

ENCLOSURE TO P-91380

FOSAVEX-91 SCENARIO

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SECTION 1.0 SCOPE

Fort St. Vrain (FSV) will conduct an annual exercise of the Defueling Emergency Response Plan (DERP) on November 20, 1991. This exercise is entitled FOSAVEX-91. The purpose of the exercise is to meet the annual exercise requirements of 10CFR50 Appendix E and the DERP, and is intended to test major elements of the Defueling Emergency Response Plan.

The DERP was initially implemented on March 29, 1991, and is a downgrade from the previous Radiological Emergency Response Plan (RERP). Offsite Emergency Response Facilities (ERF) were shown to be no longer needed, as the maximum emergency classification level credibly attainable is an ALERT. Two onsite ERF's remain - the Control Room and the Technical Support Center (TSC).

Issue 2 of the DERP became effective on October 11, 1991, and incorporated miscellaneous changes, most notable of which was the addition of emergency preparedness provisions for the recently constructed Independent Spent Fuel Storage Installation (ISFSI). As previously agreed upon by PSC and the NRC, FOSAVEX-91 will only involve Emergency Response Organization (ERO) responses to simulated emergencies that do not involve the ISFSI.

The DERP provides for notification of state/local agencies and the NRC during certain emergency conditions. Based on the maximum credible accidents during defueling operations, no offsite federal or state response is anticipated for an emergency at FSV. While notifications will be made per procedures and the drill scenario, any offsite response from local medical or law enforcement organizations will be simulated. Therefore, no offsite agencies will be involved with FOSAVEX-91.

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Section 2.0 OBJECTIVES

- 2.1 Demonstrate the ability of the organization to recognize and assess a simulated emergency at FSV, and of Control Room personnel to properly classify an emergency event per established procedures.
- 2.2 Demonstrate the ability to activate the Emergency Response Organization by manning the TSC within 90 minutes of declaring an ALERT.
- 2.3 Demonstrate the ability to properly complete emergency event/offsite notification forms, and make notification phone calls within the required time frame per established procedures.
- 2.4 Demonstrate the ability to properly conduct initial site personnel accountability within 30 minutes of sounding the plant alarm and directing personnel to their accountability stations.
- 2.5 Demonstrate the ability to properly perform search and rescue of missing personnel.
- 2.6 Demonstrate the ability to properly brief and deploy any team.
- 2.7 Demonstrate the ability to properly handle a contaminated injured victim. Demonstrate the ability to properly assess the extent of the injuries and compare to the threat of contamination/radiological hazards.
- 2.8 Demonstrate the ability to properly control a radiological hazard involving a fire and take precautionary measures to protect personnel.
 - a. Demonstrate proper wearing of protective equipment/clothing when responding to an emergency involving a radiological hazard.
 - b. Demonstrate proper radiation monitoring techniques and personnel protection provisions (ALARA) when fighting a fire involving a SFSC.
 - c. Demonstrate control of a contaminated area to prevent the spread of contamination.
 - d. Demonstrate proper fire brigade organization and leadership.

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2.9 Demonstrate proper field/survey team deployment, organization, and monitoring operations.

2.10 Demonstrate effective communications between the Control Room, TSC, Security, and deployed teams/fire brigade.

2.11 Demonstrate effective first aid and decontamination procedures.

2.12 Demonstrate ability to conduct timely dose assessments/projections.

2.13 Demonstrate the ability to properly conduct an emergency preparedness exercise and perform an effective self-assessment by the FSV Drill Controllers and Observers.

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SECTION 3.0 CONTROLLER/OBSERVER PRECAUTIONS AND INSTRUCTIONS

3.1 Should, at any time during the course of this exercise, an actual emergency situation arises, all activities and communications related to the exercise will be suspended. It will be the responsibility of any exercise Controller/Observer that becomes aware of an actual emergency to suspend exercise response in his/her immediate area and to inform the Lead Exercise Controller of the situation. Upon notification of any actual emergency, the Lead Exercise Controller may notify all other Controllers/Observers to suspend all exercise activities. The Lead Exercise Controller, together with the Emergency Coordinator, will make a determination at that point whether to continue, suspend, or terminate the exercise.

3.2 Should, at any time during the course of this exercise, an exercise Controller/Observer witness an exercise participant undertake any action which would, in the opinion of the Controller/Observer, place either an individual or plant component in an unsafe condition, the Controller/Observer must attempt to terminate the unsafe activity immediately.

Upon termination of the activity, the Controller/Observer is responsible for contacting the Lead Exercise Controller and informing him of the situation. The Lead Exercise Controller, together with the Emergency Coordinator, will make a determination at that point whether to continue, place on hold, or terminate the exercise.

3.3 Manipulation of any plant operating systems, valves, breakers, or controls in response to this exercise are only to be simulated. No alteration of any plant operating equipment, systems, or circuits in response to this exercise should occur.

3.4 All repair activities associated with the exercise will be simulated. Extreme caution should be used when working near operating equipment.

3.5 All telephone communications, radio transmissions, and public address announcements related to the exercise must begin and end with the statement, "This is a drill." Should a Controller/Observer witness an exercise participant not observing this practice, it is the Controller/Observer's responsibility to remind the individual to follow this practice.

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- 3.6 Any motor vehicle responding in this exercise, whether for medical, rescue, fire fighting, field monitoring, etc., should observe all normal traffic laws including posted speed limits, stop lights/signs, one way streets, etc. Controllers/Observers should ensure that exercise participants follow these requirements.
- 3.7 Care must be taken to prevent any individual not involved with the exercise from believing that an actual emergency exists. Any Controller/Observer who believes that this situation exists, should approach that individual and explain the nature of the exercise and its intent.
- 3.8 If a Controller/Observer is aware of any of the above situations, he or she should immediately identify the situation to the Lead Exercise Controller.
- 3.9 Except as prescribed above and in the detailed exercise scenario, Controller/Observers are not to prompt exercise participants to take actions. Controller/Observers should avoid general conversations with the participants.
- 3.10 Controller/Observers are responsible for keeping the exercise on schedule. The Lead Controller is to be notified of any significant delays or situations that would cause the drill to be extended or to terminate prematurely.
- 3.11 Controller/Observers shall take notes sufficient to allow adequate assessment of the organization's response to the simulated emergency.

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SECTION 4.0 FOSAVEX-91 SCENARIO

4.1 Scenario Overview

The exercise will begin at approximately 0830 on November 20, 1991. A truck carrying a simulated Spent Fuel Shipping Cask (SFSC) full of irradiated fuel will be staged complete with driver, and simulated to have just pulled out of the reactor building truck bay. An individual located on top of the Security Administration Building, outside of the FSV protected area, will be simulated as firing a shoulder launched missile toward the SFSC. The missile will strike the truck and explode, causing a subsequent explosion of the truck's diesel fuel tanks. These explosions result in destruction of the tractor, mangling of the trailer, and damage to the SFSC. Secondary explosions of any flammable gases stored within reasonable distances will also be simulated.

FSV Security is expected to initiate actions per Security procedures to initially secure and protect the site. FSV personnel should take cover based on the immediate threat. The security force should assess the situation to determine if any further immediate threat exists, and contact local law enforcement agencies (local agency response will be simulated). After it is determined that no additional immediate threat exists, emergency response actions should be taken per the Defueling Emergency Response Plan.

As a consequence of the simulated explosions, the truck driver will be killed instantly. A person that was walking nearby will be simulated to be injured and contaminated. Two other persons will be injured and located obscurely in or around the helium storage building and the chiller building.

After the security threat is over, the fire brigade should respond to fight the fire, plant alarms should be sounded, and an ALERT should be declared based on reports to the Control Room. Initial personnel accountability should be performed consequential to the sounding of plant alarms. The ERO should be activated, search and rescue team(s) should be deployed to search for missing/injured personnel, field/survey team(s) should be deployed to monitor radiation/contamination levels and verify projected dose rates at the Emergency Planning Zone boundary. The SFSC condition should be assessed and stabilized.

The exercise will be terminated when all objectives have been met, the SFSC is stabilized, radiation levels have been (or are being) tempered, the extent of contamination is known and controlled, and all missing persons have been found.

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4.2 Detailed Scenario

- 0830 Two Security Guards are staged outside the truck bay doors and simulated to have just locked the doors. One guard walks away and goes west through the helium storage building. The other guard makes his radio report that the doors are locked. [These actions will be controlled by a Drill Controller.]
- 0832 While the guards are located as described above, an explosion is simulated involving a truck hauling the SFSC from the reactor building truck bay. Secondary explosions also occur involving any nearby flammable gas bottles. Three persons are injured. The guard in the helium storage building is knocked unconscious. The guard standing outside the truck bay doors is knocked unconscious and falls out of sight between the chiller building and the reactor building. Both guards' radios are broken due to their fall. One person that was walking by the warehouse toward the truck was knocked down from the blast and flying debris. He has a broken arm and a sprained ankle, but is conscious. The truck driver is killed instantly.
- 0835 The injured man by the warehouse is able to inform Security that he saw a missile fired into the truck from offsite. A Security Emergency should be declared, personnel should be instructed to take cover, and Weld Co. law enforcement should be summoned (any offsite agency response will be simulated).
- 0850 FSV Security is able to determine that no further threat exists and emergency response personnel may respond. [Drill Controllers will provide information as necessary to assure this determination is made.]
- 0855 An ALERT should be declared and announced over the GAITRONICS system. A plant alarm should be sounded (most likely the fire alarm depending on the information received in the CR) and the personnel accountability process begins. (An ALERT may actually have already been declared by CR personnel. However, the ERO would not be respond until no further security threat exists.)

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- 0900 The fire brigade should respond to begin fighting the fires (from the explosion, diesel fuel and flammable gas bottles). The ERO should be summoned using the emergency pager system. CR personnel should begin offsite notifications for an ALERT (this may have already begun - see 0835 discussion).
- 0925 Initial personnel accountability is completed 30 mins. following the sounding of a plant alarm. At least 2 personnel are missing (the injured man located by the warehouse may or may not be logged as missing at this stage).
- 0930 The ISC should be activated by this time (90 mins. from the declaration of an ALERT is allowed). All fires are out 10 mins. after the fire brigade actually begins combatting the fire.
- 0935 A search and rescue team should be deployed from the TSC to search for missing personnel. Field/survey teams should be deployed from the TSC to monitor the EPZ boundary and assess the radiological hazards from the explosion site.
- 1000 Containment of the contaminated area should be in progress. Shielding for the breached SFSC should be in progress or installed. All missing personnel should have been found by this time.
- 1030 Personnel decontamination should be in progress or completed.
- 1100 The exercise ends when all objectives have been met, the SFSC is stabilized, radiation levels from the breached cask have been (or are being) tempered, the extent of contamination is known and controlled, and all missing persons have been found.

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4.3 Scenario Messages

The attached messages will be used by the Exercise Controllers as specified to inform participants of simulated conditions during the conduct of the exercise. Section 4.4 contains maps and charts stipulating simulated radiation and contamination levels.

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MESSAGE #1

TIME/OCCASION: 0830

TO: TWO SECURITY GUARDS LOCKING THE TRUCK BAY DOORS

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

"One guard will stand near the doors and report over his radio that the doors have been simulated to be locked following truck bay operations. The guard will use standard phraseology to make his report. The other guard will go into the helium storage building and wait half way up the eastern side of the building.

Upon hearing the simulated explosion, the outside guard will lay down out of sight between the chiller and reactor buildings. The other guard will lay down half way up the east side of the helium storage building. Both guards will be simulated knocked unconscious until an exercise participant touches the guard in an attempt to arouse him. The guards will hereafter remain dazed. Both guards' radios will be simulated broken from their falls. The radios will actually be turned off to simulate they are broken."

THIS IS A DRILL

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MESSAGE #2

TIME/OCCASION: 0832

TO: ALL PERSONNEL (VIA GAITRONICS)

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

"This is a drill. This is a drill. All personnel have just heard a very loud explosive noise from somewhere north of the reactor building."

THIS IS A DRILL

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MESSAGE #3

TIME/OCCASION: FROM 0830 UNTIL THE FIRE IS OUT

TO: ANY PERSON IN THE VICINITY OF THE TRUCK FIRE

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

"A huge fire is consuming the truck tractor. Smaller fires are burning at various locations on the ground around the truck. Fires are burning and flames are shooting from pressurized flammable gas bottles. All truck/trailer tires are on fire and giving off black smoke."

CONTROLLER NOTES:

1. Diesel fuel would have sprayed around the truck site from the explosion. Small fires will be burning at these locations.
2. Fires will burn from flammable gas bottles for as long as gas remains in them. After the initial bottle explosions and pressure in the bottles dissipates, these fires will be self extinguishing. Allow approximately 30 mins. for the gas bottle fires to extinguish with no external influence. Flames will taper off accordingly over this period of time.
3. The truck tire lying on the injured man is not on fire.

THIS IS A DRILL

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MESSAGE #4

TIME/OCCASION: FROM INITIAL EXPLOSIONS THROUGHOUT EXERCISE

TO: ANY PERSON IN THE VICINITY OF THE TRUCK/SFSC

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

"The truck tractor has been destroyed by the explosion and fire. The trailer is mangled and on its side. The Spent Fuel Shipping Cask is lying adjacent to the trailer. It has been physically separated/torn from the trailer. The helium storage building NE corner and eastern side have been partially torn away and blackened from the explosions and flying debris. The chiller building NW corner and western side have been penetrated and damaged. Miscellaneous metal and bottle debris is strewn about the location."

[When asked] "The wind is blowing FROM the southwest. All other environmental conditions are as they exist."

CONTROLLER NOTE:

1. Any other buildings/components within the same radius as the chiller building are similarly damaged.

THIS IS A DRILL

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MESSAGE #5

TIME/OCCASION: FROM INITIAL EXPLOSIONS THROUGHOUT EXERCISE
TO: ANY PERSON INSPECTING INSIDE THE HELIUM STORAGE BUILDING

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

"The NE corner and eastern side of the helium storage building has been scorched, ripped, and penetrated by the explosions. Small amounts of metal/bottle debris are lying about inside the building. Some of the equipment located inside is scratched and dented, but is not damaged significantly to affect its operation or pressure integrity."

THIS IS A DRILL

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MESSAGE #6

TIME/OCCASION: FROM INITIAL EXPLOSIONS THROUGHOUT EXERCISE
TO: ANY PERSON INSPECTING INSIDE THE CHILLER BUILDING

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

"The NW corner and western side of the chiller building have been penetrated and damaged, apparently by flying debris from the explosions. Small amounts of metal/bottle debris are lying about inside the building. Some of the equipment located inside is scratched and dented, but is not damaged significantly to affect its operation or pressure integrity."

THIS IS A DRILL

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MESSAGE #7

TIME/OCCASION: INJURED MAN OUTSIDE BY WAREHOUSE

TO: ANY PERSON EXAMINING THE INJURED MAN

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

"The man has been hit by debris from the explosion. He has abrasions on his head and arms."

[Upon examination or questioning him] "He has a broken arm (simple fracture) and a sprained ankle. He is coherent but in mild pain. He cannot move by his own power."

[Upon surveying him for contamination] "He is contaminated on all external surfaces." [See contamination charts.]

CONTROLLER NOTE:

1. A spare truck/trailer tire should be used as a drill prop and gently laid on top of the man's arm as he is staged for the exercise.
2. Refer to contamination charts/maps for simulated levels of personnel, ground, and equipment contamination.

THIS IS A DRILL

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MESSAGE #8

TIME/OCCASION: INJURED MAN ADJACENT TO CHILLER BLDG.

TO: ANY PERSON EXAMINING THE INJURED MAN

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

The man is unconscious when found. He has suffered minor abrasions (including on his head). Miscellaneous debris is lying around him.

[When attempted] He can be aroused after a moment's attempt, but remains dazed.

[Upon surveying him for contamination] He is contaminated on clothing from the knees down. [See contamination charts.]

CONTROLLER NOTE:

1. Refer to contamination charts/maps for simulated levels of personnel, ground, and equipment contamination.

THIS IS A DRILL

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MESSAGE #9

TIME/OCCASION: INJURED MAN INSIDE HELIUM STORAGE BLDG.

TO: ANY PERSON EXAMINING THE INJURED MAN

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

The man is unconscious when found. He has suffered minor abrasions (including on his head). Miscellaneous debris is lying around him.

[When attempted] He can be aroused after a moment's attempt, but remains dazed.

[Upon surveying him for contamination] He is not contaminated.
[Unless he becomes contaminated after he is aroused and moved.]

THIS IS A DRILL

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MESSAGE #10

TIME/OCCASION: FROM INITIAL EXPLOSIONS THROUGHOUT EXERCISE

TO: CONTROL ROOM AND TSC PERSONNEL

THIS IS A DRILL

DO NOT TAKE ANY ACTIONS AFFECTING PLANT DEFUELING CONDITIONS

MESSAGE:

[When they access meteorological data] "The wind is blowing FROM
230 degrees. All other environmental parameters are as read."

THIS IS A DRILL

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4.4 Radiation and Contamination Maps/Charts

The attached radiation and contamination maps and charts will be used by Exercise Controllers to simulate radiation levels coming from the damaged Spent Fuel Shipping Cask, and to simulate contamination levels on personnel, the ground, and equipment.

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CONTACT

RAD LEVELS

IN CASK

LOCATION

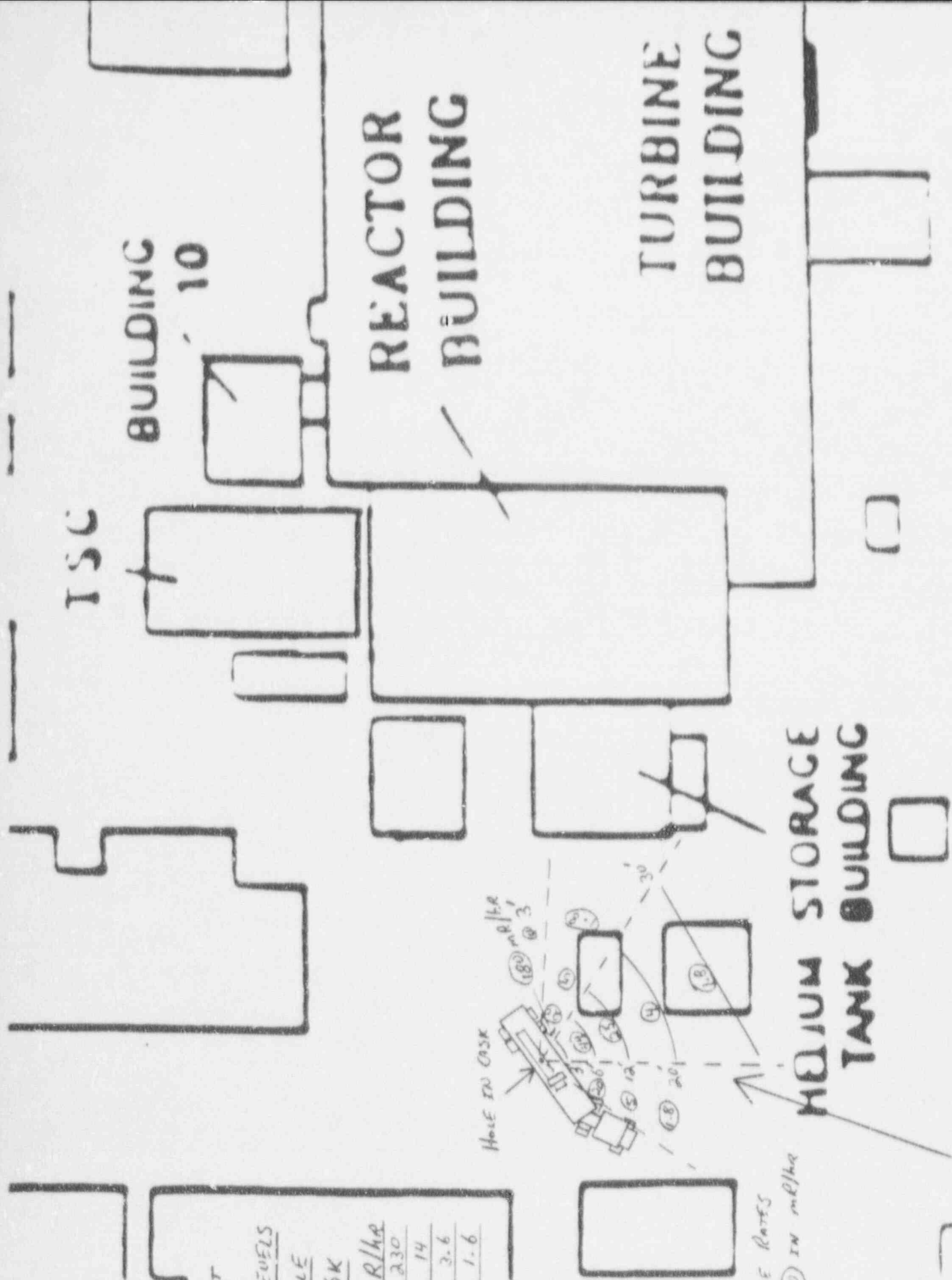
R/hr

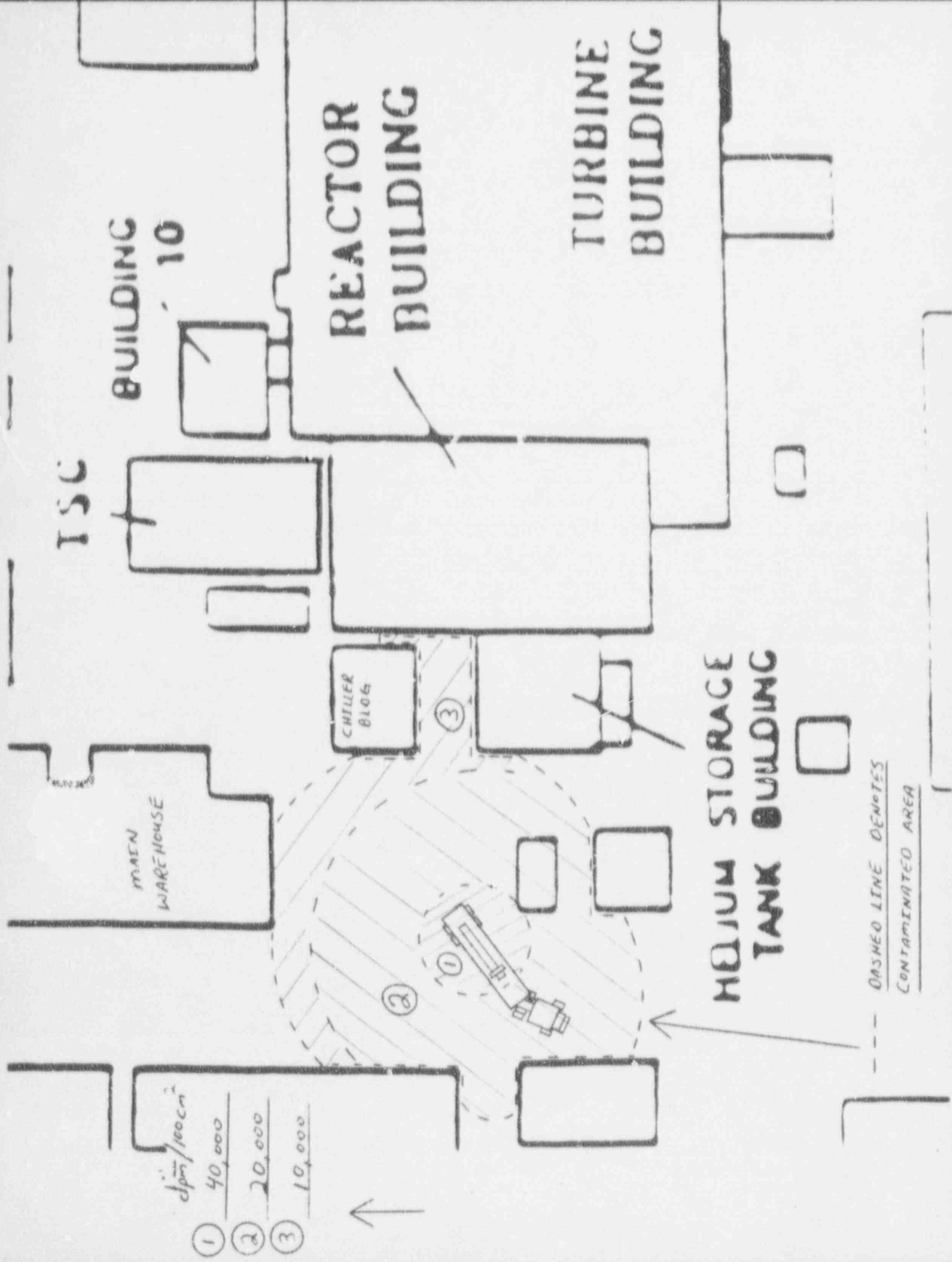
1"	230
4"	14
8"	3.6
12"	1.6

Dose Rates

(Circled) IN mR/hr

--- DASHED LINE DENOTES
RADIATION BEAM CAUSED
BY HOLE



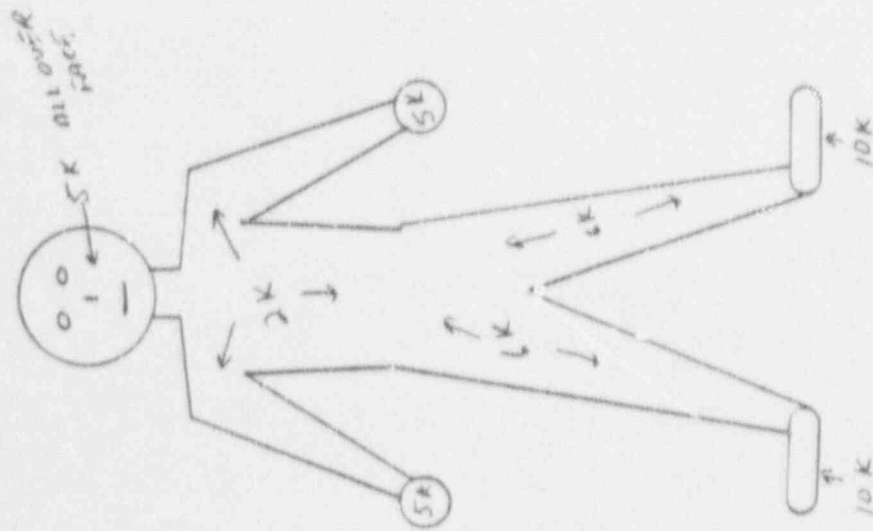


Dose Rates From Hole In Cask

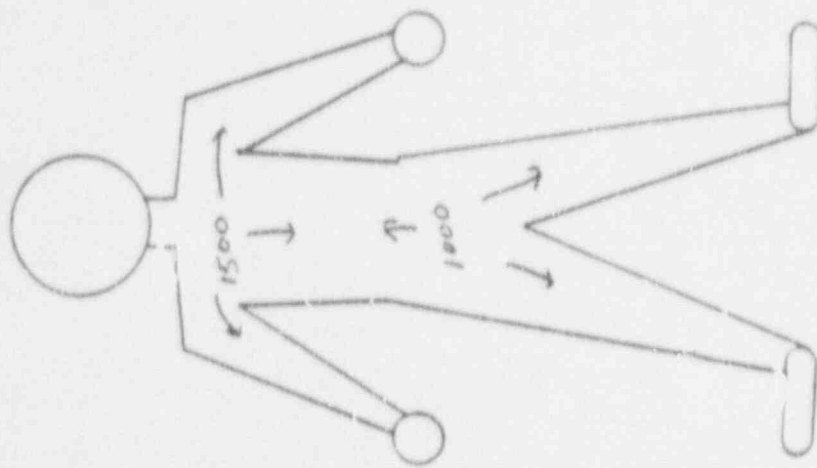
<u>INCHES</u>	<u>R/hr</u>
1"	230
2"	58
3"	26
4"	14
5"	9
6"	6.4
7"	4.7
8"	3.6
9"	2.8
10"	2.3
11"	1.9

<u>FEET</u>	<u>mR/hr</u>
1	1600
2	400
3	180
4	100
6	44
8	25
12	11
20	4
40	1.0
80	.25
120	.10

FRONT



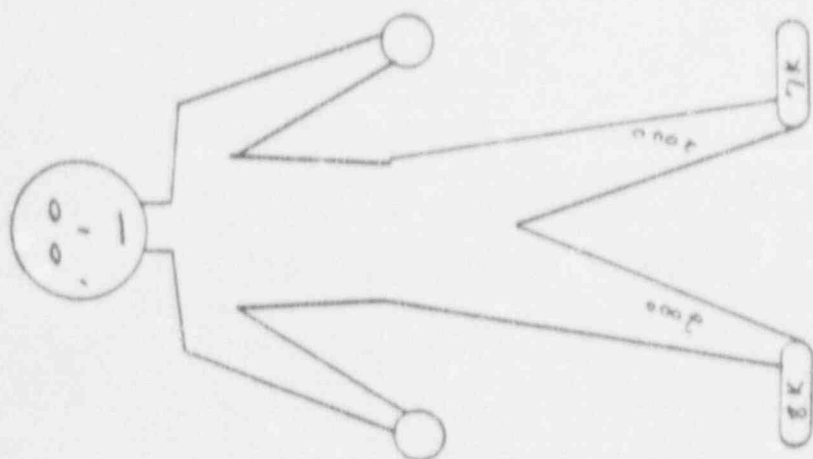
BACK



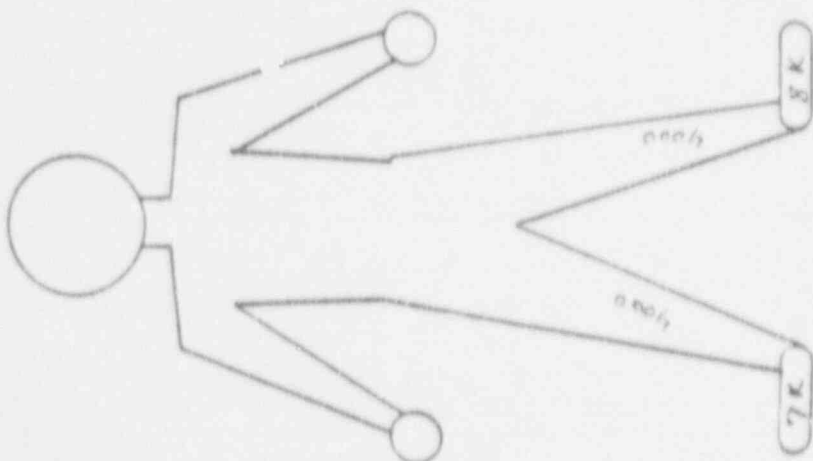
INJURED MAN OUTSIDE WAREHOUSE

ALL \bar{C} LEVELS IN dpm

FRONT



BACK



INJURED MAN ADJACENT TO CHILLER BLOCK

ALL 2 LEVELS IN SPN

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SECTION 5.0 EVALUATION CHECKLISTS

Controller/Observer evaluation checklists are attached for use during FOSAVEX-91 to evaluate the response of the FSV organization to the simulated emergency situation. The checklists should be annotated regarding the actions taken by the participants/Emergency Response Organization in sufficient detail so that they can be used during the exercise debriefing and formal critique. All checklists should be given to the Lead Exercise Controller at the conclusion of the critique.

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FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

CONTROL ROOM

Controller/Observer Name: _____

ACTIONS

EVALUATION

NOUE Declaration Time (if applicable): _____

ALERT Declaration Time: _____

1. Communications with Security and ability to evaluate the implications of the scenario?
2. Ability to initially assess facility conditions and determine the emergency classification accurately?
3. Knew when and how to activate the Emergency Response Organization properly?
4. Properly completed event notification forms, got them signed before making notifications, made notifications accurately and within specified time frames?
5. Initial personnel accountability completed within 30 minutes of notifying personnel to report to their accountability stations?
6. Any teams deployed by the CR were properly briefed and deployed per DERP-TEAMS?
7. Effective communication link to the TSC (when manned)?

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

CONTROL ROOM (continued)

ACTIONS	EVALUATION
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8. Any additional communications links established were manned by knowledgeable personnel and were effective?
9. Initial EPZ dose rates assigned per DERP-DOSE?
10. DERP-CR followed and checklists properly performed?
11. Habitability verified?

ADDITIONAL COMMENTS:

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

TECHNICAL SUPPORT CENTER

Controller/Observer Name: _____

ACTIONS

EVALUATION

1. Center manned and ready within 90 minutes of ALERT declaration?
2. Center set up and activated in accordance with Checklists/DERP-TSC?
3. Search and Rescue Teams, or other special teams properly briefed and deployed per DERP-TEAMS & DERP-EXP? Teams organized?
4. Field/Survey Teams properly briefed and deployed per DERP-FIELD/DERP-SURVEY? Teams organized?
5. Continuing accountability and personnel exposure maintained?
6. Follow-up notification forms properly completed, signed before notifications made, notifications properly made by knowledgeable individual?
7. Effective communications exist between the TSC, CR, Security and deployed teams?
8. Dose assessment/projections effectively made and are appropriate for the given conditions?

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

TECHNICAL SUPPORT CENTER (continued)

ACTIONS	EVALUATION
9. TSC is actively pursuing actual/accurate information and radiation/contamination levels from the SFSC site?	
10. TSC is actively pursuing location and status of any missing personnel?	
11. TSC is pursuing portable shielding/stabilizing the SFSC?	
12. TSC is pursuing containment of the contaminated area?	
13. Habitability is being periodically verified in the TSC?	

ADDITIONAL COMMENTS:

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

FIRE BRIGADE

Controller/Observer Name: _____

ACTIONS

EVALUATION

1. Dresses out with protective clothing and equipment appropriate for the given scenario? Wears the equipment/clothing properly?
2. Fire Brigade is organized with a known fire brigade leader?
3. Establishes effective communications with the CR or TSC? Keeps the Emergency Coordinator informed of the status of the fire?
4. Health Physics Representative on the fire brigade properly monitors radiation levels, analyzes the scene from a radiological perspective, and establishes proper protective measures for the brigade while fighting the fire?
5. Health Physics Representative is cognizant of possible contamination and reasonably provides for its control?
6. Fire brigade attempts to minimize the spread of contamination as much as possible for the given scenario?

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

FIRE BRIGADE (continued)

ACTION

EVALUATION

7. When finished fighting the fire,
properly removes protective
clothing and equipment?

ADDITIONAL COMMENTS:

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

SEARCH AND RESCUE TEAMS

Controller/Observer Name: _____

ACTIONS	EVALUATION
1. Team properly briefed before deployment?	
2. Team members understand their tasks?	
3. Team leader is identified and known to members?	
4. Radiological hazard/expected dose rates are known by all members? Follows proper ALARA precautions?	
5. Team is properly dressed in protective clothing/equipment for the expected environmental/contamination conditions?	
6. Appropriate dosimetry is worn? SRPD's are periodically checked (as applicable)?	
7. Effective communications are established between the team and TSC or CR?	

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

SEARCH AND RESCUE TEAMS (continued)

ACTION	EVALUATION
8. Properly handles and cares for an injured victim?	
9. Takes adequate personal protection precautions when handling a potentially contaminated injured victim?	
10. Minimizes the spread of contamination?	
11. Health Physics Technician is a member of any team going into areas where radiation/contamination levels are unknown?	

ADDITIONAL COMMENTS:

FOHAVEX-91
CONTROLLER/OBSERVER CHECKLIST

FIELD/SURVEY TEAMS

Controller/Observer Name: _____

ACTIONS

EVALUATION

1. Teams properly briefed before deployment?
2. Team members understand their tasks?

Team leader is identified and known to members?
4. Emergency response vehicle is properly prepared for deployment per DER2-FIELD -- instruments are properly source checked? (If applicable).
5. Radiological hazards are known by all members? Expected dose rates are known?
6. Team is properly dressed in protective clothing/equipment for the expected environmental/contamination condition.
7. Appropriate dosimetry is worn? SRPD's are periodically checked (as applicable).

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

FIELD/SURVEY TEAMS (continued)

ACTION	EVALUATION
8. Effective communications are established between the team and the TSC?	
9. Minimizes the spread of contamination?	
10. Properly completes checklists and gathers monitoring data per DERP-FIELD? (Field Team).	

ADDITIONAL COMMENTS:

FOSAVEX-91
CONTROLLER/OBSERVER CHECKLIST

FIRST AID/DECONTAMINATION

Controller/Observer Name: _____

ACTION

EVALUATION

1. Responder establishes communication with the victim and assesses an immediate medical threat? Vital signs (as appropriate for the time and location of victim)?
2. Victim's proximity to radiological and environmental hazards (i.e., radiation, contamination, fires) are compared to his medical condition? Victim is removed from any area/environmental condition that may pose a threat?
3. Any immobile victim is properly carried to safety without risking further injury?
4. Victims are kept warm and reassured?
5. Personal precautions are taken when handling a potentially contaminated victim?
6. Decontamination is performed onsite, if possible, before transporting a victim via ambulance? (This depends on the extent of the injuries).

FOHAVEX-91
CONTROLLER/OBSERVER CHECKLIST

FIRST AID/DECONTAMINATION (continued)

ACTIONS	EVALUATION
7. Spread of contamination is minimized?	
8. Any routes taken with potentially contaminated personnel are made known to radiation/contamination survey personnel?	
9. Decontamination procedures are performed with care to not aggravate injuries? Any water used does not exceed a lukewarm temperature?	
10. Decontamination procedures are effective and would actually result in lowering contamination levels?	

ADDITIONAL COMMENTS: