62 Indian trail
Duxbury, Ma 02332
October 23, 1987

Nuclear Regulatory Commission
Washington, D.C.

RE: PILGRIM NUCLEAR PLANT IN PLYMOUTH, MASSACHUSETTS

Dear Sir;

I do not believe that there should be any manufacturing or nuclear plants within this country — whose operation endangers the lives of the citizens.

Any plant that must submit an evacuation plan in case of accident, is too dangerous to tolerate. PERIOD.

We are opposed to the re-opening of Pilgrim Nuclear Plant under any circumstances.

Sincerely,
William H. and Beverly L. Worrall

8810250178 880914
PDR FOIA
JOHNSON88-198 PDR

BOSTON EDISON
Executive Offices
800 Boylston Street
Boston, Massachusetts 02199

October 26, 1987

Ralph G. Bird
Senior Vice President — Nuclear

Mr. Peter Agnes, Jr.
Commonwealth of Massachusetts
Assistant Secretary of Public Safety
One Ashburton Place - Room 2133
Boston, MA 02108

Dear Mr. Agnes:

As you and I recently discussed, periodic submittal of the information developed in response to the issues identified in the Federal Emergency Management Agency's (FEMA) August 4, 1987, "Self-Initiated Review and Interim Finding for the Pilgrim Nuclear Power Station" (SIR) should facilitate FEMA's review of the resolution of those issues. Accordingly, we are forwarding a copy of a report entitled "Pilgrim EPZ Public Beach Population Analysis," dated October 14, 1987, which addresses subissues C.1 and C.2, as identified in the "Boston Edison Company Action Plan and Schedule for Providing Assistance in Addressing FEMA Issues," dated September 17, 1987 (Boston Edison Action Plan). We are also enclosing for your consideration a draft letter of transmittal to FEMA and a suggested distribution list.

In subissue C.1, FEMA requested, "(1) an updated geographical description of the beaches (within the Pilgrim EPZ) and their capacity." (Page 26 of SIR) The Boston Edison Action Plan (Page 14) stated that preliminary estimates of the expected maximum number of people on the public beaches within the EPZ had been developed and were being verified. It also stated that updated geographical descriptions of the beaches were being developed. The results of those efforts in response to FEMA's request are contained in the enclosed report.

In subissue C.2, FEMA requested, "(2) a detailed analysis of the beach population, including the number of permanent and temporary residents and the number of day visitors, together with their geographical dispersion." (Page 26 of SIR) The Action Plan (Page 15) stated that the geographical dispersion of the population of each of the public beaches was being developed.

It also indicated that a breakdown between permanent and temporary residents and day visitors did not need to be developed since the current planning process is based on the conservative assumption that sufficient sheltering capacity will be identified for the entire beach population. Thus, the enclosed report provides the information requested by FEMA as to geographical dispersion of the population on the public beaches within the EPZ.

Please do not hesitate to contact either myself or Ron Varley at (617) 747-8544 if you have any questions.

R. G. Bird

Enclosure

cc: Mr. John Lovering
Deputy Director
MCDA
400 Worcester Road
Framingham, MA 01701

Mr. Jeffrey B. Hausner
MCDA
400 Worcester Road
Framingham, MA 01701

Mr. Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 w/o draft letter attachment

Mr. R.H. Wessman, Project Manager
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, MD 20814
Wessman - NRC w/o draft letter attachment

U.S. Nuclear Regulatory Commission
Region 1 - 631 Park Avenue
King of Prussia, PA 19406 w/o draft letter attachment

Senior NRC Resident Inspector
Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, MA 02360 w/o draft letter attachment

PILGRIM EPZ PUBLIC

BEACH POPULATION ANALYSIS

KLD Associates, Inc.

October 14, 1987

The purpose of this report is to respond to certain issues raised in the Federal Emergency Management Agency's (FEMA) August 4, 1987 "Self-Initiated Review and Interim Finding for the Pilgrim Nuclear Power Station (SIR)." In particular, the report addresses SIR subissues C.1 and C.2 as identified in the "Boston Edison Company Action Plan and Schedule for Providing Assistance in Addressing FEMA Issues" dated September 17, 1987 (Boston Edison Action Plan).

Subissue C.1 stated:

> FEMA and the RAC ... must receive the following additional information: (1) an updated geographical description of the beaches and their capacity.

Attachments A-G are relevant portions of United States Geological Survey quad sheets (modified as described under Subissue C.2 below) which identify each of the major public beaches in the EPZ as follows:

Attachment A - Brant Rock Beach and Green Harbor Beach

Attachment B - Duxbury Beach

Attachment C - Saquish Neck

Attachment D - Grays Beach

Attachment E - Plymouth Beach

Attachment F - Priscilla Beach and White Horse Beach

Attachment G - Manomet Beach

In addition, estimates of the expected maximum number of people on each of these beaches are contained on Attachments A-G and summarized below:

Location	Estimated Capacity
Brant Rock	1,211
Green Harbor Beach	2,609
Duxbury Beach	4,583
Saquish Neck	654
Grays Beach	103
Plymouth Beach	1,960
Priscilla Beach	430
White Horse Beach	2,387
Manomet Beach	655
	14,592

These estimates were developed by counting the number of persons visible on aerial photographs of the beaches and adjacent off-beach areas (e.g., paths, homes, parking areas) taken between about 1PM and 3PM on Sunday, July 5, 1987. At least two independent counts were made for each beach and the highest count selected in each case. The photographs cover virtually all of the area of the major public beaches and each of the areas of high beach population density.

On July 5 it was clear and sunny and the temperature was approximately 85 degrees with low humidity. Since July 5 was part of a three-day holiday weekend during which Massachusetts beaches likely reach capacity and the weather conditions were highly conducive to maximum beach usage, these numbers are considered to represent reasonable estimates of the maximum number of persons expected on these beaches at any one time. Although those numbers could, of course, be exceeded on a given day, the excess would be expected to be small and not significant for emergency planning purposes.

Subissue C.2 states:

(2) a detailed analysis of the beach population, including the number of permanent and temporary residents and the number of day visitors, together with their geographical dispersion.

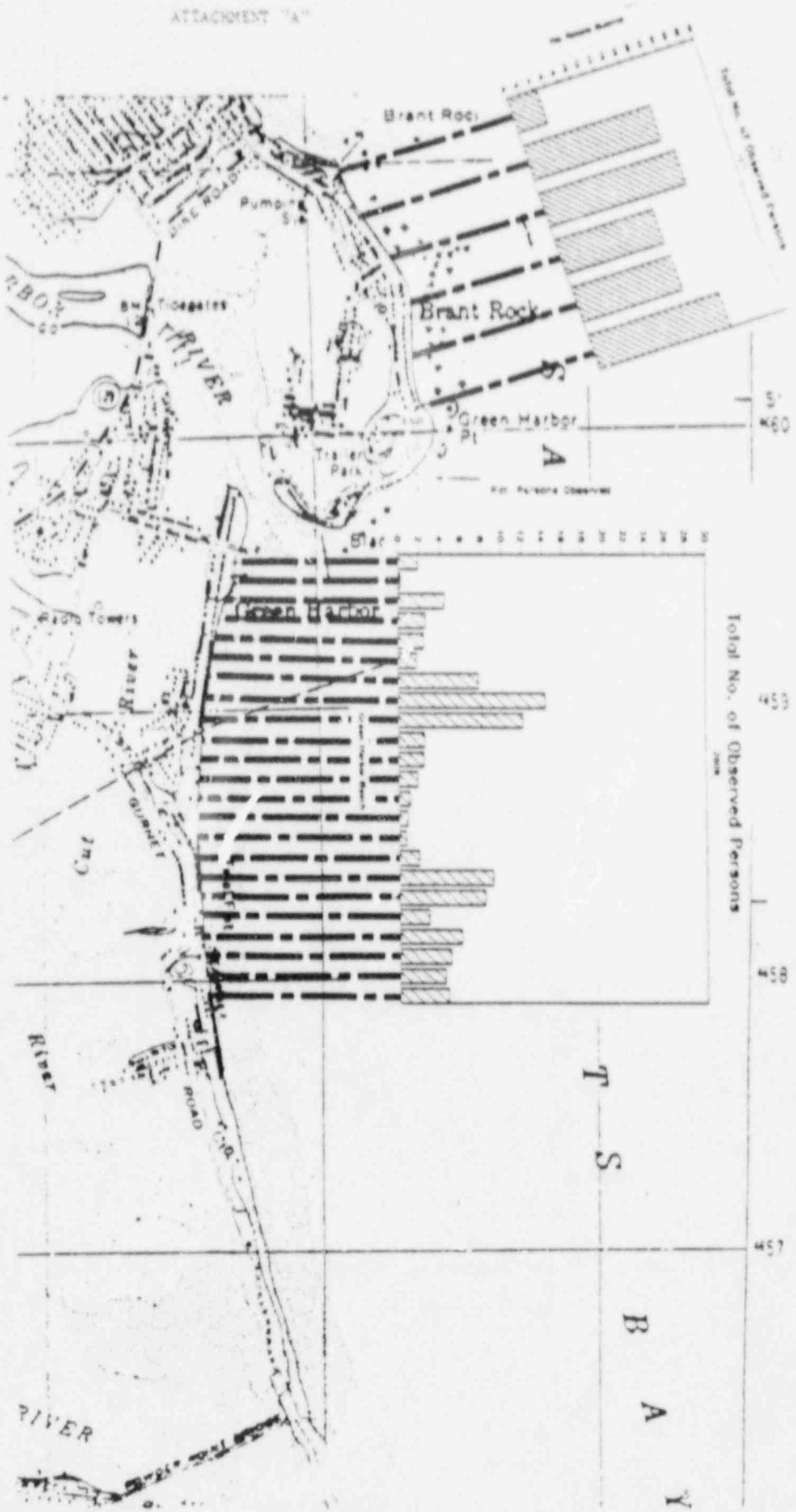
Attachments A-G contain histograms which identify the distribution of observed persons on each of the beaches on July 5, 1987. The histograms identify the percentage of the total population that is located in approximately equivalent segments of each beach. For example, Attachment A depicts Green Harbor Beach and the percentage of the total population of 2,609 persons which is located in each of 23 segments.

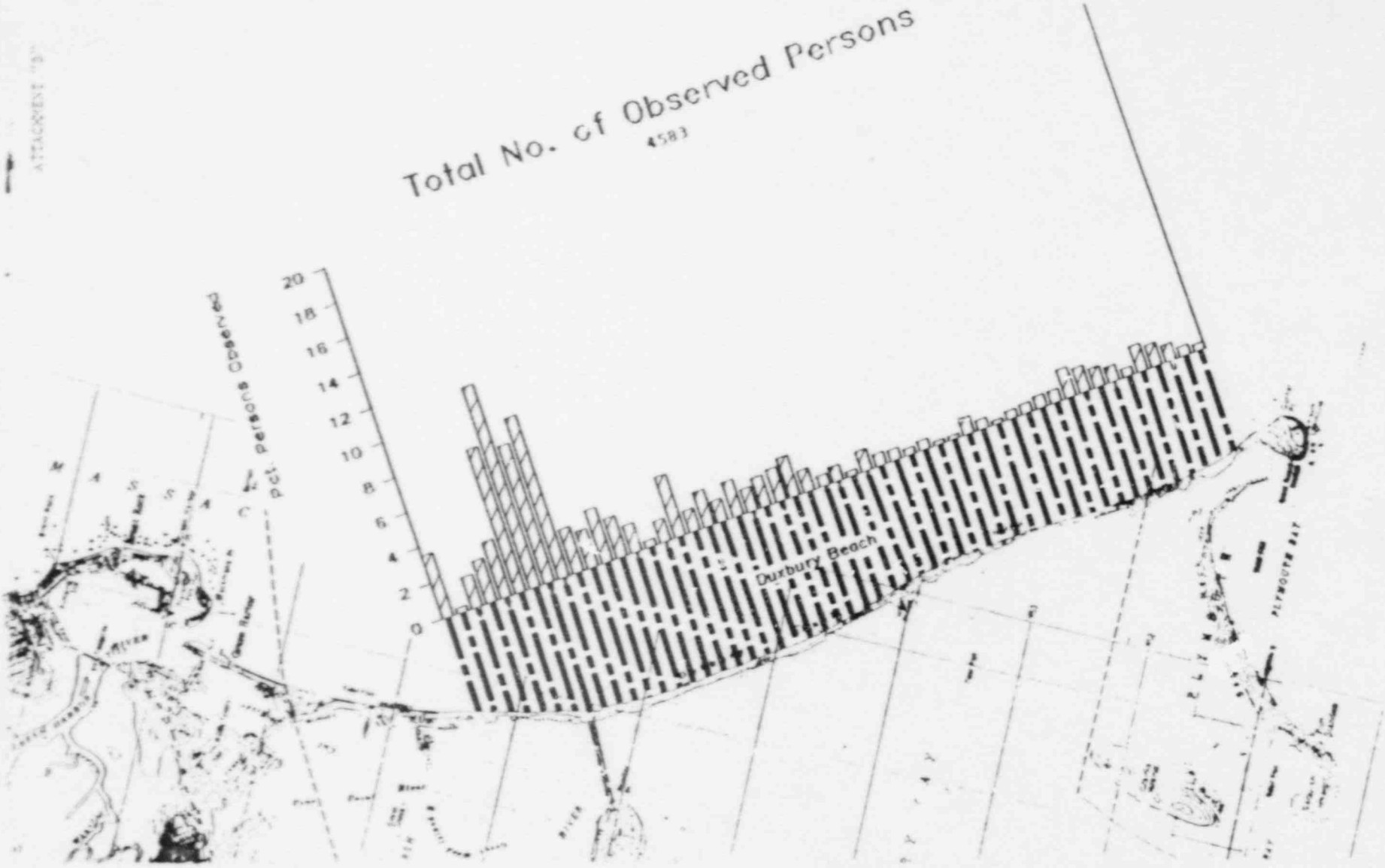
Analysis of the population distributions shows that people tend not to travel far from their parked vehicles. For example, on Duxbury Beach (Attachment B), approximately 60 percent of the beach population is concentrated along the 3/4 mile segment of beach from the entrance to the Duxbury Beach parking field to the area just south of the Powder Point Bridge. This area encompasses the two major beach parking areas. The remaining 40 percent of the beach-goers are distributed over the remaining beach south of the Powder Point Bridge. These people have access to off-road vehicles. A total of 521 off-road vehicles were counted along this stretch of beach. This represents an average vehicle occupancy of 3.51 persons per off-road vehicle (0.4 X 4,583/521). Aerial photos of Saquish Neck (Attachment C) indicate that access to the area is achieved principally by automobile via the road from Duxbury Beach, or by boat, and that persons in the area have access to a vehicle, a boat, and/or one of approximately 200 residences.

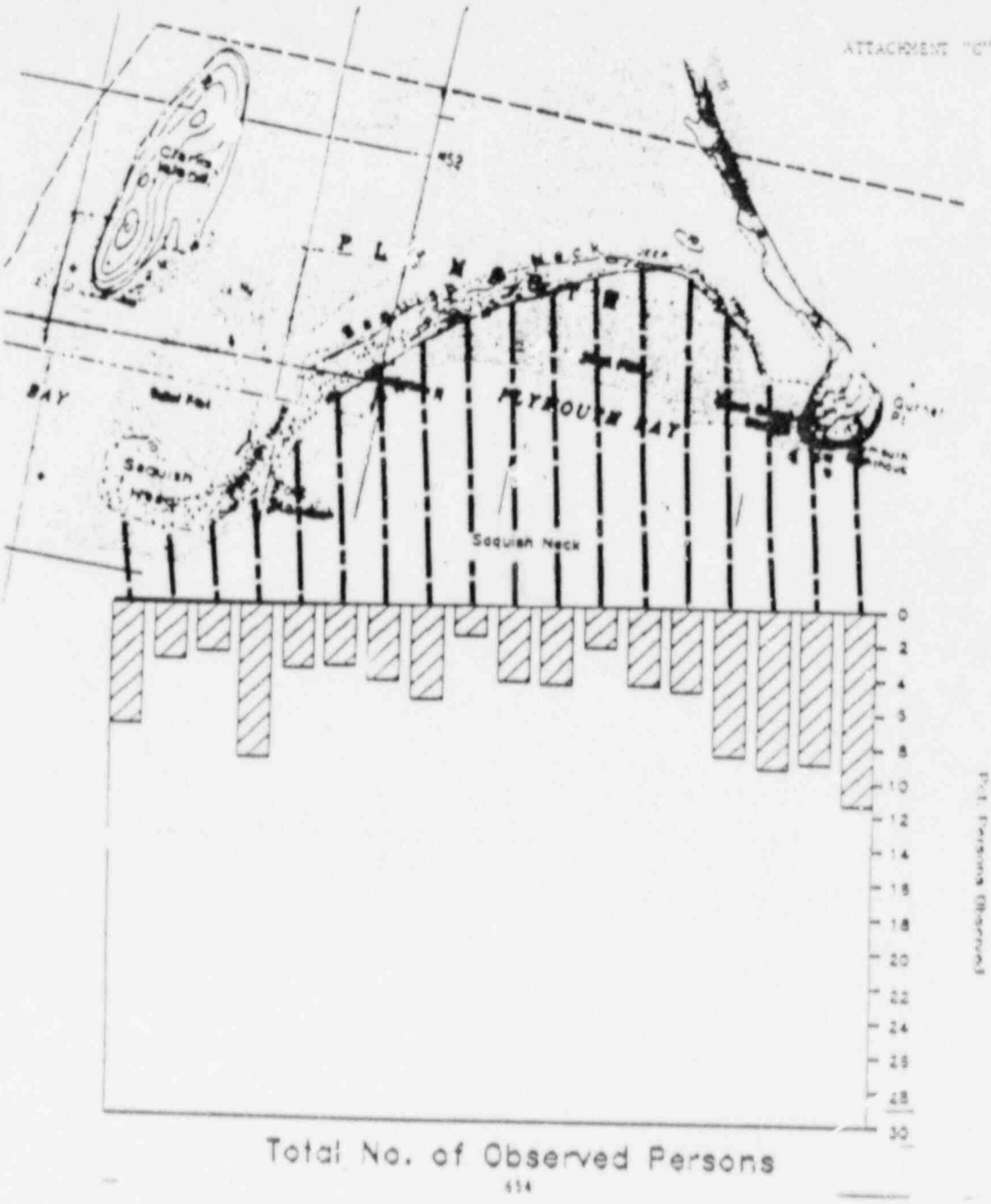
Similar conclusions may be drawn for Plymouth Beach (Attachment E). Approximately 28 percent of persons at the beach are located along that section of beach abutting the parking facilities. The remaining 72 percent of the beach-goers are distributed along the remaining portions of Plymouth Beach in proximity to the 565 off-road vehicles counted. The average occupancy for Plymouth Beach off-road vehicles is 2.49 persons per vehicle (0.72 X 1,960/565).

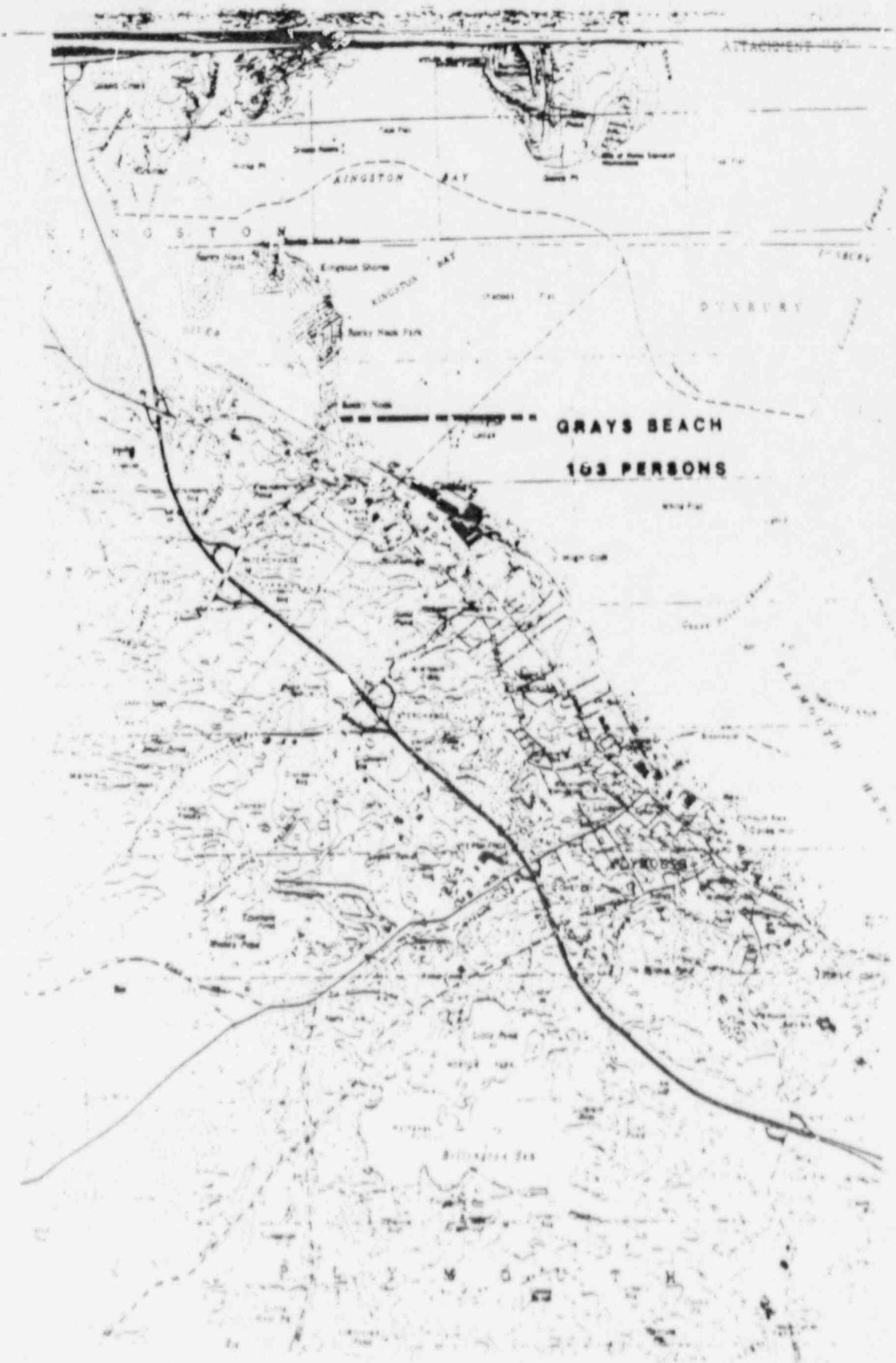
Beach-goers at the other major public facilities (Brant Rock, Green Harbor, Gray's Beach, Priscilla Beach, Whitehorse Beach, and Manomet Beach) all have ready access to adjoining roads where vehicles are parked.

ATTACHMENT "A"



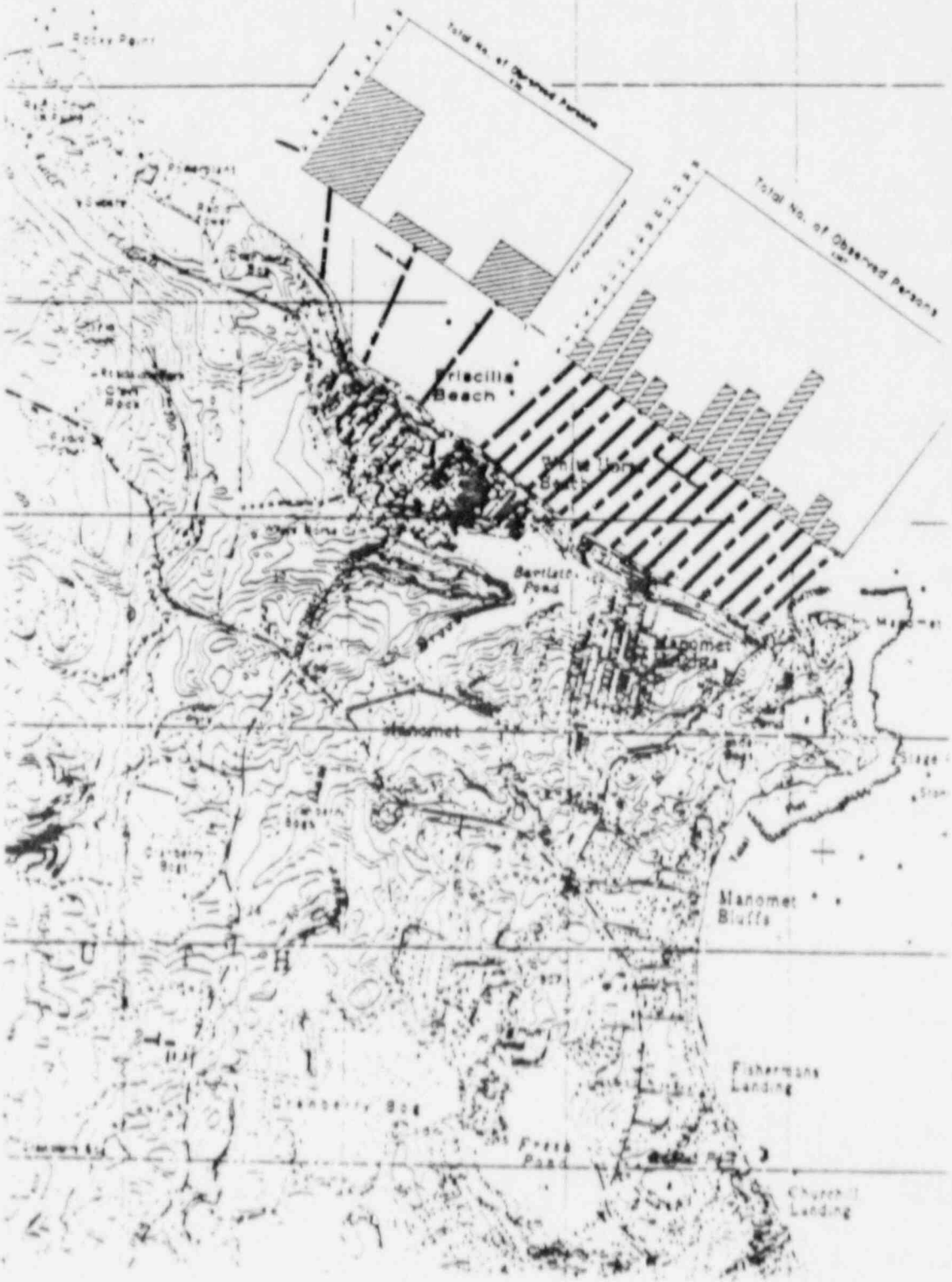

Total No. of Observed Persons
4583
Pct. Persons Observed
20
18
16
14
12
10
8
6
4
2
0
Duxbury Beach
PLYMOUTH BAY


Squaw Neck
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
Total No. of Observed Persons

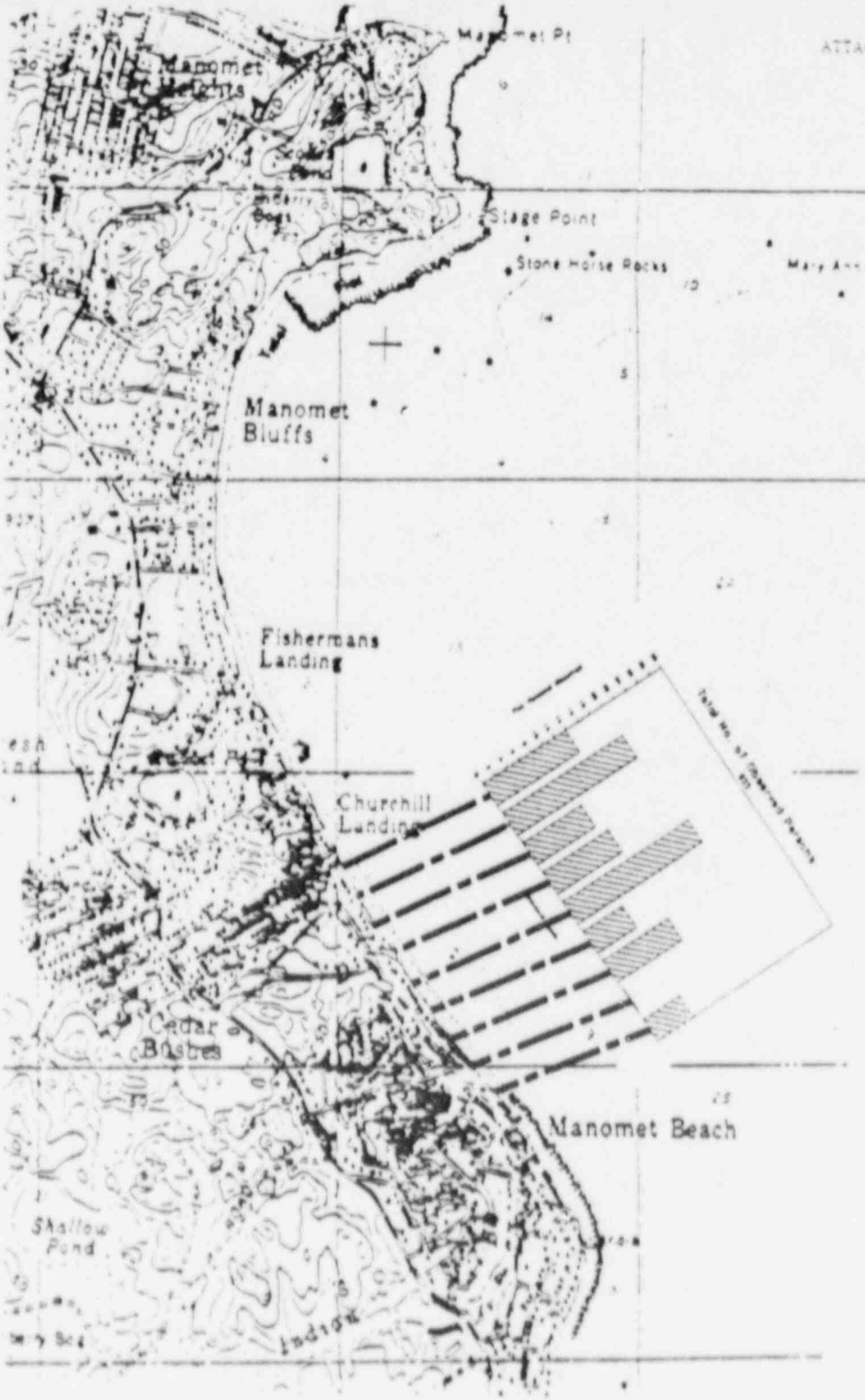

ATTACHMENT "D"
KINGSTON BAY
KINGSTON
Kingston Shores
KINGSTON BAY
DUXBURY
Rocky Neck Park
Rocky Neck
GRAYS BEACH
103 PERSONS
PLYMOUTH
Billington Sea
PLYMOUTH

Pct. Persons Observed
Total No. of Observed Persons
1980

ATTACHMENT "F"



ATTACHMENT "C"



AGENDA

DECEMBER 10, 1987

1. EOP STATUS UPDATE

2. DESCRIPTION OF PILGRIM EOPs

3. QUESTIONS AND DISCUSSION

UPDATE OF PNPS EOP STATUS SINCE AUGUST 8, 1987

- o COMPLETED VALIDATION ON PLANT-SPECIFIC SIMULATOR
  - INTERIM VALIDATION ISSUED
- o COMPLETED OPERATOR TRAINING
  - 40 HOURS OF CLASSROOM
  - 40 HOURS OF SIMULATOR
- o COMPLETED AN UPDATE OF THE DRAFT EOPs
  - INCORPORATED SIGNIFICANT VERIFICATION AND VALIDATION FINDINGS, AND OPERATOR COMMENTS
  - REVIEWED, APPROVED AND ISSUED
- o COMPLETED AN UPDATE OF ALL EOP SATELLITE PROCEDURES
- o PROVIDED AN UPDATE OF ASSOCIATED DOCUMENTATION TO NRC
- o FUTURE PLANS

o FUTURE PLANS

- REVISE PSTG AND EOPs FOLLOWING FORMAL NRC APPROVAL OF REV. 4 EPGs - Par restart

- FINALIZE EOP VERIFICATION AND VALIDATION

- FINALIZE PROCEDURE GENERATION PACKAGE AND SUBMIT TO NRC FOR REVIEW

CRITERIA FOR DEVELOPMENT OF FLOWCHART PROCEDURES

- Procedures must accurately reflect the technical content and intent of the PSTGs.

- Format must accommodate sequential, concurrent, and override actions.

- Text of instructions and decisions should be simple and unambiguous.

- Procedures must include all cautions, figures, and tables required for execution of operator actions.

- Overall arrangement should be clear, easy to follow; crossover of lines should be minimized.

- Text must be readable.

- Sheet size must be no larger than 36" x 60".

- Entries to and exits from each procedure must be clearly and unambiguously presented.

NUREG-0899 Sections (Writers' Guide & Human Factors)		PNPS EOPs (Writers' Guide Section)
5.2	**General Guidance**	
5.2.1	Consistency Among the Procedures	III.D,E,F, & IV.A,B,F
5.2.2	Cross-Referencing Within and Among Procedures	III.A.11 & IV.D
5.2.3	Operator Aids	III.A.12
5.3	**Presentation of Information for Readability**	III.D,E,F & IV.B
5.4	**Organization of EOPs**	
5.4.1	Cover Page	N/A
5.4.2	Table of Contents	N/A
5.4.3	Scope	N/A
5.4.4	Entry Conditions	III.A.1
5.4.5	Automatic Actions	III.A.4
5.4.6	Immediate Operator Actions	III.A.4
5.4.7	Subsequent Operator Actions	III.A.4
5.4.8	Supporting Material (Attachments)	III.A.12
5.5	**Format of EOPs**	
5.5.1	Identifying Information	II.A,B,C
5.5.2	Page Layout	III.E
5.5.3	WARNING, CAUTION, and NOTE Statements	III.A.13,14
5.5.4	Placekeeping Aids	(Training)
5.5.5	Divisions, Headings and Numbering	III.A.3 & III.B
5.5.6	Emphasis	III.D
5.5.7	Identification of Sections Within a Procedure or Subprocedure	III.A.3 & IV.D
5.5.8	Figures and Tables	III.A.15,16
5.5.9	Use of Flowcharts	N/A
5.6	**Style of Expression and Presentation**	
5.6.1	Vocabulary	IV.G
5.6.2	Abbreviations, Acronyms and Symbols	IV.G
5.6.3	Sentence Structure	III.A & IV.A,B
5.6.4	Punctuation	IV.F
5.6.5	Capitalization	IV.D
5.6.6	Units	IV.H
5.6.7	Numerals	IV.H
5.6.8	Tolerances	IV.H
5.6.9	Formulas and Calculations	IV.B
5.6.10	Conditional Statements	III.A.5,6,7,8

NUREG-0899 Sections (Writers' Guide & Human Factors)		PNPS EOPs (Writers' Guide Section)
5.7	**Content of EOPs**	
5.7.1	Sequencing	III.B & III.E
5.7.2	Verification Steps	III.A.8,9
5.7.3	Nonsequential Steps	III.A.2 & III.C
5.7.4	Equally Acceptable Steps	III.C & IV.D
5.7.5	Recurrent Steps	III.A.7,8,10
5.7.6	Time-Dependent Steps	N/A
5.7.7	Concurrent Steps	III.A.2
5.7.8	Diagnostic Steps	N/A
5.7.9	WARNING and CAUTION Statements	III.A.14
5.7.10	NOTE Statements	III.A.13
5.7.11	Location Information	IV.E

PILGRIM NUCLEAR POWER STATION
EMERGENCY OPERATING PROCEDURES

EOP-01, "RPV CONTROL"

EOP-02, "FAILURE TO SCRAM"

EOP-03, "PRIMARY CONTAINMENT CONTROL"

EOP-04, "SECONDARY CONTAINMENT CONTROL"

EOP-05, "RADIOACTIVITY RELEASE CONTROL"

EOP-06, "RPV FLOODING"

EOP-07, "ALTERNATE RPV DEPRESSURIZATION"

EOP-08, "STEAM COOLING"

EOP-09, "PRIMARY CONTAINMENT FLOODING"

SHEET #	EOP #	PSTG SECTIONS
1	1	3 - Entry Conditions RPV Water Level RPV Pressure Reactor Power 7 - Alternate Level Control
	8	9 - Steam Cooling
2	2	3 - Entry Conditions RPV Pressure Reactor Power 11 - Level/Power Control
3	3	4 - Entry Conditions Suppression Pool Temperature Drywell Temperature Primary Containment Pressure Suppression Pool Water Level Primary Containment Hydrogen Concentration
4	4	5 - Entry Conditions Secondary Containment Temperatures Secondary Containment Radiation Levels Secondary Containment Water Levels
	5	6 - Entry Conditions Radioactivity Release
5	6	10 - RPV Flooding
	7	8 - Emergency RPV Depressurization
	9	12 - Primary Containment Flooding

CORRELATION BETWEEN EOPs and PSTGs

KEY FEATURES OF FLOWCHART PROCEDURES

- o PRESENTS ON A SINGLE SHEET OF PAPER ALL INFORMATION REQUIRED FOR SUPERVISORY PERSONNEL TO DIRECT EMERGENCY RESPONSE ACTIONS

- o BEST FORMAT FOR MAINTAINING A BROAD PERSPECTIVE ON OVERALL PLANT CONDITIONS AND ASSOCIATED OPERATOR ACTIONS

- o ORDER OF CONDITIONS/ACTIONS IS VERY CLEARLY PRESENTED
  - SEQUENTIAL
  - BRANCH
  - CONCURRENT

- o FLOWCHART ELEMENTS ARE SELECTED TO REINFORCE THE "UNIQUE" TYPES OF ACTIONS
  - DECISIONS
  - OVERRIDES
  - CONDITIONAL ACTIONS
  - WAIT UNTIL....
  - ETC.

EOP-08
STEAM COOLING

8-1

START

While executing this procedure:

IF	THEN
Alternate RPV Depressurization is required	Exit this procedure and enter EOP-07, "Alternate RPV Depressurization."
RPV water level cannot be determined	Exit this procedure and enter EOP-07, "Alternate RPV Depressurization."
Any source of injection is lined up to the RPV with at least one pump running	Exit this procedure and enter EOP-07, "Alternate RPV Depressurization."

8-2

8-3

WAIT UNTIL RPV water level drops to -169 in.

Exit this procedure and enter EOP-07, "Alternate RPV Depressurization."

8-4

EOP-06
RPV FLOODING

6-1

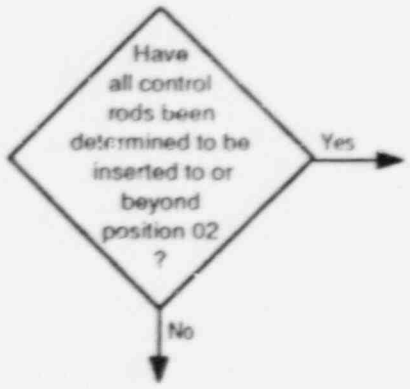
START

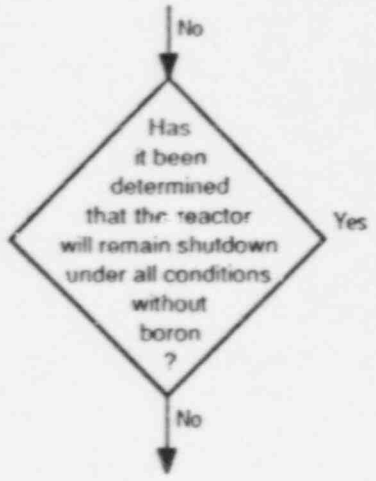
While executing this procedure:

IF	AND	THEN
RPV water level can be determined	All control rods are inserted to or beyond position 02	Exit this procedure and enter the RPV Water Level section and RPV Pressure section of EOP-01, "RPV Control;" execute these sections of EOP-01 concurrently.
RPV water level can be determined	Any control rod cannot be determined to be inserted to or beyond position 02	Exit this procedure and enter the RPV Water Level section and RPV Pressure section of EOP-02, "Failure to Scram;" execute these sections of EOP-02 concurrently.
Primary containment water level and torus pressure cannot be maintained below the MPCWLL (Figure 6.1)	---------	Irrespective of whether adequate core cooling is assured, terminate injection into the RPV from sources external to the primary containment UNTIL primary containment water level and torus pressure can be maintained below the MPCWLL.

6-2

6-3


Have all control rods been determined to be inserted to or beyond position 02 ?
Yes
No


No
Has it been determined that the reactor will remain shutdown under all conditions without boron ?
Yes
No

6-4

No

IF	OR	THEN
All control rods are inserted to or beyond position 02	It has been determined that the reactor will remain shutdown under all conditions without boron	Continue at (A).

6-5

MARFP
(Min Alternate RPV Flooding Pressure)

Number of Open SRVs	RPV Pressure (psig)
4	181
3	246
2	376
1	767

6-6

Terminate and prevent all injection into the RPV EXCEPT from boron injection systems and CRD.	
WHEN.. no SRV can be opened,	WHEN..RPV pressure is below the MARFP,

MARFP
(Min Alternate RPV Flooding Pressure)

Number of Open SRVs	RPV Pressure (psig)
4	181
3	246
2	376
1	767

CHANGES FROM DRAFT B TO REV. 0

(PARTIAL LISTING)

1. CORRECTED ENTRY CONDITION FOR EOP-04

2. RESTRUCTURED PARAMETER TABLES IN EOP-04

3. CORRECTED HCLL CURVE

4. REVISED MSBWP FROM 00 TO 02

5. CORRECTED CRITERIA FOR TERMINATING RPV VENTING IN EOP-09

6. REVISED CAUTION #1

7. MISCELLANEOUS TYPOGRAPHICAL ERRORS

Inside N.R.C.

An exclusive report on the U.S. Nuclear Regulatory Commission

LIBRARY
DEC 8 1987

Vol. 9, No. 25—December 7, 1987

FAILURE OF MARK I IS ALMOST CERTAIN IN SEVERE CORE MELT, PANEL SAYS

There is little if any doubt that Mark I containments would fail rapidly in the event of a severe core melt because molten core would melt through the steel containment liner, a group of containment experts says in a draft report submitted to NRC November 25. The group, formed by NRC to review the Mark I melt-through issue, also says in its report that there is no technical basis for industry's long-held position that Mark Is could withstand a severe core melt and melt-through of the steel liner is highly unlikely.

But members of the expert group and NRC staffers in the Office of Nuclear Regulatory Research (RES) who are reviewing the report stressed in interviews that relatively simple fixes to the containment buildings that surround Mark Is could ensure that liner melt-through and early containment failure would not result in substantial off-site releases.

"We have essentially unanimous agreement that the liner is highly vulnerable to melt-through," said one member of the expert group. "The consensus of the group is that if you have a core-on-the-floor situation, there is no doubt that the containment will fail and fail rapidly. It was difficult to even conjure up a set of conditions under which the steel liner would survive core on the floor."

The report, "Review of the Status of the BWR Mark I Melt-Through Issue," says: "It is concluded that the drywell pressure boundary (the steel liner) is vulnerable to even the most optimistic assumptions of in-vessel meltdown and melt ejection from the failed reactor vessel, and that primary containment

(continued on page 14)

MUTANT FROG IS BAD NEWS FOR KERR-MCGEE'S NRC-APPROVED WASTE PROGRAM

A nine-legged frog that turned up in a drainage pond near Kerr-McGee Corp.'s uranium conversion plant in Gore, Okla. has given local residents and environmentalists who have long opposed the facility a graphic piece of media ammunition against the company and NRC, which licensed the plant. And while plant opponents insist that no responsible federal or state agency is monitoring the environmental effects of plant operations, Kerr-McGee is already in the Oklahoma Supreme Court challenging strict new standards for renewal of its water discharge permit that could, if the company ultimately loses its case, force a shutdown of the plant.

With NRC's permission, Kerr-McGee has been applying treated raffinate—nitrogen fertilizer produced from reprocessed wastes—on grazing lands it owns around the facility, which is operated by its subsidiary Sequoyah Fuels Corp. The plant converts uranium oxide (U_3O_8) to uranium hexafluoride (UF_6), an intermediate step in production of nuclear fuel. Nitric acid from the conversion process is neutralized with anhydrous ammonia, and the majority of heavy metals and radionuclides—principally uranium, thorium, and radium—are precipitated out with a barium compound, leaving a dilute ammonium nitrate solution.

Environmentalists claim, however, that the radionuclide and heavy metal content of the fertilizer is polluting water and poisoning the forage around the Sequoyah Fuels plant. The nine-legged frog, they maintain, was the product of environmental damage caused by Kerr-McGee's use of the raffinate.

But the celebrated jumping frog of Gore, Okla.—apparently the only one ever found—is just

INSIDE THIS ISSUE . . .

Zech indicates he'll push for fitness-for-duty rule early in 1988 ..... page 3
Ex-NRC staffers say truthfulness of White letter never mattered ..... page 3
NRC bulletin on tube breaks to focus on leak detection procedures ..... page 5
NRC facing two court battles over newly enacted emergency planning rule ..... page 6
ANS predicts increased spending on backfits and other modifications ..... page 7
NRC responds to GAO report critical of agency's performance ..... page 11

Under the schedule approved by NRC, Commonwealth will change out the reactor protection switches during refueling outages scheduled for next fall at LaSalle-2, and for the last quarter of 1989 at unit 1. ECCS and RCIC system switches will be replaced during refueling scheduled for the last half of 1990 at LaSalle-2, and for the last half of 1991 at unit 1.

Commonwealth is "still working with S.O.R. Inc. to evaluate the exact cause of the switch problems," a utility spokesman said. "Liability isn't an issue yet."—*Eric Lindeman, Washington*

CORRECTIONS AND CLARIFICATIONS:

— A story in the November 23 issue of Inside N.R.C. concerning remarks made during a session at the American Nuclear Society's Winter Meeting on degreed operators misidentified a speaker at the session. The speaker, who was talking about the background of the current commission and World War II empirical data, was not session organizer Max Clausen of NRC. Instead, he was session chairman William Corcoran of IT-Delian Corp.

— An article on page 3 of the November 23 issue of Inside N.R.C. misidentified Belgium's Tihange-3 as a 1,000-MW Framatome unit. In fact, Tihange-3 is of Westinghouse design.

— On page 14 in the November 23 issue of Inside N.R.C., in a story on firms offering to conduct Individual Plant Examinations (IPEs), Pickard, Lowe, & Garrick Inc. (PL&G) was incorrectly referred to in one instance as PG&E. A spokesman for PG&E—Pacific Gas & Electric Co.—says the utility has not registered any complaints in this matter.

— The diesel generators at Duke Power Co.'s McGuire-2 are not also patched into McGuire-1, a Duke spokesman said, correcting a statement he made in connection with a fine proposed by NRC over McGuire-1's operation with only one diesel generator operational (INRC, 9 Nov., 15). Duke has since paid the $50,000 base fine, and is appealing the additional $50,000 escalation on the grounds that prompt corrective action was taken, the spokesman said.

MARK I CONTAINMENTS *(continued from page 1)*

failure by melt-through (of the liner) is a highly probable mechanism of early containment failure." The report includes a critique of an analysis by the Industry Degraded Core Rulemaking Program (IDCOR) that shows a low probability of liner melt-through and containment failure. "There appears to be no technically defensible basis for the IDCOR position," the report says.

However, one panel member said the group also reached a consensus that its conclusions are not a condemnation of Mark Is, but rather present an opportunity for NRC and industry to break a long-running impasse and finally resolve the Mark I issue.

If industry accepts the high probability of liner melt-through and early containment failure, one of the researchers said, NRC could then acknowledge that BWR Mark I reactor buildings—with minor fixes—could effectively mitigate off-site consequences of a severe accident with early containment failure.

"Members of the task force were adamant in saying that they are not condemning Mark Is," one member of the panel said. "There are simple things that can be done to mitigate off-site releases, but there are no easy fixes to prevent liner melt-through and early containment failure. There are fixes, but they have to be done in the context of recognizing the vulnerability of the liner and the containment."

"Industry has been quite adamant that the liner is not vulnerable," the panel member said. "Everybody dug trenches and put in battle emplacements on the liner issue, and it's hard to move trenches and battle emplacements. Hanging up on the liner issue hangs up the whole Mark I issue. If we could settle this (liner melt-through), we could resolve the Mark I issue—not by shutting down all the Mark Is, but with relatively simple fixes."

Panel members and RES staffers said a BWR Mark I reactor building would serve as a secondary containment and retain a large portion of the fission products in the event of a severe core melt followed by liner melt-through and rapid containment failure. One panel member said the effectiveness of the building in retaining fission products could be enhanced by adding more sprays. The threat to the reactor building from hydrogen detonation, said another task force member, "is not a problem without a fix."

"You've got to recognize that there is a great big probability of surpassing the suppression pool once you've failed the liner, and then you've got a substantial flow into the reactor building," one panel member said. "The ability of the reactor building to retain aerosols is dependent on not detonating hydrogen. Clearly there are relatively simple things that can be done."

Said one RES staffer: "You have a structurally strong building that can probably retain something like 90% of the fission products, and if you can retain 90% or so, you're not going to kill people

off site. But there are some problems assuring that you don't have hydrogen detonation."

"This is a problem that's been around a long time," the staffer added, "and we'd like to convince people one way or the other."

The report, which RES expects to release in final form by January, will be considered by another expert panel reviewing the draft version of Nureg-1150—NRC's reassessment of reactor risk—and trying to narrow the wide range of uncertainty regarding the ability of Mark Is to withstand severe core melts. "The task force firmly believes that the liner would fail, and (RES) staff is committed to that being reflected in the revised 1150," one panel member said. "The report can't be sanitized. We feel very strongly that the positions (taken in the report) need to be cemented."

The report could also play a key role in NRC's decision on how Mark Is will be treated in the individual plant examinations (IPEs) that utilities will begin next year. Moreover, the panel's conclusions will be considered by NRC staff when it reports to the commission sometime next year on the Mark I issue (INRC, 26 Oct., 1).—*Brian Jordan, Washington*

THE NEW PRESIDENT OF CANADA'S ATOMIC ENERGY CONTROL BOARD, Rene J. A. Levesque, has hit the road "to increase the board's visibility" at home and abroad. Replacing Jon Jennekens, the AECB's long-time chief executive officer and only full-time member, Levesque says his first priority is "to improve the transparency and openness" of the AECB's regulatory activities. "A more open and accessible organization is essential to the AECB's efficiency and credibility as a regulatory agency. The public is afraid of nuclear facilities and hazards linked to them, but it is our job to make sure the public is safe and that the nuclear industry is following our strict guidelines," he said.

In November Levesque toured New Brunswick Electric Power Commission's Point Lepreau plant and Ontario Hydro stations at Bruce and Darlington. At each location he told news media he felt the public perception of AECB's regulation of the nuclear industry was often "incomplete and inaccurate." This was his top concern when he appeared (Nov.18) before a parliamentary committee considering the cost of nuclear energy in Canada. AECB officials told the committee that budget limitations have left the board's personnel "spread far too thin."—*Ray Silver, Toronto*

BRIEFLY . . .

— **Comanche Peak delayed again.** Texas Utilities Electric Co. says slower than expected regulatory hearings and the company's failure to complete certain regulatory reports in time will further delay startup of Comanche Peak. TUEC had hoped to start up the $6.7-billion plant in early 1989, but now says Comanche Peak-1 will not start up until after the summer of 1989. The company also expects to revise the project's cost estimates early next year. Comanche Peak-1 was originally scheduled to open in 1980, but quality control problems scuttled that schedule.

— **Policy statement on integrated schedules issued.** NRC has issued for public comment a proposed policy statement on the use of integrated schedules for implementation of plant modifications. The statement describes the policy NRC intends to use to promote voluntary licensee integrated schedules for implementing regulatory requirements and other plant improvements. Integrated scheduling programs have been used at Iowa Electric Light & Power Co.'s Duane Arnold and Boston Edison Co.'s Pilgrim, but the agency has had only minimal success in convincing other utilities to participate, mainly because the industry feels there has been a lack of guidance from the commission regarding the preparation and implementation of the schedules. Comments on the proposed policy statement are due January 25, 1988.

— **County backs NRC consolidation.** NRC's plans to consolidate all of its headquarters offices in Montgomery County, Md. got a boost recently when the county's planning board indicated that a site adjacent to the agency's new White Flint North office building may be rezoned to accommodate a second building. The county board had originally granted a developer's request to construct a hotel-conference center on the site, but the developer now wants to build a second office building to accommodate NRC's consolidation needs. The board met last month to consider the developer's request, but deferred action in part because of concerns that a second building would create significant traffic congestion. According to NRC, the board members told Executive Director for Operations Victor Stello that they want NRC to consolidate in the county and that the site could be made acceptable to all parties.

— **$50,000 fine proposed against CP&L.** NRC has proposed a $50,000 fine against Carolina Power & Light Co. (CP&L) because of deficiencies in the utility's safe shutdown program in event of fire. The deficiencies, which were identified during an inspection in March, included inability of operators to quickly find necessary valves and breakers, and lack of adequate radio communication, according to an NRC spokesman. The problems were corrected by June, he said. CP&L has not yet decided whether to contest or pay the fine, a spokesman said.