



# Georgia Institute of Technology

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October 24, 1995

Mr. Edward J. McAlpine, Chief  
Fuel Facilities Branch  
Division of Nuclear Materials Safety  
U.S. Nuclear Regulatory Commission, Region II  
101 Marietta Street, NW, Suite 2900  
Atlanta, GA 30323-0199

Dear Mr. McAlpine:

This is to let you know that on November 2, 1995, we plan to hold our annual emergency drill. The attached outline gives appropriate details about the scenario.

Should you have any questions, please let me know (894-3620).

Sincerely,

R. A. Karam, Ph.D.  
Director

RAK/dmcg

Attachment-1

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## EMERGENCY EXERCISE

Nov. 2, 1995

- Objectives:
1. To test the NNRC Emergency Organization's response to an "ALERT" emergency event;
  2. To demonstrate that an alternate Emergency Director can handle an emergency situation;
  3. To demonstrate that NNRC personnel are trained properly and can respond appropriately to emergency situations;
  4. To demonstrate that procedures are adequate and can be followed;
  5. To demonstrate that emergency communications are appropriate.

NOTE: This exercise is limited to the initial phase of emergency response. Remediation of the emergency is completed with a Table Top drill.

SET-UP Abe Doe (Reactor Operator) is in Reactor Control Room. John Doe and Pete Doe are on Reactor Main Floor in the process of transferring fuel.

8:30 am OPS/Cont. hands card one to Abe Doe.

CARD ONE: You are in the process of transferring fuel. Two operations people are doing the transfers on the main floor. Suddenly, multiple area radiation alarms sound from within the containment facility. Four area monitors are pegged (i.e., >100 mr/h).

### Expected Action:

1. Abe Doe uses the PA to announce that an emergency has taken place and that by procedure, personnel must evacuate the facility.
2. Alternatively, Abe Doe may call management and management will announce the emergency on the PA.
3. Abe Doe or management calls GaTech police to announce emergency.
4. Abe Doe checks with operations people to assess incident before evacuating.

8:32 OPS/Cont. hands card two to Abe Doe (either as he communicates to operations people or as he exits containment).

8:35 Staff evacuates to check-in point and is surveyed.

### Expected Action

1. All personnel report and are individually surveyed.
2. Either in response to ED query or by volunteering the information, Abe communicates the following information from card two to the ED.

CARD TWO: We have had an accident in the containment building while transferring fuel. A fuel element has dropped out of the transfer cask. I have isolated the building; four area monitors are pegged! John Doe is hurt and needs medical attention. Pete and I have pulled John into the airlock. Pete Doe is with him.

Expected Action:

1. Police in conjunction with HP-1 respond to injury. Admin. First Aid. Accompanied by OPS/Controller.
2. Have police call for immediate ambulance service from Grady.
3. ED selects response team of OPS + HP 2 and Proceeds to Command Center. Accompanied by MNGMT/Controller.

8:40

Command Center Made Operational

Expected action

1. OPS + HP-2 open emergency cabinet, recover radios and survey equipment.
2. OPS + HP-2 at ED's direction proceeds to the air lock with instructions to survey area and report back
3. Communications established with OPS + HP team at air lock

8:45

OPS + HP-2 reports (Based upon suitable assessment time in airlock area OPS/Controller gives card three to OPS + HP-2 team).

CARD THREE: John Doe has compound fracture of leg. John is inside of main air lock. Policeman and HP-1 are tending to John. The fuel element is visible from the air lock window and appears to be severely damaged, i.e. the non-fuel assembly header is dented. The element is located between plug storage area and truck door and we anticipate exposures of 120 R/hr at 1 meter from the assembly. The exposure within the interlock is 10 mr/h. John says the fuel element assembly struck him during the accident.

Expected Action:

1. ED dispatches HP's to assess radiation levels at accident site and away from accident—especially at containment wall on the outside.
2. ED instructs all emergency team members not to enter containment building.
3. Instruct police to keep open ambulance path to back of building
4. Call Grady Emergency request ambulance if not already done. Alert Grady of imminent receipt of patient with possible radiological contamination.

9:00

OPS/Controller provides card four to HP-1 after reasonable assessment interval.

CARD FOUR: John Doe is contaminated on leg and shows low level cross contamination from first aid activities over other parts of his body. He appears woozy and weak!

Expected Action

1. ED, police on staff may indicate "Possible shock. Keep head lower than feet" "If cold, cover John with blanket".
2. Ambulance arrives
3. Instruct Police/HP-1 to tell EMT, known broken leg, possible shock and patient contaminated. Recommend HP accompany patient to hospital.
4. EMT respond

9:05

Assessment Classification Completed

Expected Action

1. Declare Emergency-- ALERT
  - a. Apply all Proc. 6030
  - b. Apply Proc. 6100, Section 5.10.5 "Severe Fuel Damage"
2. Initiate Notifications
  - a. GDNR/GEMA/A-FEMA
  - b. NRC
  - c. GaTech Med. Relations

9:15 - 9:25

HP building/site survey completed. OPS/HP-2 report in to ED.  
MNGMT/Controller gives OPS/HP -2 card five:

CARD FIVE: Site survey DATA sheet. No contamination anywhere outside the containment building. Radiation level in the main airlock is 10 mR/h. There is no contamination on the floor of the air lock. Radiation level outside the containment truck door is 20 mR/h. Radiation levels everywhere else are normal, i.e., background.

Expected Action

1. Clear all personnel from truck door area
2. Ambulance leaves
3. Call for Management Meeting to initiate planning for recovery from the emergency.

9:30

MNGMT/Controller hands card six to ED

CARD SIX: The immediate emergency exercise is over. You are to proceed with recovery actions as a Table Top Drill.

Note: Both controllers will assume roles as managers at this point and be available to answer questions.

Expected Action

1. ED can request technical assistance as needed.
2. Plan a step by step procedure for entering the containment building to
  - a. Determine whether or not fission products have been released inside the building.
  - b. Devise a method for retrieving the exposed fuel element and placing it in a cask to be transferred the storage pool.
3. Plan should minimize exposure to personnel.

10:00

Emergency Ends

Expected Action

1. PA announcement. OK to enter building.
2. Hold meeting to critique performance