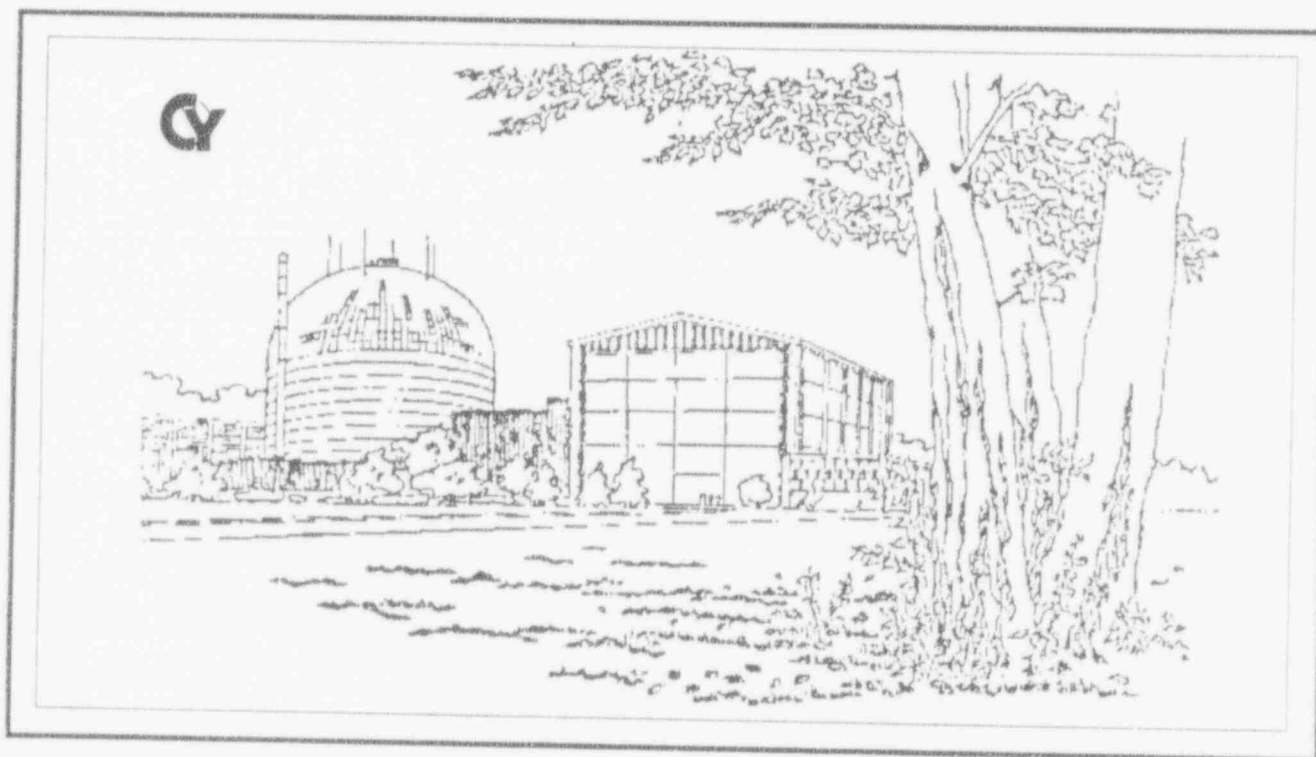


FOR CONTROLLER OR EVALUATOR EYES ONLY !!!

Connecticut Yankee Atomic Power Plant

Emergency Plan Exercise May 14, 1994



Controller Evaluator Manual

Prepared For _____

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Prepared by - Northeast Utilities Service Company

**EXERCISE
SCENARIO
GUIDE**

Introduction

This document contains the necessary information as it relates to the objectives expected to be demonstrated during the annual emergency plan partial participation exercise at Connecticut Yankee on Saturday, May 14, 1994.

The Station and Corporate staffs will fully participate in this exercise. The State of Connecticut, and 18 local communities within the 10-mile radius Emergency Planning Zone (EPZ) of the Connecticut Yankee Plant, will also fully participate for FEMA evaluation. The Station and Corporate objectives for the exercise are outlined in Section A.3.0.

This scenario was developed by first determining the required as well as desired objectives that should be met. Secondly, a collection of events was assembled into a chronological order that would provide the necessary parametric data to meet these objectives. Subsequently, the scenario was run on the Connecticut Yankee training simulator in real time following prescribed plant procedures to capture the parameters at the time an action is taken, the exact time some events will occur is unpredictable.

Consequently, the timing of events contained in this scenario are based solely on the simulator generated data captured during development. Timing of events when the exercise is run on May 14, 1994 may differ somewhat from what is contained in this scenario guide. Additionally, some parameters have been enhanced to ensure an accurate depiction of these events.

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A

**SCOPE - PARTICIPANTS and
- OBJECTIVES**

A.1 Scope

This exercise is intended to demonstrate Northeast Utilities capabilities in support of nuclear incident response activities and to ensure they meet the requirements as they pertain to the Haddam Neck Stations Emergency Plan.

A.2 Participating Agencies

Those organizations expected to participate in the Exercise include the following:

<u>Utility</u>	<u>Municipalities</u>
Connecticut Yankee Atomic Power Company Haddam Neck Plant, Haddam, Connecticut,	Town of Chester,
Northeast Utilities Service Company (NUSCO), Corporate Headquarters, Berlin, Connecticut	Town of Colchester,
	Town of Deep River,
	Town of Durham,
<u>CT State Agencies</u>	Town of East Haddam,
Governor's Office	Town of East Hampton,
Connecticut Office of Emergency Management,	Town of Essex,
Connecticut Department of Environmental Protection,	Town of Haddam,
Connecticut Department of Health,	Town of Hebron,
Connecticut State Police,	Town of Killingworth,
Connecticut Department of Agriculture,	Town of Lyme,
Connecticut Department of Consumer Protection,	Town of Madison,
Connecticut Department of Transportation, and	Town of Marlborough,
Connecticut National Guard.	Town of Middlefield,
	Town of Middletown,
	Town of Portland,
<u>Host Community</u>	Town of Salem, and
Norwich	Town of Westbrook
Windam	

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A.3 Schedule of Activities

<u>DATE</u>	<u>TIME</u>	<u>PLACE</u>	<u>EVENT</u>
MAY 10	0800	CY EOF	Utility Controller Exercise Briefing
MAY 13	1300	CY EOF	NRC Official Entrance Tour
MAY 14	UA	All EOCs	Exercise Starts
MAY 14	UA	All EOCs	Exercise Ends
MAY 14	TBD	CY EOF	Post Exercise Utility Review Meeting
MAY 15	0800	CY EOF	Lead Controller Review Meeting
MAY 16	1100	CY EOF	Official Utility Critique
MAY 16	1300	CY EOF	NRC Exit Brief

A.3.1 On-site Objectives

CORE ELEMENTS AND OBJECTIVES	APPLICABLE FACILITIES
<p>1. <u>ACCIDENT DETECTION / ASSESSMENT AND CLASSIFICATION</u></p> <p>Demonstrate the capability to classify an incident based on plant conditions and confirm (when possible) the emergency classification by dose calculations or monitoring.</p>	<p>CR EOF TSC</p>
<p>2. <u>NOTIFICATION OF ON-SITE AND OFF-SITE RESPONDERS</u></p> <p>Demonstrate the capability to promptly notify on-site responders of emergency conditions, emergency classifications, activation of emergency organizations and facilities, protective actions, radioactivity release status, and any changes to these conditions.</p> <p>Demonstrate the capability to promptly notify off-site officials, including the NRC, of emergency conditions, emergency classifications, activation of emergency organizations and facilities, recommended protective actions, radioactivity release status, potentially affected populations, projected population doses, and any changes to these conditions.</p>	<p>CR EOF</p>
<p>3. <u>COMMUNICATIONS</u></p> <p>Demonstrate the capability for all communications systems within each center to function properly in establishing and maintaining communications with each other and especially with the control room.</p> <p><i>*NRC area for improvement from Exercise Inspection 50213/93-02</i></p>	<p>CR *EOF TSC RMT ERT SEC *CEOC *OSC</p>
<p>4. <u>RADIOLOGICAL EXPOSURE CONTROL</u></p> <p>Demonstrate the capability to confirm and continually assess the habitability of the emergency response centers.</p> <p>Demonstrate the capability to properly implement appropriate iodine-protective measures (use appropriate respiratory protection or take KI).</p> <p>Demonstrate the capability to provide at risk on-site personnel with adequate protective equipment such as self contained breathing apparatuses (SCBA) and monitoring equipment with sufficient ranges.</p>	<p>CR EOF TSC OSC RMT ERT SEC</p>

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CORE ELEMENTS AND OBJECTIVES	APPLICABLE FACILITIES
<p>5. <u>PROTECTIVE ACTION DECISION / RECOMMENDATION MAKING</u></p> <p>Demonstrate the capability to decide on protective actions for on-site and off-site personnel without waiting for a dose assessment. Appropriate decision makers should promptly recommend protective actions on-site and off-site consistent with criteria established in the emergency plans.</p> <p>*NRC Area For Improvement from Exercise Inspection 50-213/93-02 and 50-213/92-06-02.</p> <p>Demonstrate the ability for the Corporate Manager Radiological Consequence Assessment (CMRCA) to receive concurrence on PARs from the Director Corporate Response Organization (DCERO) prior to communicating them to the State of Connecticut.</p>	<p>CR EOF *CEOC</p>
<p>6. <u>STAFFING AND AUGMENTATION</u></p> <p>Demonstrate the capability to augment control room staff and staff emergency centers in accordance with staffing requirements identified within the emergency plans and implementing procedures.</p> <p>Demonstrate the capability to adequately brief relief personnel when utilized.</p>	<p>CR EOF TSC OSC CEOC</p>
<p>7. <u>ANALYSIS OF PLANT CONDITIONS AND CORRECTIVE ACTIONS</u></p> <p>Demonstrate the capability to maintain an overview of the reactor and plant conditions using the expertise of technical staff and the information provided by them from other sources.</p> <p>Demonstrate the capability to recognize that events are progressing abnormally and develop appropriate strategies to bring the plant to a safe shutdown condition.</p>	<p>CR TSC CEOC</p>
<p>8. <u>FACILITY MANAGEMENT AND CONTROL</u></p> <p>Demonstrate the capability for the facility manager to coordinate and oversee the overall response and redirecting the response when necessary.</p> <p>Demonstrate the capability for emergency response personnel to perform actions in accordance with appropriate emergency response procedures and instructions.</p> <p>*NRC Area For Improvement from Exercise Inspection 50-213/93-02 and 50-213/92-06-02.</p> <p>Demonstrate the ability for the TSC staff to have access to control circuitry wiring diagrams and vendor manuals.</p>	<p>CR EOF *TSC OSC CEOC</p>

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CORE ELEMENTS AND OBJECTIVES	APPLICABLE FACILITIES
<p>9. <u>IMPLEMENTATION OF ON-SITE PROTECTIVE ACTIONS</u></p> <p>Demonstrate the capability, if warranted by conditions, for the control room to initiate on-site protective actions until the EOF is activated.</p> <p>Demonstrate the capability, while in a Site Area Emergency or a General Emergency, to evacuate all on-site nonessential personnel to off-site locations identified in the emergency plan. Also appropriate protective measures should be initiated for those personnel remaining on site (e.g., Accountability, KI, protective clothing).</p> <p>Demonstrate the capability, while in a General Emergency with imminent releases projected, to evacuate all on-site nonessential personnel without radiological monitoring or decontamination, to off-site locations identified in the emergency plan.</p> <p>Demonstrate the capability, while in a General Emergency without imminent releases projected, to evacuate all on-site nonessential personnel following radiological monitoring or decontamination, to off-site locations identified in the emergency plan.</p>	<p>CR EOF TSC OSC RMT ERT SEC</p> <p>ACTUAL EVACUATION WILL BE SIMULATED</p> <p>ACTUAL EVACUATION WILL BE SIMULATED</p> <p>ACTUAL EVACUATION WILL BE SIMULATED</p>
<p>10. <u>RADIOLOGICAL ASSESSMENT</u></p> <p>Demonstrate the capability and knowledge to use approved procedures for dose assessment. If a release is anticipated or in progress personnel should correctly and rapidly assess and integrate information from the reactor's systems status and trends, source-term assumptions, post-accident sampling system samples, and meteorological information to define the magnitude and location of the on-site and off-site impact.</p> <p>Demonstrate the capability, if a release is underway, to promptly initiate on-site sampling and monitoring to confirm the composition of releases to better define the source term and confirm projected doses.</p>	<p>EOF CEOC</p>
<p>11. <u>DISPATCH AND COORDINATION OF RADIOLOGICAL MONITORING TEAMS</u></p> <p>Demonstrate the capability, if a release is anticipated or is underway, to promptly deploy teams to perform radiological monitoring at appropriate locations to characterize the size, location and intensity of the plume.</p>	<p>CR EOF OSC CEOC RMT</p>

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CORE ELEMENTS AND OBJECTIVES	APPLICABLE FACILITIES
<p>12. <u>CONDUCT FACILITY CRITIQUE</u></p> <p>Demonstrate the capability for each facility to hold a preliminary critique at the end of the exercise while details are fresh. The preliminary critiques should be followed by a formal critique that evaluates the overall performance and the interaction of facility representatives and players with one another. Evaluators should provide an unbiased and candid evaluation of the exercise identifying areas of strength as well as areas of weakness and areas needing improvement.</p>	<p>CR EOF TSC OSC RMT ERT SEC CEOC</p>

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FIVE YEAR PLAN ELEMENTS / OBJECTIVES	APPLICABLE FACILITIES
<p>13. <u>OFF-HOURS STAFFING (6 p.m. to 4 a.m.)</u></p> <p>Demonstrate the capability to implement the emergency plan and procedure in response to an event which is initiated between the hours of 6 p.m. and 4 a.m.</p>	<p>NOT DEMONSTRATED</p>
<p>14. <u>ACTIVATION OF EMERGENCY NEWS CENTER (JOINT INFORMATION CENTER)</u></p> <p>Demonstrate the capability to disseminate accurate and timely information to the media / press and to coordinate these releases with off-site officials and the NRC. Information provided to the public should be prepared to the technical level that the public can understand.</p> <p>Demonstrate the capability to promptly provide corrected or supplemental information in the event of an error or misinformation in news stories (e.g., Rumor Control)</p>	<p>CEOC (at State Media Center)</p>
<p>15. <u>USE OF FIRE CONTROL TEAMS</u></p> <p>Demonstrate the capability to implement the emergency plan and procedure in response to an event which requires the utilization of the stations fire control teams.</p>	<p>NOT DEMONSTRATED</p>
<p>16. <u>USE OF FIRST AID AND / OR RESCUE TEAMS</u></p> <p>Demonstrate the capability to initiate and perform actions promptly following the decision to conduct an operation. The operation should be carried out in coordination with the control room and teams should be briefed on potential hazards.</p> <p>Demonstrate the capability to provide teams with adequate radiological exposure control measures and communications.</p>	<p>NOT DEMONSTRATED</p>

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FIVE YEAR PLAN ELEMENTS / OBJECTIVES	APPLICABLE FACILITIES
<p>17. <u>USE OF MEDICAL SUPPORT PERSONNEL</u></p> <p>Demonstrate the capability to give appropriate consideration to first aid treatment and associated radiological hazards. Treatment and decontamination efforts shall be commensurate with the extent of the injuries. To the extent possible, radiological controls should be utilized during transport to medical facilities.</p> <p>Demonstrate the capability to inform offsite medical facilities in advance of the victims arrival of both medical and radiological conditions.</p> <p>Demonstrate the capability to have a qualified radiological control technician accompany the victim to the hospital and brief hospital personnel on the extent of the injury and on any contamination levels.</p>	<p>NOT DEMONSTRATED</p>
<p>18. <u>USE OF LICENSEE'S HEADQUARTERS SUPPORT PERSONNEL</u></p> <p>Demonstrate the capability for the Corporate Command Center to activate and perform its function in a timely manner with congestion and noise levels kept to a minimum.</p> <p>Demonstrate the Corporate Command Center's capability to provide timely support in areas such as government liaison, logistics and support.</p>	<p>CEOC</p>
<p>19. <u>USE OF SECURITY PERSONNEL TO PROVIDE PROMPT ACCESS FOR EMERGENCY EQUIPMENT AND SUPPORT</u></p> <p>Demonstrate the capability for security personnel to control access to the site without undue hinderance to emergency response efforts.</p> <p>Demonstrate the capability for security personnel to account for all on-site personnel and for the names of missing individuals within the time specified within the emergency plan.</p>	<p>NOT DEMONSTRATED</p>
<p>20. <u>USE OF BACKUP COMMUNICATIONS</u></p> <p>Demonstrate the capability to implement the emergency plan and procedure in response to an event which requires the use of backup communications systems.</p>	<p>EOF</p>
<p>21. <u>USE OF EMERGENCY POWER (WHERE A PART OF PLANT SAFETY SYSTEMS, e.g. EMERGENCY OPERATIONS FACILITY)</u></p> <p>Demonstrate the capability to implement the emergency plan and procedures in response to an event which requires the need for backup power systems.</p>	<p>EOF</p>

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FIVE YEAR PLAN ELEMENTS / OBJECTIVES	APPLICABLE FACILITIES
<p>22. <u>EVACUATION OF EMERGENCY RESPONSE FACILITIES (ERFs) AND RELOCATION TO BACKUP ERFs, WHERE APPLICABLE.</u></p> <p>Demonstrate the capability to implement the emergency plan and procedure in response to an event which requires the evacuation of one or more emergency response centers.</p>	<p>NOT DEMONSTRATED</p>
<p>23. <u>INGESTION PATHWAY EXERCISE</u></p> <p>Demonstrate the capability to implement the emergency plan and procedure in response to an event which proceeds beyond the plume phase of an emergency into the Ingestion phase. This is accomplished through the collection and analysis of all appropriate types of environmental samples (including soil) and by sharing that information with state and local health officials</p>	<p>NOT DEMONSTRATED</p>
<p>24. <u>PASS SAMPLING AND ANALYSIS</u></p> <p>Demonstrate the capability to collect and analyze a Post Accident Coolant or Containment Air Sample under simulated emergency conditions while limiting radiological exposure to within required exposure limits.</p> <p>Demonstrate the capability to analyze the PASS samples for noble gases, radioiodine, cesium, nonvolatile isotopes, hydrogen, chlorides, and boron.</p> <p>Demonstrate the capability to make results of these analyses available to appropriate technical emergency staff within three hours of sampling.</p>	<p>NOT DEMONSTRATED</p>

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FIVE YEAR PLAN ELEMENTS / OBJECTIVES	APPLICABLE FACILITIES
<p>25. <u>DISPATCH AND COORDINATION OF CORRECTIVE ACTION TEAMS</u></p> <p>Demonstrate the capability to initiate and perform actions promptly following the decision to conduct an operation in coordination with the control room and to be briefed on potential hazards.</p> <p>Demonstrate the capability to provide teams with adequate radiological exposure control measures and communications.</p> <p>*NRC Area For Improvement from Exercise Inspection 50-213/93-02</p> <p>Demonstrate the OSC ability prioritize resources and work repair evolutions simultaneously.</p> <p>Demonstrate the ability of the Controller Organization to provide to the players only earned information.</p>	<p>CR TSC EOF *OSC ERT</p> <p>*ERT Controller Organization</p>
<p>26. <u>RECOVERY AND REENTRY</u></p> <p>Demonstrate the ability to initiate plans for reentry and recovery and describe the means by which decisions to relax protective measures (e.g., allow reentry into a previously evacuated area) are reached.</p>	<p>Not Demonstrated</p>

Applicable Facilities Key	
CR - Control Room (Affected Unit)	EOF - Emergency Operations Facility
TSC - Technical Support Center	OSC - Operational Support Center
RMT - Radiological Monitoring Teams	ERT - Emergency Reentry/Rescue Teams
SEC - CAS, SAS, Security Force	CEOC - Corporate Emergency Operations Center

B. Timeline/Scenario

B

**TIMELINE and
EXERCISE CONTROLLER GUIDE**

B.1.0 Timeline

1994 Emergency Response Exercise Scenario Time Line

TIME

0700	Players and Controllers arrive at the Simulator
0730	Event 1, Exercise Start
0745	Event 2, Loss of Annunciators
0800	Event 3, (Alert Charlie 1)
0900	EOF and Emergency Organizations are staffed up
0915	Event 4, Small RCS leak begins
0920	Event 5, Annunciator power can be restored after this time.
0930	Plant may start controlled shutdown
0955	Event 6, RCS leak increases, Reactor Trip and SI
1000	Event 7, Loss of power (station blackout), offsite line break, offsite line trip, "B" EDG fails (SAE Charlie 2)
1015	Event 8, Large Break LOCA, MOV 31 breaker failure
1030	Return of power- tripped offsite line 1772 reset
1040	Event 9, Injection flow / refill begins, CET's > 1200 degrees peak
1045	Event 10, Radiation release outside CTMT
1115	(GE "ALPHA")
1135	MOV31 breaker repaired
1145	Event 11, Fire main to CTMT is restored
1200	Event 12, Radiation release diminished
1300	Event 13, Exercise terminated

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B.2.0 Scenario

B.2.1 Initial Conditions

The following conditions are provided to the control room operators during the pre-shift brief.

- "A" Emergency Diesel Generator is Out of Service due to piston replacement in the 8th hour of a 72 hour Tech Spec Action Statement (awaiting parts to be delivered in 24 hours)
- Unit is operating at 100% power.
- The fuel is at the middle of core life (MDL).

B.2.2 Pre-Conditions

The following conditions will remain unknown to the operators until the control room operating crew determines the specific fault or condition.

- The "B" Emergency Diesel Generator will fail upon initiation of Safety Injection.
- MOV 31 breaker fails to open when called upon for CTMT spray.

B.2.3 Scenario Summary

[-] Key event initiation time.

[≈] Approximate time event is expected to occur.

B.2.4 Event and Simulator Code Guide

CLOCK TIME	EVENT DESCRIPTION	SIMULATOR CODES/ACTIONS
- 0700 Initial Conditions	Exercise controllers and players arrive at the simulator and control room annex.	
- 0720	Shift turnover and board walk-down.	
- 0730 EVENT 1	Exercise start. 100% Rx Power, MDL core conditions 450 ppm Boron, Equilibrium Xe Bank "B" Rods at 300 Steps	Simulator to run. Reset IC - 14 !DA-EGRO9 - Start disable "A" EDG MALF-EGRO6B - Start Failure "B" EDG (Unknown to Operators)
- 0745 EVENT 2	Loss of Annunciator Power to all Primary and Secondary Annunciators *AOP 3.2-49	Manually open DC ckt A10 & B10 MCB (rear)
- 0800 EVENT 3	ALERT Posture Code Charlie 1 Classification made and Notification begins	
- 0800	The Duty Officer responds to the control room.	
≈ 0830	The DSEO responds to Emergency Operations Facility (EOF).	
≈ 0845-0900	The EOF and the Emergency Organization are staffed. Once the Emergency Organization assesses plant conditions, efforts are initiated to regain the Annunciators.	
≈ 0915 EVENT 4	A small RCS leak begins < 4 gpm *AOP 3.2-31	RC07 - 2% severity R11, R12, & R32 into Alarm

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CLOCK TIME	EVENT DESCRIPTION	SIMULATOR CODES/ACTIONS
≈ 0920 EVENT 5	Repair can be made to Annunciator breaker and annunciator power can be restored when players have earned it. *Controller Call Sim Booth with this report prior to player given message	Restore Annunciator power when called by repair controller.
≈ 0930	Down power in response to plant shutdown required by Tech Spec. (3/4.4.6.2b), Greater than 1 gpm unidentified leakage *NOP 2.2-1	Plant Downpower at approx. 2.5 MWe/min.
- 0955 EVENT 6	RCS leak increase in size > 200 gpm PZR level and Press drop rapidly, Resulting in Rx Trip and Safety Injection actuated *E-0	RC06 - 30% severity ramped in over 360sec.
- 1000 EVENT 7	Loss of power. (A local fishermans truck swerves off road to prevent hitting a deer and knocks out 1 incoming off-site AC (1206) line the other offsite (1772) line also trips off the line at that time. Also when the "B" EDG is started it breaks its fuel rack control rod. This causes a station blackout.) *ECA -0.0	ED01A - Loss of Off-Site AC ED01B EGR06B - Start failure "B" EDG comes in SAE Charlie 2 Declared
≈ 1010	Operators Locally Control Aux. Feed Water to all S/G's and various other Secondary Plant manipulations.	IDA - F'VR 18,19,20,21 IDA - F'JR 28,29 IDA - FWR 07,08,01 IDA - SWR 08 IDA - SGR 11,12,13,14 IDA - CVR 56,57,58,59 IDA - CCR 15
≈ 1015	Operators Locally Dump Steam From intact S/G's	IDA - MSR 11,12,13,14 IDA - MSR 43,44
- 1030 EVENT 8	Large Break LOCA occurs at point of previous leak causes complete depressurization of RCS	RC01D - 100% severity
- 1030	CONVEX resets 1772 offsite AC line and power returns.	Remove ED01B IDA - EDR 28,29
- 1040 EVENT 9	Operators lineup electrical plant and start HPSI,LPSI and Car Fans to begin refill. CET's > 1200 peak *ECA - 0.2	
- 1045 EVENT 10	Radiation Release outside CTMT begins.	Malfunction - RM01K and RM01L at 34% over 360 sec. RM01G - 37% RM01A&B at 100%

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CLOCK TIME	EVENT DESCRIPTION	SIMULATOR CODES/ACTIONS
- 1100 - 1115	General Emergency Posture Code ALPHA is declared.	
- 1135	MOV 31 Breaker Repaired *Controller Call Sim Booth with this report prior to player given message	
- 1145 EVENT 11	If Required Firemain can be restored to CTMT Spray to reduce CTMT Press to approx. 0 psig at 12:00	CH05 B&C 4% - 0.0psig 10% - 7.5psig 25% - 26.3psig CH05 A - Sets MCB indicator per above
≈ 1200 EVENT 12	CTMT Press is equalized , Radiological released diminished.	CH05 A,B,C to 0.0psig
- 1300 EVENT 13	The Exercise is terminated.	FREEZE

C

SCENARIO
NARRATIVE

The exercise begins at 0700 on May 14, 1994 with all conditions external to the plant as they appear except the weather. The weather is predetermined to be a normal spring day with wind temperature and other conditions as described in Section F.6, Meteorological Data. The plant operating crew reports to the Simulator Control Room at 0700 and is provided the following brief. The plant is operating at 100% power at middle core life (MOL). The major equipment out of service is the "A" Emergency Diesel Generator. This places the plant in a Tech Spec Action Statement requiring a fix to be performed within 72 hours or a plant Shutdown is in order. Parts will arrive on site in approximately 24 hours. All notifications have been made (Convex, NUSCO Duty Officer, Station Director).

At 0730, (EVENT 1) the scenario starts, on shift simulator control room players and on-site on shift players begin play.

At about 0745 (EVENT 2) loss of all Annunciators becomes known to operators. The operators will proceed to AOP 3.2 - 49 then to EPIP 1.5 - 1 for classification determination. At 08:00 (EVENT 3) the Shift Supervisor (SS) and the Duty Officer (DO) declare an ALERT Posture Code Charlie 1 due to "Observed loss of most or all pri and sec annunciators for > 15 min." They will have the Staff Assistant (SSSA) notify via the notification system all appropriate members of the Emergency Response Organization (ERO) this will start ERO members to begin to respond to their Emergency Response Facilities (ERF). From 08:00 till 09:00 the ERF's will be manning up. also during this time Plant staff will be trying to identify the extent of the loss of annunciators and have staff monitor critical plant parameters closely. At approximately 09:00 the Enclosed Operating Facility (EOF) and the rest of the Emergency Organizations should be fully manned. At 09:15 (EVENT 4) a small RCS leak begins < 4 gpm Operators will enter AOP 3.2 - 31. At 09:20 (EVENT 5) repair team may complete repair on the annunciator power supply breaker and reenergizes the annunciators. By 09:30 the plant staff should commence a downpower (NDP 2.2 - 1) in response to plant shutdown required by Tech Spec. (3/4.4.6.2b), greater than 1 gpm unidentified leakage. Shutdown should be controlled at 2.5 MWe/min. At 09:55 (EVENT 6) the RCS leak increases in size to > 200 gpm. Pressurizer level and Pressure drop rapidly this will result in the operators manually Tripping the Reactor and initiating Safety Injection. The control room operators will enter EO reactor trip and safety injection procedure.

At about 10:00 (EVENT 7) A local fisherman while returning from a morning of fishing driving past the switchyard on top of the hill swerves off road to prevent from hitting a deer and knocks out the 1206 incoming AC line, the 1772 line also trips off the line at this time. This in conjunction with the "B" EDG mechanical failure results in a total loss of onsite and offsite power (Station Blackout ECA 0.0). By 10:15 the Director Site Emergency Operations (DSEO) should classify the EVENT as a Site Area Emergency, posture code Charlie-Two. The classification is based on "Loss of all offsite power and all onsite power capability for > 15 min." They should then have the Shift Supervisor Staff Assistant (SSSA) make the appropriate notification to all on and off-site emergency response personnel via the Emergency Notification and Response System (ENRS).

During ECA 0.0 the Control room operators will have the Nuclear Systems Operators (NSO) locally control Aux. Feedwater and Steam dumps. Also secure non priority electrical equipment if required.

At 10:30 (EVENT 8) A large break LOCA occurs at point of previous leak and causes a complete depressurization of the RCS. Also at 10:30 CONVEX resets the 1772 offsite AC line and power on that line is now available.

At 10:40 (EVENT 9) Operators have lined up electrical plant so as to start injection flow.
Core Exit Thermal Couplers (CET) are > 1200 deg. F peak.

At 10:45 (EVENT 10) A heating steam line from the Primary Auxiliary Building (PAB) to Containment breaks inside containment and leaks into the West Pipe Trench outside containment causing a release path outside containment.

Between 11:00 - 11:15 the Director of Station Emergency Organization (DSEO) declares a General Emergency posture code ALPHA. This classification is based on "loss of three barriers with forecasted integrated offsite dose of > 1 rem TEDE."

At 11:35 maintenance repair team repairs or replaces MOV 31 breaker.

At 11:45 (EVENT 11) the operators open MOV 31 and provide firemain to Containment Spray. this allows for the reduction of Containment Pressure.

At 12:00 (EVENT 12) Containment Pressure is equalized and the Radiological Release is diminished.

At 1300 (EVENT 13) If it is determined by the on and offsite Controlling/Evaluating Organizations that all appropriate objectives have been demonstrated then the exercise onsite and offsite may be terminated.

C.2.0 Exercise Controller Guides

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MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY--ER (S)	SUMMARY OF ACTIONS
Pre-Drill	07:00	Exercise controllers and players arrive at the simulator and control room annex.	IN-PLANT #1	<p style="text-align: center;">*****COMMAND*****</p> <p>IN SUPPORT OF THE EXERCISE, PLEASE PERFORM THE FOLLOWING:</p> <ol style="list-style-type: none"> 1. SOUND THE STATION ANNUNCIATION ALARM FOR 10 SECONDS. 2. ANNOUNCE OVER THE SITE PAGE -- "THIS IS A DRILL. THIS IS A DRILL. AN EMERGENCY PLAN EXERCISE IS NOW IN PROGRESS. PERSONNEL ASSIGNED TO THE EXERCISE SHOULD TAKE NOTE OF ALL FUTURE DRILL-RELATED ANNOUNCEMENTS. PERSONNEL NOT ASSOCIATED WITH THE DRILL ARE TO DISREGARD THE DRILL PAGES. THIS IS A DRILL. THIS IS A DRILL." 3. REPEAT STEP 2 ABOVE. 	IN-PLANT EC	ACTUAL OSS ON SHIFT		
Pre-Drill	07:20	Shift turnover and board walk-down.	SIM #1	<p style="text-align: center;">***CONTROLLER NOTE***</p> <p>SUPPLY SIM CONTROL ROOM STAFF WITH PLAN OF THE DAY</p>	SIM EC	ALL OPS CREW & DO	OSS	P views initial plant conditions with players assembled in the simulator control room.

MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY-- ER (\$)	SUMMARY OF ACTIONS
00:00	07:30 HNP	The Exercise begins. 100 % power, MOL core conditions. 450 ppm Boron, Equilibrium Xe bank "B" Rods at 300 Steps #4S/G very small pri-sec leak (just a distractor). (EVENT #1)						
00:15	07:45 HNP	Loss of Annunciator Power to all Primary and Secondary Annunciators *AGP 3.2-49 (EVENT #2)	ERT ANN #1	<p align="center">***CONTROLLER NOTE***</p> <p>CONTROLLERS ARE TO PROVIDE INVESTIGATING PLAYERS WITH APPROPRIATE INFORMATION RELATIVE TO THE LOSS OF ALL ANNUNCIATORS EVENT. CONTROLLER SHALL ALLOW PLAYERS TO MAKE PROGRESS TOWARDS RESTORATION IF IT IS EARNED. HOWEVER, THEY MUST STALL PLAYERS IF ACCOMPLISHED BEFORE 09:20.</p> <p align="center">*****COMMAND*****</p> <p>WHEN PLAYERS INVESTIGATE LOSS OF ANNUNCIATORS REPAIR TEAM CONTROLLER WILL PROVIDE APPROPRIATE INFORMATION.</p>	ERT ANN EC	NSO	OSS / SRO	<p>Acknowledges loss of annunciators event in progress.</p> <p>Communicates plant status to DO.</p>

MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY--ER (S)	SUMMARY OF ACTIONS
00:30	08:00 HNP	<p>The Duty Officer responds to the control room.</p> <p>ALERT, posture code Charlie-One classification made and notification sequence begins.</p> <p>UPON DECISION TO EVACUATE THE SITE</p> <p align="center">(EVENT #3)</p>	IN-PLANT MSG #2	<p>***CONTROLLER NOTE***</p> <p>ISSUE THE FOLLOWING MESSAGE ONCE INFORMED THAT SIMULATOR OSS HAS INITIATED A SITE EVACUATION.</p> <p align="center">*****COMMAND*****</p> <p>IN SUPPORT OF THE EXERCISE PLEASE PERFORM THE FOLLOWING STEPS:</p> <ol style="list-style-type: none"> 1. SOUND THE STATION ANNUNCIATION ALARM FOR 10 SECONDS. 2. ANNOUNCE OVER THE PLANT PAGE -- "THIS IS A DRILL. THIS IS A DRILL. NON-ESSENTIAL PERSONNEL ASSIGNED TO THE EXERCISE ARE DIRECTED TO EVACUATE THE SITE AND PROCEED TO THE ASSEMBLY AREA. THIS IS A DRILL. THIS IS A DRILL." 3. SOUND THE EVACUATION ALARM FOR 10 SECONDS. 4. REPEAT STEP 2 ABOVE. 	IN-PLANT EC	ACTUAL ON SHIFT OSS	<p>OSS / DO</p> <p>SSSA</p> <p>SSS</p> <p>SS</p>	<p>Declares an ALERT, posture code Charlie-One based on loss of all annunciators.</p> <p>Prepares a Nuclear Incident Report Form (IRF), obtains DSEO approval.</p> <p>Activates EOF. Coordinates the delivery of RMT vehicles to the EOF.</p> <p>Sounds station annunciation alarm. Provides a brief description of plant conditions over the plant page.</p>

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MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY--ER (S)	SUMMARY OF ACTIONS
			EIC #1	<p align="center">****CONTROLLER NOTE****</p> <p>ISSUE THE FOLLOWING MESSAGE 40 MINUTES AFTER THE EVACUATION ALARM HAS BEEN SOUNDED.</p> <p align="center">*****COMMAND*****</p> <p>THIS IS A SECURITY GUARD AT THE ENERGY INFORMATION CENTER. THERE ARE APPROXIMATELY 25 PEOPLE WHO SAY THEY WERE ON-SITE WHEN THE EVACUATION ALARM WAS SOUNDED. THEY WANT TO KNOW WHEN THEY CAN LEAVE THE SITE.</p>	EIC EC	SSS		
00:45	08:15 HNP		SIM #2	<p align="center">*****CONTINGENCY*****</p> <p>DECLARE AN ALERT POSTURE CODE CHARLIE 1 BASED ON A LOSS OF ALL ANNUNCIATORS</p>	SIM EC	SIM OSS	SSSA	<p>Initiates and transmits the IRF on the Notification system.</p> <p>Verifies off-site call back report. Makes backup calls as necessary.</p>
01:00	08:30 HNP	The DSEO responds to the Emergency Operations Facility (EOF).					DO / OSS	DO calls back up DSE0 who then reports to the EOF and prepares to assume the duties of DSEO. Receives a briefing from the DO on plant conditions. Briefs managers on plant conditions and station status.

MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY-ER (S)	SUMMARY OF ACTIONS
01:15	08:45 HNP	The EOF and the Emergency Organization are staffed. Once the Emergency Organization assesses plant conditions, efforts are initiated to regain the Annunciators.	MET 1-17	*****COMMAND***** WHEN MET PLAYER ARRIVES ISSUE APPROPRIATE MET DATA AND EVERY 15 MIN. UNTIL END OF EXERCISE.	CEOC MET EC	CEOC MET TEAM	DO / OSS MRDA MPI CRDC	DSEO assumes DSEO responsibilities. OSS assumes MCRO responsibilities. Assures meteorology data printer is turned on. Directs the Field Team Coordinator (FTDC) to form off-site Radiological Monitoring Teams (RMTs), and prepare to deploy them into the field. Prepares nontechnical media information based on current conditions for the CMPI. Contacts Manager of Communications (MOC) or the Technical Information (TIC) for specific plant parameter data, collects appropriate plant parameter data and inputs it into OFIS.
	09:00		IN-PLANT #3	IN SUPPORT OF THE EXERCISE SCENARIO TODAY, YOU ARE AUTHORIZED TO OPEN THE ELECTRICAL SUPPLY BREAKER TO THE EOF AT 10:00 A.M. THE PROCEDURE NEEDED TO DO THIS IS PMP 9.1-14, "START OF EOF DIESEL BY LOSS OF NORMAL POWER." DO NOT CLOSE THE BREAKER UNTIL DIRECTED TO DO SO BY AN EXERCISE CONTROLLER.	IN-PLANT EC	ACTUAL OSS ON SHIFT		
01:45	09:15 HNP	A small RCS leak begins (<4 gpm). *AOP 3.2-31 (EVENT #4)						

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MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY-- ER (S)	SUMMARY OF ACTIONS
01:50	09:20	(EVENT #5)	ERT ANN #2	<p align="center">***CONTROLLER NOTE***</p> <p>DO NOT ISSUE THE FOLLOWING MESSAGE BEFORE 09:20. BEFORE THE ISSUANCE OF ANY MESSAGE INVOLVING A SIMULATED CHANGE OF PLANT CONFIGURATION CALL THE CY SIM-CR AT 2554 AND MAKE BOOTH OPERATOR AWARE:</p> <p align="center">*****COMMAND*****</p> <p>WHEN AND IF APPROPRIATE STEPS HAVE BEEN TAKEN BY THE PLAYERS, ANNUNCIATOR POWER MAY BE RESTORED .</p>	ERT ANN EC	ERT ANN		
02:00	09:30 HNP	<p>Down power in response to plant shut-down required by technical specifications (3/4.4.6.2b), greater than 1 gpm unidentified leakage.</p> <p>*NOP 2.2-1</p>						

MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY--ER (S)	SUMMARY OF ACTIONS
02:25	09:55 HNP	RCS leak increases in size > 200 gpm. PZR Level and Pressure drop rapidly resulting in a Rx trip and a Safety Injection Actuation. *(E-0) (EVENT #6) Also when the "B" EDG is started it breaks it's fuel rack control rod. This results in a station blackout.)						
02:30	10:00 HNP	Loss of power. (A local fisherman's truck swerves off the road to prevent hitting a deer and knocks out one incoming off-site AC (1206) power lines. The other off-site line (1772) is sympathetically tripped off-line as a result shortly thereafter. *ECA -0.0 A Site Area Emergency, Posture Code Charlie-Two is declared by plant operators. The Shift Supervisor Staff Assistant (SSSA) transmits a new ENRS radiopager message. (EVENT #7)		****CONTINGENCY**** WHEN PLAYERS TRY AND ACCESS THE PLANT PAGE SYSTEM IT IS UNAVAILABLE AT THIS TIME.	MCRO DSEO EC	MCRO DSEO	DSEO MPI MCRO	Declares a SITE AREA EMERGENCY, posture code Charlie-Two based on loss of all AC power. Prepares a Nuclear Incident Report Form (IRF), obtains DSEO approval. If not already done, Implements Personnel Accountability (EPIP 1.5-13) Reviews and considers implementation of Evacuation and Assembly (EPIP 1.5-14). Reports the name and keycard number of emergency response personnel that have reported to the control room to CAS. Use of backup communications systems.

MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY-ER (S)	SUMMARY OF ACTIONS
	10:02		IN-PLANT #4	ANNOUNCE OVER THE PLANT PAGE THE FOLLOWING: "THIS IS A DRILL. THIS IS A DRILL. ALL PERSONNEL ASSIGNED TO THE DRILL ARE TO BE ADVISED THAT THE SCENARIO NOW REQUIRES THE STATION TO BE IN A SIMULATED BLACKOUT CONDITION. I REPEAT, THE STATION IS NOW IN A SIMULATED BLACKOUT CONDITION. THIS IS A DRILL. THIS IS A DRILL."	IN-PLANT EC	ACTUAL ON-SHIFT OSS		
02:35	10:05		SIM3	*****COMMAND***** CONVEX ACKNOWLEDGES LOSS OF OFFSITE LINES. WILL SEND LOCAL CREW TO INVESTIGATE	SIM EC	SIM SRO		
02:40	10:10 HNP	Operators locally control Aux. Feed-water to all S/Gs and various other Secondary plant manipulations.						
02:45	10:15 HNP	Operators locally dump steam from intact S/Gs.	EOF #1	*****CONTINGENCY***** DECLARE A SITE AREA EMERGENCY POSTURE CODE CHARLIE TWO BASED ON LOSS OF ALL ON-SITE AND OFFSITE POWER FOR > 15 MIN.	EOF EC	DSEO	SSSA	Initiates and transmits the IRF on the Notification system. Verifies off-site call back report. Makes backup calls as necessary.

MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY-- ER (S)	SUMMARY OF ACTIONS
02:50	10:20		SIM #4	*****COMMAND***** CONVEX CALLS AND STATES THAT ITS LOCAL CREW REPORTED THAT THE 1206 LINE IS DAMAGED BEYOND NEAR TERM FIX BUT THE 1772 LINE SEEMS TO BE OK AND WE ARE CHECKING AT THIS TIME	SIM EC	SIM SRO		
03:00	10:30 HNP	Large break LOCA occurs at point of previous leak causing a complete depressurization of the RCS.					SIM Ops crew	Acknowledges that LOCA has occurred.
03:05	10:30 HNP	CONVEX resets 1772 off-site AC line and power is returned. (EVENT #8)	SIM #5	*****COMMAND***** CONVEX CALLS AND REPORTS THAT THE 1772 LINE IS OK AND THEY ARE RE-ENERGIZING IT AT THIS TIME	SIM EC	SIM SRO		
03:10	10:40	Operators line up electrical plant and start HPSI, LPSI, and CAR fans. RCS refill begins. CETs > 1200 degrees, * ECA -0.2 (EVENT #9)						
03:15	10:45 HNP	Radiation Release begins outside Containment. (EVENT #10)					SIM Ops crew	Acknowledges that radiation conditions have changed.

MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY--ER (S)	SUMMARY OF ACTIONS
	10:47		SIM #6	I AM A SECURITY GUARD ASSIGNED TO SWEEP THE CTMT BUILDING AREA. AS I WAS WALKING OUT OF THE PAB, I NOTICED A LOUD NOISE AND ALOT OF STEAM COMING FROM THE HATCH FOR THE PIPE TRENCH. WHAT SHOULD I DO?	BOOTH	SIM. BOARD OPER.		
03:45	11:15 HNP	A General Emergency, Posture Code Alpha is declared. The Shift Supervisor Staff Assistant (SSSA) transmits a new ENRS radiopager message.	ERT EDG 2B #1	<p>*****CONTROLLER NOTE*****</p> <p>CONTROLLER MUST CALL SIM CR BOOTH AT 2554 AND ADVISE BOOTH OPERATOR PRIOR TO ISSUING THE FOLLOWING MESSAGE:</p> <p>*****COMMAND*****</p> <p>EDG 2A CAN BE RETURNED TO SERVICE ANYTIME AFTER THIS POINT AS LONG AS PLAYERS HAVE EARNED THE REPAIR.</p>	ERT EDG 2A EC	ERT EDG 2A	DSEO MPI DSEO	<p>Declares a GENERAL EMERGENCY, posture code Alpha based on loss of three barriers.</p> <p>Prepares a Nuclear Incident Report Form (IRF), obtains DSEO approval.</p> <p>Sounds station annunciation alarm. Provides a brief description of plant conditions over the plant page.</p>
03:45	11:15		EOF #2	<p>*****CONTINGENCY*****</p> <p>DECLARE A GENERAL EMERGENCY POSTURE CODE ALPHA BASED ON LOSS OF THREE BARRIERS.</p>	EOF EC	DSEO	SSSA	<p>Initiates and transmits the IRF on the Notification system.</p> <p>Verifies off-site call back report. Makes backup calls as necessary.</p>

MASTER SCENARIO			CONTROLLER'S MESSAGE				PLAYER'S ACTION	
SCENARIO TIME	CLOCK TIME/ PLACE	KEY EVENT/ FEMA Objective	MSG #	MESSAGE CONTENT	FROM	TO	PLAY--ER (S)	SUMMARY OF ACTIONS
04:05	11:35 HNP	A Breaker for MOV 31 is repaired.	ERT MOV 31 #1	*****CONTROLLER NOTE***** CONTROLLER MUST CALL SIM CR BOOTH AT 2554 AND ADVISE BOOTH OPERATOR PRIOR TO IS- SUING THE FOLLOWING MES- SAGE: *****COMMAND***** THE REPAIR TO THE MOV 31 BREAKER IS COMPLETE.	ERT MOV 31 EC	ERT MOV 31		
04:15	11:45 HNP	If required, fire main can be restored to supply containment spray to reduce CTMT pressure to approx. 0 psig at 12:00. (EVENT #11)						
04:30	12:00 HNP	CTMT pressure is equalized with at- mospheric pressure and the release is diminished. (EVENT #12)	SIM #6	*****COMMAND ***** SIM BOOTH OPERATOR IS TO MAKE CTMT PRESS APPROX. 0 PSIG. AT THIS TIME.	SIM EC	BOOTH CNTLR		
05:30	13:00 All Locations	The Exercise is terminated. (EVENT #13)						

SUCCESS PATH TABLE and SUB SCENARIOS

1994 CONNECTICUT YANKEE EXERCISE

Success Path Table

Activity	Probable Start to Completion Times	Probable Repair/ERT Personnel	Corrective Action Allowed	Scenario Activity
1. EG2 "A" Emergency Diesel Generator.	0700-End	Maintenance	NO	Evaluation Only in "A"EDG Room talk through with controller
2. Annunciator Failure	0745 to >0920 (FREE PLAY)	CRO/Electrician	Yes	Player to Identify location and then proceed to Swgr Room and simulate repair activities with mock up
3. RCS Leak	0915-END	NONE	NO	In Containment
4. EG2 "B" Emergency Diesel Generator.	Upon SI actuation to >1100 (FREE PLAY)	NSO/Mechanic	YES	Evaluation and Repair in the "B" EDG Room talk through with controller.
5. Loss of offsite power	1000 - 1030	CONVEX Control Cell	YES	Messages from Sim Booth Operator to stimulate Play
6. Monitor CET's Locally	Upon loss of power 1000 -1030	1 NSO/ I&C Specialist	YES	Players respond to Swgr Room to simulate taking local readings
7. MOV 31 Breaker	Upon LOCA - 1135	Repair Team	YES	Players respond to Swgr Room/ MCC5 and simulate repair activities with mock up

1994 CONNECTICUT YANKEE EXERCISE

Sub-Scenarios

The following Sub-Scenarios are provided to further describe actions taken in response to specific events.

Primary to Secondary leakage

Postulated small amount of Primary to Secondary leakage in the #4 S/G well below any Tech Spec Limit.

RCS small leak, big leak and large break LOCA

Postulated stress hairline fracture causes small then a major RCS piping failure.

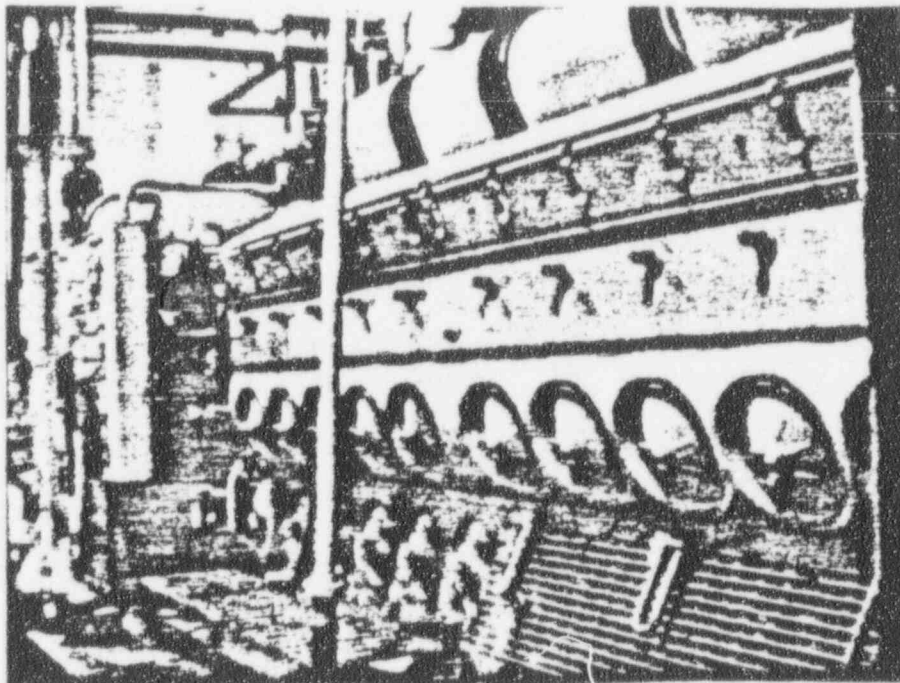
Time/Date	Position/Player	Activity	Response/Cue	Controller Information ONLY
09:15	SS/CRO	Small RCS leak occurs <4gpm leakage.	The control room operations crew will enter and follow AOP 3.2-31.	The Simulator Booth operator activates this malfunction. The simulator will provide all necessary indications to the control room operating crew.
09:55	SS/CRO	RCS leak increases in size > 200gpm.	The control room operations crew will enter and follow	The Simulator Booth operator activates this malfunction. The simulator will provide all necessary indications to the control room operating crew.
10:30	SS/CRO	Large Break LOCA of RCS piping.	The control room operations crew will enter and follow	The Simulator Booth operator activates this malfunction. The simulator will provide all necessary indications to the control room operating crew.

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EG2 "A" Emergency Diesel Generator

"A" Emergency Diesel Generator Out of Service for piston replacement. It is in the 8th hour of a 72 hour Tech Spec Action Statement. Part to be Delivered in approximately 24 hours.

Time/Date	Position/Player	Activity	Response/Cue	Controller Information ONLY
07:30	SS/CRO	Repair of the 2A Emergency Diesel generator will not be allowed in the confines of this drill.	Annunciators: J1-2-2, Diesel Gen. 2A not ready for auto-start. J1-3-3, Diesel Gen. ACB auto-trip. 2A EDG is torn apart repair time >24hrs.	This repairs on hold until new pistons arrive on site. The Simulator Booth operator activates this malfunction. The simulator will provide all necessary indications to the operating crew.



1994 CONNECTICUT YANKEE EXERCISE

Sub-Scenario:

Annunciator Failure

CONTROLLER NOTES: Report all plant operations and equipment recoveries to the Simulator Booth Operator.

Provide to the player underlined information contained in the "Response/Cue" column only when earned.

Time/Date	Position/Player	Activity	Response/Cue	Controller Information ONLY
≈07:45	CRO	Annunciators: J1-2-2, Diesel Gen. 2A not ready for auto-start. J1-3-3, Diesel Gen. ACB auto-trip Annunciator lights go out.	The control room operators go to back of Main Control Board and investigate.	The Simulator Booth operator manually causes the Annunciators to fail.
≈07:47	CRO		The control room operations crew acknowledges no alarm annunciators.	
≈08:00	SS/DO/SSSA	Classify Event and Notify Organization	Send ENRS message	
≈08:15	SS	Needs Electricians to investigate loss of Annunciators.	Call in Electricians	
≈09:00 to 09:20	SS/OSC	Dispatches repair team to investigate Loss of Annunciators.	"A" side = Annunciator can Failure "B" side = Annunciator Breaker failure.	Report to the Simulator Booth operator when all repairs have been completed.
≈09:20 (FREE PLAY NOT TO BE COMPLETED PRIOR TO 09:20)	Repair Team	Reports repairs to the Annunciators are complete.	Annunciators returned to service	The Simulator Booth operator manually causes the Annunciators to work.

1994 CONNECTICUT YANKEE EXERCISE

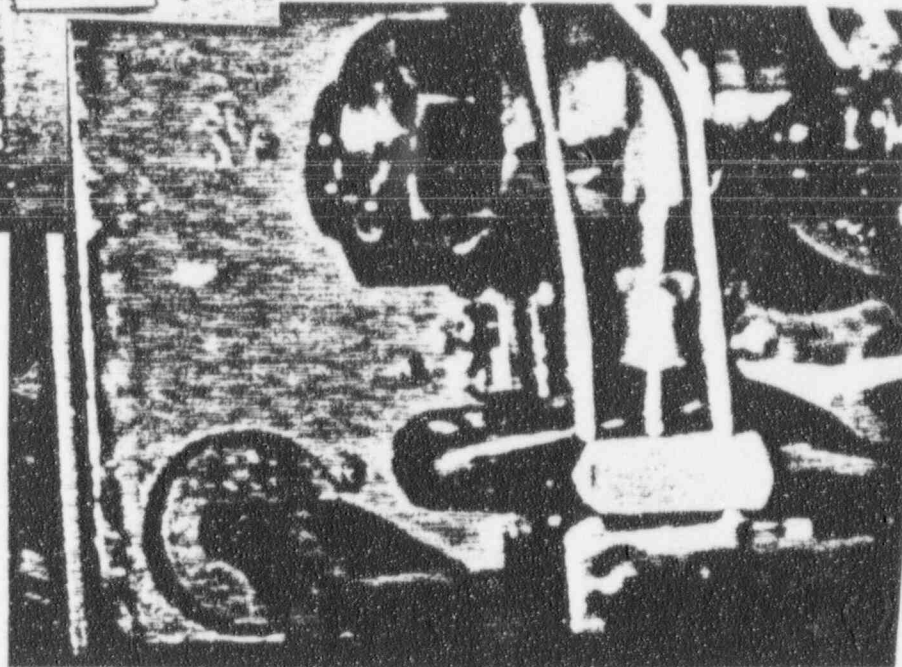
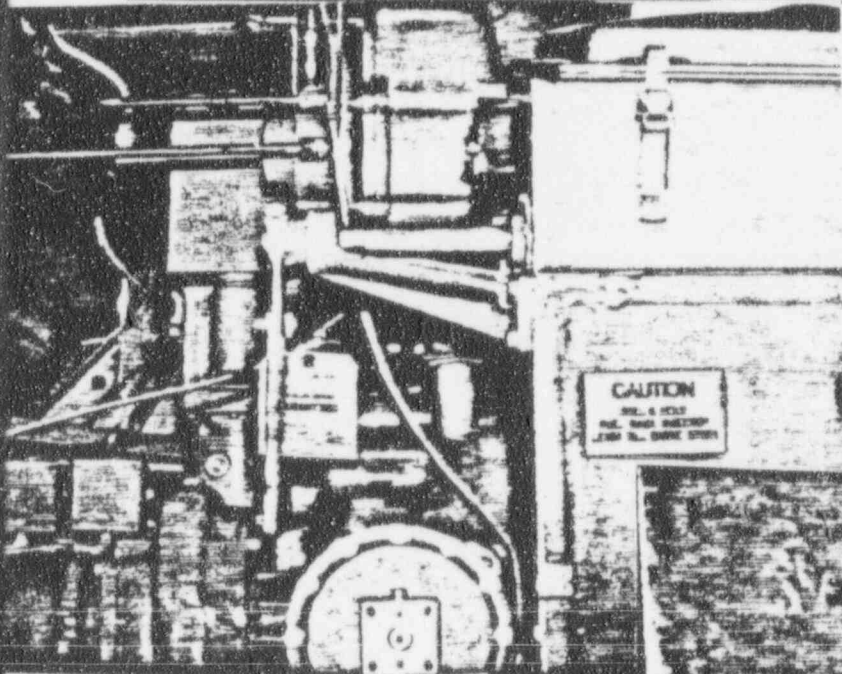
EG2 'B' Emergency Diesel Generator Failure

All appears normal at start of exercise. EG2B fails to come up to speed upon Safety Injection (SI). The fuel rack control rod is sheared in two just where it penetrates the inside the valve cover area.

Time/Date	Position/Player	Activity	Response/Cue	Controller Information ONLY
≈09:55	CRO	2B Emergency Diesel Generator not running.	The control room operations send NSO to investigate.	The Simulator Booth operator inserts a malfunction to cause the 2B Emergency Diesel Generator to fail to start.
≈09:55	CRO	Alarm annunciator J1-2-7, Diesel Gen. 2B not ready for Auto-start, actuates.	The control room operations crew acknowledges the alarm.	
≈10:00	CRO	Directs NSO to the 2B EDG to investigate.	NSO acknowledges.	
≈10:02	NSO	Proceeds to the 2B EDG room and investigates.	The EDG is not running	
≈10:00 to >11:00	OSC	Dispatches repair team to investigate and repair the 2B EDG.	The 2B Emergency Diesel Generator fuel rack control rod broke.	
≈10:20	Repair Team	Initiates tagout and repairs to the 2B EDG.	Hangs tags, obtains a replacement fuel rack control rod and repair.	

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>11:00	Repair Team	Reports repairs to the 2B EDG are complete.	OSC/CRO acknowledges.	Report to the Simulator Booth operator when all repairs have been completed.
>11:00	CRO	2B EDG is started and loaded if necessary.	Simulator provides all appropriate indications.	



NOTE: Pictures are for reference only. They do not reflect scenario conditions. Controllers will provide that information.

1994 CONNECTICUT YANKEE EXERCISE

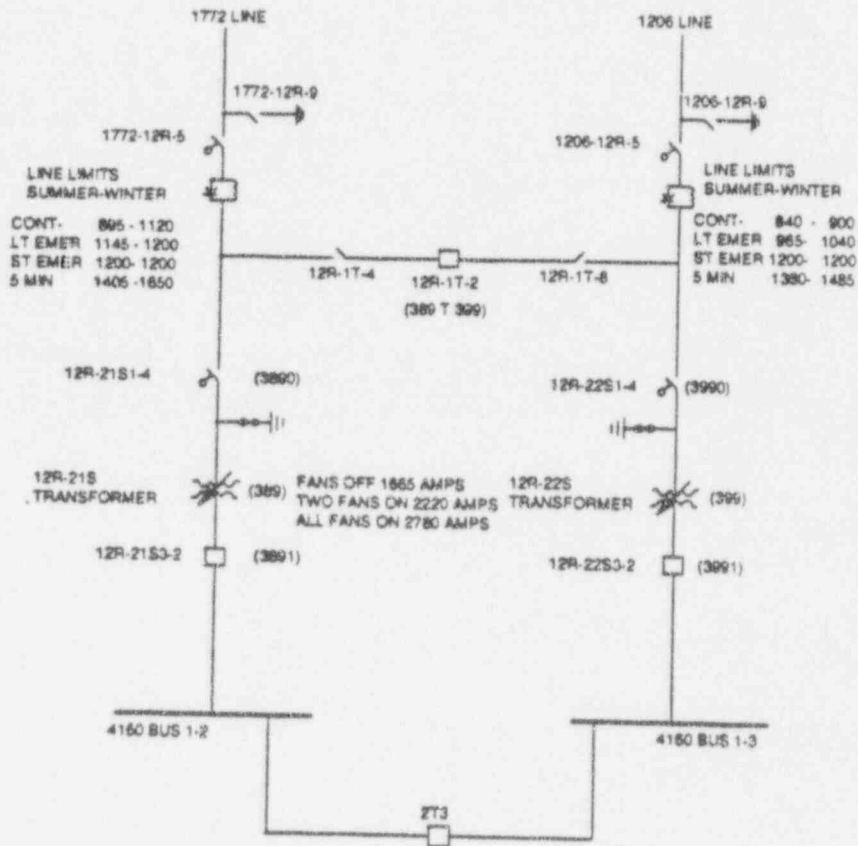
Loss of all Off-Site AC

All offsite AC is lost when a fisherman inadvertently swerves off the road and crashes into the 1206 incoming line this in turn causes the 1772 incoming line to trip off the line. The fisherman is not hurt in the accident. CONVEX must send a local crew out to determine the extent of damage.

Time/Date	Position/Player	Activity	Response/Cue	Controller Information ONLY
-10:00	SS/CRO	Loss of offsite power.	Control room operations crew follows EOP in response to the Loss of Offsite Power.	Offsite Power is lost due to a motor vehicle knocking down the 1206 line and the 1772 also trips but is undamaged this causes the power loss. The Simulator Booth operator inserts a malfunction to cause a station blackout.
10:05	CONVEX	Investigates cause.	Acknowledges loss of the 1206 and the 1772lines	
≈10:20	CONVEX	Reports status of the 1206 and the 1772lines	Reports back to Control Room that local crew is at power lines and reports that 1206 line broken but 1772 line appears O.K.	Operators relay Offsite power status to EOF.
10:30	CONVEX	Returns power to 1772 line	Reports to Control Room that the 1772 line is re-energized.	Operators begin restoring power to plant.

1994 CONNECTICUT YANKEE EXERCISE

CY 115 KV SYSTEM

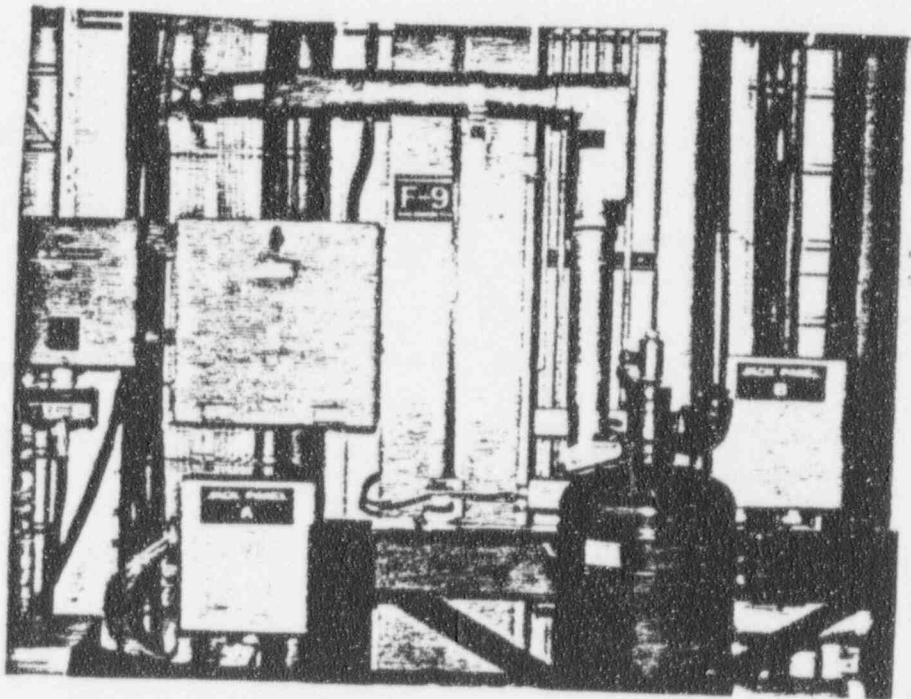


NOTE: Pictures are for reference only. They do not reflect scenario conditions. Controllers will provide that information

1994 CONNECTICUT YANKEE EXERCISE

Loss of all Off-Site AC

During the blackout Core Exit Thermocouple readings are not available in the control room but operations may send person to the "A" switchgear to manually take the readings.

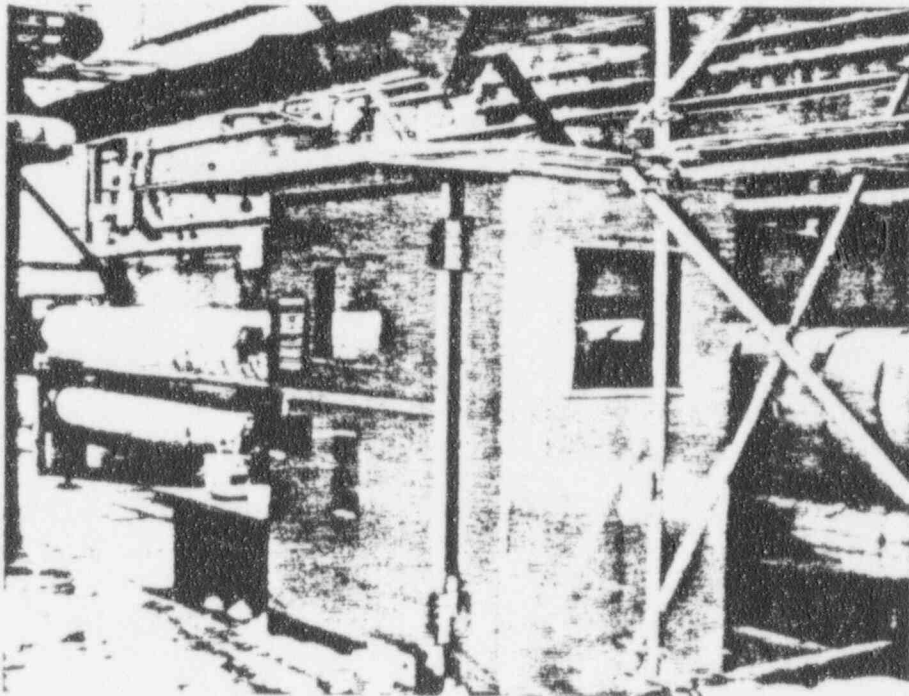


NOTE: Pictures are for reference only. They do not reflect scenario conditions. Controllers will provide that information

1994 CONNECTICUT YANKEE EXERCISE

Radiation Release Path

A service steam line from the Primary Auxiliary Building fails inside Containment and causes a weakened pipe cap on the same line in the West Pipe Trench to fail.



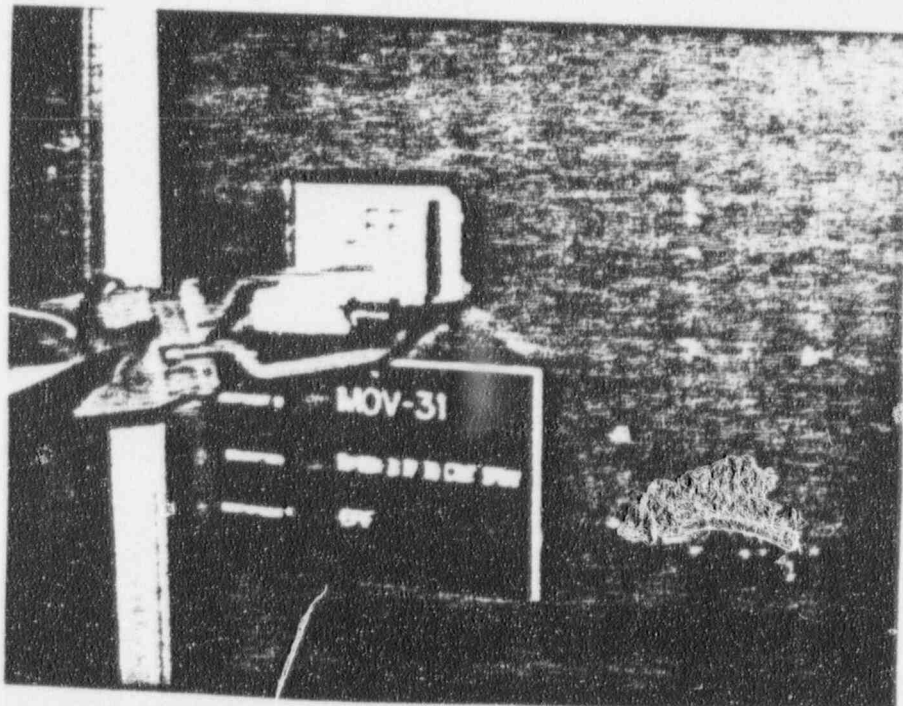
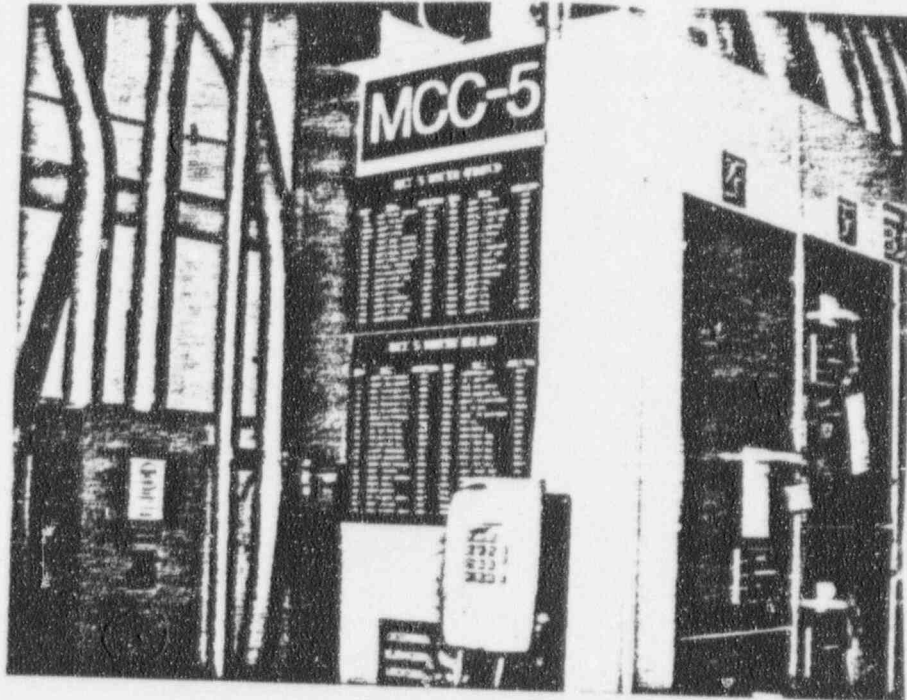
NOTE: Pictures are for reference only. They do not reflect scenario conditions. Controller will provide that information.

1994 CONNECTICUT YANKEE EXERCISE

MOV 31 failure

MOV 31 Firemain to Containment Spray valve breaker fails whenever Control Room Operators try to operate it. Do to the location of the valve (East Pipe Trench) right next to the release point the priority will be to repair or replace the damaged breaker rather than locally operate the valve manually

Time/Date	Position/Player	Activity	Response/Cue	Controller Information ONLY
≈10:30	CRO	When Control Room Operators try and use MOV - 31 will not indicate open		The Simulator Booth operator inserts a malfunction to cause MOV31 to fail to open.
≈10:35	NSO	Directs NSO to MCC 5 to investigate MOV 31 breaker status.	NSO acknowledges.	
≈10:40	NSO	Proceeds to the Switchgear room and investigates.		
≈10:42	NSO	Investigates "B"EDG		
≈10:45	NSO	Reports problem with MOV 31.	Recipient acknowledges.	
≈11:00	NSO/Repair Team	Investigates cause of loss of MOV31 breaker.		
≈11:35	NSO/Repair Team	Repair/replace MOV 31 Breaker.		Report to the Simulator Booth operator when all repairs have been completed.
≈11:35	NSO	Report back MOV 31 breaker is repaired and ready to go.	OSC/CRO acknowledges.	
≈11:45	CRO	Opens MOV 31 and Starts Spray of CTMT.	MOV 31 Breaker available to operate	Simulator provides all appropriate indications.



NOTE: Pictures are for reference only. They do not reflect scenario conditions. Controllers will provide that information

1994 CONNECTICUT YANKEE EXERCISE

Sub-Scenario:

Nuclear System Operator(s) Activities

CONTROLLER NOTES:

Report all variant operations and equipment recoveries to the Simulator Booth Operator.

Provide to the player underlined information contained in the "Response/Cue" column only when earned.

Time/Date	Position/Player	Activity	Response/Cue	Controller Information ONLY
≈09:56	CRO	Directs NSO to the 2B EDG to investigate.	NSO acknowledges.	
≈09:57	NSO	Proceeds to the 2B EDG room and investigates.		
≈09:56	NSO	Investigates "B"EDG		
≈10:00	NSO	Reports the 2B EDG is shutdown.	Recipient acknowledges.	
≈10:05	NSO/I&C Tech.	Initiates reading of CET temperatures locally at the input to the ICCS.	Reports CET temperatures as cued	Coordinate all CET temperature provided (cued) to the player(s) with the Simulator Booth Operator.
≈10:05	NSO/Repair Team	Investigates cause of loss of offsite power.		Recovery time will exceed the duration of the exercise.
≈10:15	NSO	Isolate RCP seals as directed by the CRO.	<u>The RCP seals are isolated.</u>	Report all valves operated to the Simulator Booth Operator.
≈10:15	NSO	Throttle Feedwater locally as directed by the CRO. DUMP STEAM	<u>Feed water is being throttled.</u> <u>LINE UP TO DUMP STEAM IS SET.</u>	Coordinate all feedwater throttling manipulations with the Simulator Booth operator.
≈10:15	NSO	Secure various electrical loads as directed by the CRO.	<u>Electrical loads are secured.</u>	Report all loads secured to the Simulator Booth operator.

E.1 Plant Parametric Data

E.2 Radiation Monitoring System Data

In-Plant Radiological Data

Location	R-11 Containment Particulate	R-12 Containment Gas	R-14A Main Stack Gas (Low Range)	R-14B Main Stack Gas (Wide Range)	R-15 Air Ejector Gas	R-16 Steam Generator Blowdown	R-17 Component Cooling Water	R-18 River Effluent	R-19 Spent Fuel Pool SW
Type	PAR,2nd,East	PAR,2nd,East	PAR,2nd,East	PAR,1st	Trbo,2nd,East	PAR,2nd,East	PAR,2nd,West	PAR,1st,West	SF Bldg 1st
Shielding	Scintillation	GM Tube	GM Tube	Scintillation	GM Tube	Scintillation	Scintillation	Scintillation	Scintillation
Range	Cermet Block 10-10 ⁻⁶ CPM	Cermet Block 10-10 ⁻⁶ CPM	10-10 ⁻⁶ CPM	10 ⁻⁷ -7.10 ⁻⁵ uCi/cc	None 10-10 ⁻⁶ CPM	5 in. lead 10-10 ⁻⁶ CPM	1 in. lead 10-10 ⁻⁶ CPM	10 in. lead 10-10 ⁻⁶ CPM	5 in. lead 10-10 ⁻⁶ CPM
Alert Setpoint									
Alarm Setpoint	-7000-8000 CPM	-18000 CPM	300 CPM	3700 uCi/cc	-7000-8000 CPM	-650-750 CPM	-2000 CPM	-400-450 CPM	-3000 CPM
Normal Reading	-3000-4000 CPM	-9000 CPM	-100-200 CPM	-300-500uCi/cc	-3000-3500 CPM	-30-300 CPM	-700-800 CPM	-200-220 CPM	-1700 CPM
07:30 EVENT 1 START OF EXERCISE	3000	9000	100	40	3000	30	700	200	1700
07:45 EVENT 2 LOSS OF ANNUNCIATORS	3000	9000	100	40	3000	30	700	200	1700
08:00 EVENT 3 ALERT NOTIFICATION	3000	9000	100	40	3000	30	700	200	1700
09:15 EVENT 4 SM RCS LEAK	200,000	200,000	100	40	3000	30	700	200	1700
09:55 EVENT 6 RCS LEAK INCREASES	>1 MEG	>1 MEG	100	40	3000	30	700	200	1700
10:00 EVENT 7 LOSS OF ALL POWER	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW
10:30 EVENT 8 LARGE LOCA	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW
10:31 -10:40 EVENT 9	> 1MEG	>1 MEG	200	300	1000	500	700	300	1700
10:40 EVENT 10 RAD RELEASE	> 1MEG	>1 MEG	1000	500	3000	800	1000	500	2000
11:45 EVENT 11 RAD RELEASE DIMINISHING	> 1MEG	>1 MEG	800	400	2000	600	800	400	1900
12:00-13:00 EVENT 12-13	> 1MEG	>1 MEG	100	100	100	50	700	200	1700

In-Plant Radiological Data

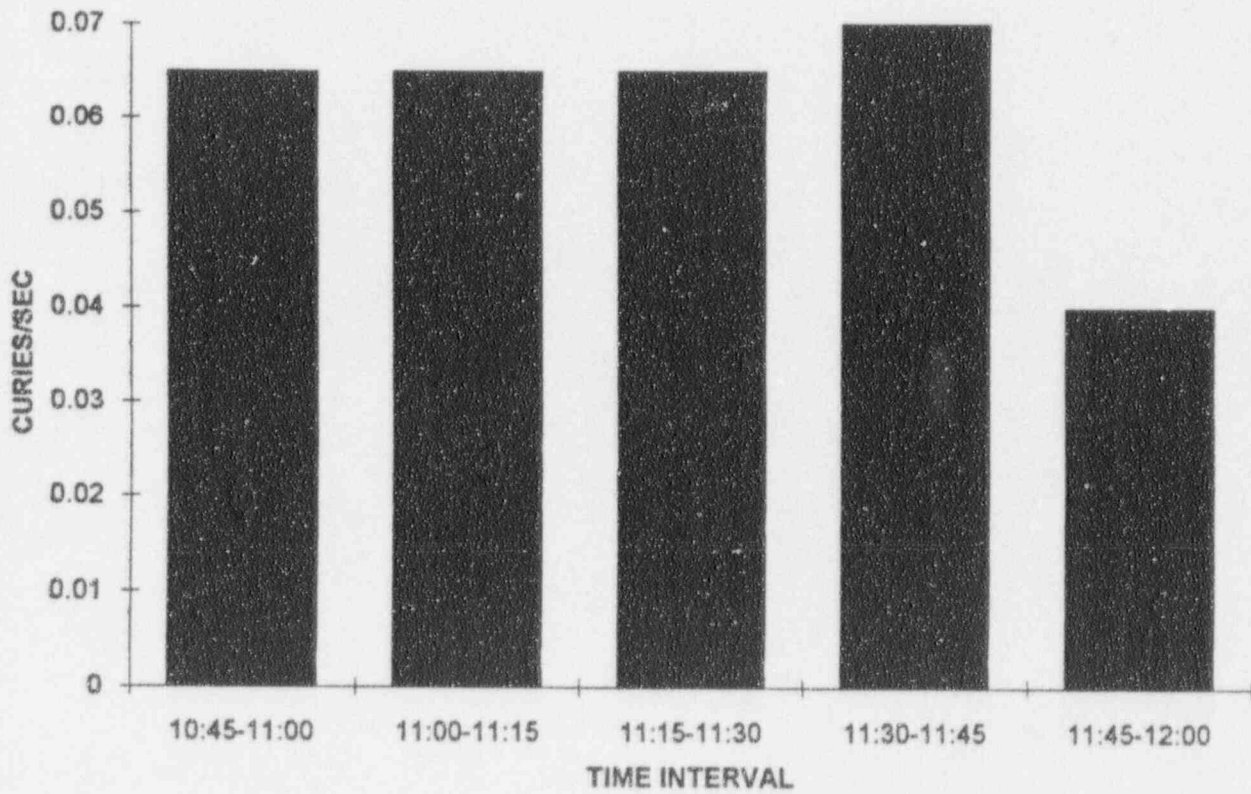
	R-20 RCS Gross Activity (Letdown)	R-21 CCW From Waste Gas Compressors	R-22 Waste Test Tank Effluent Monitor	CD-1 Wide Range Post Accident	CD-2 Wide Range Post Accident	R-31 Manipulator Crane	R-32 Containment Charging Floor	R-33 Spent Fuel Bldg: Decon Room
Location	PAB,1st,East	Waste Bldg 3rd	PAB,1st,East	CTMT Chg Flr	CTMT Chg Flr	Crane	Xfer Canal	SF,mdl,lvl
Type	Scintillation	Scintillation	Scintillation	Ion Chamber	Ion Chamber	GM Tube	GM Tube	GM Tube
Shielding	None	5 in. lead						
Range	10-10 ⁶ CPM	10-16 ⁶ CPM		1-10 ⁸ R/hr	1-10 ⁸ R/hr	1-10 ⁴ mr/hr	1-10 ⁴ mr/hr	.01-100 mr/hr
Alert Setpoint			NOT IN	5 R/hr	5 R/hr			
Alarm Setpoint	~300K CPM	~800 CPM	OPERATION	10 R/hr	10 R/hr	200-220 mr/hr	80 mr/hr	15 mr/hr
Normal Reading	~100-130K CPM	~300 CPM		1-2 R/hr	1-2 R/hr	70 mr/hr	15 mr/hr	3 mr/hr
07:30 EVENT 1 START OF EXERCISE	100	300	NORMAL	0	0	70	15	3
07:45 EVENT 2 LOSS OF ANNUNCIATORS	100	300	NORMAL	0	0	70	15	3
08:00 EVENT 3 ALERT NOTIFICATION	100	300	NORMAL	0	0	70	15	3
09:15 EVENT 4 SM RCS LEAK	100	300	NORMAL	0	0	200	200	3
09:55 EVENT 6 RCS LEAK INCREASES	100	300	NORMAL	0	0	300	300	3
10:00 EVENT 7 LOSS OF ALL POWER	FAIL LOW	FAIL LOW	FAIL LOW	5	5	FAIL LOW	FAIL LOW	FAIL LOW
10:30 EVENT 8 LARGE LOCA	FAIL LOW	FAIL LOW	FAIL LOW	10	10	FAIL LOW	FAIL LOW	FAIL LOW
10:31 - 10:40 EVENT 9	800	300	NORMAL	500	500	>10e4	>10e4	3
10:45 EVENT 10 RAD RELEASE	1000	500	NORMAL	500	500	>10e4	>10e4	8
11:45 EVENT 11 RAD RELEASE DEMINISHING	800	400	NORMAL	500	500	>10e4	>10e4	5
12:00-13:00 EVENT 12-13	100	300	NORMAL	500	500	>10e4	>10e4	3

In-Plant Radiological Data

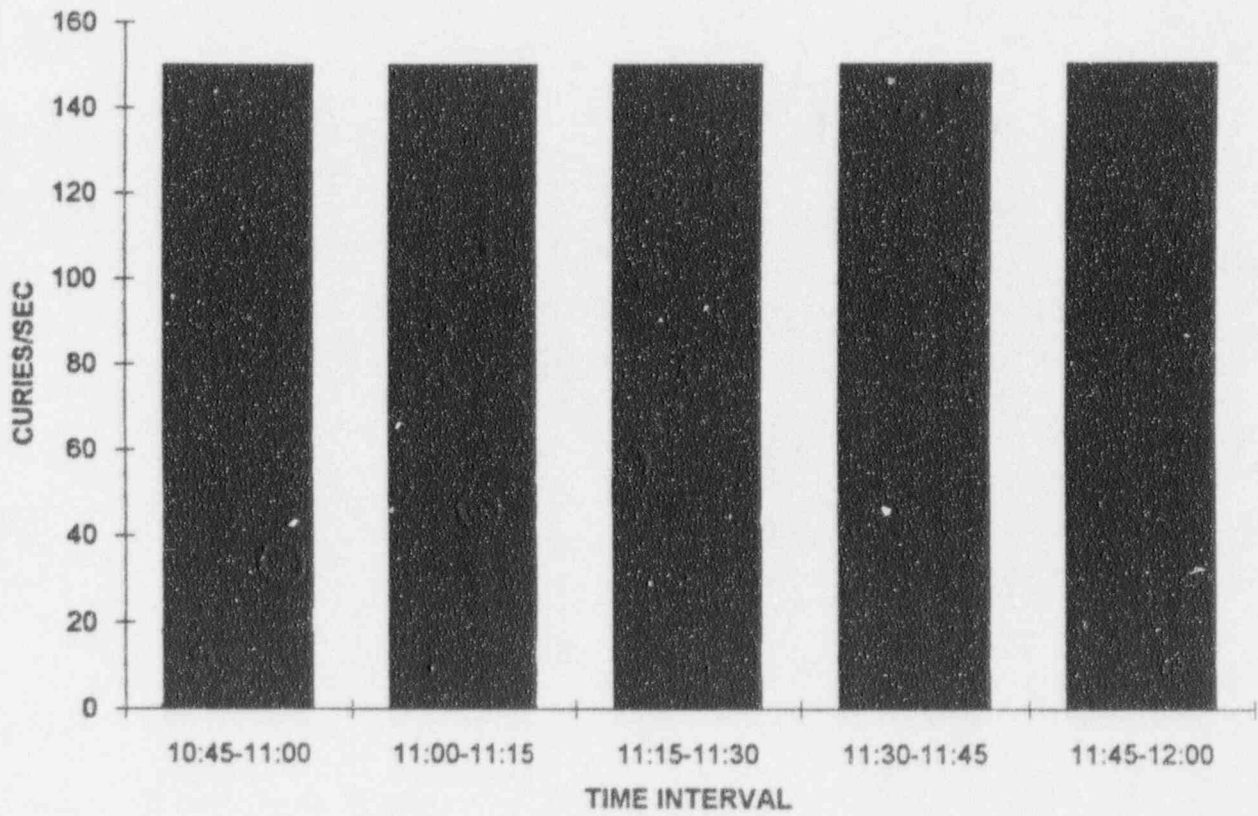
	R-35 RHFR Flr (PAB passageway)	R-36 Sample Room	R-37 Containment Hatch	R-38 Radwaste Bldg: Gas Compressor	R-39 Radwaste Bldg: Evaporator Bottoms	R-40 Radwaste Bldg: Gas Storage
Location	PAB 1st Flr GM Tube	PAB 1st Flr GM Tube	CTMT Pers Hatch Ion Chamber	Upper Lvl GM Tube	Lower Lvl GM Tube	Lower Lvl GM Tube
Type						
Shielding						
Range	.01-100 m/hr	.01-100 m/hr	1-1000 R/hr	0-10 ³ m/hr	0-10 ³ m/hr	0-10 ³ m/hr
Alert Setpoint						
Alarm Setpoint	10 m/hr	3 m/hr	10 R/hr	10 m/hr	50 m/hr	70-80 m/hr
Normal Reading	1 m/hr	.3 m/hr	<1 R/hr	.6 m/hr	10 m/hr	2-3 m/hr
07:30 EVENT 1 START OF EXERCISE	0	0	0	.6	10	3
07:45 EVENT 2 LOSS OF ANNUNCIATORS	0	0	0	.6	10	3
08:00 EVENT 3 ALERT NOTIFICATION	0	0	0	.6	10	30
09:15 EVENT 4 SML RCS LEAK	0	0	0	.6	10	3
09:55 EVENT 6 RCS LEAK INCREASES	0	0	0	.6	10	30
10:00 EVENT 7 LOSS OF ALL POWER	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW
10:30 EVENT 8 LARGE LOCA	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW	FAIL LOW
10:31-10:40 EVENT 9	80	100	50	.6	10	3
10:40 EVENT 10 RAD RELEASE	100	200	50	.8	20	8
11:45 EVENT 11 RAD RELEASE DIMINISHING	90	100	50	.7	10	5
12:00 - 13:00 EVENT 12-13	5	10	50	.6	10	3

E.3 Radiological Release Data

IODINE RELEASE RATES FOR THE 1994 CY EXERCISE



NOBLE GAS RELEASE RATE FOR THE 1994 CY EXERCISE



E.4 In-Plant Radiological Survey Data

E.5 On-Site Field Monitor Data

E.6 Off-Site Field Monitor Data

E.7 Meteorological Data

HH:MM CLOCK TIME	JUL DAY	AT033 (C)	WD033 (DEG)	WS033 (M/S)	WD196 (DEG)	WS196 (M/S)	ΔT120 (C)	ΔT196 (C)	SC 120	SC 196	DWD 033	DWD 196	DV 196
0600	134	19.7	233.2	1.4	217.0	3.5	0.4	-0.3	F/S	D/N	NE	NE	313.0
0615	134	19.6	246.5	1.4	217.0	3.6	0.4	-0.3	F/S	D/N	ENE	NE	313.0
0630	134	19.1	225.4	1.4	227.0	3.8	0.4	-0.3	F/S	7/N	NE	NE	299.6
0645	134	18.6	217.0	1.4	221.3	4.6	0.4	-0.3	F/S	D/N	NE	NE	452.6
0700	134	18.6	218.6	1.4	217.0	4.8	0.4	-0.3	F/S	D/N	NE	NE	120.4
0715	134	18.6	214.4	1.4	214.9	4.8	0.4	-0.3	F/S	D/N	NE	NE	122.5
0730	134	18.8	208.5	1.6	216.0	5.1	0.4	-0.4	F/S	D/N	NNE	NE	118.1
0745	134	19.8	220.1	1.9	220.1	5.1	0.3	-0.5	E/S	D/N	NE	NE	230.9
0800	134	20.1	222.8	1.8	227.5	4.6	0.3	-0.5	E/S	D/N	NE	NE	375.8
0815	134	20.5	227.5	1.6	221.8	4.5	0.3	-0.5	E/S	D/N	NE	NE	424.9
0830	134	20.8	251.8	1.8	232.8	4.3	0.3	-0.5	E/S	D/N	ENE	NE	359.6
0845	134	20.8	223.9	2.3	226.5	5.8	0.3	-0.5	E/S	D/N	NE	NE	272.5
0900	134	20.9	232.3	2.1	234.4	6.1	0.3	-0.5	E/S	D/N	NE	NE	222.3
0915	134	22.6	220.1	1.9	224.4	5.5	0.3	-0.5	E/S	D/N	NE	NE	205.6
0930	134	21.9	214.4	1.9	219.6	5.1	0.4	-0.4	F/S	D/N	NE	NE	225.3
0945	134	22.0	217.0	1.8	218.6	4.6	0.1	-0.6	E/N	D/N	NE	NE	234.1
1000	134	21.5	217.0	2.1	221.8	5.9	0.3	-0.5	E/S	D/N	NE	NE	169.5
1015	134	21.0	209.1	2.4	218.0	5.6	0.3	-0.5	E/S	D/N	NE	NE	112.0
1030	134	20.9	220.1	1.8	227.0	4.8	0.1	-0.6	E/N	D/N	NNE	NE	314.9
1045	134	20.8	223.9	1.9	224.4	5.4	0.1	-0.6	E/N	D/N	NE	NE	174.5
1100	134	20.8	219.1	1.5	219.6	4.1	0.1	-0.6	E/N	D/N	NE	NE	195.4
1115	134	20.9	219.1	1.5	231.3	3.8	0.0	-0.8	E/N	D/N	NE	NE	433.5
1130	134	20.9	214.3	1.5	227.5	3.3	0.0	-0.8	E/N	C/N	NE	NE	250.1
1145	134	21.0	227.3	1.3	232.8	3.4	0.0	-0.9	E/N	C/N	NE	NE	203.9
1200	134	21.0	210.1	1.3	222.3	3.3	0.0	-0.9	E/N	B/U	NE	NE	112.3
1215	134	22.9	223.9	1.5	229.1	3.8	0.0	-0.8	E/N	B/U	NNE	NE	195.3
1230	134	23.1	224.4	1.6	229.6	3.8	-0.1	-1.0	E/N	C/U	NE	NE	168.6
1245	134	23.9	217.0	1.6	219.6	3.8	-0.3	-1.1	E/N	A/U	NE	NE	240.3
1300	134	24.0	219.1	1.3	226.0	3.4	0.0	-0.9	D/N	A/U	NE	NE	285.5
1315	134	24.5	214.3	1.4	228.6	3.8	0.1	-0.8	E/N	B/U	NE	NE	195.6
1330	134	26.8	217.5	2.0	230.1	5.8	0.6	-0.3	E/N	C/N	NE	NE	168.6
1345	134	26.9	218.0	2.6	225.4	6.4	0.5	-0.3	F/S	D/N	NE	NE	130.9
1400	134	26.3	224.9	2.5	231.3	4.5	0.6	-0.1	F/S	D/N	NE	NE	218.6

E.8 Chemistry Data

REACTOR COOLANT DATA

0700

<u>Hot Leg (Rx) Liquid</u>		<u>Hot Leg (Rx) Flashed Gas</u>	
I-131	4.336E-03 uCi/ml	Xe-133	3.401E+00 uCi/cc
Xe-133	1.629E-01 uCi/ml	Kr-85M	2.079E-01 uCi/cc
Kr-85M	6.930E-03 uCi/ml	Xe131M	6.549E-01 uCi/cc
Kr-88	1.495E-02 uCi/ml	Kr-88	3.690E-01 uCi/cc
Xe-135	7.635E-02 uCi/ml	Xe-133M	7.316E-02 uCi/cc
I-135	7.754E-02 uCi/ml	Xe-138	4.806E-01 uCi/cc
I-133	3.522E-02 uCi/ml	Xe-135	1.093E+00 uCi/cc
I-132	7.913E-02 uCi/ml	Kr-87	3.393E-01 uCi/cc
I-134	1.00 E-01 uCi/ml	Xe-137	1.776E-01 uCi/cc
		Xe-135M	1.228E-01 uCi/cc
		Ar-41	4.164E-02 uCi/cc

Total Gamma Activity: 6.279E-01 uCi/ml

Boron Concentration: 450 ppm

Hydrogen: 32 cc/kg

Sample Temperature: 70°F

pH: 6.5

Dissolved O₂: 0

Chloride: < 20 ppb

Fluoride: < 20 ppb

H₂: 1.831 uCi/ml

CHEMISTRY SAMPLE DATA

11:00 (Post Large break LOCA)

Hot Leg (Rx) Liquid			Hot Leg (Rx) Flashed Gas		
I-131	1.08 E-1	uCi/ml	Xe-133	85	uCi/cc
Xe-133	4.07	uCi/ml	Kr-85M	5.2	uCi/cc
Kr-85M	1.73 E-1	uCi/ml	Xe-131M	16.4	uCi/cc
Kr-88	3.74 E-1	uCi/ml	Kr-88	9.2	uCi/cc
Xe-135	1.91	uCi/ml	Xe-133M	1.83	uCi/cc
I-135	1.94	uCi/ml	Xe-138	12.0	uCi/cc
I-133	8.8 E-1	uCi/ml	Xe-135	27.3	uCi/cc
I-132	1.98	uCi/ml	Kr-87	8.48	uCi/cc
I-134	3.9	uCi/ml	Xe-137	4.44	uCi/cc
			Xe-135M	3.07	uCi/cc
			Ar-41	1.04	uCi/cc

Sample zone & point	Survey Meter Readings		Background cpm	Iodine Sample Readings	
	Open (p+γ) mR/hr	Closed (γ) mR/hr		Sample ccpm	I-131 Conc Partic Filter Ci/m ³ ccpm
Centerline 0.3mi	8800	4400	*****	*****	*****
Centerline 0.5mi	4660	2330	*****	*****	*****
Yellow	>1000	>1000	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a
A 1.1	1.2	1.2	3709	0	0
A 2.1	0.0	0.0	100	0	0
B 3.2	0.0	0.0	100	0	0
C 2.1	0.0	0.0	103	0	0
D 2.1	0.0	0.0	149	0	0
D 2.2	0.0	0.0	101	0	0
E 2.1	0.0	0.0	102	0	0
H 1.1	0.0	0.0	129	0	0
J 1.1	0.0	0.0	188	0	0
K 1.1	0.0	0.0	231	0	0
L 1.1	0.0	0.0	217	0	0
L 2.1	0.0	0.0	100	0	0
M 1.1	0.0	0.0	136	0	0
M 2.1	0.0	0.0	102	0	0
N 1.1	0.0	0.0	112	0	0
N 2.1	0.0	0.0	101	0	0
P 2.1	0.0	0.0	106	0	0
Q 1.1	0.8	0.8	2488	0	0
R 1.1	0.0	0.0	249	0	0
R 2.1	0.0	0.0	106	0	0

Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr = background)
 LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr = background)
 LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr = background)
 ***** = Off scale high
 0.0 indicates as read on meter

Sample zone & point	Survey Meter Readings		Background cpm	Iodine Sample Readings		
	Open ($\beta + \chi$) mR/hr	Closed (χ) mR/hr		Sample ccpm	Ci/m**3	Conc Partic Filter cc/pm
Centerline 0.3mi	3600	1800	*****	*****	1.89E-06	*****
Centerline 0.5mi	2030	1020	*****	*****	7.59E-07	*****
Centerline 1.0mi	1020	512	*****	95910	2.31E-07	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	1.5	1.5	4654	0	0	0
A 2.1	0.0	0.0	107	0	0	0
B 3.1	0.0	0.0	101	0	0	0
B 3.2	0.0	0.0	187	0	0	0
C 2.1	6.7	6.7	20185	969	2.33E-09	*****
D 2.1	0.2	0.2	811	0	0	0
D 2.2	0.0	0.0	123	0	0	0
E 2.1	0.0	0.0	108	0	0	0
H 1.1	0.0	0.0	128	0	0	0
J 1.1	0.0	0.0	184	0	0	0
K 1.1	0.0	0.0	226	0	0	0
L 1.1	0.0	0.0	213	0	0	0
L 2.1	0.0	0.0	100	0	0	0
M 1.1	0.0	0.0	135	0	0	0
M 2.1	0.0	0.0	102	0	0	0
N 1.1	0.0	0.0	111	0	0	0
N 2.1	0.0	0.0	101	0	0	0
P 2.1	0.0	0.0	105	0	0	0
Q 1.1	0.8	0.8	2413	0	0	0
R 1.1	0.1	0.1	276	0	0	0
R 2.1	0.0	0.0	111	0	0	0

Notes: LLD for an RO-2A is 2.0 mR/hr (< 2.0 mR/hr = background)

LLD for an RO-2 is 0.2 mR/hr (< 0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (< 0.04 mR/hr = background)

***** = Off scale high

0.0 indicates as read on meter

Iodine Sample Readings

Survey Meter Readings

(P+δ)

Sample zone & point

Sample zone & point	Survey Meter Readings mR/hr	Closed mR/hr	Background dpm	Sample ccpm	I-131 Conc Ci/m ³	Pertic Filter ccpm
Centerline 0.3mi	3460	1730	*****	*****	1.97E-06	*****
Centerline 0.5mi	1950	978	*****	*****	7.89E-07	*****
Centerline 1.0mi	923	462	*****	80364	2.14E-07	*****
Centerline 2.0mi	438	219	*****	24785	6.60E-08	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	5.0	2.5	7675	0	1.10E-14	36267
A 2.1	0.0	0.0	124	0	0.00E+00	0
B 3.1	0.0	0.0	160	0	1.43E-13	*****
B 3.2	6.5	3.2	9772	351	9.35E-10	*****
C 2.1	108	108	*****	12439	3.31E-08	*****
C 4.1	0.0	0.0	115	0	4.60E-14	*****
C 4.2	0.0	0.0	102	0	0	0
D 2.1	0.1	0.1	477	0	4.28E-15	14114
D 2.2	0.0	0.0	117	0	0	0
D 3.1	0.0	0.0	100	0	0	0
D 4.1	0.0	0.0	100	0	0	0
E 2.1	0.0	0.0	105	0	0	0
H 1.1	0.0	0.0	125	0	0	0
J 1.1	0.0	0.0	178	0	0	0
K 1.1	0.0	0.0	220	0	0	0
L 1.1	0.0	0.0	209	0	0	0
L 2.1	0.0	0.0	100	0	0	0
M 1.1	0.0	0.0	134	0	0	0
M 2.1	0.0	0.0	102	0	0	0
N 1.1	0.0	0.0	112	0	0	0
N 2.1	0.0	0.0	101	0	0	0
P 2.1	0.0	0.0	106	0	0	0
Q 1.1	0.9	0.9	2726	0	0	0
R 1.1	0.1	0.1	357	0	0	0
R 2.1	0.0	0.0	118	0	0	0

Survey Meter Readings
(β + γ)
Closed
mR/hr

Iodine Sample Readings

1130 - 1143

Sample zone & point	Survey Meter Readings (β + γ) mR/hr	Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Cl/m**3	Partic Filter ccpm
Centerline 0.3mi	1900	951	*****	*****	9.21E-07	*****
Centerline 0.5mi	983	492	*****	*****	3.34E-07	*****
Centerline 1.0mi	418	209	*****	28238	8.22E-08	*****
Centerline 2.0mi	215	108	*****	10,665	3.11E-08	*****
Centerline 3.0mi	117	58.8	*****	5,317	1.55E-08	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	1.4	0.7	2142	0	1.18E-13	*****
A 2.1	0.0	0.0	108	0	3.38E-15	11151
B 3.1	0.0	0.0	144	1	3.04E-12	*****
B 3.2	5.0	2.5	7597	239	6.95E-10	*****
B 4.1	0.0	0.0	100	0	5.80E-18	19143
B 5.1	0.0	0.0	109	0	7.98E-13	*****
C 2.1	209	106	*****	10620	3.09E-08	*****
C 4.1	31	16	46750	1403	4.08E-09	*****
C 4.2	13	7	20329	607	1.77E-09	*****
D 2.1	0.4	0.2	741	8	1.86E-11	*****
D 2.2	0.0	0.0	146		2.73E-14	90222
D 3.1	0.0	0.0	102	0	1.15E-14	39082
D 4.1	0.0	0.0	113	0	1.20E-12	*****
E 2.1	0.0	0.0	115	0	0	0
F 2.1	0.0	0.0	100	0	0	0
H 1.1	0.0	0.0	133	0	0	0
J 1.1	0.0	0.0	193	0	0	0
K 1.1	0.0	0.0	231	0	0	0
L 1.1	0.0	0.0	214	0	0	0
L 2.1	0.0	0.0	100	0	0	0
M 1.1	0.0	0.0	134	0	0	0
M 2.1	0.0	0.0	102	0	0	0
N 1.1	0.0	0.0	111	0	0	0
N 2.1	0.0	0.0	101	0	0	0
P 2.1	0.0	0.0	105	0	0	0
Q 1.1	0.6	0.6	1919	0	0	0
R 1.1	0.0	0.0	197	0	0	0
R 2.1	0.0	0.0	108	0	0	0

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m ³	Partic Filter ccpm
Centerline 0.3mi	1870	934	*****	*****	5.52E-07	*****
Centerline 0.5mi	971	486	*****	64678	2.03E-07	*****
Centerline 1.0mi	383	192	*****	24021	7.55E-08	*****
Centerline 2.0mi	140	70.1	*****	6,468	2.03E-08	*****
Centerline 3.0mi	87.5	43.8	*****	3,755	1.18E-08	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	3.0	1.5	4654	0	1.18E-13	*****
A 2.1	0.0	0.0	117	0	3.38E-15	11151
B 3.1	0.5	0.3	867	1	3.04E-12	*****
B 3.2	18.3	9.2	27565	739	6.95E-10	*****
B 4.1	0.1	0.0	217	0	5.80E-15	19143
B 5.1	7.8	3.8	11434	0	3.09E-08	*****
C 2.1	116	58	*****	10620	4.08E-09	*****
C 4.1	37	18	55390	1403	1.77E-09	*****
C 4.2	63	31	94300	607	1.88E-11	*****
C 5.1	0.2	0.1	426	6	2.73E-14	*****
D 2.1	0.3	0.2	579		1.15E-14	90222
D 2.2	0.0	0.0	121	0	1.20E-12	38082
D 3.1	0.0	0.0	100	0	0	*****
D 4.1	0.1	0.0	183	0	0	0
D 5.1	0.0	0.0	100	0	0	0
E 2.1	0.0	0.0	105	0	0	0
H 1.1	0.0	0.0	124	0	0	0
J 1.1	0.0	0.0	176	0	0	0
K 1.1	0.0	0.0	221	0	0	0
L 1.1	0.0	0.0	210	0	0	0
L 2.1	0.0	0.0	100	0	0	0
M 1.1	0.0	0.0	136	0	0	0
M 2.1	0.0	0.0	102	0	0	0
N 1.1	0.0	0.0	112	0	0	0
N 2.1	0.0	0.0	101	0	0	0
P 2.1	0.0	0.0	107	0	0	0
Q 1.1	0.0	1.1	3250	0	0	0
R 1.1	0.0	0.1	458	0	0	0
R 2.1	0.0	0.0	122	0	0	0

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Pertic Filter ccpm
Centerline 0.3mi	0.2	0.2	737	0	0.00E+00	0
Centerline 0.5mi	1.1	0.6	1733	7	2.23E-11	*****
Centerline 1.0mi	813	407	*****	83774	2.15E-07	*****
Centerline 2.0mi	191	95	*****	8,952	3.02E-08	*****
Centerline 3.0mi	91	45	*****	3,850	1.30E-08	*****
Centerline 4.0mi	60	30	89650	2,373	8.00E-09	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	0.4	0.2	735	0	7.66E-15	25285
A 2.1	0.0	0.0	113	0	8.09E-14	*****
B 3.1	0.2	0.1	327	1	2.13E-11	*****
B 3.2	8.8	4.3	13009	239	1.31E-09	*****
B 4.1	0.1	0.0	225	0	1.14E-11	*****
B 5.1	15	7.7	23332	0	2.06E-09	*****
B 5.2	0.0	0.0	119	10620	1.70E-12	*****
B 6.1	0.2	0.1	360	1403	2.27E-11	*****
B 7.1	0.0	0.0	100	607	4.59E-15	16140
C 2.1	183	92	*****	6	2.98E-08	*****
C 4.1	49	25	73660		6.92E-09	*****
C 4.2	70	35	*****	0	9.79E-09	*****
C 5.1	19	9.3	27895	0	2.43E-09	*****
C 6.1	0.0	0.0	111	0	9.86E-13	*****
C 7.1	0.0	0.0	100	0	3.56E-14	*****
D 2.1	0.4	0.2	774	0	5.22E-12	*****
D 2.2	0.0	0.0	129	0	2.29E-13	*****
D 3.1	0.0	0.0	101	0	3.45E-13	*****
D 4.1	0.2	0.1	351	0	2.35E-11	*****
D 5.1	0.1	0.0	179	0	8.93E-12	*****
E 2.1	0.0	0.0	108	0	0	0
H 1.1	0.0	0.0	100	0	0	0
J 1.1	0.0	0.0	100	0	0	0
Q 1.1	0.0	0.0	110	0	0	0
R 1.1	0.0	0.0	121	0	0	0
R 2.1	0.0	0.0	104	0	0	0

1200

015

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m ³	Partic Filter ccpm
Centerline 0.3mi	0	0	100	0	0.00E+00	0
Centerline 0.5mi	0	0	101	0	1.74E-14	57321
Centerline 1.0mi	0	0	510	12	4.35E-11	*****
Centerline 2.0mi	84	32	95560	2,744	9.85E-09	*****
Centerline 3.0mi	43	22	64750	1,771	6.36E-09	*****
Centerline 4.0mi	31	15	46240	1,201	4.31E-09	*****
Centerline 5.0mi	23	12	34780	848	3.04E-09	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	0.0	0.0	101	0	1.35E-14	44583
A 2.1	0.0	0.0	111	0	1.16E-12	*****
A 3.1	0.0	0.0	100	0	1.57E-15	5191
B 3.1	0.4	0.2	754	18	6.51E-11	*****
B 3.2	6.6	3.3	10012	279	1.00E-09	*****
B 4.1	0.2	0.1	425	9	3.07E-11	*****
B 5.1	9.7	4.8	14587	374	1.34E-09	*****
B 5.2	0.1	0.1	271	4	1.51E-11	*****
B 6.1	2.3	1.2	3562	83	2.99E-10	*****
B 6.2	0.0	0.0	100	0	1.41E-14	46596
B 7.1	0.2	0.1	397	7	2.54E-11	*****
C 2.1	57	29	86080	2491	8.94E-09	*****
C 4.1	33	16.7	50170	1360	4.88E-09	*****
C 4.2	35	17.3	52060	1393	5.00E-09	*****
C 5.1	21	10.6	32020	792	2.84E-09	*****
C 6.1	1.6	0.8	2459	56	2.02E-10	*****
C 7.1	1.2	0.6	1873	42	1.52E-10	*****
C 8.1	0.0	0.0	103	0	2.28E-13	*****
C 8.2	0.0	0.0	100	0	3.34E-15	11012
C 9.1	0.0	0.0	100	0	1.22E-15	4019
D 2.1	0.0	0.2	681	17	6.15E-11	*****
D 2.2	0.0	0.0	204	3	1.09E-11	*****
D 3.1	0.0	0.0	234	4	1.32E-11	*****
D 4.1	0.0	0.7	2241	58	2.08E-10	*****
D 5.1	0.0	0.3	1014	23	8.22E-11	*****
D 6.1	0.0	0.0	101	0	1.20E-13	*****
E 2.1	0.0	0.0	101	0	7.12E-14	*****

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	0	0	100	0	0.00E+00	0
Centerline 0.5mi	0	0	101	0	1.74E-14	57321
Centerline 1.0mi	0	0	510	12	4.35E-11	*****
Centerline 2.0mi	64	32	95560	2,744	9.85E-09	*****
Centerline 3.0mi	43	22	64750	1,771	6.36E-09	*****
Centerline 4.0mi	31	15	46240	1,201	4.31E-09	*****
Centerline 5.0mi	23	12	34780	848	3.04E-09	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 6.1	2.3	1.2	3562	83	2.99E-10	*****
B 6.2	0.0	0.0	100	0	1.41E-14	46596
B 7.1	0.2	0.1	397	7	2.54E-11	*****
C 6.1	1.6	0.8	2459	56	2.02E-10	*****
C 7.1	1.2	0.6	1873	42	1.52E-10	*****
C 8.1	0.0	0.0	103	0	2.28E-13	*****
C 8.2	0.0	0.0	100	0	3.34E-15	11012
C 9.1	0.0	0.0	100	0	1.22E-15	4019
D 6.1	0.0	0.0	101	0	1.20E-13	*****

1215 - 300
5-10 mi

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.5mi	0	0	100	0	2.29E-15	7547
Centerline 1.0mi	0	0	106	0	6.15E-13	*****
Centerline 2.0mi	5	3	7705	203	7.72E-10	*****
Centerline 3.0mi	46	23	58830	1,791	6.81E-09	*****
Centerline 4.0mi	41	20	60940	1,536	5.84E-09	*****
Centerline 5.0mi	34	17	51310	1,239	4.71E-09	*****
Centerline 6.0mi	24	12	35440	842	3.20E-09	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	0	0.0	100	0	4.92E-15	16220
A 2.1	0	0.0	125	0	2.57E-12	*****
A 3.1	0	0.0	100	1	6.48E-14	*****
A 4.1	0	0.0	100	239	1.76E-14	58015
B 3.1	1	0.4	1435	0	1.33E-10	*****
B 3.2	3	1.3	4051	0	3.98E-10	*****
B 4.1	1	1	1868	10620	1.71E-10	*****
B 5.1	18	9	26956	1403	2.57E-09	*****
B 5.2	1	0	1165	607	9.82E-11	*****
C 2.1	3	1	4057	0	4.02E-10	*****
C 4.1	40	20	60700	0	5.95E-09	*****
C 4.2	46	23	68380	0	6.65E-09	*****
C 5.1	31	15	46030	0	2.28E-13	*****
D 2.1	0.0	0	121	0	2.21E-12	*****
D 2.2	0.0	0	132	0	3.31E-12	*****
D 3.1	0.0	0	530	0	4.29E-11	*****
D 4.1	3	2	4636	0	4.44E-10	*****
D 5.1	2	1	3307	0	3.00E-10	*****
E 2.1	0	0	100	0	6.744E-14	*****
E 3.1	0	0	100	0	1.784E-15	5821
E 4.1	0	0	100	0	3.04E-14	*****

1230 - 105
0-5 mile map

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.5mi	0	0	100	0	2.29E-16	7647
Centerline 1.0mi	0	0	106	0	6.15E-13	*****
Centerline 2.0mi	5	3	7705	203	7.72E-10	*****
Centerline 3.0mi	46	23	68830	1,791	6.81E-09	*****
Centerline 4.0mi	41	20	60940	1,536	5.84E-09	*****
Centerline 5.0mi	34	17	51310	1,239	4.71E-09	*****
Centerline 6.0mi	24	12	35440	842	3.20E-09	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 6.1	8	4	11632	276	1.41E-14	46596
B 6.2	0	0	111	0	2.54E-11	*****
B 7.1	3	2	5188	121	8.94E-09	*****
B 8.1	0	0	125	1	4.88E-09	*****
B 9.1	0	0	100	0	5.00E-09	33264
C 6.1	6	3	9588	226	3.34E-15	*****
C 7.1	10	5	15619	370	1.22E-15	*****
C 8.1	1	0	1490	33	6.15E-11	*****
C 8.2	0	0	187	2	1.09E-11	*****
C 9.1	0	0	184	2	1.32E-11	*****
C 10.1	0	0	100	0	2.08E-10	*****
D 6.1	0	0	128	1	2.60E-12	*****
D 7.1	0	0	100	0	8.45E-14	*****
D 8.1	0	0	100	0	3.25E-15	10735

1230 - 1245
5-10m cap

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 1.0mi	0	0	100	0	1.32E-14	43882
Centerline 2.0mi	0	0	411	8	3.19E-11	*****
Centerline 3.0mi	13	6	19378	493	1.98E-09	*****
Centerline 4.0mi	39	19	58210	1,474	5.91E-09	*****
Centerline 5.0mi	33	16	49060	1,198	4.80E-09	*****
Centerline 6.0mi	28	14	41350	949	3.81E-09	*****
Centerline 7.0mi	17	8	25351	571	2.29E-09	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 2.1	0.0	0.0	101	0	2.26E-13	*****
A 3.1	0.0	0.0	100	0	2.27E-14	75009
A 4.1	0.0	0.0	100	0	2.86E-14	94446
B 3.1	0.1	0.1	301	5	2.07E-11	*****
B 3.2	0.2	0.1	369	7	2.76E-11	*****
B 4.1	1.1	0.6	1824	44	1.76E-10	*****
B 5.1	18.1	9	27277	688	2.76E-09	*****
B 5.2	0.8	0	1370	31	1.25E-10	*****
C 2.1	0.0	0	235	3	1.40E-11	*****
C 4.1	0.0	10	29500	751	3.01E-09	*****
C 4.2	32	16	47620	1211	4.85E-09	*****
C 5.1	30	15	44350	1099	4.41E-09	*****
D 2.1	0.0	0.0	100	0	6.298E-14	*****
D 2.2	0.0	0.0	101	0	1.614E-13	*****
D 3.1	0.1	0.0	211	3	1.143E-11	*****
D 4.1	1.9	0.9	2948	73	2.914E-10	*****
D 5.1	2.4	1.2	3670	89	3.568E-10	*****
E 2.1	0.0	0.0	100	0	3.715E-15	12260
E 3.1	0.0	0.0	100	0	1.055E-15	3482
E 4.1	0.0	0.0	100	0	3.733E-14	*****

1245 - 00
0-5 mile Map

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 1.Omi	0	0	100	0	1.32E-14	43692
Centerline 2.Omi	0	0	411	8	3.19E-11	*****
Centerline 3.Omi	13	6	19378	493	1.98E-09	*****
Centerline 4.Omi	39	19	58210	1,474	5.91E-09	*****
Centerline 5.Omi	33	16	49060	1,198	4.80E-09	*****
Centerline 6.Omi	28	14	41350	949	3.81E-09	*****
Centerline 7.Omi	17	8	25351	571	2.29E-09	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 6.1	8.5	4.2	12844	302	1.21E-09	*****
B 6.2	0.0	0.0	125	1	2.32E-12	*****
B 7.1	5.6	2.8	8491	191	7.64E-10	*****
B 8.1	0.2	0.1	334	5	2.12E-11	*****
B 9.1	0.0	0.0	111	0	1.03E-12	*****
B10.1	0.0	0.0	100	0	2.50E-14	82368
C 6.1	8.1	4.1	12268	283	1.136E-09	*****
C 7.1	15.3	7.6	23035	522	2.091E-09	*****
C 8.1	6.6	3.3	10036	225	9E-10	*****
C 8.2	0.7	0.4	1216	25	1.011E-10	*****
C 9.1	1.2	0.6	1888	40	1.62E-10	*****
C10.1	0.1	0.0	225	3	1.131E-11	*****
C10.2	0.0	0.0	103	0	2.55E-13	*****
D 6.1	0.0	0.0	157	1	5.533E-12	*****
D 7.1	0.0	0.0	103	0	3.163E-13	*****
D 8.1	0.0	0.0	101	0	9.026E-14	*****
D 9.1	0.0	0.0	100	0	1.754E-15	5788
D10.1	0.0	0.0	100	0	3.455E-14	*****

1245 - 00
5-10 mile map

Sample zone & point	Survey Meter Readings		Background cpm	Iodine Sample Readings		
	Open (YrP) mR/hr	Closed (Y) mR/hr		Sample ccpm	I-131 Conc Ci/m**3	Partic Filter
Centerline 0.3mi	8800	4400	*****	*****	6.24E-06	*****
Centerline 0.5mi	4658	2329	*****	*****	2.28E-06	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 0.1	93	46.6	*****	8286	1.77E-08	*****
C 0.1	3972	1986.0	*****	*****	2.14E-06	*****
D 0.1	101.9	101.9	*****	0	0.00E+00	0
D 0.2	361	180.7	*****	0	1.10E-12	*****
D 0.3	2.2	2.2	6805	0	0.00E+00	0
E 0.1	52.2	52.2	*****	0	0.00E+00	0
E 0.2	0.2	0.2	595	0	0.00E+00	0
E 0.3	0.8	0.8	2352	0	0.00E+00	0
F 0.1	0.7	0.7	2292	0	0.00E+00	0
F 0.2	0.0	0.0	117	0	0.00E+00	0
G 0.1	11.9	11.9	35830	0	0.00E+00	0
J 0.1	117.2	117.2	*****	0	0.00E+00	0
M 0.1	157.1	157.1	*****	0	0.00E+00	0
N 0.1	60.1	60.1	*****	0	0.00E+00	0
P 0.1	4.5	4.5	13507	0	0.00E+00	0
Q 0.1	51.8	51.8	*****	0	0.00E+00	0
Q 0.2	3.9	3.9	11869	0	0.00E+00	0

Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr = background)
 LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr = background)
 LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr = background)
 ***** = Off scale high
 0.0 indicates "as read" on meter

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Open mR/hr	Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	3604	1802	*****	*****	1.89E-06	*****
Centerline 0.5mi	2032	1016	*****	*****	7.59E-07	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 0.1	263	131.5	*****	31827	7.66E-08	*****
C 0.1	2082	1041.0	*****	*****	8.57E-07	*****
D 0.1	198	98.8	*****	0	1.15E-13	*****
D 0.2	134	67.1	*****	1103	2.65E-09	*****
D 0.3	7	3.3	9880	0	5.76E-14	*****
E 0.1	50.6	50.6	*****	0	0.00E+00	0
E 0.2	0.2	0.2	627	0	0.00E+00	0
E 0.3	1.0	1.0	2959	0	0.00E+00	0
F 0.1	0.7	0.7	2244	0	0.00E+00	0
F 0.2	0.0	0.0	117	0	0.00E+00	0
G 0.1	11.5	11.5	34600	0	0.00E+00	0
J 0.1	113.7	113.7	*****	0	0.00E+00	0
M 0.1	152.5	152.5	*****	0	0.00E+00	0
N 0.1	58.3	58.3	*****	0	0.00E+00	0
P 0.1	4.3	4.3	13030	0	0.00E+00	0
Q 0.1	50.2	50.2	*****	0	0.00E+00	0
Q 0.2	3.8	3.8	11452	0	0.00E+00	0

Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr = background)

LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr = background)

***** = Off scale high

0.0 indicates "as read" on meter

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Open ($\beta + \gamma$) mR/hr	Closed (γ) mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	3458	1729	*****	*****	1.97E-06	*****
Centerline 0.5mi	1953	976	*****	*****	7.89E-07	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 0.1	837	418.6	*****	*****	2.83E-07	*****
C 0.1	1046	523.1	*****	*****	4.32E-07	*****
D 0.1	146	73.2	*****	0	2.43E-15	8016
D 0.2	159	79.7	*****	57	1.52E-10	*****
D 0.3	3	1.7	5272	0	2.77E-15	9128
E 0.1	41.2	41.2	*****	0	0.00E+00	0
E 0.2	0.1	0.1	463	0	0.00E+00	0
E 0.3	0.6	0.6	1774	0	0.00E+00	0
F 0.1	0.6	0.6	1761	0	0.00E+00	0
F 0.2	0.0	0.0	114	0	0.00E+00	0
G 0.1	9.9	9.9	29824	0	0.00E+00	0
J 0.1	108.8	108.8	*****	0	0.00E+00	0
M 0.1	149.7	149.7	*****	0	0.00E+00	0
N 0.1	58.5	58.5	*****	0	0.00E+00	0
P 0.1	4.5	4.5	13492	0	0.00E+00	0
Q 0.1	53.5	53.5	*****	0	0.00E+00	0
Q 0.2	4.1	4.1	12289	0	0.00E+00	0

Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr=background)

LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr=background)

LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr=background)

***** = Off scale high

0.0 indicates "as read" on meter

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Open mR/hr	Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	1902	951	*****	*****	9.21E-07	*****
Centerline 0.5mi	983	492	*****	*****	3.34E-07	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 0.1	72	36.0	*****	6097	1.77E-08	*****
C 0.1	1019	509.7	*****	*****	3.72E-07	*****
D 0.1	95	47.3	*****	3660	1.07E-08	*****
D 0.2	603	301.5	*****	82967	2.41E-07	*****
D 0.3	9	4.4	13264	434	1.26E-09	*****
E 0.1	146	72.9	*****	3	9.62E-12	*****
E 0.2	0.3	0.3	1062	0	0.00E+00	0
E 0.3	2.8	1.4	4279	6	1.69E-11	*****
F 0.1	1.1	1.1	3346	0	0.00E+00	0
F 0.2	0.0	0.0	126	0	0.00E+00	0
G 0.1	14.7	14.7	44110	0	0.00E+00	0
J 0.1	124.6	124.6	*****	0	0.00E+00	0
M 0.1	160.6	160.6	*****	0	0.00E+00	0
N 0.1	58.6	58.6	*****	0	0.00E+00	0
P 0.1	4.0	4.0	12007	0	0.00E+00	0
Q 0.1	45.6	45.6	*****	0	0.00E+00	0
Q 0.2	3.3	3.3	9940	0	0.00E+00	0

Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr = background)

LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr = background)

***** = Off scale high

0.0 indicates "as read" on meter

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Open	Closed	Background	Sample	I-131 Conc	Partic Filter
	mR/hr	mR/hr	cpm	ccpm	Ci/m**3	ccpm
Centerline 0.3mi	1867	934	*****	*****	5.52E-07	*****
Centerline 0.5mi	971	486	*****	64678	2.03E-07	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 0.1	710	354.9	*****	43628	1.37E-07	*****
C 0.1	488	243.9	*****	33261	1.05E-07	*****
D 0.1	123	61.3	*****	5	1.48E-11	*****
D 0.2	49	24.4	73360	620	1.95E-09	*****
D 0.3	2	0.9	2775	10	3.26E-11	*****
E 0.1	75	37.4	*****	3	7.25E-15	23922
E 0.2	0.1	0.1	388	0	0.00E+00	0
E 0.3	1	0.4	1361	6	5.86E-13	*****
F 0.1	0.5	0.5	1515	0	0.00E+00	0
F 0.2	0.0	0.0	112	0	0.00E+00	0
G 0.1	9.4	9.4	28171	0	0.00E+00	0
J 0.1	114.4	114.4	*****	0	0.00E+00	0
M 0.1	160.8	160.8	*****	0	0.00E+00	0
N 0.1	63.7	63.7	*****	0	0.00E+00	0
P 0.1	4.9	4.9	14842	0	0.00E+00	0
Q 0.1	123.0	61.4	*****	0	1.48E-15	4884
Q 0.2	4.6	4.6	13993	0	0.00E+00	0

Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr = background)

LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr = background)

***** = Off scale high

0.0 indicates "as read" on meter

Sample zone & point	Survey Meter Readings		Background cpm	Iodine Sample Readings		
	Open mR/hr	Closed mR/hr		Sample ccpm	Ci/m**3	Conc Partic Filter ccpm
Centerline 0.3mi	0	0	737	0	0.00E+00	0
Centerline 0.5mi	1	1	1733	7	2.23E-11	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 0.1	1	0.6	1797	78	2.64E-10	*****
C 0.1	2	1.0	3093	0	6.02E-13	*****
D 0.1	0	0.1	313	0	0.00E+00	0
D 0.2	0	0.2	779	0	0.00E+00	0
D 0.3	2	1.9	5731	2	8.22E-12	*****
E 0.1	0	0.0	187	3	0.00E+00	0
E 0.2	0.0	0.0	173	0	0.00E+00	0
E 0.3	1	0.4	1165	6	4.24E-15	14002
F 0.1	0.0	0.0	144	0	0.00E+00	0
F 0.2	0.0	0.0	101	0	0.00E+00	0
G 0.1	0.0	0.0	130	0	0.00E+00	0
J 0.1	0.0	0.0	114	0	0.00E+00	0
M 0.1	0.0	0.0	113	0	0.00E+00	0
N 0.1	0.0	0.0	112	0	0.00E+00	0
P 0.1	0.0	0.0	106	0	0.00E+00	0
Q 0.1	0.0	0.0	126	0	0.00E+00	0
Q 0.2	0.0	0.0	110	0	0.00E+00	0

Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr = background)

LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr = background)

***** = Off scale high

0.0 indicates "as read" on meter

Sample zone & point	Survey Meter Readings		Background cpm	Iodine Sample Readings		
	Open ($\delta + \beta$) mR/hr	Closed (δ) mR/hr		Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	0	0	737	0	0.00E+00	0
Centerline 0.5mi	0	0	1733	7	1.74E-14	57321
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 0.1	0	0.0	101	0	9.50E-14	*****
C 0.1	0	0.0	100	0	4.86E-15	16045
D 0.2	0	0.0	100	0	0.00E+00	0
D 0.3	0	0.0	104	0	4.67E-13	*****
E 0.2	0	0.0	100	0	0.00E+00	0
E 0.3	0	0.0	101	0	6.16E-14	*****

Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr = background)

LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr = background)

***** = Off scale high

0.0 indicates "as read" on meter

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Open mR/hr	Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.5mi	0	0	100	7	2.29E-15	7547
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 0.1	0	0.0	0	0	8.38E-15	0
C 0.1	0	0.0	0	0	1.02E-15	0
D 0.3	0	0.0	0	0	2.30E-14	0
E 0.3	0	0.0	0	0	6.63E-15	0

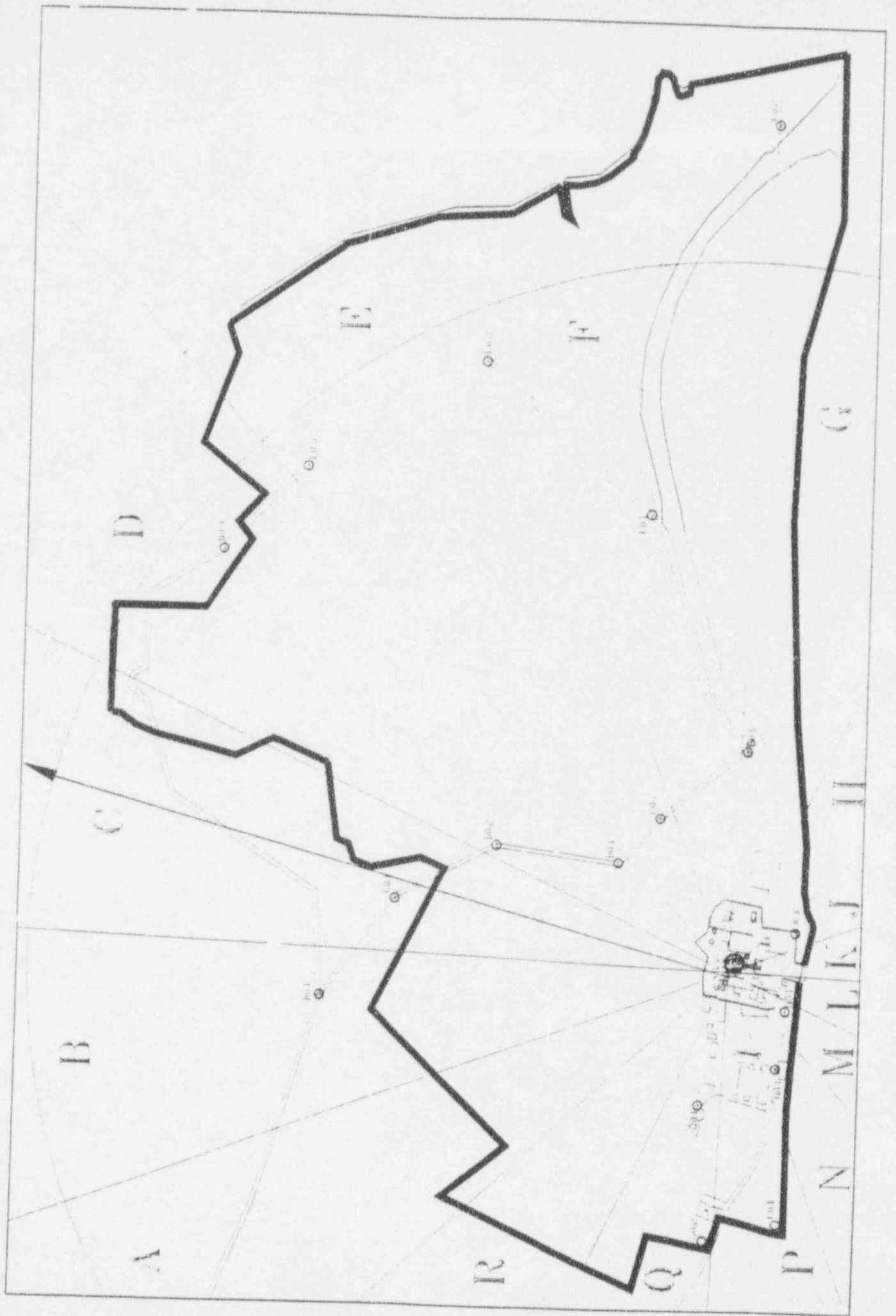
Notes: LLD for an RO-2A is 2.0 mR/hr (<2.0 mR/hr = background)

LLD for an RO-2 is 0.2 mR/hr (<0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (<0.04 mR/hr = background)

***** = Off scale high

0.0 indicates "as read" on meter



May 1994

FIELD TEAM RADIOLOGICAL DATA INDEX

<u>Time Zone</u>	<u>Offsite Data</u>		
	2 mi.	5 mi.	10 mi.
10:45 - 11:00	1		
11:00 - 11:15	2		
11:15 - 11:30	3		
11:30 - 11:45	4		
11:45 - 12:00	5		
12:00 - 12:15		6	
12:15 - 12:30		7	8
12:30 - 12:45		9	10
12:45 - 13:00		11	12

Sample zone & point	Survey Meter Readings		Background cpm	Iodine Sample Readings	
	Open (β+γ) mR/hr	Closed (γ) mR/hr		Sample ccpm	I-131 Conc Partic Filter Ci/m ³
Centerline 0.3mi	8800	4400	*****	*****	6.24E-06
Centerline 0.5mi	4660	2330	*****	*****	2.28E-06
Yellow	> 1000	> 1000	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a
A 1.1	1.2	1.2	3709	0	0
A 2.1	0.0	0.0	100	0	0
B 3.2	0.0	0.0	100	0	0
C 2.1	0.0	0.0	103	0	0
D 2.1	0.0	0.0	149	0	0
D 2.2	0.0	0.0	101	0	0
E 2.1	0.0	0.0	102	0	0
H 1.1	0.0	0.0	129	0	0
J 1.1	0.0	0.0	188	0	0
K 1.1	0.0	0.0	231	0	0
L 1.1	0.0	0.0	217	0	0
L 2.1	0.0	0.0	100	0	0
M 1.1	0.0	0.0	136	0	0
M 2.1	0.0	0.0	102	0	0
N 1.1	0.0	0.0	112	0	0
N 2.1	0.0	0.0	101	0	0
P 2.1	0.0	0.0	106	0	0
Q 1.1	0.8	0.8	2488	0	0
R 1.1	0.0	0.0	249	0	0
R 2.1	0.0	0.0	106	0	0

Notes: LLD for an RO-2A is 2.0 mR/hr (< 2.0 mR/hr = background)

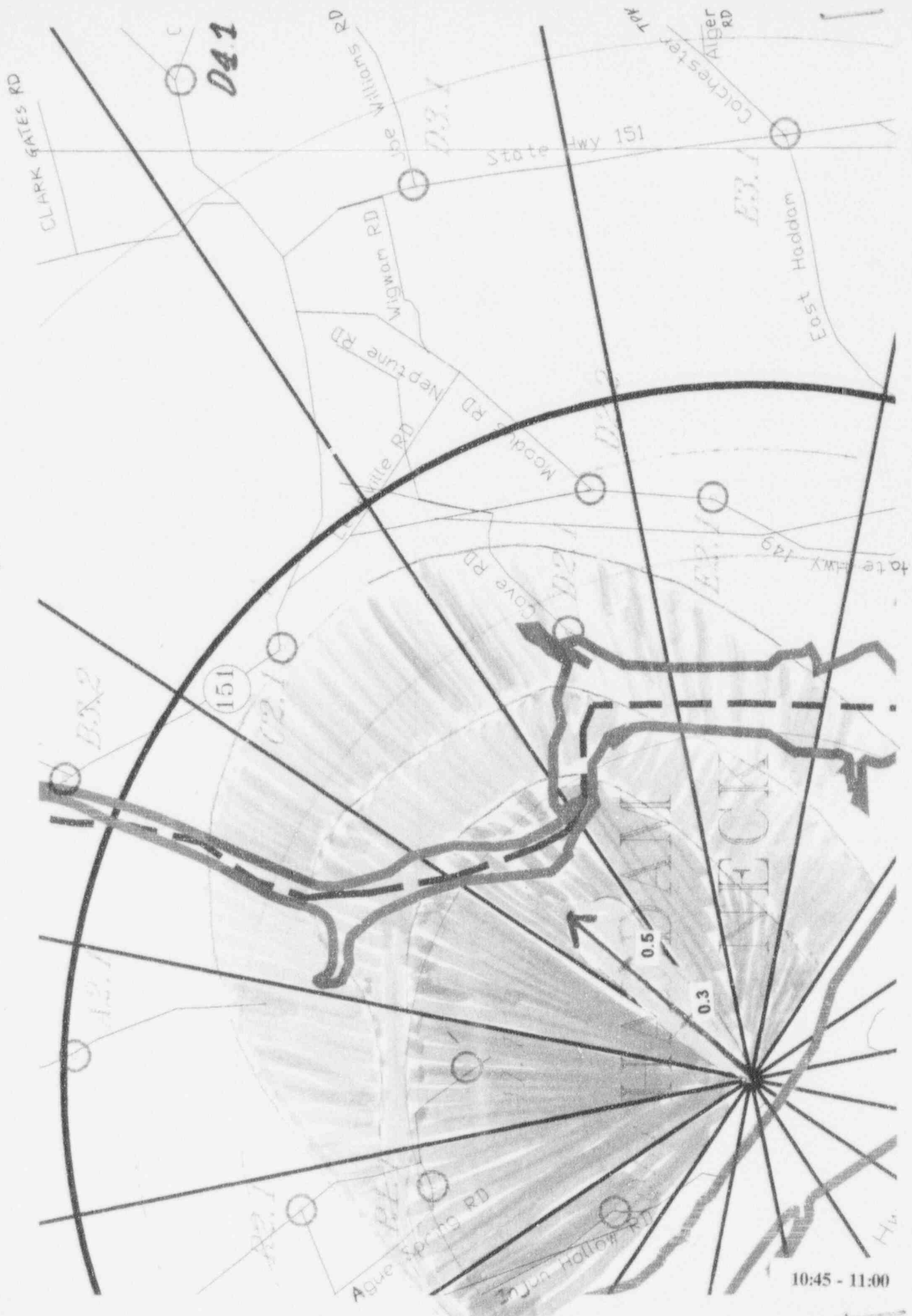
LLD for an RO-2 is 0.2 mR/hr (< 0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (< 0.04 mR/hr = background)

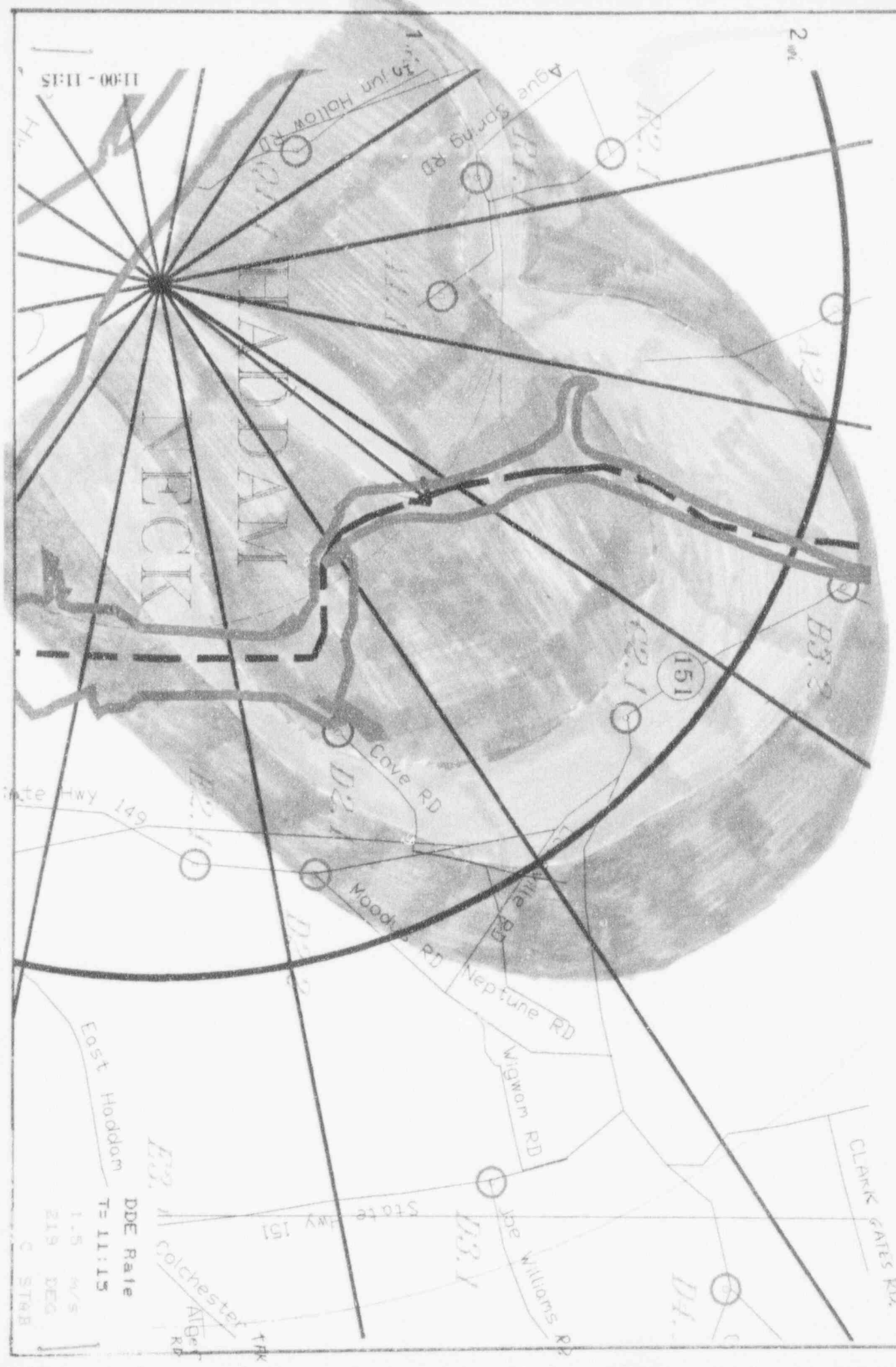
***** = Off scale high

0.0 indicates as read on meter

Connecticut Yankee Exercise (5/14/94)
Radiological Data 1045 - 1100



10:45 - 11:00



DDE Rate
T: 11:15

1.5 M/S
219 DEG
C STAR

11:00 - 11:15

Sample zone & point	Survey Meter Readings		Background cpm	Iodine Sample Readings		Ci/m**3	ccpm
	Open (β+γ) mR/hr	Closed (γ) mR/hr		Sample	H-131 Conc Partic Filter		
Centerline 0.3mi	3600	1800	*****	*****	1.89E-06	*****	
Centerline 0.5mi	2030	1020	*****	*****	7.59E-07	*****	
Centerline 1.0mi	1020	512	*****	95910	2.31E-07	*****	
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a	
Green	1000-100	1000-100	n/a	n/a	n/a	n/a	
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a	
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a	
A 1.1	1.5	1.5	4654	0	0	0	
A 2.1	0.0	0.0	107	0	0	0	
B 3.1	0.0	0.0	101	0	0	0	
B 3.2	0.0	0.0	187	0	0	0	
C 2.1	6.7	6.7	20185	969	2.33E-09	*****	
D 2.1	0.2	0.2	811	0	0	0	
D 2.2	0.0	0.0	123	0	0	0	
E 2.1	0.0	0.0	108	0	0	0	
H 1.1	0.0	0.0	128	0	0	0	
J 1.1	0.0	0.0	184	0	0	0	
K 1.1	0.0	0.0	226	0	0	0	
L 1.1	0.0	0.0	213	0	0	0	
L 2.1	0.0	0.0	100	0	0	0	
M 1.1	0.0	0.0	135	0	0	0	
M 2.1	0.0	0.0	102	0	0	0	
N 1.1	0.0	0.0	111	0	0	0	
N 2.1	0.0	0.0	101	0	0	0	
P 2.1	0.0	0.0	105	0	0	0	
O 1.1	0.8	0.8	2413	0	0	0	
R 1.1	0.1	0.1	276	0	0	0	
R 2.1	0.0	0.0	111	0	0	0	

Notes: LLD for an RO-2A is 2.0 mR/hr (< 2.0 mR/hr = background)

LLD for an RO-2 is 0.2 mR/hr (< 0.2 mR/hr = background)

LLD for an ASP-1 is 0.04mR/hr (< 0.04 mR/hr = background)

***** = Off scale high

0.0 indicates as read on meter

Survey Meter Readings
(P78)

Background

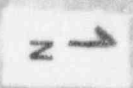
Iodine Sample Readings

Partic Filter

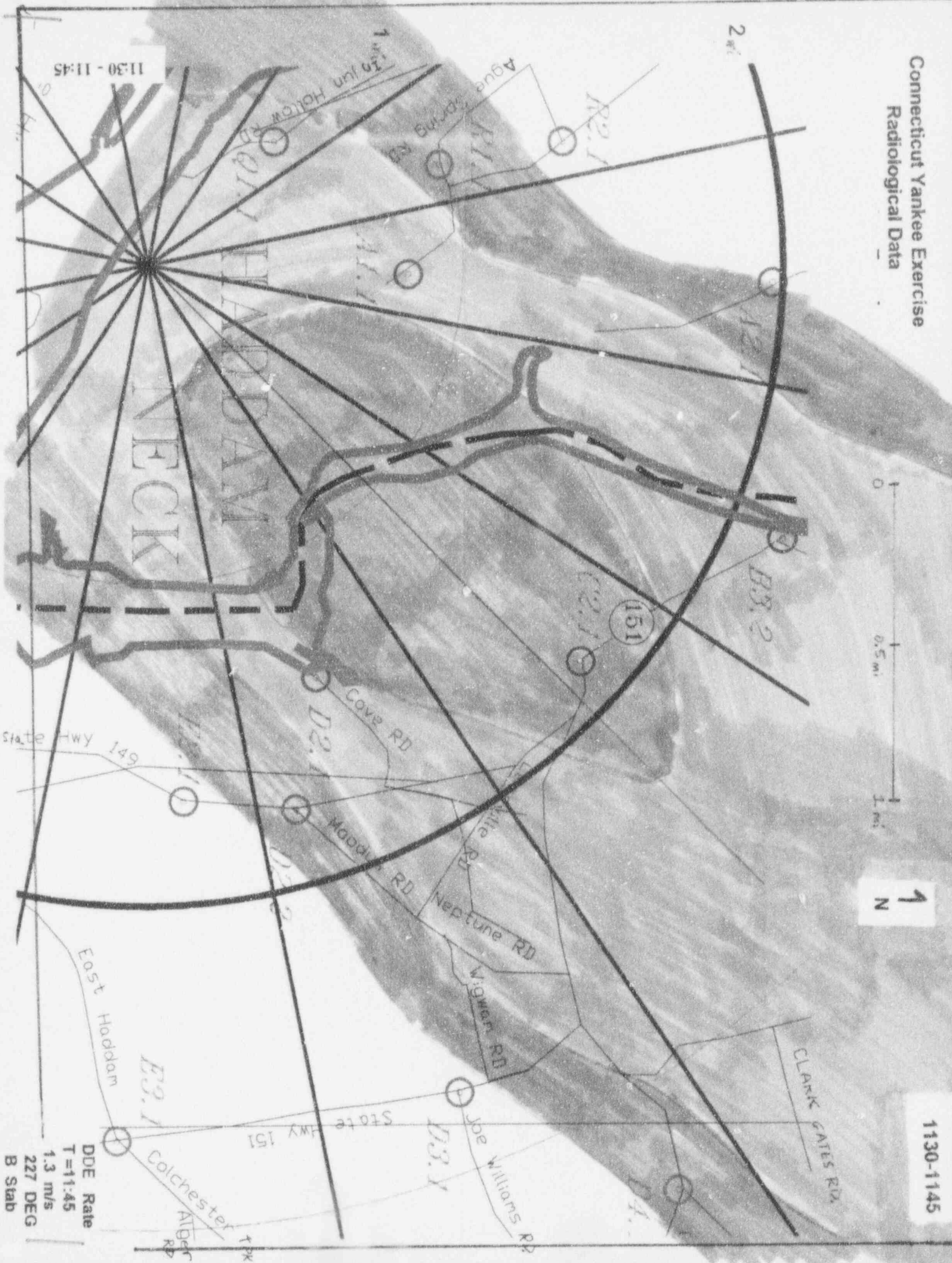
1115 - 1130

Sample zone & point	Survey Meter Readings		Background	Sample	Iodine Sample Readings		Partic Filter
	mR/hr	Closed mR/hr			cpm	I-131 Conc C/m**3	
Centerline 0.3mi	3460	1730	*****	*****	1.97E-06	*****	
Centerline 0.5mi	1950	976	*****	*****	7.89E-07	*****	
Centerline 1.0mi	923	462	*****	80364	2.14E-07	*****	
Centerline 2.0mi	438	219	*****	24785	6.60E-08	*****	
Yellow	>1000	>1000	n/a	n/a	n/a	n/a	
Green	1000-100	1000-100	n/a	n/a	n/a	n/a	
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a	
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a	
A 1.1	5.0	2.5	7675	0	1.10E-14	36267	
A 2.1	0.0	0.0	124	0	0.00E+00	0	
B 3.1	0.0	0.0	160	0	1.43E-13	*****	
B 3.2	6.5	3.2	9772	351	9.35E-10	*****	
C 2.1	108	108	*****	12439	3.31E-08	*****	
C 4.1	0.0	0.0	115	0	4.60E-14	*****	
C 4.2	0.0	0.0	102	0	0	0	
D 2.1	0.1	0.1	477	0	4.28E-15	14114	
D 2.2	0.0	0.0	117	0	0	0	
D 3.1	0.0	0.0	100	0	0	0	
D 4.1	0.0	0.0	100	0	0	0	
E 2.1	0.0	0.0	105	0	0	0	
H 1.1	0.0	0.0	125	0	0	0	
J 1.1	0.0	0.0	178	0	0	0	
K 1.1	0.0	0.0	220	0	0	0	
L 1.1	0.0	0.0	209	0	0	0	
L 2.1	0.0	0.0	100	0	0	0	
M 1.1	0.0	0.0	134	0	0	0	
M 2.1	0.0	0.0	102	0	0	0	
N 1.1	0.0	0.0	112	0	0	0	
N 2.1	0.0	0.0	101	0	0	0	
P 2.1	0.0	0.0	106	0	0	0	
Q 1.1	0.9	0.9	2726	0	0	0	
R 1.1	0.1	0.1	357	0	0	0	
R 2.1	0.0	0.0	118	0	0	0	

Connecticut Yankee Exercise
Radiological Data



1130-1145

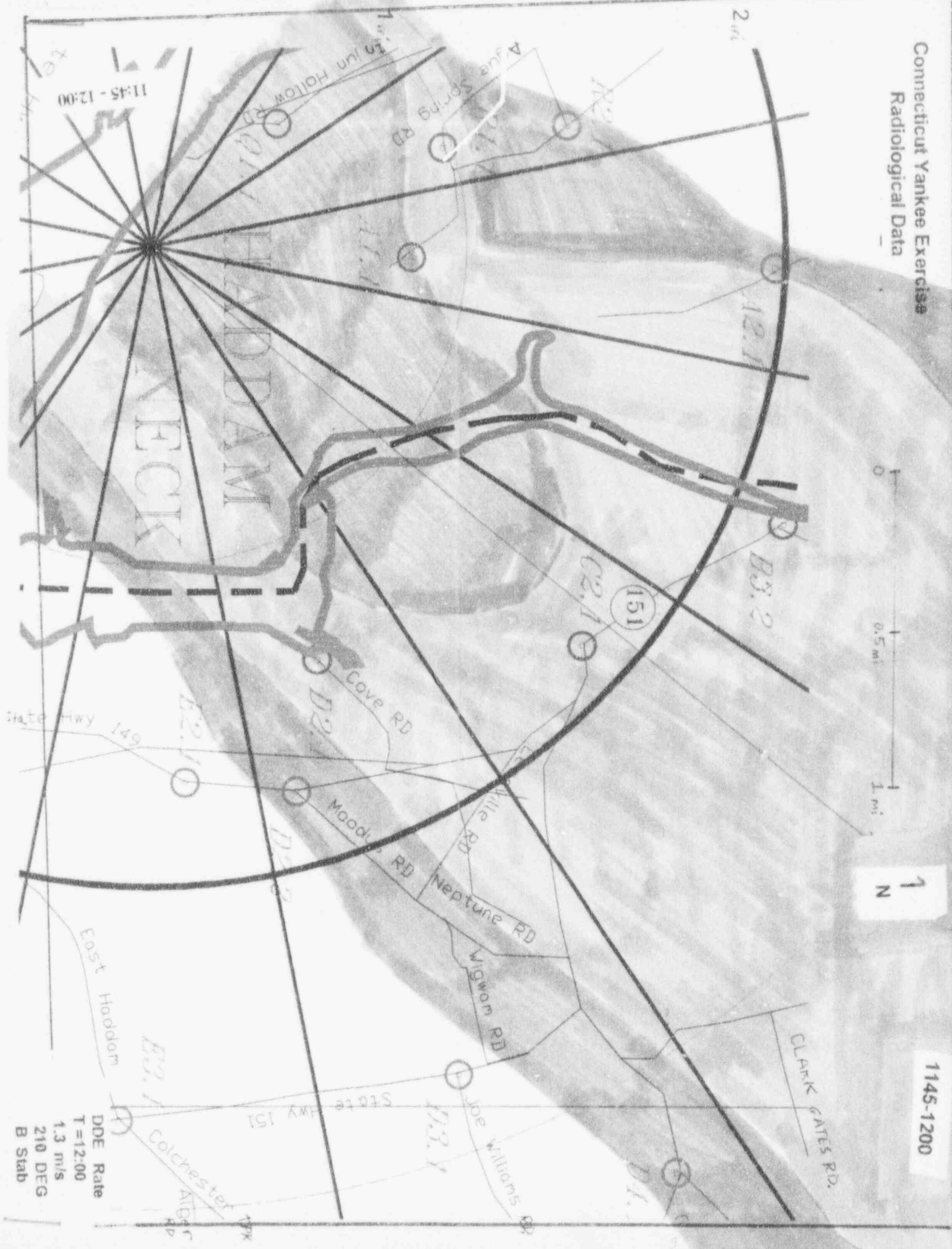


DDE Rate
T=11:45
1.3 m/s
227 DEG
B Stab

Sample zone & point	Survey Meter Readings		Background cpm	Iodine Sample Readings		
	($\beta + \gamma$) mR/hr	Closed mR/hr		Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	1900	951	*****	*****	9.21E-07	*****
Centerline 0.5mi	983	492	*****	*****	3.34E-07	*****
Centerline 1.0mi	418	209	*****	28238	8.22E-08	*****
Centerline 2.0mi	215	108	*****	10,685	3.11E-08	*****
Centerline 3.0mi	117	58.6	*****	5,317	1.55E-08	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	1.4	0.7	2142	0	1.18E-13	*****
A 2.1	0.0	0.0	108	0	3.38E-15	11151
B 3.1	0.0	0.0	144	1	3.04E-12	*****
B 3.2	5.0	2.5	7597	239	6.95E-10	*****
B 4.1	0.0	0.0	100	0	5.80E-15	19143
B 5.1	0.0	0.0	109	0	7.98E-13	*****
C 2.1	209	105	*****	10620	3.09E-08	*****
C 4.1	31	16	46750	1403	4.08E-09	*****
C 4.2	13	7	20329	607	1.77E-09	*****
D 2.1	0.4	0.2	741	6	1.86E-11	*****
D 2.2	0.0	0.0	146		2.73E-14	90222
D 3.1	0.0	0.0	102	0	1.15E-14	38082
D 4.1	0.0	0.0	113	0	1.20E-12	*****
E 2.1	0.0	0.0	115	0	0	0
F 2.1	0.0	0.0	100	0	0	0
H 1.1	0.0	0.0	133	0	0	0
J 1.1	0.0	0.0	193	0	0	0
K 1.1	0.0	0.0	231	0	0	0
L 1.1	0.0	0.0	214	0	0	0
L 2.1	0.0	0.0	100	0	0	0
M 1.1	0.0	0.0	134	0	0	0
M 2.1	0.0	0.0	102	0	0	0
N 1.1	0.0	0.0	111	0	0	0
N 2.1	0.0	0.0	101	0	0	0
P 2.1	0.0	0.0	105	0	0	0
Q 1.1	0.6	0.6	1919	0	0	0
R 1.1	0.0	0.0	197	0	0	0
R 2.1	0.0	0.0	106	0	0	0

1130 - 1145

Connecticut Yankee Exercise
Radiological Data



Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	1870	934	*****	*****	5.52E-07	*****
Centerline 0.5mi	971	486	*****	64678	2.03E-07	*****
Centerline 1.0mi	383	192	*****	24021	7.55E-08	*****
Centerline 2.0mi	140	70.1	*****	6,468	2.03E-08	*****
Centerline 3.0mi	87.5	43.8	*****	3,755	1.18E-08	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	3.0	1.5	4654	0	1.18E-13	*****
A 2.1	0.0	0.0	117	0	3.38E-15	11151
B 3.1	0.5	0.3	867	1	3.04E-12	*****
B 3.2	18.3	9.2	27565	239	6.95E-10	*****
B 4.1	0.1	0.0	217	0	5.80E-15	19143
B 5.1	7.8	3.8	11434	0	3.09E-08	*****
C 2.1	116	58	*****	10620	4.08E-09	*****
C 4.1	37	18	55390	1403	1.77E-09	*****
C 4.2	63	31	94300	607	1.86E-11	*****
C 5.1	0.2	0.1	426	6	2.73E-14	*****
D 2.1	0.3	0.2	579		1.15E-14	90222
D 2.2	0.0	0.0	121	0	1.20E-12	38082
D 3.1	0.0	0.0	100	0	0	*****
D 4.1	0.1	0.0	183	0	0	0
D 5.1	0.0	0.0	100	0	0	0
E 2.1	0.0	0.0	105	0	0	0
H 1.1	0.0	0.0	124	0	0	0
J 1.1	0.0	0.0	176	0	0	0
K 1.1	0.0	0.0	221	0	0	0
L 1.1	0.0	0.0	210	0	0	0
L 2.1	0.0	0.0	100	0	0	0
M 1.1	0.0	0.0	136	0	0	0
M 2.1	0.0	0.0	102	0	0	0
N 1.1	0.0	0.0	112	0	0	0
N 2.1	0.0	0.0	101	0	0	0
P 2.1	0.0	0.0	107	0	0	0
Q 1.1	0.0	1.1	3250	0	0	0
R 1.1	0.0	0.1	458	0	0	0
R 2.1	0.0	0.0	122	0	0	0

1145 - 1200

Radiological Data

1200-1215

N

2 mi

1 mi

0

37.1

40.

86.2

16

S. MATHEW ST

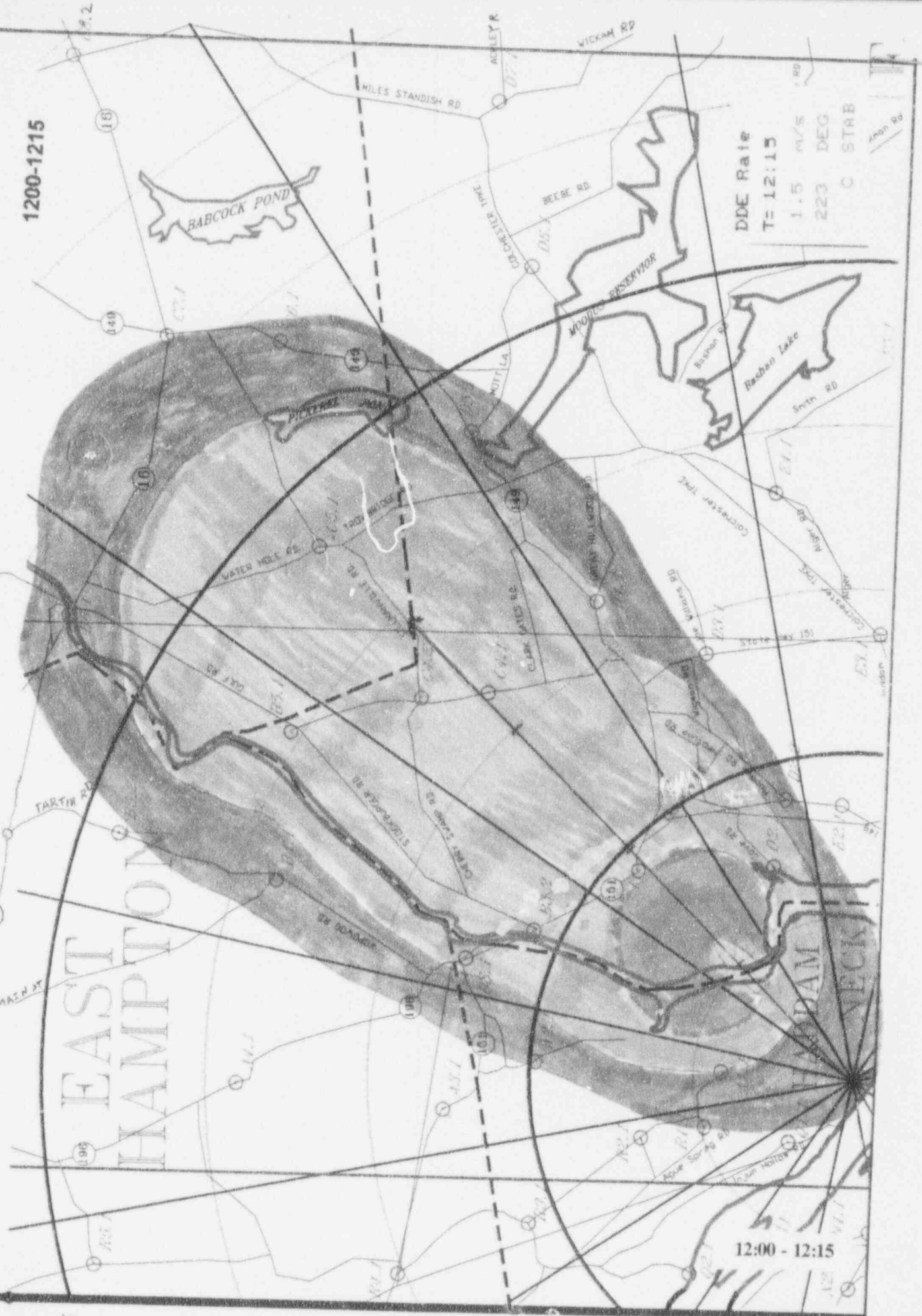
EAST HAMPTON

5 MILE

1 MILE

2 MILE

3 MILE



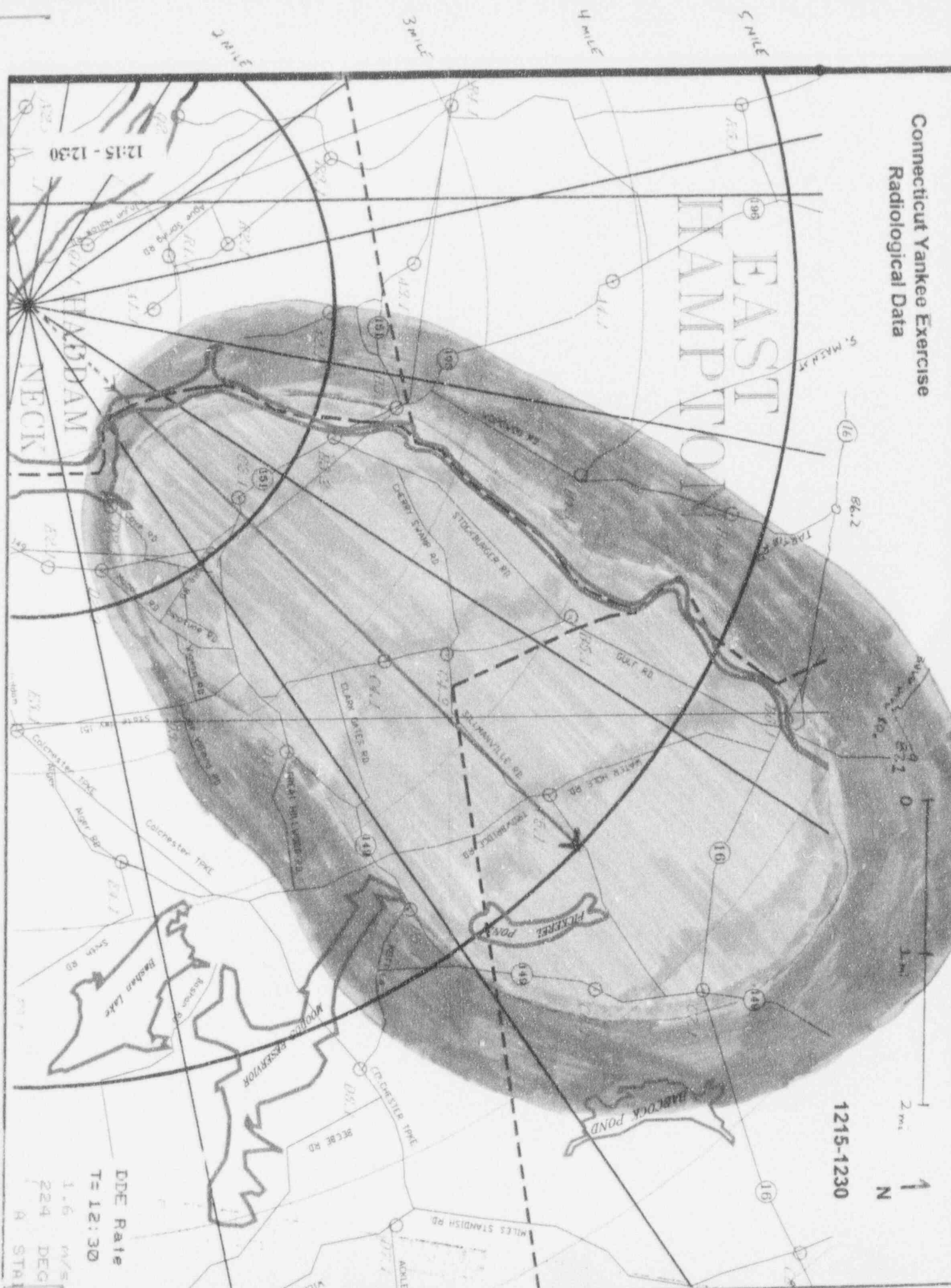
DDE Rate
T: 12:15
1.5 m/s
223 DEG
C STRB

12:00 - 12:15

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	0.2	0.2	737	0	0.00E+00	0
Centerline 0.5mi	1.1	0.5	1733	7	2.23E-11	*****
Centerline 1.0mi	813	407	*****	63774	2.15E-07	*****
Centerline 2.0mi	191	95	*****	8,952	3.02E-08	*****
Centerline 3.0mi	91	45	*****	3,850	1.30E-08	*****
Centerline 4.0mi	60	30	89650	2,373	8.00E-09	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	0.4	0.2	735	0	7.56E-15	25285
A 2.1	0.0	0.0	113	0	5.09E-14	*****
B 3.1	0.2	0.1	327	1	2.13E-11	*****
B 3.2	8.6	4.3	13009	239	1.31E-09	*****
B 4.1	0.1	0.0	225	0	1.14E-11	*****
B 5.1	15	7.7	23332	0	2.06E-09	*****
B 5.2	0.0	0.0	119	10620	1.70E-12	*****
B 6.1	0.2	0.1	360	1403	2.27E-11	*****
B 7.1	0.0	0.0	100	607	4.59E-15	15140
C 2.1	183	92	*****	6	2.98E-08	*****
C 4.1	49	25	73660		6.92E-09	*****
C 4.2	70	35	*****	0	9.79E-09	*****
C 5.1	19	9.3	27895	0	2.43E-09	*****
C 6.1	0.0	0.0	**	0	9.86E-13	*****
C 7.1	0.0	0.0	100	0	3.58E-14	*****
D 2.1	0.4	0.2	774	0	5.22E-12	*****
D 2.2	0.0	0.0	129	0	2.29E-13	*****
D 3.1	0.0	0.0	101	0	3.45E-13	*****
D 4.1	0.2	0.1	351	0	2.35E-11	*****
D 5.1	0.1	0.0	179	0	6.93E-12	*****
E 2.1	0.0	0.0	108	0	0	0
H 1.1	0.0	0.0	100	0	0	0
J 1.1	0.0	0.0	100	0	0	0
Q 1.1	0.0	0.0	110	0	0	0
R 1.1	0.0	0.0	121	0	0	0
R 2.1	0.0	0.0	104	0	0	0

1200 - 1215

Connecticut Yankee Exercise
Radiological Data



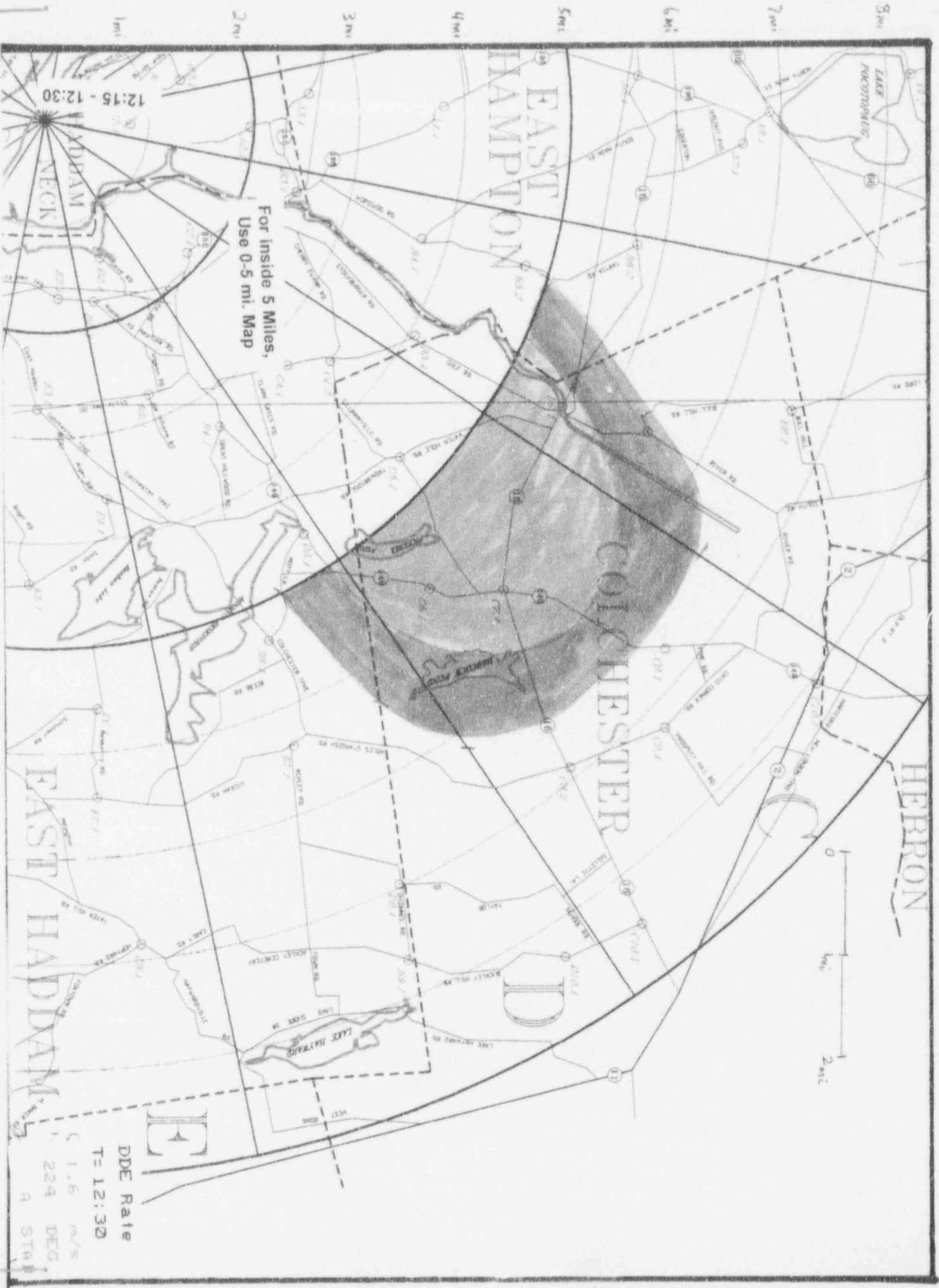
12:15 - 12:30

1215-1230

DDE Rate
T: 12:30

1.6 m/s
229 DEG
A STAB

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.3mi	0	0	100	0	0.00E+00	0
Centerline 0.5mi	0	0	101	0	1.74E-14	57321
Centerline 1.0mi	0	0	510	12	4.35E-11	*****
Centerline 2.0mi	64	32	95560	2,744	9.85E-09	*****
Centerline 3.0mi	43	22	64750	1,771	6.36E-09	*****
Centerline 4.0mi	31	15	46240	1,201	4.31E-09	*****
Centerline 5.0mi	23	12	34780	848	3.04E-09	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	0.0	0.0	101	0	1.35E-14	44583
A 2.1	0.0	0.0	111	0	1.16E-12	*****
A 3.1	0.0	0.0	100	0	1.57E-15	5191
B 3.1	0.4	0.2	754	18	6.51E-11	*****
B 3.2	6.6	3.3	10012	279	1.00E-09	*****
B 4.1	0.2	0.1	425	9	3.07E-11	*****
B 5.1	9.7	4.8	14587	374	1.34E-09	*****
B 5.2	0.1	0.1	271	4	1.51E-11	*****
B 6.1	2.3	1.2	3562	83	2.99E-10	*****
B 6.2	0.0	0.0	100	0	1.41E-14	46596
B 7.1	0.2	0.1	397	7	2.54E-11	*****
C 2.1	57	29	86080	2491	8.94E-09	*****
C 4.1	33	16.7	50170	1360	4.88E-09	*****
C 4.2	35	17.3	52060	1393	5.00E-09	*****
C 5.1	21	10.6	32020	792	2.84E-09	*****
C 6.1	1.6	0.8	2459	56	2.02E-10	*****
C 7.1	1.2	0.6	1873	42	1.52E-10	*****
C 8.1	0.0	0.0	103	0	2.28E-13	*****
C 8.2	0.0	0.0	100	0	3.34E-15	11012
C 9.1	0.0	0.0	100	0	1.22E-15	4019
D 2.1	0.0	0.2	681	17	6.15E-11	*****
D 2.2	0.0	0.0	204	3	1.09E-11	*****
D 3.1	0.0	0.0	234	4	1.32E-11	*****
D 4.1	0.0	0.7	2241	58	2.08E-10	*****
D 5.1	0.0	0.3	1014	23	8.22E-11	*****
D 6.1	0.0	0.0	101	0	1.20E-13	*****
E 2.1	0.0	0.0	101	0	7.12E-14	*****



For inside 5 Miles,
Use 0-5 mi. Map

0 1 2
mi

DDE Rate
T = 12:30

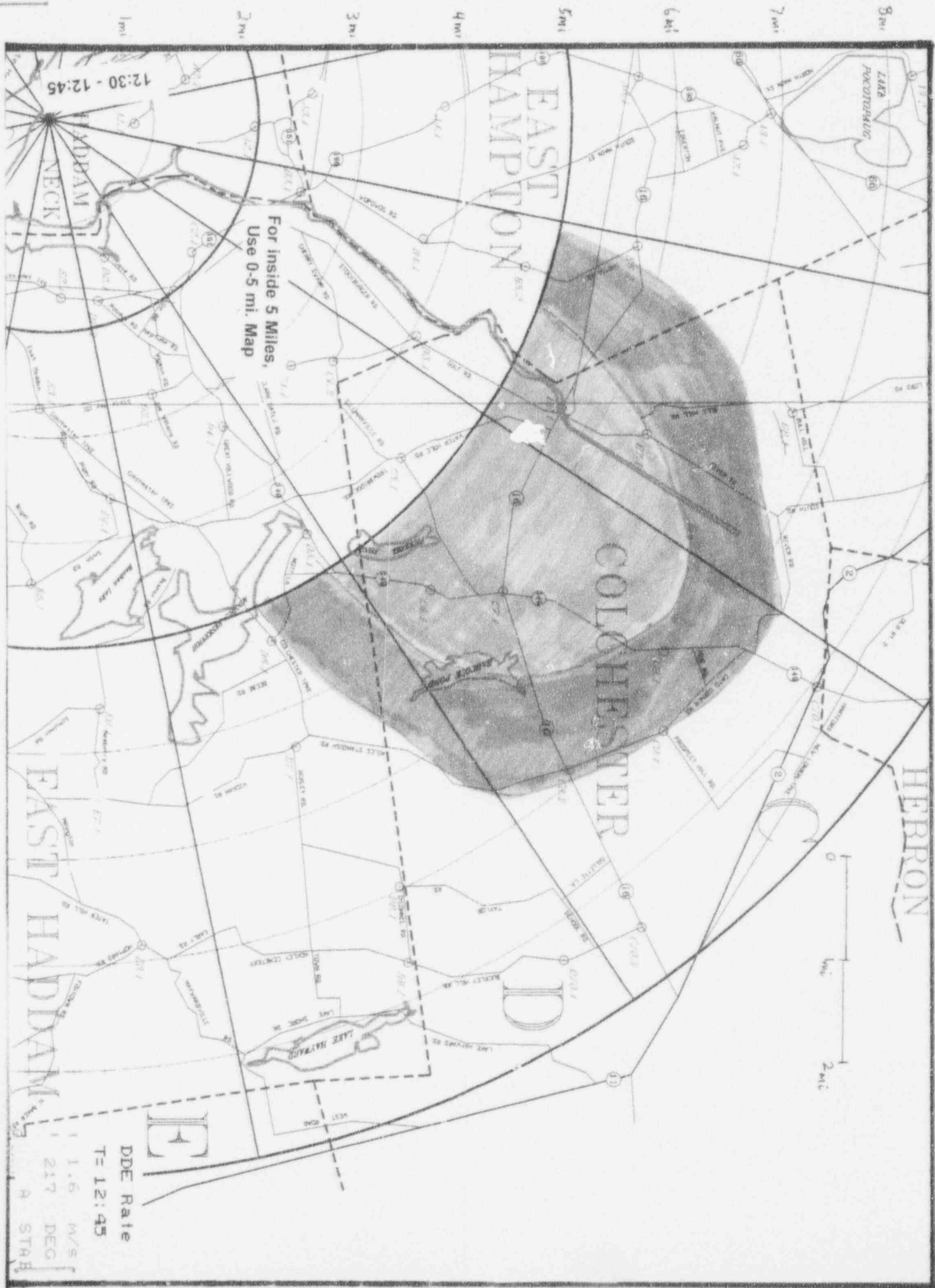
1.6 M/S
224 DEC
4 STAB

12:15 - 12:30

Sample zone & point	Survey Meter Readings		Iodine Sample Readings				121F 5-10mi	1230 5-10mi
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm		
Centerline 0.3mi	0	0	100	0	0.00E+00	0		
Centerline 0.5mi	0	0	101	0	1.74E-14	57321		
Centerline 1.0mi	0	0	510	12	4.35E-11	*****		
Centerline 2.0mi	64	32	95560	2,744	9.85E-09	*****		
Centerline 3.0mi	43	22	64750	1,771	6.36E-09	*****		
Centerline 4.0mi	31	15	46240	1,201	4.31E-09	*****		
Centerline 5.0mi	23	12	34780	848	3.04E-09	*****		
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a		
Green	1000-100	1000-100	n/a	n/a	n/a	n/a		
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a		
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a		
B 6.1	2.3	1.2	3562	83	2.99E-10	*****		
B 6.2	0.0	0.0	100	0	1.41E-14	46596		
B 7.1	0.2	0.1	397	7	2.54E-11	*****		
C 6.1	1.6	0.8	2459	56	2.02E-10	*****		
C 7.1	1.2	0.6	1873	42	1.52E-10	*****		
C 8.1	0.0	0.0	103	0	2.28E-13	*****		
C 8.2	0.0	0.0	100	0	3.34E-15	11012		
C 9.1	0.0	0.0	100	0	1.22E-15	4019		
D 6.1	0.0	0.0	101	0	1.20E-13	*****		

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.5mi	0	0	100	0	2.29E-15	7547
Centerline 1.0mi	0	0	106	0	6.15E-13	*****
Centerline 2.0mi	5	3	7705	203	7.72E-10	*****
Centerline 3.0mi	46	23	68830	1,791	6.81E-09	*****
Centerline 4.0mi	41	20	60940	1,536	5.84E-09	*****
Centerline 5.0mi	34	17	51310	1,239	4.71E-09	*****
Centerline 6.0mi	24	12	35440	542	3.20E-09	*****
Yellow	>1000	>1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 1.1	0	0.0	100	0	4.92E-15	16220
A 2.1	0	0.0	125	0	2.57E-12	*****
A 3.1	0	0.0	100	1	6.48E-14	*****
A 4.1	0	0.0	100	239	1.76E-14	58015
B 3.1	1	0.4	1435	0	1.33E-10	*****
B 3.2	3	1.3	4051	0	3.98E-10	*****
B 4.1	1	1	1868	10620	1.71E-10	*****
B 5.1	18	9	26956	1403	2.57E-09	*****
B 5.2	1	0	1165	607	9.82E-11	*****
C 2.1	3	1	4057	0	4.02E-10	*****
C 4.1	40	20	60700	0	5.95E-09	*****
C 4.2	46	23	68380	0	6.65E-09	*****
C 5.1	31	15	46030	0	2.28E-13	*****
D 2.1	0.0	0	121	0	2.21E-12	*****
D 2.2	0.0	0	132	0	3.31E-12	*****
D 3.1	0.0	0	530	0	4.29E-11	*****
D 4.1	3	2	4636	0	4.44E-10	*****
D 5.1	2	1	3307	0	3.00E-10	*****
E 2.1	0	0	100	0	6.744E-14	*****
E 3.1	0	0	100	0	1.764E-15	5821
E 4.1	0	0	100	0	3.04E-14	*****

1230 - 1245
0-5 mile Map

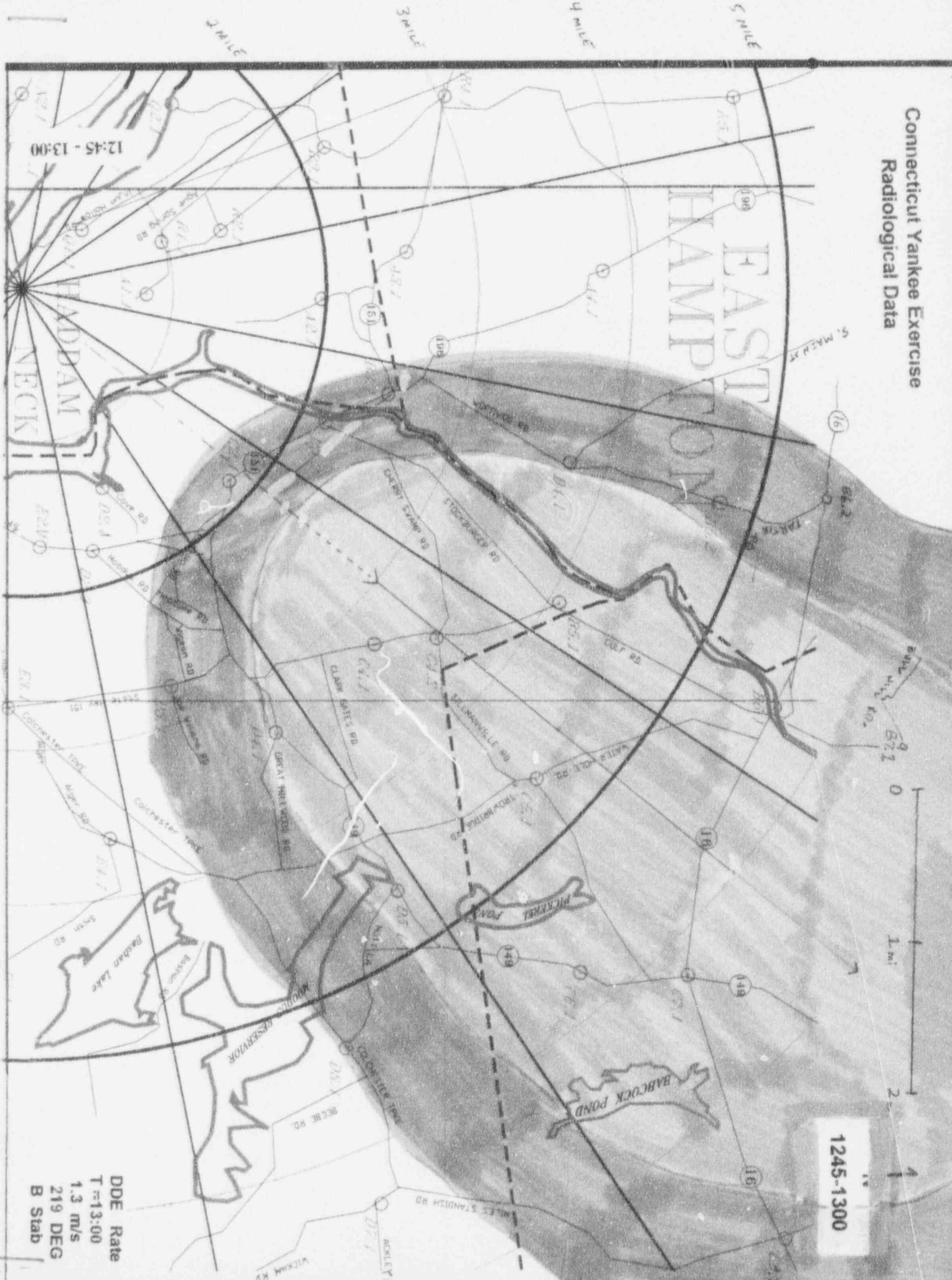


DDE Rate
T: 12:45
1.6 M/S
217 DEG
A STAR

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 0.5mi	0	0	100	0	2.29E-15	7547
Centerline 1.0mi	0	0	106	0	6.15E-13	*****
Centerline 2.0mi	5	3	7705	203	7.72E-10	*****
Centerline 3.0mi	46	23	68830	1,791	6.81E-09	*****
Centerline 4.0mi	41	20	60940	1,536	5.84E-09	*****
Centerline 5.0mi	34	17	51310	1,239	4.71E-09	*****
Centerline 6.0mi	24	12	35440	842	3.20E-09	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 6.1	8	4	11632	276	1.41E-14	46596
B 6.2	0	0	111	0	2.54E-11	*****
B 7.1	3	2	5188	121	8.94E-09	*****
B 8.1	0	0	125	1	4.88E-09	*****
B 9.1	0	0	100	0	5.00E-09	33264
C 6.1	6	3	9586	226	3.34E-15	*****
C 7.1	10	5	15619	370	1.22E-15	*****
C 8.1	1	0	1490	33	6.15E-11	*****
C 8.2	0	0	187	2	1.09E-11	*****
C 9.1	0	0	184	2	1.32E-11	*****
C10.1	0	0	100	0	2.08E-10	*****
D 6.1	0	0	128	1	2.60E-12	*****
D 7.1	0	0	100	0	8.45E-14	*****
D 8.1	0	0	100	0	3.25E-15	10735

1230 - 1245
5-10mi Map

Connecticut Yankee Exercise
Radiological Data

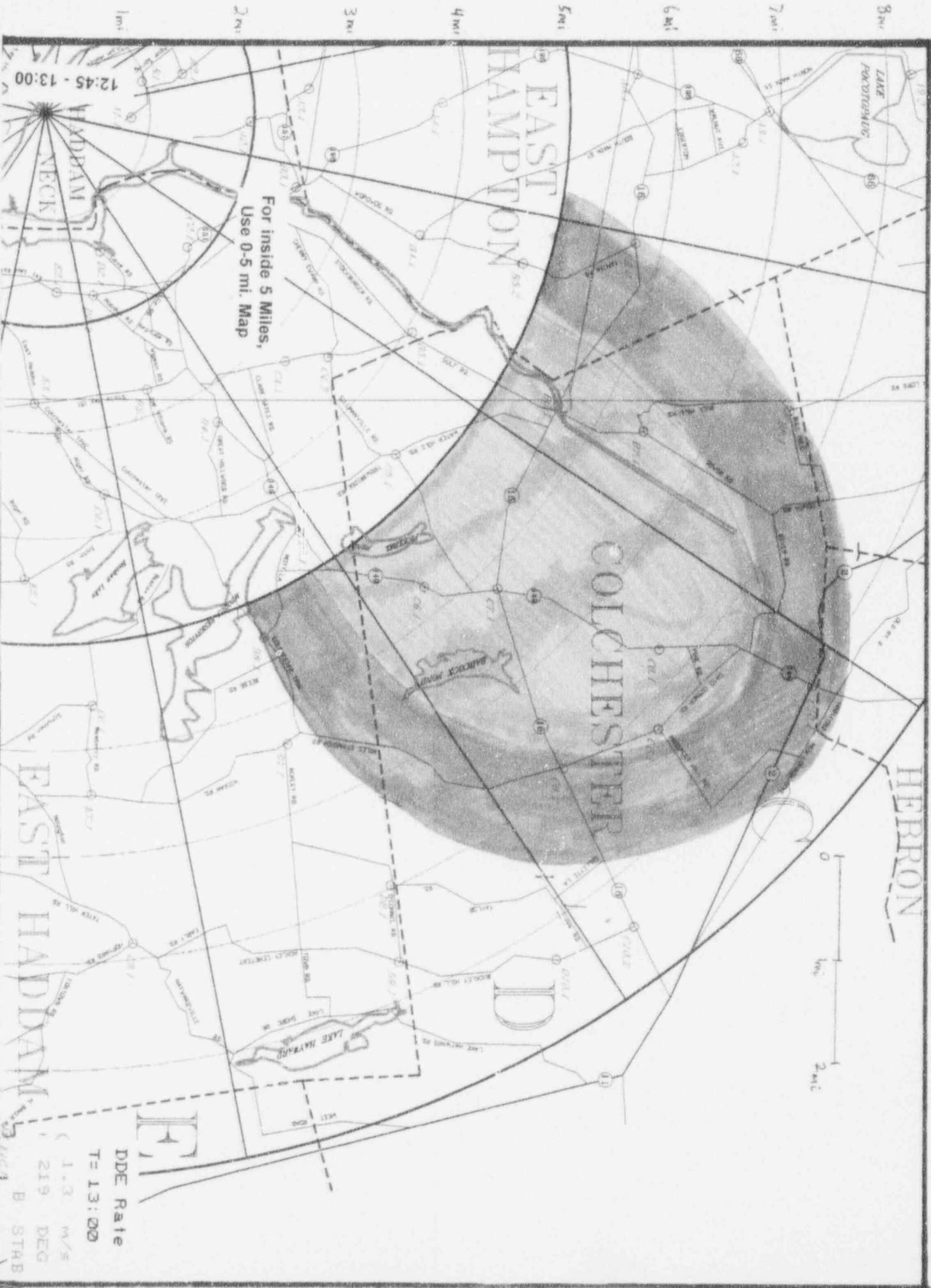


1245-1300

DDE Rate
T = 13:00
1.3 m/s
219 DEG
B Stab

Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 1.0mi	0	0	100	0	1.32E-14	43692
Centerline 2.0mi	0	0	411	8	3.19E-11	*****
Centerline 3.0mi	13	6	19378	493	1.98E-09	*****
Centerline 4.0mi	39	19	58210	1,474	5.91E-09	*****
Centerline 5.0mi	33	16	49060	1,198	4.80E-09	*****
Centerline 6.0mi	28	14	41350	949	3.81E-09	*****
Centerline 7.0mi	17	8	25351	571	2.29E-09	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
A 2.1	0.0	0.0	101	0	2.26E-13	*****
A 3.1	0.0	0.0	100	0	2.27E-14	75009
A 4.1	0.0	0.0	100	0	2.86E-14	94446
B 3.1	0.1	0.1	301	5	2.07E-11	*****
B 3.2	0.2	0.1	369	7	2.76E-11	*****
B 4.1	1.1	0.8	1824	44	1.76E-10	*****
B 5.1	18.1	9	27277	688	2.76E-09	*****
B 5.2	0.8	0	1370	31	1.25E-10	*****
C 2.1	0.0	0	235	3	1.40E-11	*****
C 4.1	0.0	10	29500	751	3.01E-09	*****
C 4.2	32	16	47620	1211	4.855E-09	*****
C 5.1	30	15	44350	1099	4.41E-09	*****
D 2.1	0.0	0.0	100	0	6.298E-14	*****
D 2.2	0.0	0.0	101	0	1.614E-13	*****
D 3.1	0.1	0.0	211	3	1.143E-11	*****
D 4.1	1.9	0.9	2948	73	2.914E-10	*****
D 5.1	2.4	1.2	3670	89	3.568E-10	*****
E 2.1	0.0	0.0	100	0	3.715E-15	12260
E 3.1	0.0	0.0	100	0	1.055E-15	3482
E 4.1	0.0	0.0	100	0	3.733E-14	*****

1245 - 1300
0-5 mile Map



Sample zone & point	Survey Meter Readings		Iodine Sample Readings			
	Window Open mR/hr	Window Closed mR/hr	Background cpm	Sample ccpm	I-131 Conc Ci/m**3	Partic Filter ccpm
Centerline 1.0mi	0	0	100	0	1.32E-14	43692
Centerline 2.0mi	0	0	411	8	3.19E-11	*****
Centerline 3.0mi	13	6	19378	493	1.98E-09	*****
Centerline 4.0mi	39	19	58210	1,474	5.91E-09	*****
Centerline 5.0mi	33	16	49060	1,198	4.80E-09	*****
Centerline 6.0mi	28	14	41350	949	3.81E-09	*****
Centerline 7.0mi	17	8	25351	571	2.29E-09	*****
Yellow	> 1000	> 1000	n/a	n/a	n/a	n/a
Green	1000-100	1000-100	n/a	n/a	n/a	n/a
Blue	100-1.	100-1.	n/a	n/a	n/a	n/a
Pink	1-.05	1-.05	n/a	n/a	n/a	n/a
B 6.1	8.5	4.2	12844	302	1.21E-09	*****
B 6.2	0.0	0.0	125	1	2.32E-12	*****
B 7.1	5.6	2.8	8491	191	7.64E-10	*****
B 8.1	0.2	0.1	334	5	2.12E-11	*****
B 9.1	0.0	0.0	111	0	1.03E-12	*****
B10.1	0.0	0.0	100	0	2.50E-14	82368
C 6.1	8.1	4.1	12268	283	1.136E-09	*****
C 7.1	15.3	7.6	23035	522	2.091E-09	*****
C 8.1	6.6	3.3	10036	225	9E-10	*****
C 8.2	0.7	0.4	1216	25	1.011E-10	*****
C 9.1	1.2	0.6	1888	40	1.62E-10	*****
C10.1	0.1	0.0	225	3	1.131E-11	*****
C10.2	0.0	0.0	103	0	2.55E-13	*****
D 6.1	0.0	0.0	157	1	5.533E-12	*****
D 7.1	0.0	0.0	103	0	3.163E-13	*****
D 8.1	0.0	0.0	101	0	9.026E-14	*****
D 9.1	0.0	0.0	100	0	1.754E-15	5788
D10.1	0.0	0.0	100	0	3.455E-14	*****

1245 - 1300
5-10 mile Map