and procedures allow a higher classification, i.e. General Emergency, to be declared if more than one distinctive EAL of the same classification level is reached, e.g. two EALs for Site Emergency. Therefore, no additional EAL change is planned.

This item is considered complete.

Open Item #24 (Continued)

d. The applicant must resolve the apparent disparity in feedwater temperatures between the Braidwood EAL Condition 21 for an Unusual Event and the corresponding Byron EAL. (456/86021-24; 457/86019-24)

Response

The disparity in feedwater temperatures between Byron and Braidwood EALs will be resolved prior to fuel load.

Open Item #25

Prior to Fuel Load, the applicant must include the responsibility for requesting federal assistance, and the responsibility for authorizing emergency worker radiation exposures for vital equipment protection and saving of life to the list of non-delegable responsibilities of the Acting Station Director and Station Director in the appropriate BwZPs. (456/86021-25; 457/86019-25)

Response

The Acting Station Director and Station Director implementing procedures have been revised to include the following two non-delegable responsibilities:

a) Authorizing emergency worker exposure limits beyond 10 CFR 20 limits for lifesaving, for controlling a fire, protection of vital equipment, and preventing a release.

b) Requesting assistance from DOE Chicago Operations Office, in accordance with the Federal Radiological Monitoring and Assessment Plan (FRMAP). Assistance provided by DOE shall not abridge state or local authority.

Revised procedures are scheduled to be in place by 9/15/86.

Open Item #26

Prior to Fuel Load, the applicant must revise those BwZPs where reference to NRC notifications occurs to correctly reflect the current wording of 10 CFR 50.72(a)(3). (456/86021-26; 457/86019-26)

Response

The current wording of 10 CFR 50.72(a)(3) has been incorporated into all appropriate BwZPs. Revised procedures are expected to be in place by 9/15/86.

Open Item #27

Prior to exceeding five percent power, the applicant must ensure that Control Room procedures yielding off-site PARs are in place and appropriate personnel are trained on the procedures so that all radiological accidents including unmonitored releases and/or the unavailability of specific instrumentation (e.g., containment radiation levels) are covered. (456/86021-27; 457/86019-27)

Response

If the A-Model does not provide sufficient information for issuing a PAR, Control Room personnel will use default recommendations in the procedures. These default recommendations are given in the GSEP and are agreed upon by the State of Illinois. Personnel are scheduled to be fully trained on the use of these recommendations prior to exceeding five percent power.

Open Item #28

Prior to Fuel Load, the applicant must position the analytical counting equipment at its designated location on the 401 foot level of the Turbine Building to serve as a backup counting facility. Appropriate personnel must also have completed training on the use of the facility's equipment. (456/86021-28; 457/86019-28)

Response

A back up counting facility will be available at the 401 foot level of the Turbine Building prior to fuel load. Additionally, cognizant personnel are scheduled to have completed training on the use of the facility's equipment by fuel load.

Open Item #29

Prior to Fuel Load, the applicant must complete operator hands-on training on the seismic monitoring system. (456/86021-29; 457/86019-29)

Response

The seismic monitoring equipment is currently under construction. As the system is completed, all pertinent Control Room training will be incorporated into the licensed operator training program. Training will be completed prior to fuel load.

Open Item #30

Prior to Fuel Load, the applicant must complete operator hands-on training on the fire monitoring system. (456/86021-30; 457/86019-30)

Response

The fire monitoring system is currently under construction. As the system is completed, all pertinent Control Room training will be incorporated into the licensed operator training program. Training will be completed prior to fuel load.

Open Item #31

Prior to Fuel Load, the applicant must revise appropriate BwZPs to include guidance regarding hazards which may exist and may warrant continued sheltering of nonessential onsite personnel in lieu of their evacuation following completion of assembly/accountability activities. (456/86021-31; 457/86019-31)

Response

BwZP 300-5 and BwZP 300-6 have been revised to include hazards which may prevent an evacuation following completion of assembly and accountability. The revised procedures are expected to be available 9/15/86.

Open Item #32

Prior to Fuel Load, the applicant must conduct a successful onsite assembly and accountability drill involving a total number of applicant, contractor, and construction personnel as may be expected onsite during a refueling outage. (456/86021-32; 457/86019-32)

Response

Braidwood Station will conduct an onsite assembly and accountability drill prior to fuel load. The drill will be conducted at such time that sufficient personnel are present to be representative of the number expected during a refueling outage.

Open Item #33

Prior to Fuel Load, the applicant must develop procedural guidance to address the means of maintaining accountability once it has been established. (456/86021-33; 457/86019-33)

Response

Maintaining accountability in an assembly area once it has been established is done through the security computer/card reader system. This system tracks personnel throughout the protected area. Should the security computer be unavailable for any reason, manual accountability is maintained by the security supervisor in each area. Procedural guidance for assembly area ingress and egress is currently under development and the approved procedure is expected to be available by 9/15/86.

Open Item #34

Prior to exceeding five percent power, the applicant must complete development of and any associated training on the "Communication Services Plan." (456/86021-34; 457/86019-34)

Response

Work is continuing on a "Communication Services Plan". The development on this plan will continue as quickly as possible but should not be hinged to five percent power at Braidwood. It is expected that a plan will be completed by the end of the first quarter of 1987. The majority of the information does presently exist in GSEP and the Illinois Plan for Radiological Accidents. We will be consolidating the information into a single Emergency News Center (ENC) manual.

Open Item #35

Unless otherwise directed by the ASLB, the next edition of the Braidwood Public Information Brochure must be distributed by April 30, 1987. (456/86021-35; 457/86019-35)

Response

The next edition of the Braidwood Public Information Booklet will be distributed by April 30, 1987, unless otherwise directed by the ASLB.

Open Item #36

Prior to exceeding five percent power, the prompt notification (siren) system for the 10-mile EPZ must be fully operational, including completion of training by all persons responsible for system activation. (456/86021-36; 457/86019-36)

Response

The Braidwood Prompt Notification System will be fully operational, including training of all persons responsible for system activation, prior to exceeding five percent power.

Open Item #37

Prior to Fuel Load, additional emergency preparedness training must be completed by all Shift Engineers, Shift Foremen, and Station Control Room Engineers, with emphasis on the following: identification of Control Room shift personnel and completion of integrated training for each shift requiring the concurrent use of reactor plant procedures and EPIPs; understanding which emergency response facilities must be activated for each emergency class; understanding of off-site evacuation time estimate data in making PAR decisions; familiarity with the guidance provided in NRC Information Notice IN 85-78; and the ability of all persons who could become Acting Station Director to correctly classify emergencies. (456/86021-37; 457/86019-37)

Response

Prior to fuel load, all Shift Foremen, Shift Control Room Engineers, and Shift Engineers will be trained on emergency response facilities (ERF's) and activation requirements, off-site evacuation time estimate data for protective action recommendations, correct classifications of various emergency conditions, and guidance provided in NRC Information Notice IN-85-78.

Integrated training utilizing reactor plant procedures for off-normal events and GSEP procedures has been addressed in the response to Open Item #7.

Open Item #38

Prior to Fuel Load, the applicant must complete remedial training on general and position-specific aspects of the Station's emergency preparedness program for the following types of Station Group directors: Station, Operations, Technical, and Maintenance Directors. (456/86021-38; 457/86019-38)

Response

All Station Group Directors will complete remedial training on general and position-specific aspects of the Generating Station Emergency Plan. Training is expected to be completed by 9/30/86.

Appendix B - Improvement Items

Based on the results of the NRC's appraisal of the Braidwood Nuclear Power Station emergency preparedness program conducted May 29 through June 13, 1986, the following items should be considered for improvement:

1. The GSEP Surveillance Program should be developed and formally documented.

2. Additional duties assigned to GSEP Coordinators should be relevant to the stations' emergency preparedness programs and should not be of an extent to prevent the Coordinators from adequately performing their principal duties.

3. There should be increased interaction between corporate emergency planning staff and the GSEP Coordinators on routine matters affecting the stations' programs, including pre-implementation review of corporate - generated procedures that are also used at the stations.

4. The GSEP Coordinator's position description should include a minimum frequency for professional training opportunities. Job qualification requirements should include some knowledge of current, relevant regulatory requirements and guidance.

5. The procedural requirements of BwZP 500-9 should be completed prior to Fuel Load.

6. The GSEP Assignment Form and/or GSEP Proficiency Forms, as contained in BwZP 500-9, should include provisions for the signature of the individual being assigned a position in the onsite emergency organization.

7. Applicant personnel, whose positions may be deleted from the offsite emergency organization in future GSEP revisions, should continue to receive annual overview training on the GSEP so they better understand the emergency response organization with which they may still have to interface.

8. The applicant should conduct periodic, off-hours augmentation drills of its offsite emergency organization personnel who would respond to the CCC or to a station's EOF.

9. The position-specific lesson plan/EPIP cross-reference matrix should be formalized.

10. The emergency worker dose limits for stopping a release, as stated in the Station Support Personnel lesson plan, should be corrected.

11. The information in the Control Room Operations Personnel lesson plan regarding use of the NARS code should be corrected.

12. The EPIP/GSEP director matrix should be incorporated in a formal training requirement.

13. The applicant should provide for a security/access control point and/or a radiological check point at the 431 foot level access doors to the TSC.

14. Step F.5 of BwZP 400-1 should be revised to specify numerical criteria for evacuation of the TSC.

15. BwZP 400-1 and 400-2 should be referenced in BwZP 100-8, the Rad/Chem Director Implementing Procedure.

16. The time notation (12 or 24 hour clock) to be used during TSC activation should be standardized and an appropriate wall-mounted clock should be installed.

17. Copies of spare/repair parts availability and cross reference listings should be available in the TSC for use by the Maintenance and Stores Directors.

18. A reference copy of CCC and EOF implementing procedures should be in the TSC.

19. Composite system flow diagrams should be available in the TSC.

20. The 10 and 50 mile radius EPZ topographic maps should have A through R sector designations.

21. The applicant should provide an airborne concentration number in BwZP 400-2 as a part of the conditions to determine the OSC personnel shall be evacuated to a backup location.

22. The applicant should evaluate the availability of emergency supplies (such as respiratory equipment, protective clothing, portable lighting) which might be needed by nonessential personnel in onsite assembly areas.

23. The applicant should identify one or more additional plant exit routes that begin in directions other than to the north. All site evacuation routes should be depicted in the Braidwood Annex and also in implementing procedures BwZP 100-8, BwZP 300-5, and BwZP 300-6.

24. The applicant should continue evaluating the need for an alternate ENC to the Mazon facility and should coordinate this planning effort with appropriate State agencies.

25. Dresden Station personnel responsible for the St. Joseph Medical Center's emergency kit should routinely provide the Braidwood Station with copies of records of kit inventories and instrument checks, and should provide information on the kit's exact storage location.

26. Mazon EOF personnel responsible for the GSEP van and its contents should routinely provide the Braidwood Station with copies of inventory records for the van's equipment.

27. Procedure BwZP 500-3 should indicate the storage location of the environs kits used by field teams.

28. The applicant should ensure that appropriate ED-series procedures and Environs Director training materials address which nuclear stations' meteorological data may serve as representative backup data for characterizing another station's meteorological conditions.

29. Placards associated with analog strip chart recorders located in the Control Room should list the meteorological measurement levels for Braidwood, rather than the Byron Station.

30. Analog wind speed data available in the Control Room should be in the unit of measure utilized in dose assessment software and manual backup calculation procedures.

31. The applicant should develop a listing of damage control equipment, parts and supplies which may typically be needed for rapid and/or temporary repairs. The list could include quantities available at various storage locations in the plant.

32. The applicant should acquire or assemble several damage control tool kits or tool rolls. The contents should be determined by experience and judgment to include those items which might be needed by a team dispatched from the OSC. Such pre-assembled/pre-positioned kits should be readily available to OSC staff.

33. The applicant should develop a consolidated index for all BwZPs, to be placed at the front of the procedures binder. The pages of the index should be dated. The index should be updated whenever procedure revisions occur.

34. As BwZP procedures are revised, attention should be given to assuring that all pertinent references are cited in the body of the procedures at the applicable step(s), and that only cited references are included in the list of references. Additionally, all references cited in procedures used in the Control Room, TSC, OSC, EOF, or CCC should be available in those facilities.

35. The applicant should develop a detailed check-off list for use in conjunction with BwZP 380-1 for briefing and approving volunteers to exceed normal 10 CFR 20 dose limits in emergency situations to protect vital equipment or to save lives.

36. The next revision to 1BwOA-ELEC 5, Local Emergency Control of Safe Shutdown Equipment, should include the step referencing GSEP evaluation per BwZP 200-1.

37. In next revisions to applicable LCOARs, the wording of the statement contained as ACTION Step 1 in the LCOARs should be revised to state the correct title of "Station Director", rather than the incorrect "Station GSEP Director". The wording should also be revised to indicate that the Station Director would initiate, rather than evaluate, GSEP response activities.

38. The applicant should include procedural steps, where appropriate, in the Station Director and Acting Station Director implementing procedures to provide for a plant public address announcement after the declaration of an emergency.

39. The applicant should develop check-off lists for use by the Acting Station Director (Shift Engineer) in turning over to the Station Director, and for the Station Director in turnover or information exchange with the EOF Recovery Manager or the CCC Director. Similar check-off lists should be developed to facilitate shift relief for the various Station Group Directors.

40. The applicant should develop an Acting Station Director check-off list as an Appendix to BwZP 100-12, to summarize those items for which he is responsible.

41. The applicant should review the BwZPs to ensure that appropriate procedure steps specify referenced procedures.

42. The applicant should develop procedural guidance to describe accident assessment staffs and their inter-relationships.

43. The applicant should include, in appropriate ED series procedures, the necessary computer passwords and instructions on when computer commands must be capitalized. Otherwise, such software restrictions should be eliminated.

44. The applicant should ensure that instrument readings used as inputs to dose assessment calculations have the same measurement units as those required by the dose assessment software.

45. The applicant should computerize offsite PAR guidance in the C Model.

46. Dose assessment printouts should include "flags" to indicate when any default input value was utilized.

47. The applicant should incorporate into appropriate implementing procedures directions on sounding the assembly/evacuation siren and making an announcement on the plant paging system. A prescripted message should be provided in the procedures for use when making this announcement.

48. The applicant should insert references to pertinent personnel monitoring/decontamination procedures as appropriate within the existing assembly/accountability/evacuation procedures.

49. The applicant should periodically test the assembly/evacuation siren in order to familiarize onsite personnel with its sound.

50. The applicant should distribute the "Braidwood Site Accountability Guidelines" to all onsite applicant, contractor, and construction personnel prior to Fuel Load. Distribution records should be maintained so that the completeness of the distribution can be verified.

51. A separate Search and Rescue procedure should be prepared which addresses all aspects of the conduct of an onsite search and rescue operation, including: team leadership and composition, team briefing, debriefing, communications, and systematic search routes and methods.

52. Procedure EG-10 should be referenced in BwZP 300-5, BwZP 300-6, and BwRP 1470-1.

53. The applicant should provide a listing to Dresden Station personnel of all procedures, publications, and other materials desired to be taken to the Joliet Station by Dresden Station personnel, in the event that Joliet Station is selected as a reassembly area for Braidwood Station evacuees.

54. Form BwZP 380-3A1 should be revised to provide for recording the model and serial number of the survey instrument used, the instrument probe and conversion factor used, and the name and/or signature of the RCT performing the survey/decontamination. Instructions should be provided on the form, or in Procedure BwZP 380-3, for forwarding the completed form to the Station Health Physicist or to the Rad/Chem Director.

55. Form 1400-T1, Personnel External Contamination Record, should be revised to provide for recording both the survey instrument model and serial number and the instrument probe and conversion factor used.

56. Procedures BwRP 1470-1 and BwZP 380-3 should be revised to reference numerical values for contamination levels that require decontamination, as stated in BwRP 1480-1.

57. The requirements for handling and processing personnel contamination data collected during emergencies should be proceduralized.

58. The applicant should add information on first aid and rescue team composition to Procedures BwZP 100-2 and 100-8.

59. The applicant should include a precautionary statement in BwZP 380-1 to consider the needs for extremity exposure monitoring and multiple whole body exposure monitoring for search and rescue team members.

60. The applicant should add instructions to BwZP 380-3 to require that pocket dosimeters either be zeroed or the initial reading recorded prior to issue to emergency response personnel.

61. The BwRP procedure volume index should be corrected regarding the Medical and TLD program procedures sets.

62. The OSC Director duties listed in BwZP 100-10A1 should include additional guidance on the content of team briefings and debriefings for repair and corrective action activities.

63. The applicant should identify, in procedures requiring periodic review/update, the title of the person responsible for performing the review/update.

64. The applicant should implement additional administrative measures to ensure that Call Supervisors keep their current call-out lists readily available when offsite.

IMPROVEMENT ITEMS - RESPONSES

Improvement Item #1

The GSEP Surveillance Program should be developed and formally documented.

Response

It is a goal of the Exercise and Planning group of Corporate Emergency Planning to develop a formally documented GSEP Surveillance Program. The program will, in general, standardize the duties of the GSEP Coordinators and minimize their duties outside of GSEP.

Improvement Item #2

Additional duties assigned to GSEP Coordinators should be relevant to the stations' emergency preparedness programs and should not be of an extent to prevent the Coordinators from adequately performing their principal duties.

Response

The Braidwood GSEP Coordinator's additional duties are relevant to the emergency plan. Job assignments are made such that the main responsibility of maintaining emergency preparedness is not adversely affected.

This item is considered complete.

Improvement Item #3

There should be increased interaction between corporate emergency planning staff and the GSEP Coordinators on routine matters affecting the stations' programs, including pre-implementation review of corporate - generated procedures that are also used at the stations.

Response

Periodic GSEP coordinator meetings are held between corporate EP personnel and station GSEP coordinators to discuss matters affecting station GSEP programs including: facilities, communications, training, procedures, etc. In addition, informal meetings, visits, and/or telephone conversations are conducted as necessary.

This item is considered complete.

In reference to Nuclear Services procedure NST-EP-ADMIN-1, Revision 1, December 1985 entitled "Control of Procedures", the Generating Stations do not review corporate procedures prior to implementation but are invited to submit suggestions to corporate procedures whenever there is a justification for change. In addition to reviews conducted by Emergency Planning personnel, corporate EPIPs are reviewed by Nuclear Station Managers with past operational experience when applicable.

Improvement Item #4

The GSEP Coordinator's position description should include a minimum frequency for professional training opportunities. Job qualification requirements should include some knowledge of current, relevant regulatory requirements and guidance.

Response

The opportunity to attend professional training programs by Station GSEP Coordinators is extended by the station manager. Recommendations are made by the Supervisor of Emergency Planning when these courses are deemed valuable to the Emergency Planning program.

Periodic reviews of the Station GSEP Coordinators position description is done. In future reviews, emphasis will be made on regulatory requirements such as 10 CFR 50 Appendix E and NUREG 0654.

This item is considered complete.

Improvement Item #5

The procedural requirements of BwZP 500-9 should be completed prior to Fuel Load.

Response

The requirements of BwZP 500-9 were implemented and are expected to be completed by 9/1/86 for the existing station group. BwZP 500-9 will be used for all future changes to the station group.

Improvement Item #6

The GSEP Assignment Form and/or GSEP Proficiency Forms, as contained in BwZP 500-9, should include provisions for the signature of the individual being assigned a position in the onsite emergency organization.

Response

The GSEP Assignment Form and GSEP Proficiency Form in BwZP 500-9 have been revised to include the signature of the GSEP participant. Revised and approved GSEP Assignment Forms are currently in use. Revised and approved GSEP Proficiency Forms are expected to be in place by 9/15/86.

Improvement Item #7

Applicant personnel, whose positions may be deleted from the offsite emergency organization in future GSEP revisions, should continue to receive annual overview training on the GSEP so they better understand the emergency response organization with which they may still have to interface.

Response

GSEP personnel being deleted from Revision 6 to the GSEP plan and still required to perform their normal job function in support of a GSEP related incident will receive an annual reading package describing the current overview of the GSEP program. This reading package will also include emergency response organizational interface.

This item is considered complete.

Improvement Item #8

The applicant should conduct periodic, off-hours augmentation drills of its offsite emergency organization personnel who would respond to the CCC or to a station's EOF.

Response

To date, we have conducted three telephonic augmentation drills during off hours to determine estimated times for staffing the Emergency Operations Facilities. It was established that we could activate the EOF within an hour and establish command and control within several hours. In addition, three unannounced exercises were conducted, which required travel to the EOFs and also activation of the Corporate Command Center.

This item is considered complete.

Improvement Item #9

The position-specific lesson plan/EPIP cross-reference matrix should be formalized.

Response

The position-specific lesson plan/EPIP cross-reference matrix will be incorporated into the Braidwood Station Emergency Plan Training Program's Administration and Course Management Instruction (ACMI). This is expected to be complete by the end of 1986.

Improvement Item #10

The emergency worker dose limits for stopping a release, as stated in the Station Support Personnel lesson plan, should be corrected.

Response

G1-EP-XL-19, Station Support Personnel lesson plan, has been revised (Rev. 4) to correct the emergency worker dose limit for stopping a release.

Improvement Item #11

The information in the Control Room Operations Personnel lesson plan regarding use of the NARS code should be corrected.

Response

G1-EP-XL-20, Control Room Operations Personnel lesson plan, has been modified to ensure that personnel understand the correct NARS code to use when reporting emergency classifications.

This item is considered complete.

Improvement Item #12

The EPIP/GSEP director matrix should be incorporated in a formal training requirement.

Response

The EPIP/GSEP director matrix has been incorporated into BwTP 600-37, "Station Emergency Plan Training" program as an appendix. It requires training and evaluation to be conducted on listed items/procedures referenced.

This item is considered complete.

Improvement Item #13

The applicant should provide for a security/access control point and/or a radiological check point at the 431 foot level access doors to the TSC.

Response

The Security Director Implementing Procedure, BwZP 100-7, has been revised to provide for an access control point at the TSC double doors on the 435 ft. level. The Rad/Chem Director Implementing Procedure BwZP 100-8 has been revised to establish a radiological checkpoint at the 435 ft. TSC double doors when radiological conditions warrant.

Procedures are expected to be in place 9/15/86.

Improvement Item #14

Step F.5 of BwZP 400-1 should be revised to specify numerical criteria for evacuation of the TSC.

Response

BwZP 400-1 has been revised to specify the numerical evacuation criteria for the TSC. The revised procedure is expected to be in place 9/15/86.

Improvement Item #15

BwZP 400-1 and 400-2 should be referenced in BwZP 100-8, the Rad/Chem Director Implementing Procedure.

Response

BwZP 100-8 has been revised to reference BwZP 400-1 and BwZP 400-2. The revised procedure is expected to be in place 9/15/86.

Improvement Item #16

The time notation (12 or 24 hour clock) to be used during TSC activation should be standardized and an appropriate wall-mounted clock should be installed.

Response

A notation corresponding to 01-24 hours has been accepted as the standard method of reporting time in emergency events. Clocks with 1-24 hours are difficult to read and provide unnecessary confusion to those responding in an emergency. Requests for their removal have been made at other CECo facilities. There are two 12-hour clocks in the TSC. At this time, placement of a 24 hour clock is not warranted.

This item is considered complete.

Improvement Item #17

Copies of spare/repair parts availability and cross reference listings should be available in the TSC for use by the Maintenance and Stores Directors.

Response

A microfiche listing containing equipment, parts and supplies and their locations will be available in the Technical Support Center (TSC) for use by the Stores and Maintenance Directors by fuel load.

Improvement Item #18

A reference copy of CCC and EOF implementing procedures should be in the TSC.

Response

Reference copies of CCC and EOF implementing procedures are being procured and will be available in the TSC by the end of 1986.

Improvement Item #19

Composite system flow diagrams should be available in the TSC.

Response

Composite system flow diagrams are being procured and will be available in the TSC by the end of 1986.

Improvement Item #20

The 10 and 50 mile radius EPZ topographic maps should have A through R sector designations.

Response

The 10 and 50 mile radius EPZ topographic maps have had the sector designators A through R affixed to them.

This item is considered complete.

Improvement Item #21

The applicant should provide an airborne concentration number in BwZP 400-2 as a part of the conditions to determine the OSC personnel shall be evacuated to a backup location.

Response

BwZP 400-2 has been revised to include an airborne concentration value as part of the OSC evacuation criteria. The revised procedure is expected to be in place by 9/15/86.

Improvement Item #22

The applicant should evaluate the availability of emergency supplies (such as respiratory equipment, protective clothing, portable lighting) which might be needed by nonessential personnel in onsite assembly areas.

Response

Due to the proximity of all these assembly areas to the CECo storeroom and to the change area one floor above, it has been determined that adequate supplies of respiratory equipment and protective clothing are readily available in an emergency.

Emergency back-up lighting is currently being installed, and includes the three designated assembly areas. Installation is expected to be completed by 9/30/86.

Improvement Item #23

The applicant should identify one or more additional plant exit routes that begin in directions other than to the north. All site evacuation routes should be depicted in the Braidwood Annex and also in implementing procedures BwZP 100-8, BwZP 300-5, and BwZP 300-6.

Response

Additional plant exit routes, leaving the plant to the southwest, have been depicted on an additional map for inclusion into the next revisions of the Braidwood Annex. Further, copies of all evacuation routes have been included into BwZP 300-5 and BwZP 300-6. Revised procedures are expected to be available on 9/15/86.

Improvement Item #24

The applicant should continue evaluating the need for an alternate ENC to the Mazon facility and should coordinate this planning effort with appropriate State agencies.

Response

The renovated Mazon JPIC is considered adequate to serve local, major, regional and major national print and electronic media. It is possible that an accident might eventually draw media with specialized interests (i.e. financial) and numerous non-local representatives of smaller media outlets. CECo continues to investigate methods of dealing with an overflow situation, should one develop. A conference room in the Edison Building seating approximately one hundred persons has been under consideration as a location to brief media representatives.

This item is condisered complete.

Improvement Item #25

Dresden Station personnel responsible for the St. Joseph Medical Center's emergency kit should routinely provide the Braidwood Station with copies of records of kit inventories and instrument checks, and should provide information on the kit's exact storage location.

Response

Dresden Station is currently providing completed instrument and inventory checklists of the St. Joseph Medical Center's medical emergency kit to Braidwood Station. These records are kept by the Braidwood GSEP Coordinator. To help ensure familiarity with the hospital supplies, each inventory is included in the Radiation Chemistry Technician (RCT) required reading program.

This item is considered complete.

Improvement Item #26

Mazon EOF personnel responsible for the GSEP van and its contents should routinely provide the Braidwood Station with copies of inventory records for the van's equipment.

Response

The Mazon EOF is currently providing completed inventory checklists of the GSEP van to Braidwood Station. These records are kept by the Braidwood GSEP Coordinator. To help ensure familiarity with the GSEP van supplies, each inventory is included in the Radiation Chemistry Technician's (RCT) required reading program.

This item is considered complete.

Improvement Item #27

Procedure BwZP 500-3 should indicate the storage location of the environs kits used by field teams.

Response

BwZP 500-3 has been revised to indicated the Sulfuric Acid Pump House as the storage location of the environs kits.

This item is considered complete.

Improvement Item #28

The applicant should ensure that appropriate ED-series procedures and Environs Director training materials address which nuclear stations' meteorological data may serve as representative backup data for characterizing another station's meteorological conditions.

Response

The Environs Director Implementing procedure and lesson plan have been revised to indicate representative backup sources of meteorological data for Braidwood Station.

The revised procedure and lesson plan are expected to be available by 9/15/86.

In addition, a summary of the backup meteorological data systems will be added to the appropriate ED series procedures. This information will be added to the training materials.

Improvement Item #29

Placards associated with analog strip chart recorders located in the Control Room should list the meteorological measurement levels for Braidwood, rather than the Byron Station.

Response

The analog strip chart recorder placards for meteorological data in the Control Room have been revised to indicate the Braidwood tower measurement levels. The revised placards are expected to be in place by 9/30/86.

Improvement Item #30

Analog wind speed data available in the Control Room should be in the unit of measure utilized in dose assessment software and manual backup calculation procedures.

Response

Analog wind speed data from the chart recorder contain the units meters/second, consistent with the units of measurement in the dose assessment software and manual backup calculations.

This item is considered complete

Improvement Item #31

The applicant should develop a listing of damage control equipment, parts and supplies which may typically be needed for rapid and/or temporary repairs. The list could include quantities available at various storage locations in the plant.

Response

A microfiche listing containing equipment, parts and supplies and their locations will be available in the Technical Support Center (TSC) for use by the Stores and Maintenance Directors by the end of 1986.

Improvement Item #32

The applicant should acquire or assemble several damage control tool kits or tool rolls. The contents should be determined by experience and judgment to include those items which might be needed by a team dispatched from the OSC. Such pre-assembled/pre-positioned kits should be readily available to OSC staff.

Response

Braidwood has reviewed the need to assemble damage control tool kits and store them in the Operational Support Center (OSC). The proximity of the OSC to both the maintenance shops and the storeroom, where ample supplies are readily available, is such that the pre-positioning of tools for an emergency is not warranted.

As noted in the report, fire suits and steam suits were not available at the time of the appraisal. These items will be available in designated plant locations by fuel load.

This item is considered complete

Improvement Item #33

The applicant should develop a consolidated index for all BwZPs, to be placed at the front of the procedures binder. The pages of the index should be dated. The index should be updated whenever procedure revisions occur.

Response

Braidwood Station is currently reviewing the need for consolidated indices for appropriate procedures, including BwZPs. Several options are currently under consideration, with the selected option chosen by the end of 1986 and subsequent implementation scheduled thereafter.

Improvement Item #34

As BwZP procedures are revised, attention should be given to assuring that all pertinent references are cited in the body of the procedures at the applicable step(s), and that only cited references are included in the list of references. Additionally, all references cited in procedures used in the Control Room, TSC, OSC, EOF, or CCC should be available in those facilities.

Response

As BwZP procedures are reviewed, references shall be incorporated into the body of the procedure when the sequence of steps requires other tasks to be performed prior to or concurrent with a particular procedure step. These include references of event classification, completion of the NARS form, protective action recommendations and notifications.

Wherever possible, cited references will be available in the Control Room, TSC, EOF and CCC. Due to its proximity to Central Files, maintaining references in the OSC is not warranted.

This item is considered complete

Improvement Item #35

The applicant should develop a detailed check-off list for use in conjunction with BwZP 380-1 for briefing and approving volunteers to exceed normal 10 CFR 20 dose limits in emergency situations to protect vital equipment or to save lives.

Response

Braidwood Station has reviewed the need for developing a checklist for briefing and approving volunteers to exceed 10 CFR 20 dose limits in emergency conditions. Guidance set forth in the CECo Radiation Protection Standards, BwRP and BwZP procedures is sufficient such that the development of a checklist is not warranted.

This item is considered complete

Improvement Item #36

The next revision to 1BwOA-ELEC 5, Local Emergency Control of Safe Shutdown Equipment, should include the step referencing GSEP evaluation per BwZP 200-1.

Response

The next revision to 1BwOA-ELEC 5 will include a step referencing the GSEP emergency action levels for Braidwood, contained in BwZP 200-1.

Improvement Item #37

In next revisions to applicable LCOARs, the wording of the statement contained as ACTION Step 1 in the LCOARs should be revised to state the correct title of "Station Director", rather than the incorrect "Station GSEP Director". The wording should also be revised to indicate that the Station Director would initiate, rather than evaluate, GSEP response activities.

Response

The next revisions to applicable LCOARs will indicate the Station Director initiates rather than evaluates GSEP response activities.

The correct title, "Acting Station Director" will replace "Station GSEP Director" in these procedures.

Improvement Item #38

The applicant should include procedural steps, where appropriate, in the Station Director and Acting Station Director implementing procedures to provide for a plant public address announcement after the declaration of an emergency.

Response

The Station Director and Acting Station Director implementing procedures have been revised to include specific instructions for plant public address announcements after the declaration of an emergency. Revised procedures are expected to be in place by 9/15/86.

Improvement Item #39

The applicant should develop check-off lists for use by the Acting Station Director (Shift Engineer) in turning over to the Station Director, and for the Station Director in turnover or information exchange with the EOF Recovery Manager or the CCC Director. Similar check-off lists should be developed to facilitate shift relief for the various Station Group Directors.

Response

BwZP 300-12, "Command and Control Transfer" is currently under development. This procedure provides guidance for a timely turnover of command and control to other emergency response facilities and may also be used to transfer command and control during shift relief. This procedure will be available by initial criticality.

Improvement Item #40

The applicant should develop an Acting Station Director check-off list as an Appendix to BwZP 100-12, to summarize those items for which he is responsible.

Response

BwZP 100-12 has been revised to include a detailed check off list for the Acting Station Director summarizing those items for which he is responsible.

The revised procedure is expected to be available by 9/15/86.

Improvement Item #41

The applicant should review the BwZPs to ensure that appropriate procedure steps specify referenced procedures.

Response

As BwZP procedures are reviewed, references shall be incorporated into the body of the procedure when the sequence of steps requires other tasks to be performed prior to or concurrent with a particular procedure step. These include references of event classification, completion of the NARS form, protective action recommendations and notifications.

This item is considered complete

Improvement Item #42

The applicant should develop procedural guidance to describe accident assessment staffs and their inter-relationships.

Response

Accident assessment staffs and their interrelationships are described in generic GSEP and station procedures and discussed in GSEP training sessions. A practical demonstration of assessment staffs and their inter-relationships is conducted during drills and exercises. Additional procedures are not necessary.

This item is considered closed.

Improvement Item #43

The applicant should include, in appropriate ED series procedures, the necessary computer passwords and instructions on when computer commands must be capitalized. Otherwise, such software restrictions should be eliminated.

Response

The Corporate Emergency Planning personnel will undertake a human factors evaluation of the computer program. It will address the user friendliness as well as the consistency of measurement units.

Improvement Item #44

The applicant should ensure that instrument readings used as inputs to dose assessment calculations have the same measurement units as those required by the dose assessment software.

Response

The Corporate Emergency Planning personnel will undertake a human factors evaluation of the computer program. It will address the user friendliness as well as the consistency of measurement units.

Improvement Item #45

The applicant should computerize offsite PAR guidance in the C Model.

Response

Procedure ED-24 which addresses offsite PAR guidance has been computerized.

This item is considered complete

Improvement Item #46

Dose assessment printouts should include "flags" to indicate when any default input value was utilized.

Response

The Corporate Emergency Planning personnel will undertake a human factors evaluation of the computer program. It will address the user friendliness as well as the consistency of measurement units.

Improvement Item #47

The applicant should incorporate into appropriate implementing procedures directions on sounding the assembly/evacuation siren and making an announcement on the plant paging system. A prescripted message should be provided in the procedures for use when making this announcement.

Response

BwZP 300-6 has been revised to incorporate prescripted messages on the plant public address system prior to sounding the assembly siren. Both the Station Director and Acting Station Director implementing procedures have been revised to reference the prescripted messages.

This item is considered complete

Improvement Item #48

The applicant should insert references to pertinent personnel monitoring/ decontamination procedures as appropriate within the existing assembly/ accountability/evacuation procedures.

Response

Appropriate BwZP procedures have been revised to provide reference information on personnel monitoring and decontamination. The revised procedures will be available by fuel load.

Improvement Item #49

The applicant should periodically test the assembly/evacuation siren in order to familisrize onsite personnel with its sound.

Response

The Braidwood assembly siren will be tested the first Tuesday of each month between 12 noon and 12:30 p.m. in accordance with Braidwood Surveillance #A00XX-000001-M01-03.

This item is considered complete

Improvement Item #50

The applicant should distribute the "Braidwood Site Accountability Guidelines" to all onsite applicant, contractor, and construction personnel prior to Fuel Load. Distribution records should be maintained so that the completeness of the distribution can be verified.

Response

The Braidwood Site Accountability Guideline will be distributed to all CECo and contractor personnel prior to fuel load. Contractor personnel will receive the information with their paychecks so that distribution may be verified.

Improvement Item #51

A separate Search and Rescue procedure should be prepared which addresses all aspects of the conduct of an onsite search and rescue operation, including: team leadership and composition, team briefing, debriefing, communications, and systematic search routes and methods.

Response

BwZP 300-10, "Rescue" is currently under development. This procedure outlines the methods used to rescue personnel in high radiation areas. It describes team composition and leadership and provides guidance for team operation. This procedure will be available by initial criticality.

Improvement Item #52

Procedure EG-10 should be referenced in BwZP 300-5, BwZP 300-6, and BwRP 1470-1.

Response

BwZP 300-5, BwZP 300-6 and BwRP 1470-1 have been revised to reference EG-10. The corrected procedures are expected to be in place by 9/15/86.

Improvement Item #53

The applicant should provide a listing to Dresden Station personnel of all procedures, publications, and other materials desired to be taken to the Joliet Station by Dresden Station personnel, in the event that Joliet Station is selected as a reassembly area for Braidwood Station evacuees.

Response

The Corporate Emergency Planning personnel will investigate the development of a generic procedure which will include a checklist of suggested materials for the relocation facilities.

Improvement Item #54

Form BwZP 380-3A1 should be revised to provide for recording the model and serial number of the survey instrument used, the instrument probe and conversion factor used, and the name and/or signature of the RCT performing the survey/decontamination. Instructions should be provided on the form, or in Procedure BwZP 380-3, for forwarding the completed form to the Station Health Physicist or to the Rad/Chem Director.

Response

BwZP 380-3A1 has been revised to include model and serial number of the survey instrument, instrument probe and conversion factor used, and the signature of the RCT.

The text of the procedure has been revised to indicate forwarding the completed form to the Station Rad/Chem Supervisor.

Both changes are expected to be in place 9/15/86.

Improvement Item #55

Form 1400-T1, Personnel External Contamination Record, should be revised to provide for recording both the survey instrument model and serial number and the instrument probe and conversion factor used.

Response

Form 1400-T1 is a part of the standardized radiation protection procedures whose content is determined by the Corporate Health Physics Group. The suggested change has been submitted to the corporate group for the inclusion in the next revision of this procedure.

Improvement Item #56

Procedures BwRP 1470-1 and BwZP 380-3 should be revised to reference numerical values for contamination levels that require decontamination, as stated in BwRP 1480-1.

Response

Procedures BwRP 1470-1 and BwZP 380-3 have been revised to reference numerical contamination values which require decontamination. The procedure is expected to be available by 9/15/86.

Improvement Item #57

The requirements for handling and processing personnel contamination data collected during emergencies should be proceduralized.

Response

The method for handling and processing personnel contamination data is delineated in BwRP 1470-3, which is controlled by the Corporate Radiation Protection Group. This procedure is currently available at the station. No further action is required.

This item is considered complete

Improvement Item #58

The applicant should add information on first aid and rescue team composition to Procedures BwZP 100-2 and 100-8.

Response

BwZP 100-2 and BwZP 100-8 have been revised to include information on first aid and rescue team composition. These procedures are expected to be available on 9/15/86.

Improvement Item #59

The applicant should include a precautionary statement in BwZP 380-1 to consider the needs for extremity exposure monitoring and multiple whole body exposure monitoring for search and rescue team members.

Response

The Precaution section of BwZP 380-1 has been revised to include the needs for extremity monitoring and multiple whole body monitoring for search and rescue teams. This revision is expected to be in place 9/15/86.

Improvement Item #60

The applicant should add instructions to BwZP 380-3 to require that pocket dosimeters either be zeroed or the initial reading recorded prior to issue to emergency response personnel.

Response

BwZP 380-3A, "Checklist for Use at Accident Scene" has been prepared for use by those responding to a medical emergency. A specific step in the checklist calls for medical team dosimetry to be zeroed before the team enters the radiation area. This change is expected to be in place by 9/15/86.

Improvement Item #61

The BwRP procedure volume index should be corrected regarding the Medical and TLD program procedures sets.

Response

The BwRP procedure volume index has been corrected to reflect the correct procedure subset titles of the radiation protection procedures. This change is expected to be in place 9/15/86.

Note that Braidwood Station is currently reviewing the need for consolidated indices for appropriate procedure books. Several options are being considered with the selected option and subsequent implementation scheduled after fuel load.

Improvement Item #62

The OSC Director duties listed in BwZP 100-10A1 should include additional guidance on the content of team briefings and debriefings for repair and corrective action activities.

Response

BwZP 100-10A1 has been revised to include additional guidance on team briefings in the OSC. The revised procedure is expected to be available 9/15/86.

Improvement Item #63

The applicant should identify, in procedures requiring periodic review/update, the title of the person responsible for performing the review/update.

Response

Procedures BwZP 600-1, 600-2 and 600-3 have been revised to indicate the GSEP Coordinator as the responsible individual for performing the quarterly review and update. These revisions will be included in the fourth quarter 1986 updates, effective October 1, 1986.

Improvement Item #64

The applicant should implement additional administrative measures to ensure that Call Supervisors keep their current call-out lists readily available when offsite.

Response

Quarterly, Call-Supervisors are provided with an updated call-out list. Each list will have a Call-List update form attached to it. The Call Supervisor is required to sign the form indicating the call-list is readily available off-site.

IMPROVEMENT ITEMS - RESPONSES

(24)

All Call-List Update forms are maintained by the GSEP trainer who is responsible for issuing the quarterly updates to each of the Call-Supervisors.

The initial call-update form will be issued with the fourth quarter 1986 Call List, effective October 1, 1986.