

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of:

Docket No.

COMMISSION MEETING

BRIEFING ON INDIAN POINT EXERCISE

PUBLIC MEETING

Location: Washington, D.C.

Pages: 1 - 88

Date: Wednesday, April 20, 1983

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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION

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6 BRIEFING ON INDIAN POINT EXERCISE

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8 PUBLIC MEETING

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11 Room 1130,
12 1717 H Street, N.W.
Washington, D.C.

13 Wednesday, April 20, 1983

14 The NRC Commission met in public session at 2:16
15 p.m., pursuant to notice.

16 COMMISSIONERS PRESENT:
17 N. PALLADINO, Chairman
18 J. ASSELSTINE, Commissioner
19 J. AHEARNE, Commissioner
T. ROBERTS, Commissioner
V. GILINSKY, Commissioner

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STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

- S. Chilk
- H. Plaine
- M. Blume
- M. Malsch
- R. Krimm, FEMA
- F. Petrone, FEMA
- J. Bragg, FEMA
- W. Dircks

AUDIENCE SPEAKERS:

- M. Kowieske
- M. McIntire
- S. Perry

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P R O C E E D I N G S

1
2 CHAIRMAN PALLADINO: Good afternoon, ladies and
3 gentlemen. We are meeting this afternoon to allow repre-
4 sentatives of the Federal Emergency Management Agency, FEMA,
5 to brief the Commissioners on the results of the most recent
6 emergency exercise at the Indian Point facility. This
7 exercise was held on March 9, 1983.

8 The Commissioners have been provided with copies of
9 the Assessment Report provided by FEMA, Region II Director.
10 and our purpose in meeting today is to go over the details of
11 the report and allow FEMA to respond to Commissioner questions.
12 The Commission will be meeting again at a later date to
13 discuss possible actions it can take regarding the Indian
14 Point plant in light of deficiencies still remaining in the
15 off-site emergency preparedness around the facility.

16 Do any of my fellow Commissioners have any addi-
17 tional remarks they would like to make before we start? Then
18 I propose turning the meeting over to Mr. Jeff Bragg, who is
19 the Executive Deputy Director for FEMA.

20 MR. BRAGG: Thank you, Mr. Chairman. I am here
21 today with Mr. Dick Krimm, who is Assistant Associate Director
22 for the Office of National Technological Hazards, as well as
23 Frank Petrone, Regional Director for FEMA's Region II.

24 I would like to discuss FEMA's latest report in
25 our continuing process to review and evaluate off-site plans

1 and preparedness at Indian Point power plant.

2 In our meeting of December 21, 1982, we gave the
3 Commission our position on the adequacy of off-site plans for
4 Indian Point. We could not render a judgment on the adequacy
5 of preparedness, however, since an exercise of those plans
6 could not be conducted before the end of the 120-day clock.
7 As you remember, this was due to limitations of state and
8 local resources which were already fully committed to the
9 corrective planning actions due at the beginning of December.
10 They could not be concurrently committed to exercise prepara-
11 tion in a way that would yield a meaningful test of the plans'
12 implementation before December 2, 1982; thus, we were only
13 able to make a judgment on the plans themselves. A plan is
14 ultimately only valuable if it can be implemented well. This
15 is the essence of preparedness. A judgment could not be made
16 on the preparedness aspect until after the exercise in early
17 March. Thus, we committed that by April 15th, or as soon as
18 possible after the March exercise, we would present our find-
19 ings on the adequacy of off-site preparedness at Indian Point.

20 We delivered that report to the Commission on Friday
21 and are prepared to discuss it today. We would like to use
22 a series of slides to present our evaluation of the exercise
23 and FEMA's recommended actions. Actions on these recommenda-
24 tions will be important since FEMA's basic finding is that the
25 state of off-site preparedness at Indian Point is inadequate

1 to protect the health and safety of the population within
2 the ten-mile emergency planning zone.

3 Before beginning the discussion of the deficiencies
4 in corrective actions, I would like to stress again the view
5 that FEMA's evaluation of off-site preparedness is an ongoing
6 task that continually re-examines the state of preparedness.
7 It is in this context that I am requesting Mr. Krimm and Mr.
8 Petrone to present our findings on the adequacy of prepared-
9 ness at Indian Point.

10 With your permission, Mr. Chairman, I would like
11 to turn a portion of this meeting over to Mr. Krimm for his
12 presentation.

13 CHAIRMAN PALLADINO: All right. Thank you.

14 MR. KRIMM: Thank you.

15 We have a series of overhead slides which we would
16 like to give to you on the off-site preparedness at the Indian
17 Point nuclear station.

18 (Slide)

19 I believe it would be helpful if I could go through
20 all of these and then you could ask the questions of me and
21 Mr. Petrone later.

22 COMMISSIONER AHEARNE: It may be helpful, but that
23 may not be --

24 (Laughter)

25 MR. KRIMM: All right. I thought it would be

1 useful to start out showing the geographical location of
2 Indian Point with the ten-mile emergency planning zone. As
3 you know, it is 35 miles north of New York City in Westchester
4 County and located in Buchanan, New York.

5 (Slide)

6 The next slide will show the County emergency
7 response centers for the County of Orange. These are located
8 in Goshen, New York; the County of Putnam is located in
9 Carmel, the County of Westchester is located in White Plains,
10 and for the County of Rockland it is located in Pomona.

11 (Slide)

12 COMMISSIONER AHEARNE: Could you hold this slide
13 a minute since a lot of the discussion will focus on it.

14 MR. KRIMM: Yes, surely.

15 COMMISSIONER AHEARNE: Thank you.

16 MR. KRIMM: Okay, thank you.

17 The next slide.

18 (Slide)

19 This slide will show where the emergency operations
20 facility is located in Buchanan, New York, close to the
21 Indian Point facilities.

22 (Slide)

23 The next slide. This will show our August 2nd
24 interim finding which we discussed with you. The major
25 deficiencies cited at that time were notification methods and

1 procedures, which included siren malfunctions -- I might say
2 that I am going to get into the detailed list, and I thought
3 I would just highlight what these were in August -- public
4 education and information, which included lack of public
5 awareness about emergency plans; protective response, which
6 included lack of means to notify transient population, inade-
7 quacies dealing with the use of evacuation routes, and lack
8 of agreements with bus drivers; the radiological exposure
9 control, which included limited 24-hour capability to determine
10 exposure received by emergency workers; and the responsibility
11 for the planning effort, which included state, local
12 preparedness effort and need for compensatory measures.

13 I am now going to get into a review of the major
14 deficiencies, which were based on the results of the March 9,
15 1983 exercise.

16 (Slide)

17 This is a review, again, of the five previously
18 deficient standards. The notification methods and procedures
19 are now adequate except for Rockland County. The public
20 education and information is adequate in Orange and Putnam
21 Counties and in the State of New York. Deficiencies still
22 exist in Rockland County and Westchester County. The public
23 remains uninformed and inadequate distribution of brochures
24 in both cases.

25 We wish to note, though, that Westchester County

1 will be adequate if the brochure is distributed prior to
2 June 1, 1983.

3 COMMISSIONER ROBERTS: I don't understand that.

4 MR. KRIMM: I will let Frank Petrone --

5 COMMISSIONER AHEARNE: Let me give you the reason
6 I don't understand it. First, is it based upon your knowing
7 what is in the brochure and so you are judging that that
8 brochure will produce adequacy? And then second, I don't
9 understand what is magic about June 1st.

10 MR. PETRONE: Okay. First of all, that brochure
11 had been delayed for specific reasons. Plan revisions due
12 to be submitted to us in January were not submitted until
13 March, at which time we could not adequately review the plan
14 revisions to assure that a brochure would be approved for
15 printing for an annual submission.

16 We concurred with the County and with the State at
17 that point to delay the brochure so that we would not have
18 misinformation presented to the public and that the brochure
19 when printed would include the revisions. What we based the
20 June 1st date on was basically --

21 COMMISSIONER AHEARNE: So you are saying that you
22 have reviewed the brochure.

23 MR. PETRONE: We are reviewing the revisions, and
24 then the brochure is to be submitted to us. We haven't seen
25 it.

1 COMMISSIONER AHEARNE: All right. So you don't at
2 this moment really know whether or not that brochure would be
3 adequate.

4 MR. PETRONE: No. And why we chose June 1st was
5 that interpreting annual submission is annual submission
6 prior to the last brochure is directly after it, and what we
7 did is we adopted your window in terms of how you estimate
8 when an exercise should be scheduled, so three months prior
9 or three months following. We felt it would be fair at that
10 point because the work that has been done with the brochure
11 with regard to the Utility and the County is in process.

12 CHAIRMAN PALLADINO: Is anything being done in
13 Rockland County on brochures?

14 MR. PETRONE: No. Nothing is being done in
15 Rockland County for the simple reason that that plan is not
16 complete yet.

17 CHAIRMAN PALLADINO: There are no brochures being
18 issued in Rockland County?

19 MR. PETRONE: Brochures being issued.

20 CHAIRMAN PALLADINO: And who made that decision?

21 MR. PETRONE: That is a decision basically of the
22 County. They are in a planning process at this point, and a
23 brochure, of course, is not going to be printed until the
24 plan is completely adopted.

25 COMMISSIONER AHEARNE: The brochure and distribution

1 is a County function?

2 MR. PETRONE: Yes.

3 COMMISSIONER AHEARNE: And the Westchester County
4 brochure, does that revision incorporate the revised plan by
5 the County Executive on the school?

6 MR. PETRONE: That is being considered at this
7 point.

8 COMMISSIONER AHEARNE: So it is still not complete.

9 MR. PETRONE: That still has to be submitted to us
10 in regard to reviewing that as a plan, and we will have our
11 comments with regard --

12 COMMISSIONER AHEARNE: So you haven't passed on
13 that yet.

14 MR. PETRONE: No.

15 CHAIRMAN PALLADINO: Are brochures to be issued
16 periodically?

17 MR. PETRONE: Annually.

18 (Slide)

19 MR. KRIMM: Let us continue, then, with these
20 deficiencies. Protective response is adequate in Orange and
21 Putnam Counties and in the State of New York. Deficiencies
22 still exist in Rockland and Westchester Counties. Westchester
23 did not demonstrate the capability to implement evacuation
24 procedures necessary to protect the public.

25 COMMISSIONER AHEARNE: As I read the report, it

1 seemed to focus primarily on the lack of training of bus
2 drivers.

3 MR. PETRONE: That's correct.

4 MR. KRIMM: Yes.

5 CHAIRMAN PALLADINO: Was that lack of training of
6 the bus driver in the absence of a contract? One place
7 mentions the absence of a contract; the other --

8 MR. PETRONE: In the absence of contract or agree-
9 ments, basically were taken up in our plan review as we sub-
10 mit it to you. This is post-exercise assessment, so we would
11 really not get into that because it is not a product of the
12 exercise.

13 CHAIRMAN PALLADINO: But your letter mentioned it.

14 MR. PETRONE: We mention that as something that is
15 still pending.

16 CHAIRMAN PALLADINO: Is that a requirement, that
17 there be such a contract?

18 MR. PETRONE: Yes, that we have assurances that
19 there are agreements in place. I would mention at this point
20 that the problem of training had been that we found that the
21 training had been issued just previous to the exercise, and
22 we found that in our five routes that were pre-decided, that
23 basically there were many problems with regard to knowledge
24 that the bus drivers had with regard to their routes, with
25 regard to the reception centers that they were to go to, and

1 regarding the fact of the timing in terms of when they would
2 arrive at the specific destination.

3 We found there was tremendous confusion there, and
4 we find it is a product of the limited training that has taken
5 place, that basically took place just prior to the exercise.

6 CHAIRMAN PALLADINO: Are these routes that they
7 follow their normal routes?

8 MR. PETRONE: Yes, sir.

9 CHAIRMAN PALLADINO: Well, then I don't understand
10 why they wouldn't know their routes.

11 MR. PETRONE: Basically these routes had been
12 determined in the plan, and the training is supposed to
13 basically enlighten the drivers with regard to their specific
14 routes or specific assignments. Obviously, the training that
15 did take place was not adequate for the simple reason we found
16 there was confusion between the bus drivers, dispatchers and
17 the bus drivers with regard to their assignments and the
18 information given to them. This is a problem and it is
19 something that we have mentioned in the report as a deficiency
20 and a recommended corrective action that should take place.

21 MR. KRIMM: Let us move on, then -- oh, I'm sorry.
22 Excuse me.

23 COMMISSIONER AHEARNE: On the contractual matter,
24 you say that in your judgment the lack of a set of formal
25 agreements still remains a deficiency?

1 MR. PETRONE: It still remains a deficiency, and
2 we have had much discussion with Westchester and the State on
3 this issue. In fact -- I will mention that over the course
4 of a year, this has been an item that we have all discussed,
5 and basically I think there has been some concurrence with
6 regard to what the approach will be. Westchester, along with
7 the State, is at this point pursuing a transportation study
8 to be done to basically study the entire process of
9 transportation and as it relates to the evacuation program.

10 COMMISSIONER AHEARNE: Transportation across the
11 whole spectrum of all possible needs or transportation --

12 MR. PETRONE: All possible needs, including --

13 COMMISSIONER AHEARNE: What I meant was is it
14 broader than for nuclear emergencies?

15 MR. PETRONE: No, it is just for this specific
16 situation. The study group that was composed is composed of
17 the State as well as the utilities. It's composed also of
18 members from the various bus companies, and they have
19 proposed to undertake the study which calls for in the study
20 various commitments and agreements. The projected date of
21 this study is to be completed by the end of the year. This
22 is the last date that was given to us, this December '83.

23 COMMISSIONER AHEARNE: That's the transportation
24 safety planning group that you mentioned in your letter?

25 MR. PETRONE: Yes.

1 MR. KRIMM: The radiological exposure control is
2 now adequate except for Rockland County. The responsibility
3 for the planning effort remains deficient but involves
4 Rockland County only.

5 (Slide)

6 All the previous 34 sub-elements are listed plus
7 seven new minor --

8 CHAIRMAN PALLADINO: You talk about the planning
9 effort and then you talk about the exposure control.

10 (Slide)

11 How did the exercise go with regard to the actual
12 exposure control?

13 MR. PETRONE: Basically it went well, as we have
14 stated here, except in Rockland County, and that is another
15 issue in itself. That is specifically the reason why we
16 felt it was not adequate there. As you know, there is no
17 participation from that county, and there were some problems
18 in --

19 COMMISSIONER AHEARNE: During duty hours.

20 MR. PETRONE: Right.

21 CHAIRMAN PALLADINO: But was there participation
22 by the State?

23 MR. PETRONE: Yes.

24 CHAIRMAN PALLADINO: Was their participation
25 not adequate?

1 MR. PETRONE: In terms of this item here,
2 radiological exposure control, let me just refer to Roger
3 Koestry, who is Chairman of RAC.

4 MR. KOWIESKI: In Rockland County, as far as the
5 exposure control is concerned, the State demonstrated good
6 capability except in bus companies and --

7 CHAIRMAN PALLADINO: Except in what?

8 MR. KOWIESKI: Bus companies did not have a large
9 enough supply of potassium iodide, and again, there was a
10 problem with dosimetry. There was not enough supply of
11 dosimeters.

12 CHAIRMAN PALLADINO: Okay. Well, we can come back
13 later.

14 MR. KRIMM: If I could move on, then, to the Indian
15 Point status report.

16 (Slide)

17 Notification methods and procedures. The
18 deficiency -- and we have listed the deficiency and the year
19 that it occurred. It will show 1982, and this basically
20 is a repeat of the presentation we made in 1982, but it is
21 to give you an update of where we are. One of the deficiencies
22 under notification methods and procedures was the siren
23 system requires improvement. At that time the proposed
24 corrective action was that the utility provide certification
25 that sirens worked. Present status is adequate.

1 In 1982 there was inadequate emergency broadcast
2 system messages and criteria. The proposed corrective action
3 was that the State will develop the emergency broadcasting
4 system message criteria, modify plans and develop generic
5 messages. That is now adequate.

6 COMMISSIONER AHEARNE: How do you evaluate the adequacy
7 of these broadcast messages?

8 MR. PETRONE: Roger.

9 MR. KOWIESKI: When an alert notification system
10 is activated, and specifically when sirens sound and tone
11 alert radius will go up, what we watch for, look for is timely
12 activation of EBS system. In other words, we want to make
13 certain the public will be notified shortly after the sirens
14 are sounded as to what protective action to take.

15 COMMISSIONER AHEARNE: But I thought here one of
16 the -- at least the phrasing, and as I recall, the issue was
17 the messages would be inadequate. How do you assess the
18 adequacy of the message? I think what you just responded to is
19 the procedure for putting the message on the air.

20 MR. KOWIESKI: That's right. During the 120-day
21 clock, we reviewed the new EBS procedures, EBS messages again
22 for conciseness, for accuracy, and to make certain that they
23 are informative.

24 MR. PETRONE: May I add something here? There had
25 been a PIO work group with representation from the counties as

1 well as the State, and they reviewed many of these issues
2 following that, and at that point they came up with revisions
3 to this entire program. So it was, I think, a collective
4 effort, and this is basically how we came up with the
5 information that would be adequate for EBS, and it had
6 improved.

7 COMMISSIONER AHEARNE: Is it fair to say the true
8 assessment of the adequacy of the message is judgment by the
9 people involved in putting the messages together that these
10 messages will be clear?

11 MR. PETRONE: I think it's fair to say that any
12 first responder involved should be involved in the planning
13 process, and we pull those people into that planning process
14 and they are the ones that have to issue these and work with
15 this. So their advice was well-taken.

16 MR. KRIMM: Also in 1982 the inadequate public
17 information office procedures -- the corrective action proposed
18 was that state and county plans will be revised to reflect all
19 concerns in the interim finding. This is now adequate. There
20 is inadequate notification of Rockland emergency personnel and
21 local schools. The action proposed was initial call-out
22 methods in county plan will be improved and paging equipment
23 will be ordered. This is adequate. The plan was submitted by
24 the State.

25 COMMISSIONER AHEARNE: But that obviously has that

1 little asterisk next to it that says it involves Rockland
2 County, and the --

3 MR. KRIMM: That's right, yes.

4 CHAIRMAN PALLADINO: Where is the asterisk?

5 COMMISSIONER AHEARNE: It is not on there, but --

6 (Slide)

7 MR. KRIMM: Continuing on notification methods and
8 procedures, the deficiency in 1982 for inadequate procedures
9 for notifying Federal agencies. The proposed corrective
10 action was state plan to include telephone numbers. This is
11 now adequate. The public information officers must be trained
12 on revised procedures. The State was going to develop
13 a training schedule for all state and county public informa-
14 tion officers. This is now adequate.

15 FEMA has an outdated emergency broadcasting system
16 plan. The State will furnish FEMA with a current emergency
17 broadcasting system plan. This is now adequate. The emergency
18 broadcast system plan does not detail activation procedures
19 for the four-county area. The State and County plans will
20 be modified accordingly and provide ten lead emergency
21 broadcast system stations. Meetings will be held with all
22 EBS station management. This is now adequate.

23 (Slide)

24 Deficiency: evacuation buses were not equipped with
25 radios for communication. This is the 1983 deficiency. The

1 proposed corrective action is that each evacuation bus should
2 be equipped with radio for communications. The present
3 status is this is a minor deficiency.

4 CHAIRMAN PALLADINO: Are there plans to get those
5 radios installed?

6 MR. PETRONE: Yes.

7 CHAIRMAN PALLADINO: What is the timetable?

8 MR. PETRONE: There aren't any buses in Rockland
9 County to review.

10 CHAIRMAN PALLADINO: What is the proposed date?

11 MR. PETRONE: We are hoping this will be sometime --
12 I really don't want to be pinned to anydate.

13 CHAIRMAN PALLADINO: No, I'm not trying to do that.

14 MR. PETRONE: This is being worked on now, and as
15 it is being done, as far as I understand, following the
16 exercise there have been some installations already.

17 MR. KRIMM: In the 1983 exercise the State and
18 County officials responsible for mobilization of emergency
19 resources did not receive timely notification of the alert in
20 Westchester, Orange and Putnam Counties. The proposed correc-
21 tive action is State and Counties should meet with the utility
22 to review the procedures for ensuring the mobilization of
23 emergency resources. This is a minor deficiency.

24 The bottom line for the Standard E notification and
25 methods procedures is that they are now adequate.

1 (Slide)

2 Public education and information is the next
3 standard I wanted to discuss. In 1982 we found a deficiency
4 that the public appears uninformed about the radiological
5 emergency planning and preparedness plan. The proposed correc-
6 tive action was that public education program developed by
7 the state, county and utilities will be initiated. The
8 present status is this still remains deficient in Rockland and
9 Westchester Counties.

10 COMMISSIONER AHEARNE: I was puzzled in your
11 report and I wondered if perhaps you could explain to me your
12 judgment as to why in some areas -- I seem to recall Putnam
13 being one -- that the people on your survey seem to know what
14 sirens meant, and the other area, people did not seem to know
15 what sirens meant.

16 MR. PETRONE: I think again it depends on the effort
17 that is being put forth here.

18 (Commissioner Gilinsky left the room at 2:40 p.m.)

19 I think what we are looking for here -- and of
20 course, in assessing some of this during the exercise, this
21 is by no means a scientific assessment. It is merely some of
22 our observers' questioning some spot individual.

23 In the public education program in Rockland
24 County, there hasn't been any distribution of brochures.

25 COMMISSIONER AHEARNE: But there was in Westchester

1 County.

2 MR. PETRONE: In Westchester County it was a year
3 ago.

4 COMMISSIONER AHEARNE: Right.

5 MR. PETRONE: There have been changes made.

6 COMMISSIONER AHEARNE: But were the changes ones
7 that would have led them to be confused about the meaning of
8 the siren?

9 MR. PETRONE: I don't believe so, because there had
10 been no brochure that showed the change. The brochure was
11 still to come.

12 COMMISSIONER AHEARNE: Right. Right.

13 MR. PETRONE: I think it is still a product of
14 basically more the effort that is portrayed in those individual
15 counties, and we find, of course, there are regulations that
16 we look to for having a brochure distributed and having other
17 things distributed. Following that, I think it is an effort
18 of basically the county and to a great extent perhaps
19 cooperation with the utility in terms of some of their public
20 service announcements.

21 CHAIRMAN PALLADINO: I wanted to find out what sort
22 of question was asked so that people -- do they know what a
23 siren, any siren means?

24 MR. PETRONE: As I said, it wasn't scientific. An
25 observer would go up and say, "Do you understand what this

1 siren means?" without trying to give them any information
2 that would sway them one way or the other, and in some
3 instances people would say, no, I don't; in other instances
4 they might have said, yes, it's this exercise, or it's Indian
5 Point, and then I think there was a follow-up question, too,
6 of, well, what would you do?

7 I think where we had some problems is where people
8 didn't respond in terms of the fact they would turn on their
9 radios and their EBS station.

10 COMMISSIONER AHEARNE: Do you have any sense of how
11 big a sample size you are talking about?

12 MR. PETRONE: No, it was a small check, and this
13 is not something that was scientific, so I wouldn't hang my
14 hat on it. I would hang my hat on Rockland and Westchester
15 with regard to the fact that I know there is a problem there
16 with the distribution of the material.

17 COMMISSIONER AHEARNE: How recently did Putnam
18 put out their material?

19 MR. PETRONE: There was a brochure -- when was that
20 distributed, Roger?

21 MR. KOWIESKI: Just before the exercise.

22 MR. PETRONE: That may have answered your question.

23 MR. KRIMM: Deficiency of inadequate distribution
24 of the brochure, "Indian Point Planning and You."

25 COMMISSIONER AHEARNE: Dick, I'm sorry. I should

1 have -- if the Westchester County brochure a year ago did
2 describe accurately what they were supposed to do with
3 respect to the siren, going back to one of the earlier
4 slides, then the brochure, if filed by June 1st, would be
5 adequate; what would lead you to have confidence that the new
6 brochure would be more successful in getting the Westchester
7 people to understand what the siren meant?

8 MR. PETRONE: I really couldn't say that it would
9 be. I can only say that it would have the right information
10 and reflect what the plan calls for and give them the
11 information necessary for them to be part of the plan. I
12 would say it would probably be more successful if, of course,
13 with the distribution there was an extensive campaign launched
14 with regard to this brochure and the importance behind it, and
15 I think perhaps this is something that we are getting to.

16 I should mention the reason we did this on the
17 spotcheck is because we felt that it is all well and good to
18 submit brochures and have these things printed, and here we
19 are telling the public what to do, but to a great extent is it
20 really workable? And I think we are looking for a means to
21 evaluate them to make some new recommendations for improvement.

22 COMMISSIONER AHEARNE: Given that last comment, I
23 am a little surprised by the earlier comments only in the
24 sense that I think you pointed out the survey samples you took
25 really would not give you, I guess, statistical significance,

1 so you wouldn't want to reach a conclusion either that it did
2 inform or it did not inform.

3 MR. PETRONE: No, I can't reach that conclusion.
4 The only conclusion I could reach is that I think the public
5 information piece is important and there is a lot of effort
6 that has to go behind it.

7 COMMISSIONER AHEARNE: Yes.

8 MR. KRIMM: Inadequate distribution of the brochure,
9 "Indian Point Planning and You." The State is developing more
10 specialized distribution methods to provide new and current
11 residents the brochure. However, in Rockland and Westchester
12 Counties, this remains deficient.

13 COMMISSIONER AHEARNE: Dick, I'm puzzled, then.
14 This is the State developing the distribution methods. I
15 thought it was the County that distributed the brochure.

16 MR. PETRONE: Yes, but the State is in here taking
17 the lead in terms of developing methods, other types of
18 methods to distribute the brochure. As you are aware, there
19 are different methods utilized.

20 COMMISSIONER AHEARNE: I should not infer that the
21 State is going to do any of the actual distribution?

22 MR. PETRONE: No.

23 CHAIRMAN PALLADINO: Will the same brochure be used
24 in all counties or is it being used?

25 MR. PETRONE: There is a brochure for each county

1 separate.

2 CHAIRMAN PALLADINO: The separate one, "Indian
3 Point Planning and You," would be separate for each county?

4 MR. PETRONE: Yes.

5 CHAIRMAN PALLADINO: And Westchester, have they
6 distributed this?

7 MR. PETRONE: No, sir. Hopefully it will be
8 distributed, we are hoping for June 1st.

9 CHAIRMAN PALLADINO: Westchester?

10 MR. PETRONE: Yes.

11 COMMISSIONER AHEARNE: Isn't this the brochure that
12 was distributed last year?

13 MR. PETRONE: This is the brochure -- let me get
14 back to where we are. Yes, this is last year's, correct.
15 It was distributed last year.

16 CHAIRMAN PALLADINO: Does this suggest they have
17 to be distributed more than once a year if people are to
18 remember them, or some attention called to them?

19 MR. PETRONE: I think that is something we are
20 looking at, and I think that is something we are going to have
21 to make a decision on eventually, is what the means are; and
22 again I would say it is probably going to be a collective
23 decision with regard to the County's involvement -- they know
24 their people -- and the involvement of the State. I think we
25 are looking for ways to get the word out to people more

1 effectively.

2 COMMISSIONER AHEARNE: Just as a side comment, I
3 can recall when we were debating in our -- I guess Vic is
4 gone, but Vic might remember when we were debating the
5 emergency planning rule on the Commission and looking and
6 talking about what kind of requirements we put on our licen-
7 sees for the distribution of information. That was an issue
8 we were very uncertain about, how often to do it. Some people
9 felt it should be done every month, and others felt that if
10 you do it once, then you wouldn't have to repeat it for another
11 several years. So there is great uncertainty of what is the
12 retention time and how well do they read it.

13 MR. PETRONE: I may mention that something
14 interesting is taking place in Orange where they have a slide
15 presentation that they put together where they are beginning
16 to network that through various civic organizations and
17 different meetings that take place in their county. We are
18 going to continue to look at that and see how effective that
19 is. That may be another means of notifying the public and a
20 step that can be taken.

21 COMMISSIONER AHEARNE: To what extent are those
22 kinds of emergency brochures melded with any other emergency
23 action planning that you or the State or the County does, for
24 example, for chemicals or, in this area, hurricanes?

25 MR. PETRONE: It is not at this point.

1 CHAIRMAN PALLADINO: Is what?

2 MR. PETRONE: It is not at this point. This is a
3 specific piece. As you well know, we are not finished with
4 350 at Indian Point. We have not finished 350 in any of the
5 plants in the region.

6 CHAIRMAN PALLADINO: Do you use the sirens for other
7 purposes in addition to --

8 MR. PETRONE: No, sir. They can, though.

9 CHAIRMAN PALLADINO: No, but I meant right now
10 they are used only for Indian Point purposes.

11 MR. PETRONE: Yes. I think a point I was going to
12 bring up was the fact that perhaps when we finish our 350
13 process, initially, at least, because it is ongoing and con-
14 tinues, there may be considerations we could look at in terms
15 of utilizing some of the same practices or the same mediums
16 with regard to some of our other emergencies. We do have
17 awareness campaigns that we run through headquarters and
18 through our regions with regard to winter awareness, hurricane
19 awareness, flooding and the like, and it may very well be that
20 someday we will be running a nuclear power plant awareness
21 program. But that is your decision.

22 (Laughter)

23 COMMISSIONER ROBERTS: When are you going to
24 finish the 350 process?

25 MR. PETRONE: The process around Indian Point, I

1 think, really cannot be determined right now. We have the
2 situation in Rockland, and of course Westchester still has
3 concerns and problems that they are beginning to address
4 through their transportation planning. With regard to Putnam
5 and Orange we are much more confident in terms of the things
6 that are pretty much in line, and with some of the minor
7 deficiencies and administrative problems handled, we may be
8 closer to it. I really could not give you a firm date at this
9 point, but then again, our 350 process signs off on the entire
10 ten-mile EPZ.

11 MR. KRIMM: And that has to come from the governor
12 of the state?

13 MR. PETRONE: And the recommendation would go from
14 our region to the headquarters and then they would sign off.

15 MR. KRIMM: Let me continue. On the brochure, one
16 of the deficiencies we found was a need for brochures in
17 languages other than English. A survey will be done by the
18 utility to determine the size and number of foreign-speaking
19 communities in the emergency planning zone. This is now
20 adequate.

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r2/oyl 1 COMMISSIONER AHEARNE: I'm not sure what is now
2 adequate.

3 MR. KRIMM: The fact that we reviewed it, the survey
4 was done, and -- Frank, I will let you answer that.

5 MR. PETRONE: The survey was complete and it was
6 found there were various different-speaking populations in
7 the area, and rather than getting into printing different
8 brochures and distributing them, you know, how would you
9 identify a certain individual or family that is non-English
10 speaking? It became difficult to do that.

11 What had been recommended, and again through the
12 task force approach that we recommended and that was put
13 together last year, was the fact that let's network this
14 entire information through the civic organizations, the
15 religious organizations that represent or at least identify
16 with that speaking population. This had been recommended and
17 this is what has --

18 COMMISSIONER AHEARNE: It has been done?

19 MR. PETRONE: Yes. Again, the brochure question in
20 some of these counties is still the issue, and the issue is
21 in Westchester by and large there is a non-English speaking
22 population.

23 COMMISSIONER AHEARNE: But my question really was
24 has that networking been done, and if your answer is yes,
25 the follow-up question is: how do you know?

1 CHAIRMAN PALLADINO: Was it tested?

2 MR. KOWIESKI: Actually, we don't have an indication
3 from the State that it is being done right now -- that has
4 been done, okay? As far as we are concerned, at this point
5 what we can tell you is that the methodology has been
6 approved by FEMA. Thus far what has been done at this point
7 we cannot tell you. We have not received any feedback from
8 the State.

9 COMMISSIONER AHEARNE: Who is supposed to be check-
10 ing on that?

11 MR. KOWIESKI: We are supposed to be checking on it.

12 COMMISSIONER AHEARNE: I didn't mean that. I mean
13 is the State supposed to check on whether that --

14 MR. KOWIESKI: We are dealing through the State. The
15 State has a coordinating role in the whole process. So the
16 State would be the one to inform us as to what has been
17 accomplished in this area.

18 COMMISSIONER AHEARNE: So the State is supposed to
19 then check whether or not -- you say there is an improved
20 methodology. The State then, as far as your understanding,
21 is going to check on whether the counties then put that into
22 effect.

23 MR. KOWIESKI: That's right. That's correct.

24 COMMISSIONER AHEARNE: And insofar as this
25 exercise is concerned, that was not an element that was

1 checked.

2 MR. KOWIESKI: It was not part of the exercise
3 scenario.

4 CHAIRMAN PALLADINO: What do you do with regard to
5 other kinds of evacuations with regard to foreign-speaking
6 communities?

7 MR. PETRONE: We work specifically with the local
8 governments and the State government in any type of evacuation
9 or emergency response. All of them are dealing specifically
10 with local government and state government. As you know, our
11 role in this program is technical advice and planning and
12 review of plans, and we also have another role, and that is
13 the response role in the event there were an accident. In our
14 other experiences in our other programs, all of our response
15 is based on the relationships that we have with our local
16 governments and with the state governments. All responses
17 begin at the local level, in which case some of the local
18 problems, such as non-English speaking communities, would be
19 dealt with by the local government. In the event local
20 government cannot handle or does not have the capability to
21 handle an extensive emergency, this is where the state backs
22 them up and assumes some of the responsibility, and of course
23 we would be there to back up the state.

24 So it is a local issue and something handled at
25 the local level, hopefully.

1 COMMISSIONER ROBERTS: Give me some sense of what
2 percentage of the rest of the population you are talking
3 about in this specific --

4 MR. KOWIESKI: I would say it is very small, less
5 than 4,000 people.

6 MR. PETRONE: Less than 4,000 people out of --

7 MR. KOWIESKI: 257,000.

8 COMMISSIONER AHEARNE: Less than 4,000 are non-English
9 speaking?

10 MR. KOWIESKI: That's right.

11 COMMISSIONER AHEARNE: But the routes that you have
12 for other non-nuclear disasters could also work in this case
13 If needed if there were no brochures in foreign languages.

14 MR. PETRONE: If the regulations call for a
15 brochure, we have no other choice but to assume that.

16 CHAIRMAN PALLADINO: Which regulations call for a
17 brochure?

18 MR. PETRONE: The public information programming.

19 CHAIRMAN PALLADINO: The NUREG suggests that is one
20 way of accomplishing it.

21 COMMISSIONER AHEARNE: We require an annual
22 distribution of information.

23 MR. KRIMM: Usually where there is a population of
24 5,000 or more, we require the foreign language brochure.

25 CHAIRMAN PALLADINO: Is that in our regulations?

1 MR. KRIMM: No, it is just usually policy procedure.
2 It varies from place to place.

3 CHAIRMAN PALLADINO: But the requirement to put
4 brochures out in foreign languages I am unaware of.

5 MR. KRIMM: It is in the planning standards.

6 (Commissioner Gilinsky returned to the room at
7 2:57 p.m.)

8 COMMISSIONER AHEARNE: Although realistically it's
9 a question of the reason you put out the brochure is community.

10 CHAIRMAN PALLADINO: I was getting at if they have
11 acceptable ways of doing it for other kinds of disasters maybe
12 that's an acceptable way here. I'm not sure the requirement
13 says you have to have a brochure, but -- okay.

14 (Slide)

15 MR. KRIMM: Continuing on public education and
16 information. Deficiency noted in 1982 was inadequate rumor
17 control. The proposed corrective action was the Oswego model
18 tested and approved at the Fitzpatrick exercise. This was to
19 be tailored and added to the state and county plan. The
20 present status is now adequate.

21 In 1982 it was noted that state and county plans
22 lack description of public information and public education
23 program, news media briefing and notification of transients.
24 The proposed corrective action was that the outline of program
25 will be included in state and county plans; posters, pamphlets

1 and so forth to be forwarded to FEMA for review. This is
2 now adequate.

3 Deficiency in 1982 was arrangement and procedure for
4 joint media facility needed to be in the plans. The proposed
5 corrective action at the time was that all plans to include
6 floor plan, equipment and internal location information for
7 the joint media facility, new locations being actively sought.
8 This is now adequate.

9 (Slide)

10 Continuing with public education and information.
11 A deficiency in the 1983 exercise was the Orange County news
12 releases were not all issued on a timely basis and some con-
13 tained inaccuracies. The proposed corrective action is that
14 Orange County should improve timeliness and accuracy of news
15 releases. We considered this a minor deficiency.

16 The bottom line for public education and information
17 is that the failure to distribute the brochures by June 1st,
18 1983 to the general public will result in a reconfirmation of
19 the standard as being significantly deficient for Westchester
20 County.

21 (Slide)

22 CHAIRMAN PALLADINO: Is the converse true, that if
23 the brochures are out, that they will not be deficient?

24 MR. PETRONE: That's correct.

25 COMMISSIONER AHEARNE: There has to be an

1 assumption.

2 CHAIRMAN PALLADINO: Yes, that's right.

3 COMMISSIONER AHEARNE: The assumption has to be
4 that the brochure is adequate.

5 CHAIRMAN PALLADINO: And is read and understood.

6 MR. PETRONE: As long as it is informative and
7 has the correct information.

8 MR. KRIMM: The next standard is protective
9 response. In 1982 we noted a deficiency of methods for
10 notifying of transients must be provided. The proposed
11 corrective action was that the State was to furnish the
12 interim notification methods, copy of posters and telephone
13 inserts as scheduled for dissemination to be forwarded to
14 FEMA.

15 The present status is that Rockland and Westchester
16 remain deficient.

17 COMMISSIONER AHEARNE: When you say the status to
18 furnish interim methods, is that similar to the other, the
19 state was to develop the procedures and the counties then
20 were supposed to actually print the material?

21 MR. PETRONE: Yes. The state worked with the counties
22 in terms of developing the methods.

23 COMMISSIONER AHEARNE: Was the material ever
24 printed?

25 MR. PETRONE: The material, as we understand it,

1 the material was printed in Rockland and Westchester and not
2 to this stage yet in Westchester. It had been printed but we
3 were informed by Westchester that they did distribute but
4 that the facilities it had been distributed to did not pursue
5 it, so that is something we are looking into right now with
6 Westchester and the State.

7 COMMISSIONER AHEARNE: In this distribution from the
8 county, is it a voluntary posting? Is there any county or
9 state law that says that it has to be posted?

10 MR. PETRONE: It is interesting you should ask be-
11 cause that was one of the questions that the County of
12 Westchester had, basically is there a state law or could there
13 be a state law that would require the posting of this material?
14 It is something that was deferred to the State for review
15 and consideration, and we will be awaiting some response from
16 them on that.

17 COMMISSIONER AHEARNE: I gather by that, then, there
18 is no County statute.

19 MR. PETRONE: No.

20 CHAIRMAN PALLADINO: Is posting of these posters
21 the only way to notify transients?

22 MR. PETRONE: This is one of the methods that had
23 been discussed. It was pretty much decided this was the best
24 method to do it.

25 CHAIRMAN PALLADINO: Decided by whom?

1 MR. PETRONE: Excuse me?

2 CHAIRMAN PALLADINO: Decided by whom?

3 MR. PETRONE: Excuse me.

4 CHAIRMAN PETRONE: Decided by whom?

5 MR. PETRONE: Discussed with the State and the County
6 and with us, and we felt perhaps this is the only way at this
7 point that you could really do any means of notification of
8 transients.

9 COMMISSIONER AHEARNE: In other areas around
10 the country, Dick, do you know, is this the normal way of
11 doing it, to have a notification to be posted, say -- I guess,
12 for example, this is posted in motels, restaurants, that
13 type of thing?

14 MR. KRIMM: Yes, in a number of the areas it is
15 done that way.

16 COMMISSIONER AHEARNE: Do you know what kind of
17 success --

18 MR. KRIMM: I cannot answer that. I will let you
19 know how successful it has been. I am afraid that in some
20 areas they post it for a while and then, like so many things,
21 it gets put aside, and the next exercise comes and they get
22 it out again.

23 COMMISSIONER AHEARNE: If you can only let them
24 know when it might have to be used, they could have it posted.

25 (Laughter)

1 MR. KRIMM: That's true. We can probably give you
2 some information as to how it works in most other areas.
3 There is a requirement.

4 COMMISSIONER AHEARNE: I guess it would be
5 interesting to find out if there are areas in which it has
6 been successful in getting it posted. Is that because the
7 local area has a statute or is it a sense of civic duty that
8 is somehow gotten across?

9 MR. KRIMM: I think in many cases it's a sense of
10 civic duty.

11 CHAIRMAN PALLADINO: Some places it's not posted
12 as a sense of civic duty.

13 (Laughter)

14 No, seriously. I know in central Pennsylvania
15 there is question by a number of motel owners as to whether
16 or not it is in the interest of the locality to have them
17 posted, but nevertheless, I think they are also all giving
18 attention, though, to make sure that their procedures and
19 what to do with transients is understood. I think that is
20 very important, and they have alternative ways of notifying
21 their transients, such as calling them up and telling them to
22 turn on their radio.

23 MR. KRIMM: Yes, there can be alternative ways, but
24 I think that the important thing is that people are made aware
25 of the problem.

1 CHAIRMAN PALLADINO: Yes, I see the need to have
2 them made aware. I understand that.

3 MR. KRIMM: Another deficiency that was noted in
4 1982 was maps with population by ERPA should be displayed in
5 the emergency operating centers. The proposed corrective
6 action was that the state has maps and will provide information
7 to the regional assistance committee, and this is now adequate.

8 The next one was that the state has decided not to
9 provide thyroid blocking agents for emergency workers. The
10 proposed corrective action was that the state policy now calls
11 for potassium iodide to be furnished emergency workers in
12 special populations, policy to be included in the state
13 plan.

14 The KI policy of the state has changed since this
15 element was included and they are now making it available to
16 emergency workers.

17 The next deficiency was an inadequate handling of
18 impediments to evacuation. The proposed corrective action
19 was that state and county plans to be upgraded to include the
20 means of clearing routes, and this is now adequate.

21 COMMISSIONER AHEARNE: Impediment to evacuation. Is
22 that, for example, a stuck car in the middle of the road?

23 MR. KRIMM: Yes. The grid lock situation that can
24 occur.

25 The next one in 1982 is inadequate handling of the

1 ingestion pathway, and the proposed corrective action was
2 the state to provide surface water inventory and location of
3 dairy and produce farms, and this is now adequate.

4 (Slide)

5 Continuing on the protective responses, another
6 deficiency in 1982 was the monitoring capability at reloca-
7 tion centers needs clarification. The proposed corrective
8 action is the plan to be revised to clarify procedures for
9 relocation centers versus reception centers. The present
10 status is that it is adequate procedures available for all
11 counties. Training is a minor deficiency in Westchester and
12 some problems still remain, but FEMA judges the element
13 as now adequate.

14 The next deficiency was the inadequate data
15 collection and transmission of field data to decision-makers.
16 The proposed corrective action was that standard operating
17 procedures will be developed and the county emergency
18 operating center staffs will be trained. This is now adequate,
19 and minor problems are in Putnam County but we consider it
20 overall adequate.

21 Another deficiency noted was the evacuation of
22 handicapped was not addressed in 1982. The proposed correc-
23 tive action was that state and county plans to reflect a
24 program to identify and evacuate such persons. It is adequate
25 except that ambulance drivers need training in Westchester

1 County.

2 CHAIRMAN PALLADINO: Have they not been trained?
3 Something I read gave me the feeling they had been trained
4 in Westchester County.

5 MR. PETRONE: There had been some training but
6 not really enough to address the needs that there are, and
7 we found --

8 CHAIRMAN PALLADINO: How did you test that?

9 MR. PETRONE: This is through our observation during
10 the exercise and through the training schedules that come in.
11 We are also just in the process of completing a verification
12 study which is being finalized now and will be presented to
13 your ASLB next week, and in that we have identified some of
14 the concerns and problems with some of the training. We had
15 hoped that this would be completed so that we could present
16 it to you today, but unfortunately, it was not timely, and we
17 will submit it to you, though, as soon as it is submitted
18 to the ASLB.

19 (Slide)

20 MR. KRIMM: In 1982 under protective responses a
21 deficiency was noted that no evacuation commitments from
22 bus drivers and others. The proposed corrective action was
23 that compensating measures were being developed and included
24 in plans. Unfortunately, this is still deficient. Westchester
25 County did not demonstrate a capability to implement the

1 evacuation.

2 CHAIRMAN PALLADINO: There was a compensating
3 measure, if I recall correctly, that they use in the National
4 Guard if needed. Was that checked out in any way?

5 MR. PETRONE: That was during our last update to
6 you. That had been checked and we rejected the idea since
7 we felt it was not timely, the notification of the Guard.
8 They are reservists and reservists that have other positions.
9 They are not necessarily working right in the community, and
10 it would take up to a number of hours to bring them in to
11 assist.

12 CHAIRMAN PALLADINO: I recall a number such as
13 four hours.

14 MR. PETRONE: A number such as four to five hours,
15 and we felt this would not help the situation and in fact it
16 may hinder the situation if we had to wait for their arrival
17 in order to assist in evacuation.

18 CHAIRMAN PALLADINO: Do you feel a contract is
19 necessary with each bus operator?

20 MR. PETRONE: Yes, I feel there is a need for
21 an agreement or commitments. This has been something that
22 has been hanging around for quite a while, and as I have
23 mentioned before, the approach that is being taken to this and
24 to other problems with transportation in Westchester is that
25 of a study group that will put together a study to decide on

1 the needs of transportation as it revolves around evacuation
2 needs in that county. This had been done by Orange, by the
3 way, and it was successful. Westchester has made the
4 commitment to --

5 CHAIRMAN PALLADINO: Does Orange have a contract
6 or a commitment?

7 MR. PETRONE: Orange has a study completed where the
8 bus drivers have been working with them on the study, and
9 these commitments are being put in place right now.

10 CHAIRMAN PALLADINO: They have commitments?

11 MR. PETRONE: They are being put in place, yes, sir.

12 CHAIRMAN PALLADINO: I still want to come back to
13 the National Guard. Why did you reject it? There are any
14 numbers of scenarios where four hours would not necessarily
15 give a problem.

16 MR. PETRONE: Yes, there are; but we also in our
17 planning have to assume a fast-moving accident, a scenario
18 that would be quick moving, and in the event this would be put
19 in place in a specific county and other measures without them
20 would not be adequate, which we found they were not adequate,
21 where would we be leaving the public at that point if indeed
22 we had the Guard and we were ready to evacuate, if the state
23 and county were ready to evacuate and they had to wait for the
24 few hours it would take for the Guard to get there?

25 CHAIRMAN PALLADINO: You were planning for a whole

1 spectrum of scenarios. You say you must plan only for the
2 fastest moving. Does this not take care of a large segment
3 of accidents, so that we are not talking about planning for
4 nothing but planning for a large segment of the community.

5 MR. PETRONE: Right, but I think all the emergency
6 preparedness has been based on the fact that you plan for the
7 fast-moving scenario, and this is, I think, the situation that
8 we find ourselves in when we are trying to evaluate.

9 CHAIRMAN PALLADINO: You don't get the same answer
10 in every case for a fast-moving scenario and a slow-moving
11 scenario. What you do for one may be wrong for another. I
12 think you have to plan for the spectrum.

13 MR. PETRONE: I think part of the spectrum, then,
14 is your fast-moving, which could be less than probably four
15 hours.

16 CHAIRMAN PALLADINO: I wasn't aware you had
17 rejected that, because last time that was presented as a
18 viable alternative.

19 MR. PETRONE: But I think we did mention last time
20 that we found --

21 CHAIRMAN PALLADINO: You mentioned that it took
22 four or five hours.

23 MR. PETRONE: Right, and because of the timing, it
24 was not timely. We could not have this supercede or correct
25 the deficiency that was noted prior.

1 COMMISSIONER AHEARNE: In the transportation study,
2 if you would just say another word about it. I'm having a
3 little difficulty understanding whether it's trying to
4 address routes or trying to work contract arrangements, or is
5 it a mechanism to address the larger scale question of can
6 you move this number of people out of this area, or all of
7 those?

8 MR. PETRONE: As you well know, Commissioner,
9 the county executive in Westchester is not pleased with the
10 entire transportation spectrum and the problems that could
11 be associated with evacuation. The study is supposed to deal
12 with the entire piece of transportation from the bus operators
13 that would be dealing generally with school children right
14 through your other emergency vehicles that would be dealing
15 with special facilities. It would deal with the various
16 mechanisms and interrelationships within the county emergency
17 forces or response group that would deal with evacuation.

18 What they are trying to do here is look at the
19 entire piece logically and assess what some of the concerns
20 are, where the need is, for definite equipment, where the
21 need is for routes perhaps to be adjusted, because there have
22 been many, many days of discussion with regard to the problems
23 with their own routes and roads.

24 I would say the transportation study is to address
25 the entire spectrum of their concerns.

1 COMMISSIONER AHEARNE: Would it then also
2 address this question of the early dismissal solution for
3 the school children?

4 MR. PETRONE: Yes.

5 CHAIRMAN PALLADINO: With the what?

6 COMMISSIONER AHEARNE: School children. At least
7 as I understand it, originally the concept was to take the
8 children to a reception center and then county executives
9 revised -- I'm not sure "solution" is the right word, but a
10 revised plan was to have an early dismissal and have the
11 children go home. Is that right?

12 MR. PETRONE: That was the recommendation that the
13 county executive in Westchester, Mr. O'Rourke, brought forth
14 as a viable alternative. In fact, it was exercised.

15 COMMISSIONER AHEARNE: Right.

16 MR. PETRONE: Again we come back to it is an
17 alternative, it is not a solution, for the simple reason that
18 again we get back to another fast-moving scenario where
19 indeed we may not be able to dismiss children.

20 COMMISSIONER AHEARNE: I understand that. The
21 old brochure a year ago had the children going to reception
22 centers?

23 MR. PETRONE: Had them going to reception centers,
24 and at that point this is where they'd be reunited with their
25 families.

1 COMMISSIONER AHEARNE: Right.

2 If Indian Point were to be operating next week
3 and there were to be an accident, where would the children go?

4 MR. PETRONE: If Indian Point were to be operating
5 and there were to be an accident, it's pretty much --
6 the county executives concurred that they would explore the
7 early dismissal program of school children. And it varies.
8 Some will explore it, some will utilize it, but I would
9 suggest that if there was time and if they would make that
10 decision at an alert stage as to whether or not they dismiss
11 children.

12 I would suggest that if they felt, through the
13 various decisionmaking information that would come through,
14 that they would have time to adequately be sure that school
15 children would be able to be dismissed to their homes or to
16 the emergency locations suggested by the parents, that they
17 would opt to utilize this system.

18 COMMISSIONER AHEARNE: Putting aside the Indian Point-
19 specific case, and any one of the three of you or all of you,
20 in just a general philosophy of emergency planning, do you
21 believe that is an acceptable solution? That is, that if you
22 do have to move children to not have advance planning as to
23 whether they may go to reception centers or go home, but make
24 that decision at the time of the event?

25 MR. PETRONE: I believe the decision has to be made

1 at the time of the event. I believe also that there has to be
2 advance planning for both things. If indeed you are going
3 to dismiss children and you want to utilize this program,
4 utilize it, if indeed you have enough time.

5 On the other hand, you must have another program in
6 place. If you did not have --

7 COMMISSIONER AHEARNE: So you would then incorporate
8 the concept that as far as parents are concerned, that they
9 would -- you would have them listen to the emergency broadcast
10 system, I guess, to find out where their child was going?

11 MR. PETRONE: Right. And I think this again becomes
12 part of the public information program, once this is pretty
13 much adopted in the counties as a means, it will become part
14 of the public education process.

15 MR. KRIMM: The most desirous is to have the
16 children taken home.

17 CHAIRMAN PALLADINO: Providing the parents are
18 there.

19 MR. KRIMM: Yes, providing the parents are there.

20 COMMISSIONER AHEARNE: What I am trying to probe
21 is whether you -- given that it's not a similar case -- again,
22 this is your area, so it's not a similar case to where you take
23 a group of people and move them somewhere because there's
24 another group of people that are going to be trying to mesh up
25 with them. I gather that your point is that parents should not

1 plan on a particular system, but they have to keep a close
2 ear, or whatever it is, to the emergency broadcast system to
3 find out where their child is going to go.

4 So, in answer to that rhetorical question, "Do
5 you know where your child is?" you have to listen to the
6 radio.

7 MR. PETRONE: And we get right back to the brochures.

8 COMMISSIONER AHEARNE: But the brochure, I guess --
9 correct me if I'm wrong. From what you said, the brochure
10 is going to have to say that decision will be made at the time
11 of the --

12 MR. PETRONE: Exactly. "Please tune in to your EBS
13 station."

14 CHAIRMAN PALLADINO: Do you use that procedure
15 now in non-nuclear situations, if you have evacuations?

16 MR. PETRONE: If we had to. I'm sure again this
17 would be a local decision because the decision is to protect
18 the public, whether it's a flood or a hurricane, of course,
19 we have early warning. Those usually have early warning.
20 And this is a system that has been in place especially
21 in New York State, it's mandated for every school to have
22 an emergency dismissal program.

23 CHAIRMAN PALLADINO: So you do have one?

24 MR. PETRONE: Yes.

25 COMMISSIONER AHEARNE: Let's take a county, like

1 Westchester County. My understanding is that there is a
2 variety of individual school districts in that county. Is
3 the choice of early dismissal a decision by the superintendent
4 of each district, or is it the county executive who has the
5 authority to make that decision?

6 MR. PETRONE: It would be the county executive.

7 COMMISSIONER AHEARNE: The county executive has
8 the authority over the school district?

9 MR. PETRONE: He would recommend early dismissal.
10 He'd work this out -- he's working these out or they will be
11 working these out with the superintendents of schools.

12 COMMISSIONER AHEARNE: But he doesn't have the
13 authority himself?

14 MR. PETRONE: I'm not too sure. I really couldn't
15 say that. Does he have the authority?

16 MR. MC INTIRE: That question has never been
17 raised before.

18 COMMISSIONER AHEARNE: Is it similar in the other
19 -- I live here in Northern Virginia in a county where the
20 school system is a county system. So that's why I'm asking.

21 MR. PETRONE: Well, the school systems in New
22 York, by and large, many of them are individual jurisdictions.

23 COMMISSIONER AHEARNE: So that Rockland, Putnam,
24 Orange, these are counties, but the school systems are
25 scattered throughout the county?

1 MR. PETRONE: That would be checked out.

2 MR. KRIMM: Another deficiency in 1982, the
3 relocation centers were too close to the emergency planning
4 zone. We proposed a corrective action of review indicated
5 that none were located within the emergency planning zone.
6 So we made that standard as being adequate.

7 In 1982, we found a lack of maps in state and
8 county emergency operating center. The proposed corrective
9 action was additional maps are now available. The regional
10 systems committee will identify where required, and that is
11 now adequate.

12 In 1983, again under the protective response, we
13 found a deficiency that Rockland County emergency operating
14 center --

15 COMMISSIONER ASSELSTINE: Excuse me, Dick, I
16 think we're one slide behind, so that people in the audience
17 can follow along.

18 MR. KRIMM: Oh, thank you very much. We should
19 be on 10 of 13. Next slide. Thank you.

20 (Slide.)

21 Okay. This is continuing on the protective
22 response, and these are 1983 deficiencies.

23 The Rockland County emergency operating center
24 did not display maps of Bergen County Congregate Care Centers.
25 The proposed corrective action is that Rockland County should

1 obtain and post maps in the emergency operating center. This
2 is a minor deficiency.

3 The Bergen County emergency operating center
4 did not display maps showing a plume emergency planning zone,
5 boundary, population, evacuation, routes, reception centers
6 and relocation centers.

7 The proposed corrective action is that Rockland
8 County should obtain and post maps in the emergency operating
9 center to show these items.

10 COMMISSIONER AHEARNE: Why should Rockland County
11 correct Bergen County's problems?

12 MR. KRIMM: It's the Bergen County emergency
13 operating center, but the Rockland County -- Bergen County,
14 yes, should obtain and post the maps. Right. Excuse me.

15 COMMISSIONER AHEARNE: I figured that if Rockland
16 County isn't going to play, you're going to make them do --

17 MR. KRIMM: Yes. Excuse me. Right.

18 The other deficiency in 1983 was the Westchester
19 County Congregate Care Facility is too small to accommodate
20 the capacity specified in the plan and the proposed corrective
21 action is that additional congregate care facilities should
22 be identified.

23 This is also a minor deficiency, but the importance
24 on a protective response remains significantly deficient,
25 and that is the bottom line.

1 CHAIRMAN PALLADINO: And that's due to what?

2 MR. KRIMM: Primarily the Westchester deficiency
3 that they did not demonstrate capability to implement
4 evacuation.

5 COMMISSIONER AHEARNE: That's the bus driver --

6 MR. KRIMM: The bus driver situation.

7 CHAIRMAN PALLADINO: Is that because of the
8 no-evacuation commitment from the bus drivers, or they didn't
9 perform well in the exercise?

10 MR. PETRONE: Both, I would say, for the simple
11 reason that the commitment is one issue which is a planning
12 piece, and the bus drivers not performing well is basically a
13 training piece, and also reflects around equipment that has
14 to be issued to them and training on that equipment. So it
15 is basically a combination of that, but it all evolves around
16 the same issue.

17 CHAIRMAN PALLADINO: What needs to be done to fix
18 up the Westchester, aside from the commitment, assuming the
19 bus drivers participate? Is it equipment, training?

20 MR. PETRONE: Training, and the like. Westchester
21 is now telling us that they wish to go into their transportation
22 study in order to do a full spectrum job on the entire
23 transportation piece, rather than doing it piecemeal.

24 COMMISSIONER AHEARNE: Let me give you a
25 hypothetical:

1 If there were a contractual arrangement, would
2 you still say it's significantly deficient?

3 MR. PETRONE: Most definitely, on the basis that
4 when we observed and questioned five bus routes, and we find
5 that the training and the problems that existed are pretty
6 much uniform, that tells us something, that there are major
7 problems with regard to that training or that equipment.
8 It tells us that the effort that was put into the training
9 could be improved.

10 COMMISSIONER AHEARNE: Not only that; I gather
11 you are saying that not only could it be improved, but it was
12 deficient to the level where it is inadequate?

13 MR. PETRONE: It's deficient to the levels, since
14 it's -- you know, it's really your basis for your evacuation.

15 COMMISSIONER AHEARNE: Sure.

16 MR. PETRONE: And if you don't have this at a
17 level where you are at least comfortable and reasonably
18 assured that if drivers do come out -- and again that gets
19 back to the agreements --

20 COMMISSIONER AHEARNE: I was trying to separate in
21 my mind the planning piece, which was contractual, from the
22 implementation piece.

23 MR. KRIMM: Let's move on to the next slide, which
24 is the radiological exposure control.

25 (Slide.)

ar3-11

1 We found a deficiency in 1982 in adequate
2 dosimetry. The proposed corrective action was that the
3 state will order TLDs and self-reading pocket dosimeters, 24-
4 hour capability will be demonstrated at annual exercise.

5 The present status is that it's adequate. However,
6 there is a minor deficiency that remains in Westchester,
7 Orange and Putnam Counties.

8 We also noted in 1982 a deficiency of a current
9 decontamination procedure for emergency workers require
10 revision. The corrective action that was proposed was
11 decontamination procedures are being reviewed and modified
12 and personnel to be trained, and this is now adequate.

13 The third one was decontamination of protocols
14 (sequences) were not in the plan. The proposed corrective
15 action was that levels will be displayed as needed and
16 personnel will be trained in application in conjunction
17 with the decontamination training. This is now adequate.

18 Another one was that we found a deficiency in in-
19 adequate waste disposal plans for the counties. The proposed
20 corrective action was that disposal will be in accordance with
21 applicable regulations. Plans will be revised accordingly,
22 and the Westchester site was under review.

23 This is now adequate.

24 (Slide.)

25 The next slide, dealing again with radiological

1 exposure control. Another deficiency that was found in 1982
2 was inadequate calibration and maintenance of monitoring
3 equipment. The proposed corrective action was that
4 equipment will be checked quarterly and exchanged or calibrated
5 annually.

6 The present status is that it is adequate.

7 In 1983, we found that bus drivers and some
8 police officers in all counties are not fully familiar with
9 radiological exposure control procedures. The proposed
10 corrective action is that all emergency response personnel
11 should be fully trained in radiological exposure control
12 procedures.

13 The present status is this is a minor deficiency.

14 The bottom line for the standard is that it is now
15 adequate.

16 The last planning standard I want to talk about
17 is planning responsibility.

18 (Slide.)

19 It deals primarily with Rockland County.

20 In 1982, we found that Rockland County's non-
21 participation impacting on decisionmakers' capability to
22 respond in an emergency was a deficiency. The proposed
23 corrective action was the state will develop a generic
24 procedure in plan to handle county with inadequate plan or the
25 county that elects not to participate. The State will respond

1 with a senior management team to direct locals after the
2 governor declares an emergency, and this remains deficient.

3 CHAIRMAN PALLADINO: Why does that remain deficient?
4 I read the report and I can go -- I can quote, if you'd like,
5 at least half a dozen very commendable statements about how
6 they performed on this.

7 COMMISSIONER AHEARNE: Let me ask, if I can ask a
8 question in that area. See if this is an accurate description.
9 What the information reads as, though, it is deficient because,
10 by definition, if the county is not going to participate,
11 you cannot find it adequate. Is that correct?

12 MR. KRIMM: Well, let me just talk about that for
13 one second. Okay. And, Jeff, did you want to mention something?

14 MR. BRAGG: Go ahead.

15 MR. KRIMM: If a state is going to adopt a plan
16 for a county or local government, in adopting that plan, they
17 must have resources available to be stationed in that
18 community in the event that an accident takes place, that
19 they can move in and react.

20 Basically the state has to be willing to take over
21 for the county or for the local government, because they have
22 to be on the scene. Our planning standards are based on, of
23 course, the ideal situation of the local and state involvement.
24 The state could develop a plan where they could completely
25 take over for the county government and actually have people

1 stationed in the county. That's the only way you could
2 really find that the public health and safety are protected.

3 CHAIRMAN PALLADINO: I don't understand that. You
4 are saying that what they did doesn't speak as loud as what's
5 on that piece of paper?

6 MR. KRIMM: Excuse me, I was speaking in a very
7 general term and not a specific. I think when we get into
8 the specifics, Frank can explain to you exactly what happened
9 with the state in Rockland County.

10 COMMISSIONER AHEARNE: If I could ask one more on
11 the general question. Imbedded in the report that you have
12 sent us, you say, "FEMA's regulations require each county to
13 have a plan and exercise it." And the sentence is, "Since
14 FEMA's regulations require each county to have a plan and
15 exercise it, Rockland County's level of preparedness must be
16 evaluated as inadequate at this time."

17 That is what led me to conclude, that sentence,
18 that you are saying as a fundamental point that in the
19 absence of a county having the plan itself, you must, by
20 definition, conclude it is inadequate?

21 CHAIRMAN PALLADINO: Whose definition?

22 COMMISSIONER ROBERTS: Answer that question.

23 MR. KRIMM: Let me try to respond to that, if I may.

24 We believe that the state could develop a compensating
25 plan which would meet the requirements of the county for

1 evacuation. It is not likely that that plan would be found
2 inadequate unless there was a commitment of resources from
3 the county or from the state in that locality in order to
4 carry out that plan.

5 It could even be that on a theoretical basis
6 that as long as the resources could be delivered to that county
7 within a timeframe in order to carry out the evacuation in
8 keeping with the criteria, that they could be located offsite.

9 But to the extent that that would compromise
10 the ability of the plan to carry out that evacuation, that
11 would become evidence that the plan was deficient.

12 COMMISSIONER AHEARNE: So you are saying that
13 my reading of this sentence is not quite as tight as it sounds?

14 MR. KRIMM: That's correct. Except that, you know,
15 again the 350 process, the ideal situation, is the local
16 government and the state. But Jeff is quite correct
17 that the state can, if it's willing to allocate the resources
18 and so forth, move in and take over for the county.

19 COMMISSIONER ASSELSTINE: That, in fact, is
20 entirely consistent with what the director said in his
21 April 18th letter to us.

22 MR. KRIMM: That's right.

23 MR. PETRONE: Now we get to the specific situation
24 within that Indian Point community, the state has submitted
25 generic plans, statewide, in terms of compensating measures

1 that would supplement or in essence could actually take over
2 with Rockland County and for any of these counties around
3 Indian Point the procedures that have been submitted by the
4 State of New York or those that are supplementary. There
5 are no procedures that speak to takeover of counties. Therefore,
6 there are no plans along these lines to take over that county.

7 CHAIRMAN PALLADINO: The fact that they did, though,
8 belies that?

9 COMMISSIONER ASSELSTINE: Why don't we let him
10 finish his statement?

11 MR. PETRONE: I believe, first of all, there are
12 procedures. Okay, they came in and they were going to exercise
13 a partial plan that had been completed by the county which
14 was still basically planning. It hadn't been approved, and
15 in essence we found that there were problems, and there
16 were problems basically in, number one, the fact that they
17 brought in a management team of six or seven people from
18 different agencies. Some of those people arrived up to an
19 hour and a half late. And that's because of the distances
20 that they came from.

21 In fact, we found the representatives from the
22 Department of Health, they were uninformed with regard to
23 24-hour continuous response procedures that would be
24 necessary for them to know. We began to find that, really,
25 in essence, there were no procedures to call for a takeover

1 by the state. No procedures means there really hadn't been
2 any training.

3 There were procedures for supplemental measures to
4 be taken with the county, and that's where we have a problem.
5 Now, if I may, to this date the State of New York has not
6 made any commitment that they were willing to write procedures
7 or establish a plan for Rockland County and to put the
8 necessary resources in that county.

9 So, you know, that hasn't been done by the state.
10 If the State of New York decides to do that, we most
11 certainly will have to review it and we will review it.

12 COMMISSIONER AHEARNE: Let me see whether I've
13 got another misimpression from this. The impression I got
14 from your report was that New York State's plan assumes that
15 in the case of an inadequacy in a county, that the state
16 will send in people to provide direction to the county personnel
17 that were going to be participating and your comment on the
18 deficiency is that the state didn't do that. And if that is
19 correct, I guess then the next question is, as I read the
20 report, the New York State plan says, quoting your quote of
21 their plan -- this is page 35 -- "Upon declaration of a
22 disaster arising from a radiological accident, the governor
23 or his designee shall direct," et cetera, et cetera.

end 3

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The Rockland County Legislature, which you also quote on page 34, "In the event of a nuclear occurrence at the Indian Point facility," that its chairman is directed "to take any and all action in coordinating and cooperating with any and all Federal and State agencies."

The impression I get is that the state's plan is, in the case of a real emergency declared by the governor, that the state people go in and direct the county people who are there, and Rockland County has said if there were a real emergency, then we would allow people to participate.

MR. PETRONE: That's correct, sir, and I can explain a little further, if you'd like, why we came to the conclusion we did.

COMMISSIONER AHEARNE: Yes.

MR. PETRONE: I think that's what you'd want to hear.

COMMISSIONER AHEARNE: First I want to make sure I understood this.

MR. PETRONE: You're correct. For one, Rockland County is still planning. Rockland County would respond according to what plan? Is it the old plan or the plan that's supposedly 75 -- that's not complete? That's one issue. I think that is probably not the major issue, the major issue being all well and good, those supplemental measures may work and if there were an accident at Indian Point, and we had to have a response in Rockland County, and the county did participate,

1 I could not tell you whether or not it would be inadequate,
 2 because we haven't had an opportunity to see them participate
 3 or to exercise them. So I am not saying it's not impossible,
 4 that it will not work. I am not saying the supplemental
 5 measures are not adequate at all.

6 What I am saying is we had no opportunity to
 7 adequately observe because they did not participate.

8 CHAIRMAN PALLADINO: That's the Rockland County
 9 people?

10 MR. PETRONE: Yes.

11 COMMISSIONER AHEARNE: I guess I was trying, as I
 12 was reading through this -- because obviously we have to end
 13 up reaching some kind of a judgment -- I was trying to draw a
 14 distinction between the Rockland County case. It seemed to
 15 me where you had previously pointed out to us you don't have
 16 a plan to evaluate, and now in this case, in the implementation
 17 the state sent in its people. We have an affidavit somewhere
 18 from one of the Rockland County people pointing out how they
 19 had been participating until the point duty hours came and
 20 then they stopped.

21 So the sense I was getting was as I described,
 22 if there were an emergency, probably the people would be there.
 23 Now the question is obviously would they be well trained and
 24 would they have a workable plan to implement. I draw a
 25 distinction between that and the Westchester case, where you

1 have pointed out there still is no contract, that you found
2 in the implementation the training to be inadequate and the
3 county executive has said that as far as he is concerned, he
4 doesn't accept this transportation planning.

5 MR. PETRONE: The county executive is saying that
6 he needs to further explore the transportation planning and
7 that he is in the process of doing that, and he will be
8 comfortable with that full exploration. And he is also
9 exploring other measures that are being looked at right now,
10 too.

11 COMMISSIONER AHEARNE: I meant in a separate --
12 assuming the validity of Western Union, the Westchester County
13 executive has said that -- in light of the assessment by you,
14 he has concluded that it is inadequate, and he focuses atten-
15 tion on the transportation aspect. So I put those pieces
16 together and I conclude he is saying that the transportation
17 is inadequate.

18 This is different, in my mind, than the Rockland
19 County case.

20 MR. PETRONE: That is different than Rockland
21 County. You have a very different situation in Westchester.
22 I think we have gone through this several times in several
23 meetings, and I think we have come to the understanding that
24 this whole process is ongoing -- I mean that this process
25 of emergency preparedness and planning is ongoing. I think

ar4-4

1 this is an example of it in Westchester. We find that you
2 get to certain levels, your plans are submitted, those plans
3 are reviewed, corrective actions are asked for in the planning,
4 you exercise, you find that there are problems, be it major
5 or minor, you ask for corrections. And this is an ongoing
6 process and that is what you're reading today.

7 CHAIRMAN PALLADINO: Might I pursue questions on
8 Rockland County?

9 MR. PETRONE: Yes, sir.

10 CHAIRMAN PALLADINO: In part, your decision that
11 the public health and safety may not be protected appears to
12 be based on Rockland County's situation, at least in part.

13 MR. PETRONE: For that specific standard.

14 CHAIRMAN PALLADINO: However, as I read your report,
15 it seems to me the state did compensate for Rockland County,
16 and had it been a real situation, based on your quotes -- a
17 few of which I'm going to read --

18 MR. PETRONE: Please do.

19 CHAIRMAN PALLADINO: -- then this would say that
20 from this standpoint, they would have been protected. You
21 talked about the 24-hour continuous operation was not fully
22 demonstrated on March 3, 1983 exercise. This year the
23 state demonstrated an acceptable capability to sustain
24 continuous operation in Rockland County. Sufficient back-up
25 personnel were available and shift changes were made -- were

1 demonstrated. On the emergency operations management, it
2 says emergency operations management by the state management
3 team, the EOC, was good. The state EOC representative
4 demonstrated effective control of the emergency response
5 and had staff read things on a regular basis.

6 The emergency classification system was used
7 correctly, et cetera.

8 Turn the page.

9 MR. PETRONE: What page are you on, sir?

10 CHAIRMAN PALLADINO: That was 39. I'm going to
11 40, down in the last paragraph.

12 "Communications between the Rockland County EOC
13 and the joint media center in Verplanck, New York were good.
14 State personnel demonstrated a good capability to replace
15 county PIOs at the Rockland County EOC and the joint media
16 center in Verplanck."

17 I can go to page 41 on accident assessment.

18 "Accident assessment functions which were carried
19 out by state personnel normally based in Albany and Monticello
20 were good. The two state field monitoring teams demonstrated
21 a good capability to take radiological measurements within the
22 10-mile plume exposure pathway EPZ; adequate equipment was
23 available, and teams demonstrated acceptable to good levels
24 of familiarity with field monitoring procedures," et cetera.

25 I can go to page 42, I believe it is.

1 "Simulation of procedures for identifying and
2 dealing with potential impediments to evacuation was good."

3 This is in the paragraph that starts, "State
4 personnel demonstrated several protective actions in Rockland
5 County during the exercise."

6 It says:

7 "The capability for processing evacuees at a
8 reception center was acceptable. State employees performed
9 all functions that would normally be carried out by Rockland
10 County personnel. Personnel contamination scans were
11 demonstrated; instrumentation and procedures complied with
12 requirements. . ."

13 So I read on and the feeling I get when I am all
14 through, even on the recovery and reentry, is the state
15 personnel and Rockland County EOC demonstrated a good
16 capability for recovery, reentry operations.

17 The feeling I get is the state performed
18 admirably in fulfilling the requirements that would have been
19 placed on Rockland County if they chose not to participate.

20 Now how does this say that the people of New
21 York, at least from this standpoint, would not have been
22 protected adequately?

23 MR. PETRONE: Okay, sir, the state did perform
24 admirably, but also there are deficiencies in the body of what
25 you are reading, and recommendations.

1 CHAIRMAN PALLADINO: There were one or two, but --

2 MR. PETRONE: I can go over them, if you'd like.

3 The point of the matter is that there were deficiencies and
4 there were deficiencies because there is a planning standard
5 that is not adequate.

6 There are procedures set forth by the state to
7 supplement Rockland County. There are no procedures to come
8 in and take over Rockland County.

9 CHAIRMAN PALLADINO: But they did, and they did it
10 well.

11 MR. PETRONE: It was not adequate, according to
12 our determination.

13 CHAIRMAN PALLADINO: Well, I just read --

14 MR. PETRONE: No --

15 COMMISSIONER ROBERTS: I think you make the point
16 that they are inadequate because they were not performed
17 according to written plans or procedures. Well, what is
18 the result? People were protected, at least, except what
19 they did --

20 MR. PETRONE: I have to disagree. People were not
21 protected, and --

22 CHAIRMAN PALLADINO: Please explain.

23 MR. PETRONE: And until I have an opportunity to
24 observe Rockland County in these supplemental measures or,
25 indeed, if the State of New York decided to submit compensatory

1 measures that were written to take over Rockland County
2 completely, we would then be in a complete -- we'd have to go
3 through a complete plan review at the beginning of the
4 process of plan review, and then move that up to an exercise.

5 CHAIRMAN PALLADINO: Well, Frank, one of the
6 problems I am having is you prejudge that if there aren't
7 plans, this is going to be an unsuccessful exercise. That's
8 what this says.

9 MR. PETRONE: No, it doesn't say that.

10 CHAIRMAN PALLADINO: What the report says is
11 that New York State went in and did a very fine job in
12 compensation for them. We have to consider compensation
13 measures, at least that is part of our charge, and I just
14 find it difficult to know that we are only working -- you
15 are basing your results on the fact that they didn't do this
16 according to a written procedure, but they did do it well.

17 COMMISSIONER ASSELSTINE: If I understood what
18 Frank had said earlier, it was not that his judgment was
19 based exclusively on the absence of a complete and adequate
20 plan, either by the state or by the county, but it was also
21 based in part upon the performance of the state people, no
22 matter how laudable those efforts were.

23 Is that correct?

24 MR. PETRONE: Yes, sir.

25 COMMISSIONER ASSELSTINE: Is that a correct

1 assessment?

2 MR. PETRONE: I think if you read through the
3 deficiencies that were listed, I think some of them, you know,
4 are significant, and if you can --

5 CHAIRMAN PALLADINO: Well, I'll go back and read
6 some of them. The education brochure had not been distributed;
7 we had that. There was no evidence of signs or policies
8 posted in hotels; we covered that. Now you do say DOE's
9 personnel based in Monticello were unfamiliar with procedures
10 for 24-hour continuous emergency response operations. However,
11 they were there and they had support personnel and they did
12 it for 24 hours. I'm reading deficiencies, and I don't find
13 quite the congruence that you imply.

14 MR. PETRONE: Well, I think I'll make the statement
15 at this point that we found these deficiencies. We find that
16 with these deficiencies that the planning standard is
17 significantly deficiently, and we feel that we cannot, as
18 Mr. Bragg had mentioned and Mr. Pagothlin through his letter
19 also, that we could not at this point attest to the public
20 health and safety in Rockland County.

21 This is for you, then, sir, to make your decision.

22 CHAIRMAN PALLADINO: I'm trying to understand,
23 though, how you got to where you did.

24 COMMISSIONER AHEARNE: Page 43 might be a deficiency,
25 the first one.

1 "Due to the absence of detailed evacuation plans
2 and procedures for Rockland County" --

3 CHAIRMAN PALLADINO: No, I find that a problem
4 because in truth it's not so much whether they are measured
5 against the plan in the absence of a plan, but whether or not
6 they achieved the objective.

7 COMMISSIONER AHEARNE: But the basic concept of an
8 exercise is very similar to our inspections. It's an audit.
9 An exercise doesn't test everything. It tests certain things
10 and usually what you try to do is to set up a chain of events
11 that you are going to follow down, and you're using that as a
12 test of each one of those points in that whole chain of an
13 exercise.

14 But the inherent value of it is to train the people
15 that are going to have to do it and also enable you to conclude
16 you've followed down one chain of this whole plan. If that
17 holds together, then it gives you some confidence that the
18 rest of the plan is going to hold together. But you have to
19 have a plan that you --

20 CHAIRMAN PALLADINO: Well, I was reading excerpts
21 from the discussion of each one of these headings which are
22 objectives of the plan, and I find it difficult --

23 COMMISSIONER AHEARNE: Frank, just to quantify,
24 you see, that's the point on 43 where the point I just made is
25 that there is no detailed plan for Rockland County that they

1 can match against, and the state has the provision to come in
2 and I think I share your view that the state people did very
3 well and my own conclusion is that in case of a real emergency
4 the county people would be there, they could direct them.
5 But, nevertheless, there is no plan.

6 MR. KRIMM: And there is no way we can say to you
7 that the public health and safety is protected.

8 CHAIRMAN PALLADINO: However, you did make judgments
9 there and the judgments in most of the cases were quite
10 favorable. So there must have been some standard against
11 which you measured.

12 MR. KRIMM: But the planning responsibility is
13 significantly deficient, and there were three other items
14 that were deficient in 1982 and remain deficient. There is
15 the fact that you can't update a nonexistent plan for
16 Rockland County; you can't keep a nonexistent plan current;
17 and FEMA is concerned over the implementation of the
18 Rockland County plan.

19 So what is the problem is that the planning
20 responsibility for Rockland County is significantly deficient.

21 CHAIRMAN PALLADINO: Their plans may be, but the
22 preparedness apparently is not. The preparedness based on
23 the state is not.

24 COMMISSIONER ASSELSTINE: In fairness, Frank, you ought
25 to say clearly again what your position is on that, the status

1 of preparedness.

2 MR. PETRONE: The status of preparedness around
3 Indian Point at this time is not adequate.

4 COMMISSIONER AHEARNE: It just is another piece of
5 information as I tried to put all of this together, and I
6 don't know whether you know the answer to it -- maybe Bill
7 does. Does any of the power from Indian Point go to Rockland
8 County, or is the river the dividing line?

9 MR. PETRONE: From what I understand, it doesn't.
10 That's what I understand. But I --

11 MR. DIRCKS: That's what I understand, too.

12 COMMISSIONER AHEARNE: So Rockland County is in the
13 sense of -- they are not a receiver of any of the power
14 benefits from Indian Point; is that correct?

15 MR. DIRCKS: That is my understanding.

16 MR. KRIMM: Now if I may just quickly conclude
17 with the next slide --

18 (Slide.)

19 -- the evaluation of offsite plans and preparedness
20 by government entity is for the state of New York, adequate.
21 For Orange County, it is adequate. Putnam County is adequate.
22 Westchester County, no reasonable assurance that the county
23 can protect the health and safety of the public. For
24 Rockland County, no reasonable assurance that the county can
25 protect the health and safety of the public.

1 (Slide.)

2 The next slide is the Indian Point --

3 CHAIRMAN PALLADINO: Can I ask you two questions
4 on that slide there?

5 MR. KRIMM: Yes.

6 CHAIRMAN PALLADINO: At the present time you have
7 procedures or you have plans, you have facilities to carry out
8 an evacuation presumably in Westchester County to protect
9 against non-nuclear events. To what extent can that be
10 considered an offsetting factor on the lack of the bus
11 drivers in Westchester County? Is it extensive enough so
12 that you can count on it?

13 For example, not long ago in Rockland County there
14 was an evacuation of hundreds of people.

15 MR. PETRONE: I think you have to take into
16 consideration here we have various things. It's the event,
17 it's the time and the resources. That is the key to any
18 type of an emergency response. And we could sit here and we
19 can begin to discuss various types of emergency response
20 and they are all different. There are some generic bases to
21 them and that, yes, population protection, we have to move
22 people in any type of an event. How you do it may vary by
23 the numbers that you have to move and the direction that you
24 have to move them in. Various reasons. So on one hand there
25 is a generic base to this, but on the other hand, movement

1 of people around the Indian Point area within that 10-mile
2 EPZ is specific and quite difficult.

3 Most emergencies, for example, have warning
4 periods prior where you have time. We again, as I had
5 mentioned, as we do our planning --

6 CHAIRMAN PALLADINO: Do you have more time? Do
7 you have more time than you do in a nuclear accident?

8 MR. PETRONE: Si, I can't make that judgment.
9 The judgment I can make is that we are dealing with a fast-
10 moving scenario.

11 CHAIRMAN PALLADINO: No, you said that there was
12 more time.

13 MR. PETRONE: That is a little different, perhaps,
14 than knowing that a hurricane is coming within 15 hours or
15 even six hours.

16 CHAIRMAN PALLADINO: Well, I was thinking of a
17 chlorine tank bursting. You don't have any more time than you
18 would in a fast-moving scenario. The distances may vary.

19 MR. KRIMM: The distance is very different there,
20 that's true.

21 But the bottom line for the Indian Point power station
22 is that Rockland and Westchester Counties continue to be
23 significantly deficient and, therefore, FEMA cannot assure
24 that the public health and safety can be protected in a 10-
25 mile emergency planning zone around Indian Point.

1 We will continue to work with the state and the
2 local governments there and will report back to you from time
3 to time as we obtain additional information and as we again
4 hold other drills and exercises.

5 MR. BLUME: Mr. Chairman, before everybody leaves,
6 I have a few questions.

7 COMMISSIONER AHEARNE: We have a few questions.

8 CHAIRMAN PALLADINO: Well, I had one more and
9 then I'm going to quit.

10 COMMISSIONER AHEARNE: I've got one more.

11 CHAIRMAN PALLADINO: I promise you --

12 COMMISSIONER ROBERTS: I have 13.

13 (Laughter.)

14 So I'll wait.

15 CHAIRMAN PALLADINO: Mine will be short:

16 What plans are going on in Rockland County to
17 develop their plans and get people trained for them?

18 MR. PETRONE: As far as we are told at this point,
19 Rockland County continuing their planning effort for their
20 advisory committee. There is no real projection at this point
21 at what time they will be completed with that planning effort
22 and what time it will be submitted to their legislature for
23 approval.

24 We will not make a projection on that, because we --

25 CHAIRMAN PALLADINO: They have not, you say?

1 MR. PETRONE: They have not notified us officially
2 or the state officially with regard to a timetable. I do
3 understand that they have -- they did testify, though, at the
4 ASLB and they did state that they possibly would be finished
5 just with the planning come December '83. But, of course,
6 that's not something that we can attest to.

7 CHAIRMAN PALLADINO: Is there something peculiar
8 to their county as opposed to the other counties on the
9 difficulty of planning?

10 MR. PETRONE: Well, I think what they are doing in
11 Rockland County -- and on one hand it's somewhat time-consuming,
12 and on the other hand I think some credit is to be given to
13 them. They are pulling into the planning process people that
14 are involved in all types of emergency components. What
15 they're doing, they have a citizens advisory group and
16 they are pulling in the responders at the planning stage,
17 unlike many of the other areas that we work with, the planning
18 stage developed with your consultants and with your emergency
19 planning people right in the county. Here they are doing
20 something from grass roots and so I think on that hand they
21 have to be given some credit, and on that hand it's probably
22 going to take somewhat a little longer than if they were to
23 proceed at the other level.

24 COMMISSIONER AHEARNE: Is that funded out of that
25 state fund?

1 MR. PETRONE: This is partially funded, right, out
2 of the state dollars that are submitted to them.

3 CHAIRMAN PALLADINO: Tom, you said you had 13
4 questions? Did you have any comment on those?

5 COMMISSIONER ROBERTS: Well, I prefer to give them
6 to them in writing and ask them to respond in writing.

7 COMMISSIONER GILINSKY: Good.

8 (Laughter.)

9 CHAIRMAN PALLADINO: Can we have copies of that?

10 COMMISSIONER ROBERTS: Sure.

11 COMMISSIONER AHEARNE: This is similar to the one
12 on Rockland County. I realize that Indian Point is located
13 in Westchester County. Does it provide power to Westchester
14 County?

15 MR. PETRONE: I believe so.

16 MR. DIRCKS: I think a good part of the plant's
17 power goes to the Metropolitan Transit Authority.

18 COMMISSIONER AHEARNE: I knew that from previous
19 submissions. I was just trying to figure out. One of the
20 issues in emergency planning over the years has always been
21 the funding, and also the argument that, yes, it's a lot of
22 work to put in, but there's a benefit accruing in a local area
23 from the plant in the sense of an economic benefit, and it is
24 not at all obvious that Rockland County has any benefit and I'm
25 just wondering whether Westchester has.

ar4-17

1 MR. DIRCKS: A lot of commuters come down to
2 Westchester County from New York City using MTA.

3 COMMISSIONER ASSELSTINE: Frank, is the State of New
4 York giving any consideration now to developing a complete
5 plan for substituting for Rockland County?

6 MR. PETRONE: They have not communicated that to us.

7 CHAIRMAN PALLADINO: General Counsel, do you have
8 questions?

9 MR. BLUME: You concluded that the public education
10 and information standard was significantly deficient, in part
11 because of lack of distribution of the brochures in Westchester
12 and Rockland.

13 Are you aware of whether there were newspaper
14 ads or television or radio spots to compensate for that, that
15 lack?

16 MR. PETRONE: Yes, there were.

17 MR. BLUME: And could those have compensated for
18 that failure to distribute brochures?

19 MR. PETRONE: I wouldn't say that it could at this
20 point. I think the plan called for the distribution of
21 brochures and that was what had been agreed upon, and I
22 am saying basically in Westchester. Rockland, I think, is
23 another complete issue. There is no plan to even consider
24 what distribution you are going to make, where, and what you
25 are going to inform the public on. Westchester, I am saying

1 that the brochure is being worked on currently with the various
2 revisions, and we are not calling that significantly deficient
3 until such time it is not distributed by June 1st.

4 MR. BLUME: If it was not distributed by June 1st,
5 couldn't the other means be used to quickly educate the public?

6 MR. PETRONE: That would have to come to us then
7 in the form of a revision of the plan, which we don't object
8 to.

9 MR. BLUME: Now you also had problems with notifica-
10 tion of transients. How many people are there that are under
11 that label?

12 MR. PETRONE: Which county are you referring to?

13 MR. BLUME: The deficiency was in Westchester.

14 MR. PETRONE: Okay. Let's see. The number of
15 transients -- Roger, you have those. I have the other things.

16 MR. KOWIESKI: Well, we don't have the exact figures.
17 Again it is hard to assign. It depends on the season, and
18 again in the summertime, you go to Harriman Park and you have
19 a large area where you have obviously people going to the
20 park or to the lake or camping. Again, it is very hard to
21 make a precise estimate. Again you have hotels and motels.
22 If you are asking for an exact figure, I cannot give you this.
23 Again it depends now on the --

24 COMMISSIONER ROBERTS: How about a rough figure?

25 CHAIRMAN PALLADINO: Could you provide that for us, as

1 part of the written responses?

2 MR. KOWIESKI: If you wish, we can give you the
3 maximum and minimum, of the seasons, I'm saying. Of the
4 wintertime and of the summertime.

5 COMMISSIONER AHEARNE: Was there no method at
6 Harriman -- you see, I may have had a misimpression. The
7 impression I got was that what the report was addressing,
8 the lack of posting in hotels, motels, restaurants, but
9 you mentioned Harriman State Park as a major segment of the
10 transient population.

11 So what I'm asking, was there no posting? I
12 recognize that March in Harriman might not be in big demand,
13 but since you mentioned it, was there anything in Harriman?

14 MR. KOWIESKI: No, we did not verify it during
15 the exercise.

16 COMMISSIONER AHEARNE: We don't know whether --

17 MR. KOWIESKI: No, again, it's of seasons obviously.
18 Right now it's not -- I don't think it's an issue. Some time
19 in June or July obviously you would --

20 CHAIRMAN PALLADINO: Can I ask a follow-up question?

21 Frank, you implied that if you are going to take
22 any alternative measures to compensate for any measures in
23 the plan -- did I get the implication you get no credit for it
24 unless that was a process specified in the plan?

25 MR. PETRONE: Well, yes. You know, I think we are

1 dealing with -- the real issue is emergency planning is one
2 aspect, but emergency preparedness is another. And emergency
3 preparedness brings forth the components of planning as well
4 as measuring that response, and that's where --

5 CHAIRMAN PALLADINO: What I was getting at, suppose
6 you do have a plan and it calls for distribution of brochures
7 and you find that's not being effective in educating the
8 public and you took steps to get newspaper ads and the public
9 -- let's assume for the moment they got educated thereby.
10 I gather there would be no credit given because that was not
11 part of the plan. Did I understand that?

12 MR. PELRONE: No, I don't think that's true. I
13 think, you know, at first when the school dismissal program
14 was in issue, it was not in plan. After discussing it with
15 the state following the measures that were taken it was
16 discussed that this would be revised in the plan, or on the
17 same hand it's assumed already in the plan because it's a
18 planning standard that's already in the counties for any
19 emergency. It's mandated by the state education department
20 for New York school districts.

21 So, not at all. If something did take place, we
22 would most certainly entertain the revision in the plan. This
23 does happen.

24 CHAIRMAN PALLADINO: I was talking about the revision
25 in the plan; the fact that you found the plan somehow

1 deficient in the operation and you stepped in to take some
2 corrective action.

3 MR. PETRONE: There was no plan, number one, to
4 find deficient, nor was there a plan --

5 CHAIRMAN PALLADINO: You're answering a specific
6 question, I'm asking a hypothetical one.

7 MR. PETRONE: Oh. I'm sorry.

8 CHAIRMAN PALLADINO: If there was a deficiency, and
9 compensatory measures were taken and let's assume they were
10 effective, that to me would help assure public health and
11 safety because at least the people were smart enough and
12 intelligent enough to --

13 COMMISSIONER ROBERTS: If those compensatory
14 measures were not in the plan, that doesn't say a thing.
15 That's what --

16 COMMISSIONER GILINSKY: How do you go about
17 measuring whether or not people were informed? Is it the fact
18 of the distribution of the brochure?

19 MR. PETRONE: Spot-checking.

20 COMMISSIONER GILINSKY: Spot-checking what?
21 Questionnaires or --

22 MR. PETRONE: No, this was spot-checked during
23 the exercise. Our observers asked various questions to
24 people. As I mentioned, it was not scientific and I would
25 not myself be able to certify that the people in specific

1 counties are just not informed. It tells me that it is
2 something that has to be considered. It has to be considered
3 at the table with the counties, the state and the utilities
4 in terms of, you know, this could be realistic and it could
5 not be realistic, and what are the things that could be done
6 to get to better levels of assurance in terms of public
7 information.

8 I think you find that unfortunately we could say
9 that you can lead a horse to water, but are you going to make
10 that horse drink? You know what I mean? That's the
11 question. And I think that's the question of public information
12 and education. And the only way we could solve that is just
13 to continue doing it and to continue improving it as best we
14 know how through the different mistakes that we find and the
15 deficiencies that we find along the way.

16 CHAIRMAN PALLADINO: Mike, you had more?

17 MR. BLUME: A few more, yes, Mr. Chairman.

18 You used NUREG 0654, the standards and criteria, to
19 evaluate preparedness; isn't that right?

20 MR. PETRONE: Yes.

21 MR. BLUME: How did you use those criteria?

22 MR. PETRONE: At this point, counsel, I'm going
23 to have you talk to counsel. Mr. Spence Perry, please.

24 (Laughter.)

25 MR. PERRY: Mr. Chairman. counsel, my name is Spence

1 Perry. I am Associate General Counsel for Federal Emergency
2 Management Agency.

3 I was wondering if counsel could perhaps first of
4 all clarify the question for me.

5 (Laughter.)

6 MR. BLUME: The question is how were the standards
7 and criteria in NUREG 0654 used to evaluate preparedness?

8 MR. PERRY: Well, I think we think of 0654 as a
9 regulatory template, and we place it upon the reality, whether
10 it's the planning reality or the operational reality that
11 we face.

12 Our people are trained in a general way to respond
13 to a variety of emergencies. The standards that are contained
14 in the NUREG have flesh on them. They know, by virtue of
15 being expert and testifying in your own proceedings as
16 emergency management experts, what they see; they understand
17 what they see; and they are capable of making an expert
18 judgment about what they see. So I think that, in a rough
19 way, is how the basic field material is developed. This is
20 then reviewed by our senior people in the region and the
21 regional director places a final imprimatur on the finding.

22 MR. BLUME: Were the criteria in 0654 used as
23 litmus tests? In other words, if there was compliance with
24 the criteria, was it then concluded there was preparedness?
25 But if there was not compliance with those criteria, then it

1 was concluded that there was a significant deficiency?

2 MR. PERRY: I would think that is a fair
3 characterization. I like your term "litmus test." I think
4 is the kind of process we are talking about.

5 MR. BLUME: And that is despite the fact that
6 the foreword to 0654 says that it is to be construed only as
7 guidance and not requirements?

8 MR. PERRY: I don't think that is contradictory at
9 all, sir.

10 COMMISSIONER ROBERTS: It certainly seems to me
11 that it is.

12 MR. PERRY: We take it very much as guidance and
13 we don't take it as binding regulation, and we frequently
14 state that.

15 We understand better than most, sir, I think, in
16 our agency the flexibility and reaction to reality are very
17 important in emergency situations.

18 CHAIRMAN PALLADINO: Mike, perhaps a good vehicle
19 would be for you to place the questions in writing and
20 add them to the list that Tom Roberts has, if you have more.

21 MR. BLUME: I'd be happy to. I do have some others
22 on the bus drivers deficiency. I'd be happy to do that.

23 CHAIRMAN PALLADINO: Well, I think we have
24 been here a long time. I think if you could do that, that
25 would be helpful.

1 COMMISSIONER AHEARNE: Also. I guess, at some
2 point we have to recognize that what FEMA has done is
3 bring us their conclusion, and I think we have to explore --
4 and that's what, Mike, you were doing, is explore the
5 fundamentals, how they got there and the basis so we can
6 understand it. But I think the purpose of the meeting is to
7 hear this is FEMA's judgment and then we have to decide what
8 we do with it.

9 CHAIRMAN PALLADINO: If you could get us -- I
10 don't want to put a severe time burden on you, but --

11 (Laughter.)

12 -- but I will.

13 (Laughter.)

14 COMMISSIONER AHEARNE: Remember, Congressional
15 committees may put a precedent.

16 CHAIRMAN PALLADINO: Oh, they do that on us, too.
17 But it would be helpful if we could get the
18 responses, assuming we get you the questions right away, if
19 possible in time for us to evaluate or consider the answers
20 in the May 5th meeting.

21 MR. KRIMM: Mike, can you get your questions to us?
22 I do have Commissioner Roberts' questions.

23 MR. BLUME: Sure. We'll get them to you tomorrow.

24 MR. KRIMM: Thank you.

25 COMMISSIONER GILINSKY: Will you circulate those,

1 Tom?

2 COMMISSIONER ROBERTS: I will.

3 CHAIRMAN PALLADINO: We'd like copies of whatever
4 you send.

5 Is there anything more the Commissioners want?

6 COMMISSIONER AHEARNE: I may not agree with all of
7 the points that FEMA has made, but I respect that we have
8 put them in a difficult position. We essentially have said
9 many times that they are the people we will look to for
10 making the judgments on emergency planning, and I appreciate
11 the difficult task you guys have and I think you are doing
12 your best to try and address these very sticky problems.
13 Thank you.

14 MR. PETRONE: Thank you.

15 COMMISSIONER AHEARNE: I would certainly agree --

16 CHAIRMAN PALLADINO: I certainly want to thank you.
17 I know on the one point I gave -- I probed, but my probing
18 came from what I read. But I do appreciate the efforts
19 you are making to improve the situation, because I think we
20 made significant progress despite any existing deficiencies
21 that may be identified.

22 MR. PETRONE: If I can just add, I think significant
23 progress over the past year in some of the areas has been
24 made, and it's been a long year, and I think a lot had to be
25 done in that long year. And we tried our best. Thank you.

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MR. KRIMM: Thank you very much.

CHAIRMAN PALLADINO: Thank you.

With that, the meeting is adjourned.

(Whereupon, at 4:10 p.m., the meeting was
adjourned.)

* * * *

CERTIFICATE OF PROCEEDINGS

This is to certify that the attached proceedings before the
NRC COMMISSION

In the matter of: Briefing on Indian Point

Date of Proceeding: April 20, 1983

Place of Proceeding:

were held as herein appears, and that this is the original
transcript for the file of the Commission.

Official Reporter - Typed

[Signature]

Official Reporter - Signature

APRIL 20, 1983

SCHEDULING NOTES

TITLE: BRIEFING ON INDIAN POINT EXERCISE

SCHEDULED: 2:00 P.M., WEDNESDAY, APRIL 20, 1983

DURATION: 1-1/2 HOURS

SPEAKERS: 1. JEFFREY BRAGG, EXECUTIVE DEPUTY DIRECTOR, FEMA
2. RICHARD KRIMM, ASSISTANT ASSOCIATE DIRECTOR
FOR NATURAL AND TECHNOLOGICAL HAZARDS
3. FRANK PETRONE, REGIONAL DIRECTOR, REGION II,
FEMA, NEW YORK

DOCUMENTS: APRIL 15, 1983 FEMA REPORT

OFF SITE EMERGENCY
PREPAREDNESS
AT
INDIAN POINT
NUCLEAR POWER
STATION



April 1983

10-MILE RADIUS EMERGENCY PLANNING MAP
U.S. NUCLEAR REGULATORY COMMISSION - 1980

74°00' 73°45'



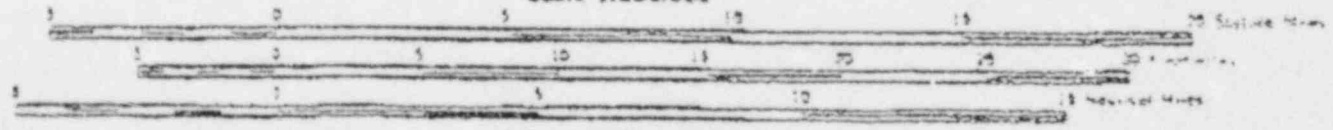
41°15'

41°12'

74°00' 73°45'

INDIAN POINT
STATION
NEW YORK

Scale 1:250,000



CONTOUR INTERVAL 100 FEET
WITH SUPPLEMENTARY CONTOURS AT 50 FOOT INTERVALS



COUNTY EMERGENCY RESPONSE CENTERS

Orange County: Orange County Government Center, 255-275 Main Street, Goshen, N.Y. 10924

Putnam County: Putnam County Office Building, 40 Glenlida Avenue, Carmel, NY 10512

Rockland County: Rockland County Sheriff's Communications Center, Fire Training Center, Route 45, Pomona, N.Y. 10970

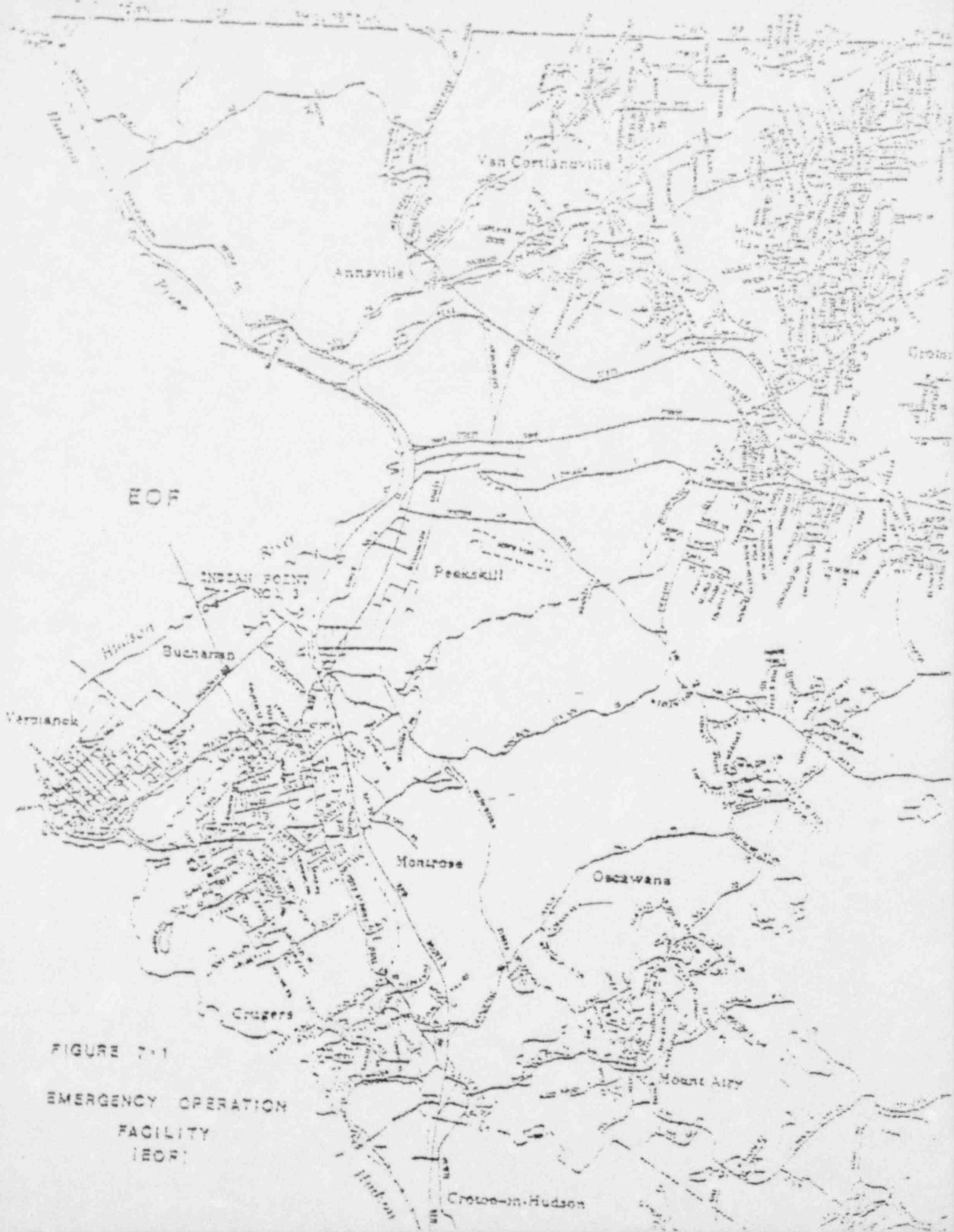


FIGURE 7-1

EMERGENCY OPERATION
FACILITY
(EOF)

- MAJOR DEFICIENCIES CITED

NOTIFICATION METHODS AND PROCEDURES

- INCLUDED SIREN MALFUNCTIONS

PUBLIC EDUCATION AND INFORMATION

- INCLUDED LACK OF PUBLIC AWARENESS ABOUT EMERGENCY PLANS

PROTECTIVE RESPONSE

- INCLUDED LACK OF MEANS TO NOTIFY TRANSIENT POPULATION
- INADEQUACIES DEALING WITH USE OF EVACUATION ROUTES
- LACK OF AGREEMENTS WITH BUS OPERATORS

RADIOLOGICAL EXPOSURE CONTROL

- INSUFFICIENT RESOURCES FOR DECONTAMINATION OF PERSONNEL
- ABSENCE OF PERMANENT RECORD DEVICES AND INSUFFICIENT SUPPLY OF SELF READING DOSIMETERS

RESPONSIBILITY FOR THE PLANNING EFFORT

- INCLUDED STATE/LOCAL PREPAREDNESS EFFORT AND NEED FOR COMPENSATORY MEASURES



REVIEW OF MAJOR DEFICIENCIES BASED ON RESULTS OF MARCH 9, 1983 EXERCISE

NOTIFICATION METHODS AND PROCEDURES

- Now Adequate (Except Rockland County)

PUBLIC EDUCATION AND INFORMATION

- Adequate in Orange and Putnam Counties and in State of New York
- Deficiencies Still Exist in Rockland and Westchester Counties
 - Public Remains Uninformed
 - Inadequate Distribution of Brochures

(Note: Westchester County Will Be Adequate If Brochure Distributed Prior to June 1, 1983.)



April 1983

REVIEW OF MAJOR DEFICIENCIES BASED ON RESULTS OF MARCH 9, 1983 EXERCISE **(Continued)**

PROTECTIVE RESPONSE

- Adequate in Orange and Putnam Counties and in State of New York
- Deficiencies Still Exist in Rockland and Westchester Counties
 - Westchester Did Not Demonstrate the Capability to Implement Evacuation Procedures Necessary to Protect the Public

RADIOLOGICAL EXPOSURE CONTROL

- Now Adequate (Except Rockland County)

RESPONSIBILITY FOR THE PLANNING EFFORT

- Remains Deficient (Involves Rockland County Only)



April 1983

INDIAN POINT STATUS REPORT

APRIL 20, 1983

E. NOTIFICATION METHODS & PROCEDURES

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
•(A) Siren System Requires Improvement (1982)	•Utility Provides Certification that Sirens Work	•Adequate
•(B) Inadequate EBS Messages and Criteria (1982)	•State Will Develop EBS Message Criteria, Modify Plans, and Develop Generic Messages	•Adequate
•(C) Inadequate PIO Procedures (1982)	• State & County Plans Will Be Revised to Reflect All Concerns in Interim Finding	•Adequate
•(D) Inadequate Notification of Rockland Emergency Personnel and Local Schools (1982)	•Initial Call Out Methods in County Plan Will Be Improved and Paging Equipment Will Be Ordered	•Adequate (Plan Submitted by State)



April 1983

1 of 13

INDIAN POINT STATUS REPORT

APRIL 20, 1983

E. NOTIFICATION METHODS & PROCEDURES (Continued)

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
•(E) Inadequate Procedures for Notifying Federal Agencies (1982)	•State Plan to Include Telephone Numbers	•Adequate
•(F) PIO's Must Be Trained on Revised Procedures (1982)	•State Will Develop Training Schedule for All State & County PIO's	•Adequate
•(G) FEMA Has Outdated EBS Plan (1982)	•State Will Furnish FEMA Current EBS Plan	•Adequate
•(H) EBS Plan Does Not Detail Activation Procedures for Four County Area (1982)	•State & County Plans Will Be Modified Accordingly and Provided 10 Lead EBS Station Meetings Will Be Held with All EBS Station Management	•Adequate



INDIAN POINT STATUS REPORT

APRIL 20, 1983

E. NOTIFICATION METHODS & PROCEDURES (Continued)

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
•(I) Evacuation Buses Were Not Equipped with Radios for Communication (1983)	•Each Evacuation Bus Should Be Equipped with a Radio for Communications	•Minor Deficiency
•(J) State and County Officials Responsible for Mobilization of Emergency Resources Did Not Receive Timely Notification of the Alert (1983) (Westchester, Orange & Putnam Counties)	•State and Counties Should Meet with the Utility to Review the Procedures for Ensuring the Mobilization of Emergency Resources	•Minor Deficiency

• Notification Methods & Procedures Now Adequate



INDIAN POINT STATUS REPORT

APRIL 20, 1983

G. PUBLIC EDUCATION & INFORMATION

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
<ul style="list-style-type: none"> •(A) Public Appears Uninformed about "REP" Plan (1982) 	<ul style="list-style-type: none"> •Public Education Program Developed by State, County and Utilities Will Be Initiated 	<ul style="list-style-type: none"> •Rockland & Westchester Remain Deficient
<ul style="list-style-type: none"> •(B) Inadequate Distribution of Brochure, "Indian Point Planning & You" (1982) 	<ul style="list-style-type: none"> •State Is Developing More Specialized Distribution Methods to Provide New and Current Residents the Brochure 	<ul style="list-style-type: none"> •Rockland & Westchester Remain Deficient
<ul style="list-style-type: none"> •(C) Need for Brochure in Language(s) other than English (1982) 	<ul style="list-style-type: none"> •Survey Will Be Done by Utility to Determine Size and Number of Foreign Speaking Communities in the EPZ 	<ul style="list-style-type: none"> •Adequate



INDIAN POINT STATUS REPORT

APRIL 20, 1983

G. PUBLIC EDUCATION & INFORMATION (Continued)

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
<ul style="list-style-type: none"> •(D) Inadequate Rumor Control (1982) 	<ul style="list-style-type: none"> •“Oswego Model” Tested & Approved at Fitzpatrick Exercise Will Be Tailored and Added to State & County Plan 	<ul style="list-style-type: none"> •Adequate
<ul style="list-style-type: none"> •(E) State & County Plans Lack Description of Public Information/Public Education Program, News Media Briefing and Notification of Transients (1982) 	<ul style="list-style-type: none"> •Outline of Program Will Be Included in State & County Plans, Posters, Pamphlets etc. to be Forwarded to FEMA for Review 	<ul style="list-style-type: none"> •Adequate
<ul style="list-style-type: none"> •(F) Arrangement & Procedures for Joint Media Facility (JMF) Need to be in Plans (1982) 	<ul style="list-style-type: none"> •All Plans to Include Floor Plan, Equipment, and Internal Location Information for JMF, New Locations Being Actively Sought 	<ul style="list-style-type: none"> •Adequate



INDIAN POINT STATUS REPORT

APRIL 20, 1983

G. PUBLIC EDUCATION & INFORMATION (Continued)

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
•(G) Orange County News Releases Not All Issued on Timely Basis and Some Contained Inaccuracies (1983)	•Orange County Should Improve Timeliness and Accuracy of News Releases (1983)	•Minor Deficiency
•Public Education & Information Failure to Distribute the Brochures by June 1, 1983, to the General Public Will Result in Re-Confirmation of the Standard as Being Significantly Deficient.		



INDIAN POINT STATUS REPORT

APRIL 20, 1983

J. PROTECTIVE RESPONSE

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
•(A) Methods for Notifying Transients Must Be Provided (1982)	•State to Furnish Interim Notification Methods. Copy of Posters & Telephone Inserts & Schedule for Dissemination to be Forwarded to FEMA .	•Rockland & Westchester Remain Deficient
•(B) Maps with Population by ERPA Should Be Displayed in EOCs (1982)	•State Has Maps, Will Provide Information to RAC	•Adequate
•(C) State Has Decided Not to Provide "Thyroid Blocking Agents" to Emergency Workers (1982)	•State Policy Now Calls for KI to be Furnished Emergency Workers and Special Populations. Policy to be Included in State Plan	•Adequate
•(D) Inadequate Handling of Impediments to Evacuation (1982)	•State & County Plans to be Upgraded to Include Means of Clearing Routes	•Adequate
•(E) Inadequate Handling of Ingestion Pathway (1982)	•State to Provide Surface Water Inventory, and Location of Dairy and Produce Farms	•Adequate



INDIAN POINT STATUS REPORT

APRIL 20, 1983

J. PROTECTIVE RESPONSE (Continued)

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
<ul style="list-style-type: none"> •(F) Monitoring Capability at Relocation Centers Needs Clarification (1982) 	<ul style="list-style-type: none"> •Plans to be Revised to Clarify Procedures for Relocation Centers versus Reception Centers 	<ul style="list-style-type: none"> •Adequate Procedures All Counties (Training Minor Deficiency in Westchester)
<ul style="list-style-type: none"> •(G) Inadequate Data Collection & Transmission of Field Data to Decision Makers (1982) 	<ul style="list-style-type: none"> •SOP's Will Be Developed •County EOC Staffs Will Be Trained 	<ul style="list-style-type: none"> •Adequate (Minor Problems in Putnam County)
<ul style="list-style-type: none"> •(H) Evacuation of Handicapped Not Addressed (1982) 	<ul style="list-style-type: none"> •State & County Plans to Reflect Program to Identify & Evacuate Such Persons 	<ul style="list-style-type: none"> •Adequate (Ambulance Drivers Need Training in Westchester)



April 1983

8 of 13

INDIAN POINT STATUS REPORT

APRIL 20, 1983

J. PROTECTIVE RESPONSE (Continued)

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
<ul style="list-style-type: none"> •(I) No Evacuation Commitments from Bus Operators, etc. (1982) 	<ul style="list-style-type: none"> •Compensating Measures Will Be Developed and Included in Plans 	<ul style="list-style-type: none"> •Deficient (Westchester Did Not Demonstrate Capability to Implement Evacuation)
<ul style="list-style-type: none"> •(J) Relocation Centers Too Close to EPZ (1982) 	<ul style="list-style-type: none"> •Review Indicated None Located within EPZ 	<ul style="list-style-type: none"> •Adequate
<ul style="list-style-type: none"> •(K) Lack of Maps in State & County EOC (1982) 	<ul style="list-style-type: none"> •Additional Maps Now Available. RAC Will Identify Where Required 	<ul style="list-style-type: none"> •Adequate



INDIAN POINT STATUS REPORT

APRIL 20, 1983

J. PROTECTIVE RESPONSE (Continued)

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
•(L) Rockland County EOC Did Not Display Maps of Bergen County Congregate Care Centers	•Rockland County Should Obtain and Post Maps in EOC	•Minor Deficiency
•(M) Bergen County EOC Did Not Display Maps Showing the Plume EPZ Boundary, Population, Evacuation Routes, Reception Centers and Relocation Centers	•Rockland County Should Obtain and Post Maps in EOC Which Show These Items	•Minor Deficiency
•(N) Westchester County Congregate Care Facility Is Too Small to Accommodate the Capacity Specified in the Plan	•Additional Congregate Care Facilities Should Be Identified	•Minor Deficiency

J. Protective Response Remains Significantly Deficient



INDIAN POINT STATUS REPORT

APRIL 20, 1983

K. RADIOLOGICAL EXPOSURE CONTROL

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
<ul style="list-style-type: none"> •(A) Inadequate Dosimetry (1982) 	<ul style="list-style-type: none"> •State Will Order TLD's & Self-Reading Packet Dosimeters. 24-Hour Capability Will Be Demonstrated at Annual Exercise 	<ul style="list-style-type: none"> •Adequate (Minor Deficiency Remains in Westchester, Orange & Putnam Counties)
<ul style="list-style-type: none"> •(B) Current Decontamination Procedures for Emergency Workers Require Revision (1982) 	<ul style="list-style-type: none"> •Decontamination Procedures Are Being Reviewed & Modified •Personnel to be Trained 	<ul style="list-style-type: none"> •Adequate
<ul style="list-style-type: none"> •(C) Decontamination Protocols (Sequences) Not in Plan (1982) 	<ul style="list-style-type: none"> •Levels Will Be Displayed as Needed •Personnel Will Be Trained in Application in Conjunction with Decontamination Training 	<ul style="list-style-type: none"> •Adequate
<ul style="list-style-type: none"> •(D) Inadequate Waste Disposal Plans for Counties (1982) 	<ul style="list-style-type: none"> •Disposal Will Be in Accordance with Applicable Regulations. Plans Will Be Revised Accordingly •Westchester Site Under Review 	<ul style="list-style-type: none"> •Adequate



INDIAN POINT STATUS REPORT

APRIL 20, 1983

K. RADIOLOGICAL EXPOSURE CONTROL (Continued)

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
•(E) Inadequate Calibration & Maintenance of Monitoring Equipment (1982)	•Equipment Will Be Checked Quarterly and Exchanged or Calibrated Annually	•Adequate
•(F) Bus Drivers and Some Police Officers in all Counties Are Not Fully Familiar with Radiological Exposure Control Procedures	•All Emergency Response Personnel Should Be Fully Trained in Radiological Exposure Control Procedures	•Minor Deficiency
	• <u>Radiological Exposure Control Now Adequate</u>	



INDIAN POINT STATUS REPORT

APRIL 20, 1983

P. PLANNING RESPONSIBILITY

DEFICIENCY	PROPOSED CORRECTIVE ACTION	PRESENT STATUS
<ul style="list-style-type: none"> •(A) Rockland County's Non-Participation Impacting on Decision Makers Capability to Respond in Emergency (1982) 	<ul style="list-style-type: none"> •State Will Develop Generic Procedures in Plan to Handle County with Inadequate Plan or County that Elects Not to Participate. State Will Respond with Senior Management Team to Direct Locals after Governor Declares Emergency 	<ul style="list-style-type: none"> •Remains Deficient
<ul style="list-style-type: none"> •(B) Can't Update Non-Existent Plan (Rockland County) (1982) 	<ul style="list-style-type: none"> •See Above 	<ul style="list-style-type: none"> •Remains Deficient
<ul style="list-style-type: none"> •(C) Can't Keep Non-Existent Plan Current (Rockland County) (1982) 	<ul style="list-style-type: none"> •See Above 	<ul style="list-style-type: none"> •Remains Deficient
<ul style="list-style-type: none"> •(D) FEMA Concerned over Implementation of Rockland County Plan (1982) 	<ul style="list-style-type: none"> •See Above 	<ul style="list-style-type: none"> •Remains Deficient
<ul style="list-style-type: none"> • <u>Planning Responsibility Remains Significantly Deficient</u> 		





Federal Emergency Management Agency

Washington, D.C. 20472

APR 15 1983

Mr. William J. Dircks
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Dircks:

Enclosed is the Federal Emergency Management Agency (FEMA) Post Exercise Assessment dated April 14, 1983, which provides an update on the status of planning and preparedness by State and local governments at the Indian Point Nuclear Power Station. As noted in the enclosed April 14, 1983 report, FEMA has determined that plans and preparedness for Rockland and Westchester Counties continue to be significantly deficient. As of this date, FEMA cannot assure that the public health and safety can be protected in the 10-mile emergency planning zone (EPZ) around Indian Point.

The original "Interim Finding Report" that was furnished to you on August 2, 1982, identified thirty-four subelement deficiencies that resulted in five "planning standards" being rated as significantly deficient. A major effort has been made to upgrade the "plans" and "preparedness" since the initiation of the 120-day clock. The recent exercise provided the vehicle by which FEMA evaluated the progress of State and local governments involved.

The current status of the five planning standards is discussed below; however, it should be noted that all parties, even those already in compliance, are upgrading planning and preparedness on a continuing basis:

E. Notification Methods and Procedures.

All eight subelement deficiencies that resulted in this standard being rated as significantly deficient have had adequate remedial action, as demonstrated in the March 9, 1983, exercise and now meet the planning and preparedness standard set forth in NUREG-0654-FEMA-REP-1, Rev. 1. During the March 9 exercise, two new minor deficiencies were identified; however, the standard remains adequate in that these minor deficiencies will not impede an effective response during an emergency.

G. Public Education and Information.

Four of the six subelement deficiencies that resulted in this standard being rated as significantly deficient have had adequate remedial actions as demonstrated in the March 9, 1983, exercise and now meet the planning and preparedness standard set forth in NUREG-0654-FEMA-REP-1, Rev. 1. However, as a result of the March 9, 1983, exercise two of the subelements remain deficient in Rockland and Westchester Counties from a "preparedness" standpoint:

- (1) Public appears uninformed about the "REP" plan; and
- (2) Inadequate distribution of brochure "Indian Point Planning and You."

FEMA has every reason to believe that the brochures will be distributed by June 1, 1983, in Westchester County. Failure to distribute this brochure by June 1, 1983, to the general public will result in a reconfirmation of the standard as being significantly deficient. During the March 9 exercise, one additional minor deficiency was identified; however, this deficiency alone would not result in this standard being rated significantly deficient, since it will not impede an effective response during an emergency.

J. Protective Response.

Nine of the 11 subelement deficiencies that resulted in this standard being rated as significantly deficient have had adequate remedial actions demonstrated in the March 9, 1983, exercise and now meet the planning and preparedness standard set forth in NUREG-0654-FEMA-REP-1, Rev. 1. However, as a result of the March 9 exercise, two of the subelements remain deficient:

- (1) "Methods for notifying transients must be provided" remains deficient from a preparedness standpoint in Westchester and Rockland Counties; and
- (2) "No evacuation commitments from bus operators, etc.," remains deficient from both a planning and preparedness standpoint in Westchester County.

As a result of these two remaining deficiencies, this planning standard remains significantly deficient. During the March 9 exercise, three additional minor deficiencies were identified; however, these deficiencies alone would not result in this standard being rated significantly deficient since they would not impede an effective response during an emergency.

K. Radiological Exposure Control

All five subelement deficiencies that resulted in this standard being rated as significantly deficient have had adequate remedial actions as demonstrated in the March 9, 1983, exercise and now meet the planning and preparedness standards set forth in NUREG-0654-FEMA-REP-1, Rev. 1. However, as a result of the March 9 exercise, one additional deficiency surfaced that would not impede an effective response during an emergency.

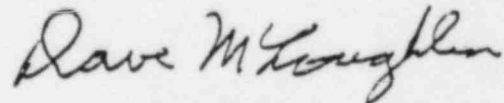
P. Planning Responsibility.

All four subelement deficiencies that resulted in this standard being rated as significantly deficient were related to Rockland County's non-participation in the exercise process. The plan for Rockland County has not been completed and since no county capability was demonstrated on March 9, the significant deficiency previously identified still remains. The original plan for compensatory measures by the State called for State personnel to supplement county resources, not to "fully" offset their withdrawal from the exercise from a resource perspective. This resulted in the State's inability to satisfactorily compensate for the lack of the County's participation in the exercise.

In addition to the deficiencies cited above, 6 new minor deficiencies were identified as a result of the March 9, 1983, exercise in the other 10 planning standards evaluated by FEMA. However, these new minor deficiencies in no way change FEMA's previous finding of adequacy for these 10 planning standards as stated in the August 1982 Interim Finding.

It is my belief that this report provides an adequate factual basis for the Commission to perform its tasks resulting from the August 3, 1982, issuance of a 120-day letter.

Sincerely,



Dave McLoughlin
Deputy Associate Director
State and Local Programs
and Support

Enclosure

POST EXERCISE ASSESSMENT



March 9, 1983 Exercise of the Radiological
Emergency Response Plans of New York State and
Westchester, Rockland, Orange and Putnam Counties
for the

INDIAN POINT NUCLEAR POWER STATION

April 14, 1983

**Federal Emergency Management Agency
Region II**

FRANK P. PETRONE
Regional Director

26 FEDERAL PLAZA
New York, N.Y. 10278

POST EXERCISE
ASSESSMENT

March 9, 1983 Exercise of the Radiological
Emergency Response Plans of New York State and
Westchester, Rockland, Orange and Putnam Counties

for the

INDIAN POINT NUCLEAR POWER STATION

April 14, 1983

Federal Emergency Management Agency

Region II

Frank P. Petrone
Regional Director

26 Federal Plaza
New York, N.Y. 10278



Federal Emergency Management Agency

Region II

26 Federal Plaza

New York, New York 10278

April 14, 1983

Mr. Dave McLoughlin
Deputy Associate Director
State and Local Programs and Support
Federal Emergency Management Agency
500 C Street, S.W.
Washington, D. C. 20472

Dear Mr. McLoughlin:

This letter transmits the Post Exercise Assessment for the March 9, 1983 full scale exercise at the Indian Point nuclear generating station. FEMA had more than 50 observers and evaluators at the exercise.

Overall, I concluded that significant progress has been made since the first exercise on March 3, 1982. It is my judgment that significant progress in offsite emergency planning has been made at the State level and in Orange and Putnam Counties. This is not to say that some minor deficiencies do not remain. There are still minor deficiencies. But, we have every reason to believe at this time, that these will be corrected in an expedited manner.

In early March, the Rockland County Legislature voted not to participate in the exercise. The County's role was that of permitting several of their officials to observe the exercise and making its Emergency Operating Center available to State personnel.

The original compensating measures by the State were to have State personnel supplement County resources not to take their place. New York decided to attempt to carry out the County's functions for the March 9th exercise. They did a commendable job under the circumstances. However, the State was not able to satisfactorily compensate for the lack of the County's participation and resources. There is not a completed plan for Rockland County. And, since no County capability was demonstrated on March 9th, the significant deficiency previously identified still remains.

In Westchester County, two significant developments have taken place regarding the transportation plan. Mr. O'Rourke, the County Executive, has developed a new option regarding the school children. If the situation were not a fast moving accident, he would order school children to be sent home at the alert stage. This was simulated at the March 9th exercise. In essence, this does away with the two-wave evacuation in most instances as well as it unites families before any general evacuation. The County Executive has also formed a Task Force on Transportation. The County has received a proposal to develop a comprehensive transportation program for Westchester County by the Transportation Safety Planning Group (TSPG). TSPG is a not-for-profit corporation made up of several of the bus company owners in the area. Westchester County is considering the proposal. It is estimated that if the proposal is funded in the near future, it will be completed in 1983. At this date, the significant deficiency earlier identified still remains.

A concern of FEMA's is the fact that the public education brochures have not been printed in Rockland and Westchester Counties. The circumstances in both Counties are somewhat parallel. In Rockland County, an accurate and effective brochure cannot be developed until a plan is completed to such a stage that the County Government will utilize it.

The Westchester County plan revisions, which were to be submitted to FEMA on January 15, 1983, were not actually received until March 27, 1983. In order not to distribute misinformation to the public, the decision was made, with FEMA's concurrence, not to print the brochures until after the plan revisions were completed. It is our understanding that there are now ongoing discussions between Westchester officials and the utilities regarding the final format of the brochures.

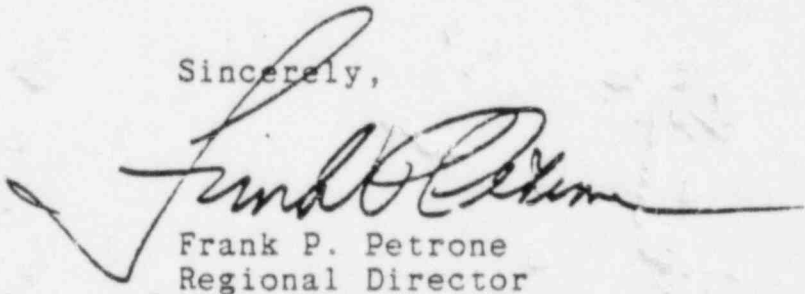
FEMA has been informed that the posters have been completed and distributed. A problem that has been noted is that no level of government has the authority to require the private sector to actually display the posters on private property. It has been suggested that the State give consideration to enacting legislation requiring prominent display of the posters.

While the situation regarding the brochures is of concern to me, we have reason to believe that they will be printed and distributed by June 1, 1983. However, if the brochures are not distributed to the general public in Westchester County by that time, I believe a significant deficiency would then exist.

As a final statement on offsite emergency preparedness as of this date around the Indian Point site, the following can be said. With respect to the State of New York, Orange and Putnam Counties, a statement of adequacy can be made where the few minor deficiencies noted in the exercise are corrected to FEMA's satisfaction. As for Rockland County, a judgement on adequacy will not be able to be made until the County plan is developed and exercised with full County participation. For Westchester County, a judgement of adequacy will not be able to be made until the transportation plan is revised based upon completion of sufficient action items in the TSPG proposal. As of this date, FEMA cannot assure that public health and safety can be protected in the 10 mile EPZ around Indian Point.

Again, I must reiterate in the interest of fairness a point that FEMA has made several times to the Nuclear Regulatory Commission. That is, the CFR 350 process of FEMA does not lend itself to tight deadlines. Substantial progress is being made almost on a daily basis. But, certain emergency planning activities require time, especially when there are limited resources. The general planning effort in Rockland County and the transportation planning effort in Westchester County are two such examples.

Sincerely,

A handwritten signature in cursive script, appearing to read "Frank P. Petrone", written in dark ink. The signature is fluid and extends across the width of the text block below it.

Frank P. Petrone
Regional Director

CONTENTS

ABBREVIATIONS.....	vii
SUMMARY.....	ix
1 INTRODUCTION.....	1
1.1 Exercise Background.....	1
1.2 Federal Observers.....	2
1.3 Evaluation Criteria.....	4
1.4 Exercise Objectives.....	5
1.5 Exercise Scenario.....	11
1.5.1 Major Sequence of Events on Site.....	11
1.5.2 Scenario Summary.....	11
1.5.3 Description of State and Local Resources.....	13
2 EXERCISE EVALUATION: DEFICIENCIES AND RECOMMENDATIONS.....	18
2.1 State and Southern District EOCs.....	18
2.1.1 Emergency Operations Facilities and Resources.....	18
2.1.2 Alerting and Mobilization of Officials and Staff.....	19
2.1.3 Emergency Operations Management.....	19
2.1.4 Public Alerting and Notification.....	20
2.1.5 Public and Media Relations.....	20
2.1.6 Accident Assessment.....	20
2.1.7 Actions to Protect the Public.....	20
2.1.8 Health, Medical, and Exposure Control Measures.....	21
2.1.9 Recovery and Reentry Operations.....	21
2.1.10 Relevance of the Exercise Experience.....	21
2.2 Near-Site EOF.....	21
2.2.1 Emergency Operations Facilities and Resources.....	21
2.2.2 Alerting and Mobilization of Officials and Staff.....	22
2.2.3 Emergency Operations Management.....	22
2.2.4 Public Alerting and Notification.....	23
2.2.5 Public and Media Relations.....	23
2.2.6 Accident Assessment.....	23
2.2.7 Actions to Protect the Public.....	23
2.2.8 Health, Medical, and Exposure Control Measures.....	23
2.2.9 Recovery and Reentry Operations.....	24
2.2.10 Relevance of the Exercise Experience.....	24
2.3 Joint Media Center.....	24
2.4 Westchester County, New York.....	25
2.4.1 Emergency Operations Facilities and Resources.....	25
2.4.2 Alerting and Mobilization of Officials and Staff.....	25
2.4.3 Emergency Operations Management.....	26
2.4.4 Public Alerting and Notification.....	26
2.4.5 Public and Media Relations.....	27
2.4.6 Accident Assessment.....	28
2.4.7 Actions to Protect the Public.....	29

CONTENTS (Cont'd)

2.4.8	Health, Medical, and Exposure Control Measures.....	32
2.4.9	Recovery and Reentry Operations.....	33
2.4.10	Relevance of the Exercise Experience.....	33
2.5	Rockland County, New York.....	34
2.5.1	Emergency Operations Facilities and Resources.....	37
2.5.2	Alerting and Mobilization of Officials and Staff.....	38
2.5.3	Emergency Operations Management.....	39
2.5.4	Public Alerting and Notification.....	39
2.5.5	Public and Media Relations.....	41
2.5.6	Accident Assessment.....	42
2.5.7	Actions to Protect the Public.....	43
2.5.8	Health, Medical, and Exposure Control Measures.....	45
2.5.9	Recovery and Reentry Operations.....	45
2.5.10	Relevance of the Exercise Experience.....	45
2.6	Orange County, New York.....	45
2.6.1	Emergency Operations Facilities and Resources.....	45
2.6.2	Alerting and Mobilization of Officials and Staff.....	46
2.6.3	Emergency Operations Management.....	47
2.6.4	Public Alerting and Notification.....	47
2.6.5	Public and Media Relations.....	48
2.6.6	Accident Assessment.....	49
2.6.7	Actions to Protect the Public.....	49
2.6.8	Health, Medical, and Exposure Control Measures.....	50
2.6.9	Recovery and Reentry Operations.....	52
2.6.10	Relevance of the Exercise Experience.....	52
2.7	Putnam County, New York.....	52
2.7.1	Emergency Operations Facilities and Resources.....	52
2.7.2	Alerting and Mobilization of Officials and Staff.....	53
2.7.3	Emergency Operations Management.....	53
2.7.4	Public Alerting and Notification.....	53
2.7.5	Public and Media Relations.....	54
2.7.6	Accident Assessment.....	55
2.7.7	Actions to Protect the Public.....	56
2.7.8	Health, Medical, and Exposure Control Measures.....	57
2.7.9	Recovery and Reentry Operations.....	59
2.7.10	Relevance of the Exercise Experience.....	59
2.8	Dutchess County, New York.....	60
2.8.1	Emergency Operations Facilities and Resources.....	60
2.8.2	Alerting and Mobilization of Officials and Staff.....	60
2.8.3	Emergency Operations Management.....	60
2.8.4	Actions to Protect the Public.....	61
2.8.5	Relevance of the Exercise Experience.....	61
2.9	Bergen County, New Jersey.....	61
2.9.1	Emergency Operations Facilities and Resources.....	61
2.9.2	Alerting and Mobilization of Officials and Staff.....	62

CONTENTS (Cont'd)

2.9.3	Emergency Operations Management.....	62
2.9.4	Actions to Protect the Public.....	62
2.9.5	Relevance of the Exercise Experience.....	63
3	SCHEDULE FOR CORRECTION OF DEFICIENCIES.....	64

ABBREVIATIONS

ANL	Argonne National Laboratory
BNL	Brookhaven National Laboratory
CD	civil defense
CR	control room
CWP	County Warning Point
DOE	U.S. Department of Energy
DOH	Department of Health
DOT	U.S. Department of Transportation
DPC	Disaster Preparedness Commission
EBS	Emergency Broadcast System
EOC	emergency operations center
EOF	emergency operations facility
EPA	U.S. Environmental Protection Agency
EPZ	emergency planning zone
ERPA	emergency response planning area
FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
HHS	U.S. Department of Health and Human Services
INEL	Idaho National Engineering Laboratory
IP 2	Indian Point Nuclear Power Station, Unit 2
KI	potassium iodide
LOCA	loss-of-coolant accident
NAWAS	National Warning System
NRC	U.S. Nuclear Regulatory Commission
ODP	Office of Disaster Preparedness
OSC	operations support center
PAG	Protective Action Guide
PASNY	Power Authority of the State of New York
PIO	public information officer
PMC	personnel monitoring center
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
RECS	Radiological Emergency Communications System
REPP	Radiological Emergency Preparedness Plan
RERP	Radiological Emergency Response Plan
TCP	traffic control point
TLD	thermoluminescent dosimeter
TSC	technical support center
SOP	standard operating procedure
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture

SUMMARY

An exercise of the plans and level of preparedness for off-site emergency response organizations and personnel was conducted for the Indian Point Nuclear Power Station Unit No. 2 (IP 2) on March 9, 1983. Following the exercise, an evaluation was made by a 48-member federal observer team and a preliminary briefing for exercise participants and the general public was held on March 10, 1983, at the Indian Point Joint Media Center in Verplanck, New York. Subsequently, detailed evaluations were prepared and are included in this document.

STATE OF NEW YORK

The State of New York was responsible for coordinating response activities in Westchester, Rockland, Orange, and Putnam counties and providing support as needed. The state, operating from the state emergency operations center (EOC) in Albany and the EOC in the Southern District Office of Disaster Preparedness in Poughkeepsie, demonstrated a good capability to activate and staff the EOCs, manage emergency operations and public relations, carry out accident assessment functions, recommend actions to protect the public, and coordinate reentry and recovery operations. However, there was approximately a 30-60 minute delay between the declaration of Alert classification by the licensee and notification of the state, Westchester, Orange and Putnam Counties. The delay in notification of the emergency status is especially important because the dismissal of students from school may be initiated at the Alert classification.

The emergency operations facilities and resources at the EOCs in Albany and Poughkeepsie were good. External communications systems were improved by the addition of a new "executive hot line" with the county EOCs and a backup radio system. Maps and displays were also improved since the 1982 exercise.

New York State's role in implementing compensating measures for Rockland County is evaluated in the Rockland County sections of this report.

WESTCHESTER COUNTY, NEW YORK

The emergency facilities and equipment in the Westchester County EOC were good. Since the 1982 exercise the county has secured a new electronic display board for the EOC that shows, by means of light indicators, both evacuated emergency response planning areas (ERPAs) and host areas. The county has also established a new communications system providing individual telephone lines for each agency representative. A new dedicated communications line between the EOC and the utility's Emergency Operations Facility (EOF) has also been installed since the 1982 exercise and has improved communications between the facilities. All of these new communications systems worked very well.

The Westchester County Commissioner of Public Safety/Sheriff (Commissioner/Sheriff) is responsible for notifying EOC personnel; the

Westchester County Department of Public Safety communications center is staffed 24 hours a day.

The management of emergency operations in Westchester County was good. Management of the county EOC was excellent. The County Executive was clearly in charge of these operations. The public alerting and notification system worked well. However, the new public education brochure, which is currently in review, had not been distributed and there was little evidence that the emergency education program carried out during recent months had been effective. The public interviewed on the day of the exercise generally did not know that they should turn on their radios to the Emergency Broadcast System (EBS) station after hearing the sirens.

Westchester County demonstrated good accident assessment capability. The field monitoring and personal dosimetry equipment used in this exercise were improved over previously observed equipment. All of the monitoring instruments had recently been calibrated. The coordination of accident assessment activities between the EOF and the Westchester County EOC has been substantially improved. The utility's field monitoring data were received at the EOC in a timely manner.

It was evident that the transportation personnel have not been adequately trained regarding evacuation procedures, the routes they should follow to pick up evacuees, and the location of reception centers. Therefore, the capability to implement an evacuation of the general population in Westchester County remains questionable. All buses to be used for evacuation services are scheduled to be equipped with radio communications equipment by the end of April 1983. Transportation companies involved in the exercise apparently did not have an adequate supply of dosimetry equipment and potassium iodide (KI), and drivers were not consistently trained in radiological exposure control measures.

The scenario used for the March 9 exercise provided a good test of Westchester County's ability to mobilize local emergency response personnel and work with the state and surrounding New York counties. The cooperation and participation of county officials, professional response organizations, and volunteers contributed to the success of the exercise as a training experience for most of the participants.

ROCKLAND COUNTY, NEW YORK

The radiological emergency response demonstrated in Rockland County at the March 9, 1983 exercise was inadequate for two reasons:

- Rockland County has not prepared a radiological emergency preparedness plan, and did not participate in the exercise as required by the Federal Emergency Management Agency's (FEMA's) proposed regulations;
- The demonstration by the State of New York of its compensating measures did not conform to its own plan, which explicitly requires the state, in directing radiological emergency response activities, to involve

county as well as state resources and personnel. In the March 9, 1983, exercise, state employees substituted for Rockland County employees in all levels of emergency response in Rockland County.

Recognizing that the county had not completed its ongoing planning process, the state adopted a draft of the Rockland County Radiological Emergency Preparedness Plan prior to the exercise to implement compensating measures. These compensating measures were designed to supplement county resources with state resources, not to replace county resources.

When Rockland County recently decided not to participate in the exercise, with the exception of emergency services personnel before normal business hours, the state made a commendable effort to mount an emergency response that relied entirely on state, rather than county resources. In effect, the state attempted to replace, rather than supplement, the county resources.

The state utilized a draft of the Rockland County Radiological Emergency Preparedness plan. However, the plan is not complete and has not been adopted by the county legislature. Since FEMA's regulations require each county to have a plan and exercise it, Rockland County's level of preparedness must be evaluated as inadequate at this time.

The state's efforts to develop and implement compensating measures with a relatively short lead time are to be applauded. But these compensating measures can only work if county resources and personnel are available. At the exercise, it was observed that the state substituted its own employees for county emergency response personnel. As the compensating measures are described, one would have expected to observe state employees controlling the response with the assistance of county resources. What was actually observed was that state employees assumed the responsibility for implementation of the emergency response and for all management and control functions, as well as for all support emergency response functions that are the responsibility of county employees. Therefore, it must be concluded that New York State's implementation of its compensating measures during the exercise was inadequate.

In addition, federal observers found both strengths and weaknesses in the state's implementation of its own responsibilities prescribed in the compensating measures in Rockland County. After some initial confusion early in the exercise, the state demonstrated a strong response in the Rockland County EOC. State personnel generally made timely, accurate decisions based on information that was received and verified on a well-operated communications system. The initial confusion was due to the delayed arrival of key state personnel who had to travel long distances. It took as much as an hour and a half for some of these people to arrive from as far away as Poughkeepsie, Monticello, and Albany.

The exercise revealed several deficiencies in planning and preparedness. Revised public education brochures have not been mailed to Rockland County residents during the last year due to continuing planning activities which, when completed, will be incorporated into a forthcoming brochure. Based on spot-check interviews with people on the day of the

exercise, the public is generally unaware of actions to be taken in a radiological emergency at IP 2. Evacuation plans and procedures in New York State's compensating measures for Rockland County lack sufficient detail. Bus drivers and staff at the reception center in Rockland County need additional personal dosimetry equipment and training in its use.

ORANGE COUNTY, NEW YORK

Orange County emergency response personnel operated competently and effectively throughout the exercise. The EOC staff functioned well, responding to all events. However, news releases issued from the joint media center by the Orange County public information officer's (PIO) were not timely.

Field teams performed well in radiological monitoring and accident assessment. Actions to protect the public were acceptable. Evacuation was successfully demonstrated, and the congregate care center adequately performed its functions. The reception center was well managed but did not have provisions for the handicapped, a deficiency which was also noted in the 1982 exercise.

In general, health, medical, and exposure control measures were acceptable. Most emergency personnel in the 10-mile plume exposure pathway emergency planning zone (EPZ) had dosimetry and KI. The personnel monitoring center was an excellent facility and was staffed with well-trained personnel. Emergency personnel showed improvement over the 1982 exercise in monitoring evacuees, workers, and vehicles. Continued additional training will help speed up their procedures. Recovery and reentry operations were successfully simulated.

PUTNAM COUNTY, NEW YORK

EOC facilities and resources, including internal communications, displays, and security, adequately supported emergency operations at the EOC. All personnel were promptly alerted and mobilized, and 24-hour continuous emergency response capability was demonstrated through shift changes. The EOC was effectively managed throughout the entire exercise, and activities and decision making were effectively coordinated between the emergency response director and all staff. All public information activities in the EOC were fully coordinated with the joint media center. Public alerting and notification were accomplished with sirens and tone alert radios. Brochures recently mailed to all residents, and posters displayed in a limited number of locations, have provided the public with additional information concerning emergency response activities.

Accident assessment in the EOC and the activities of the field monitoring teams were acceptable; however, additional review of established procedures and equipment is needed. Training in radiological exposure control varied considerably in Putnam County. Although field monitoring teams were knowledgeable about dosimeter reporting requirements and threshold limits, other emergency workers were not properly trained. Reception centers and congregate care centers activated for the exercise were well equipped.

Personnel were knowledgeable about procedures for handling large numbers of evacuees, and radiological monitoring capabilities at these and the personnel monitoring centers were generally good.

DUTCHESS COUNTY, NEW YORK

Dutchess County is a host area for evacuees from Putnam and Westchester counties. The Dutchess County EOC was activated to coordinate the activities at the John Jay High School reception center/congregate care center in Hopewell Junction. The EOC had good facilities and resources to support these emergency operations. Displays were good and clearly visible to EOC staff. The communication system functioned effectively throughout the exercise. The EOC was fully staffed by dedicated and informed personnel, and it was well managed throughout the exercise.

BERGEN COUNTY, NEW JERSEY

Bergen County, New Jersey, is a host area for evacuees from Rockland County requiring congregate care. The Bergen County EOC was activated on a limited basis, and the Red Cross established a congregate care center at the Arcola Methodist Church. At the EOC, activation procedures and staffing were good. Facilities were generally adequate, but additional maps should be acquired. Communication and coordination with Rockland County requires improvement with both planning and practice.

The Red Cross demonstrated the ability to set up a full-service congregate care center on short notice. Cots, and blankets as well as nursing care and counseling were available. The facility and operations were well managed.

1 INTRODUCTION

1.1 EXERCISE BACKGROUND

On December 7, 1979, the President directed the Federal Emergency Management Agency (FEMA) to assume lead responsibility for all off-site nuclear planning and response.

FEMA's responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

- Taking the lead in off-site emergency planning and in the review and evaluation of radiological emergency response plans developed by state and local governments.
- Determining whether such plans can be implemented, on the basis of observation and evaluation of exercises of the plans conducted by state and local governments.
- Coordinating the activities of federal agencies with responsibilities in the radiological emergency planning process:
 - U.S. Department of Commerce (DOC)
 - U.S. Nuclear Regulatory Commission (NRC)
 - U.S. Environmental Protection Agency (EPA)
 - U.S. Department of Energy (DOE)
 - U.S. Department of Health and Human Services (HHS)
 - U.S. Department of Transportation (DOT)
 - U.S. Department of Agriculture (USDA)
 - U.S. Food and Drug Administration (FDA)

Representatives of these agencies serve as members of the Regional Assistance Committee (RAC), which is chaired by FEMA.

Formal submission of the Indian Point Radiological Emergency Response Plans (REPPs) to the RAC by the state and involved local jurisdictions was followed closely by the critiquing, and evaluation of these plans. An exercise was then held on March 3, 1982 and two public meetings were held in June 1982, to acquaint the public with the plan contents, answer questions, and receive suggestions on the plans.

A radiological emergency exercise was conducted on March 9, 1983, between the hours of 5:15 a.m. and 5:45 p.m., to assess the capability of the state and local emergency preparedness organizations to implement their radiological emergency plans and procedures and protect the public in a radiological emergency involving the Indian Point Nuclear Power Station.

An observer team consisting of personnel from FEMA Region II, the RAC, FEMA's contractors, and federal and state agencies evaluated the March 9 exercise. Forty-eight observers were assigned to evaluate activities of state and local jurisdictions. Observers were trained in radiological emergency planning concepts and given an evaluation kit, which included information on exercise objectives, the exercise scenario, and other issues relating to the exercise. Team leaders coordinated team operations.

Following the exercise, the federal observers met to compile their evaluations. Observers presented observations specific to their assignments, and the teams of observers developed preliminary assessments for each jurisdiction and team leaders consolidated the evaluations of individual team members. This final exercise report is based on these preliminary assessments. A public critique of the exercise for exercise participants and the general public was held at 2:00 p.m. on Thursday, March 10, 1983, at the joint media center in Verplanck, New York.

The findings presented in this report are based on evaluations of federal observers, which were reviewed by FEMA Region II. FEMA requests that state and local jurisdictions submit a schedule of remedial actions for correcting the deficiencies discussed in this report. The Regional Director of FEMA is responsible for certifying to the FEMA Associate Director of State and Local Programs and Support, Washington, D.C., that all negative findings observed during the exercise have been corrected and that such corrections have been incorporated into state and local plans, as appropriate.

1.2 FEDERAL OBSERVERS

Forty-eight federal observers evaluated off-site emergency response functions. These individuals, their affiliations, and their exercise assignments are given below.

<u>Observer</u>	<u>Agency</u>	<u>Exercise Location/Function</u>
F. Petrone	FEMA	General Observation/Region II Director
R. Kowieski	FEMA	General Observation/RAC Chairman
S. McIntosh	FEMA	State Emergency Operations Center (EOC)/Team Leader
J. Feldman	EPA	State EOC/Accident Assessment
R. Archila	FEMA	State EOC/Public Information Officer
P. Weberg	FEMA	State EOC/Communications
R. Conley	USDA	Southern District EOC; Westchester Co./Ingestion Pathway Samplings; Dutchess Co. EOC
T. Jackson	NRC	Indian Point Emergency Operations Facility (EOF)/Liaison
M. Jackson	FEMA	Joint Media Center/Public Information Officer

<u>Observer</u>	<u>Agency</u>	<u>Exercise Location/Function</u>
H. Fish	DOE	Joint Media Center/Public Information Officer
H. Rand	FEMA	Joint Media Center/Public Information Officer
G. Connolly	FEMA	Westchester Co. EOC/Team Leader
R. Bernacki	FDA	Westchester Co./Medical Drill, Accident Assessment; Rockland Co./Medical Drill
R. Kinard	FEMA	Westchester Co. EOC/Communications
L. Dillon	FEMA	Westchester Co. EOC/Public Information Officer
T. Baldwin	ANL ^a	Westchester Co./Evacuation, Congregate Care
F. Fishman	FEMA	Westchester Co./Evacuation
C. Saricks	ANL	Westchester Co./Evacuation
D. Tinsman	USCG ^b	Westchester Co./Evacuation, Alert and Notification
T. Holliday	FEMA	Westchester Co./Evacuation, Traffic Control Points
L. Robertson	FEMA	Westchester Co./Evacuation of Mobility-Impaired Persons
N. Chipman	INEL ^c	Westchester Co./Radiological Monitoring
N. Rohrig	BNL ^d	Westchester Co./Radiological Monitoring, Reception Center
T. Maynard	FEMA	Rockland Co. EOC/Team Leader
J. Keller	INEL	Rockland Co. EOC/Accident Assessment
R. Garelik	FEMA	Rockland Co. EOC/Communications
J. Asher	FEMA	Rockland Co. EOC/Public Information Officer
Y. Klein	ANL	Rockland Co./Evacuation, Traffic Control Points, Alert and Notification
E. Tanzman	ANL	Rockland Co./Evacuation, Traffic Control Points, Alert and Notification
D. Petranech	FEMA	Rockland Co./Evacuation, Reception Center
R. Hellriegel	FEMA	Rockland Co./Evacuation, Congregate Care
R. Huchton	INEL	Rockland Co./Radiological Monitoring, Personnel Monitoring
D. Hulet	ANL	Rockland Co./Radiological Monitoring, Personnel Monitoring
J. Picciano	FEMA	Orange Co. EOC/Team Leader
A. Hull	BNL	Orange Co. EOC/Accident Assessment
A. Davis	FEMA	Orange Co. EOC/Communications
G. Seidenfeld	FEMA	Orange Co. EOC/Public Information Officer
P. Becherman	ANL	Orange Co./Evacuation, Traffic Control Points, Reception Center, Alert and Notification

<u>Observer</u>	<u>Agency</u>	<u>Exercise Location/Function</u>
L. Hoffman	INEL	Orange Co./Radiological Monitoring
J. Opelka	ANL	Orange Co./Radiological Monitoring, Personnel Monitoring
R. Reynolds	FEMA	Putnam Co. EOC/Team Leader
L. Olmer	EPA	Putnam Co. EOC/Accident Assessment
S. Barisas	ANL	Putnam Co./Evacuation, Traffic Control Points, Alert and Notification
R. Rodriguez	FEMA	Putnam Co./Reception, Congregate Care, Alert and Notification
B. Motes	INEL	Putnam Co./Radiological Monitoring, Personnel Monitoring
R. Honkus	INEL	Putnam Co./Radiological Monitoring, Personnel Monitoring
K. Lerner	ANL	Bergen Co. EOC/Communications, Congregate Care
N. Kelly	FEMA	New York City/WABC Radio Station

^aANL = Argonne National Laboratory, U.S. Department of Energy.

^bUSCG = U.S. Coast Guard, U.S. Department of Transportation.

^cINEL = Idaho National Engineering Laboratory, U.S. Department of Energy

^dBNL = Brookhaven National Laboratory, U.S. Department of Energy.

1.3 EVALUATION CRITERIA

Radiological emergency response activities were evaluated by federal observers in accordance with the following scheme:

- Capability outstanding: no deficiencies noted, no improvements necessary.
- Capability good: only minor deficiencies noted.
- Capability acceptable: deficiencies noted that limit effective performances.
- Capability weak: significant deficiencies noted.
- Capability lacking: response called for but not demonstrated.

1.4 EXERCISE OBJECTIVES

The objectives of state and local jurisdictions in this exercise were to demonstrate the adequacy of radiological emergency response plans, the capability to mobilize needed personnel and equipment, and familiarity with procedures required to cope with an emergency at the Indian Point Nuclear Power Station, Unit 2 (IP 2), which is operated by the Consolidated Edison Co. of New York, Inc. The State of New York Radiological Emergency Response Group developed the following objectives for this exercise.

1. Radiological Emergency Preparedness Plans

- a. Evaluate the adequacy of radiological emergency plans for New York State; the counties of Westchester, Rockland, Orange, and Putnam; and IP 2.
- b. Demonstrate the emergency response capabilities of state authorities, local support agencies, IP 2, and appropriate federal agencies.
- c. Demonstrate the capabilities of the counties of Westchester, Rockland, Orange, and Putnam; New York State; and IP 2 to implement their respective radiological emergency plans in a manner satisfying FEMA/NRC acceptance criteria.

2. Notification Procedures

- a. Demonstrate the capability of the IP 2 staff to classify actual or potential emergencies according to on-site emergency procedures for:
 - Notification of Unusual Event
 - Alert
 - Site Area Emergency
 - General Emergency
- b. Demonstrate the capability of the IP 2 staff to notify the state, local, and federal governments in accordance with federal guidelines and established protocols.
- c. Demonstrate the capabilities of IP 2; the state; and the counties of Westchester, Rockland, Orange, and Putnam to communicate technical information. Indian

Point 2 should also demonstrate communication of technical information with the NRC over the NRC hot lines.

- d. Demonstrate the capability of the state, the four counties, and IP 2 to notify and activate emergency response personnel in accordance with established protocols.
- e. Demonstrate the capability of the state and counties to alert and notify the affected permanent and transient public within the 10-mile plume exposure pathway emergency planning zone (EPZ) of an incident at the IP 2 site and provide follow-up information as required. This capability should include activation of the prompt notification system (sirens and tone alert radios) and the Emergency Broadcast System (EBS).
- f. Demonstrate, as appropriate, the notification of and request for assistance from federal agencies, such as radiological assistance from the DOE.
- g. Demonstrate, as appropriate, the notification of states and counties within the 50-mile ingestion exposure pathway EPZ and of agencies such as railroads by the state and appropriate county.

3. Emergency Communications

- a. Demonstrate the IP 2 communications among the control room (CR), technical support center (TSC), EOF, operations support center (OSC), and the joint media center, and ability to maintain communications with the federal government.
- b. Demonstrate the the capability for emergency communications among Westchester, Rockland, Orange, and Putnam counties; the state; and IP 2, including the Radiological Emergency Communications System (RECS) hot line. Commercial telephone, radio, and/or the National Warning System (NAWAS) should be used if the RECS line is postulated to be inoperative.
- c. Demonstrate the adequacy of IP 2, local, and state emergency communications to:
 - Transmit instructions to activate essential staff.

- Disseminate essential information to assisting agencies.
 - Operate a 24-hour/day alert and notification system.
- d. Demonstrate the ability of IP 2 and Westchester, Rockland, Orange, and Putnam counties to coordinate, control, and deploy radiological monitoring teams with their respective field communications systems.

4. Emergency Response Facilities

- a. Demonstrate the adequacy of staffing, the timeliness in setting up emergency response facilities, and the adequacy of space and habitability for management of a radiological emergency at:
- IP 2 CR
 - IP 2 TSC
 - IP 2 OSC
 - IP 2 EOF
 - State EOC
 - Office of Disaster Preparedness (ODP), Southern District EOC
 - Westchester County EOC
 - Rockland County EOC
 - Orange County EOC
 - Putnam County EOC
 - Joint Media Center
- b. Demonstrate the activation of the EOC in host (support) counties, as appropriate.
- c. Demonstrate the adequacy of internal communications in the state and county EOCs, including the use of status boards, charts, maps, diagrams, and other displays.

- d. Evaluate the adequacy and competency of state, county, and IP 2 staff to operate the emergency response facilities.
- e. Evaluate the adequacy of access control and security at emergency response facilities.

5. Direction and Control

- a. Demonstrate the ability of key emergency personnel at all levels of government and IP 2 to initiate and coordinate timely and effective decisions during a radiological emergency and clearly demonstrate "who is in charge."
- b. Demonstrate effective organizational control and integrated radiological emergency response, including deployment of field monitors; acquisition of field monitoring data; receipt and analysis of field data; and effective sharing of field data among the licensee, state, and counties for evaluation and verification.
- c. Demonstrate the capability of federal, state, and county emergency response agencies to identify and provide for resource requirements. Any required federal response activity may be simulated.
- d. Demonstrate the capability of coordinating (internally/externally) actions among organizations in order to obtain support and to make appropriate decisions.
- e. Demonstrate the capability of elected and appointed officials to implement appropriate radiological emergency response actions.

6. Public Information

- a. Demonstrate the adequacy of the operation of and interaction among the state, county, and IP 2 public information actions.
- b. Demonstrate activation and staffing of the joint media center news center by licensee, state, and local public information personnel and provision for periodic public information releases and rumor control. As appropriate, the transfer of the

responsibility for the preparation and transmission of official public information on required protective actions from the joint media center to an alternate location should be demonstrated for an EBS message.

- c. Demonstrate that the off-site authorities and the licensee can work effectively with the media in the event of an accident.

7. Accident Assessment and Evaluation

- a. Demonstrate the activation, operations, and reporting procedures of IP 2 and county field monitoring teams. IP 2 teams should be dispatched within and beyond the site boundary. Referees should give field monitoring teams simulated data consistent with the simulated release from the plant.
- b. Demonstrate the ability of IP 2, the counties, and the state to receive and assess radiological data from both county and licensee field teams in accordance with their respective radiological emergency plans.
- c. Demonstrate the ability of IP 2, the state, and the counties to calculate dose projections, compare projections to the Protective Action Guides (PAGs), and determine appropriate protective actions.

8. Protective Response

- a. Demonstrate the capability of the state and county emergency response organizations to make decisions and implement appropriate protective actions. The response options include:
 - Sheltering and evacuation (simulated) of on-site and off-site areas;
 - Informing the public of the accident development and any required protective actions;
 - Activation of reception and congregate care centers and provision for monitoring evacuees for contamination;
 - Identification of and provision for special populations, including provision for identification,

notification, and evacuation of noninstitutionalized, mobility-impaired persons;

- Analysis and determination of ingestion exposure pathway considerations;
- Provision for removal of impediments from evacuation routes.

9. Radiological Exposure Control

- a. Demonstrate the decision process for limiting exposure of emergency workers.
- b. Demonstrate the processing of state and local emergency workers through personnel monitoring centers (PMCs) including monitoring and decontamination.
- c. Evaluate the capability of off-site emergency response personnel to implement access control procedures.
- d. Demonstrate methods and resources for distributing dosimetry equipment and thyroid blocking agents to emergency workers.
- e. Demonstrate record keeping and use of dosimetry equipment and thyroid blocking agents for the protection of emergency workers.

10. Medical Support

- a. Demonstrate the initial treatment of contaminated injured persons and their transport to and subsequent treatment at hospitals on both sides of the Hudson River. The medical drill in Westchester County should involve a simulated injury at IP 2. The Rockland County medical drill should involve an off-site person.

11. Reentry and Recovery

- a. Demonstrate the capability of emergency personnel to identify requirements, assess the situation, and identify procedures for reentry.

- b. Demonstrate the capability of emergency personnel to identify requirements, programs, and policies governing damage assessment and recovery.

1.5 EXERCISE SCENARIO

1.5.1 Major Sequence of Events on Site

<u>Approximate Time</u>	<u>Event</u>
5:15 a.m.	Start of exercise - medical drill with on-site injury begins.
5:45 a.m.	<u>Notification of Unusual Event</u> classification declared.
8:00 a.m.	Declaration of <u>Alert</u> classification.
9:30 a.m.	Indications of occurrence of large-break loss-of-coolant accident (LOCA). Escalation to the <u>Site-Area Emergency</u> classification. Wind shifts to up-valley flow conditions. Weather forecast projects frontal passage within 8 hours with shift in wind direction toward the south.
12:00 p.m.	Escalation to the <u>General Emergency</u> classification. Major airborne release begins with no projection for duration of release.
2:00 p.m.	Wind speed increases to cross-valley flow conditions and results in wind shift.
4:30 p.m.	Releases to environment terminated. De-escalation to the <u>Site-Area Emergency</u> classification.
4:35 p.m.	Break in exercise play.
4:45 p.m.	Date advance of two days for consideration of reentry and recovery planning and ingestion exposure pathway problems.
5:45 p.m.	Secure from exercise.

1.5.2 Scenario Summary

The IP 2 is initially operating at 100% power. The 13.8 kV feed is out of service for maintenance. The staff has been monitoring a reactor coolant leak into containment from an unknown source. The leak rate is below technical specification limits. A decision has been made previously to not enter the containment to investigate. The operators are unaware that this leak is on the discharge of reactor coolant pump No. 21 and will be the cause of the subsequent LOCA.

A fire lasting over 10 minutes occurs in a radioactive material handling area, resulting in injury and contamination to workers. This event results in a Notification of Unusual Event classification.

There is an interruption of service on 138-kV feeder No. 95332 into the station. Subsequently, reactor coolant pump No. 21 develops high vibration, trips due to a locked rotor, and in turn trips the unit. As a result of the locked rotor, fuel cladding failure occurs and reactor coolant activity exceeds technical specification limits. Subsequent to the locked rotor of the reactor coolant pump, there is a step jump increase in the leakage rate as well as an increase in the atmospheric activity in the containment. Again unknown to the operators, the leak is the result of the aggravation of the already existing leak. These events result in an Alert classification.

Developments that follow the above sequence indicate that a large-break LOCA has occurred. The indications to the operator are:

- Low pressurizer pressure reactor trip,
- Safety injection signal,
- High containment pressure,
- High containment sump level and humidity,
- Containment isolation signal.

These indications result in a Site-Area Emergency classification. The operator implements large-break LOCA emergency operating procedures and subsequently, when the water reaches the level where transfer to the recirculation mode is required, recirculation pumps Nos. 21 and 22 are started. Normal recirculation takes place for a short period of time until the failure of one of the recirculation pumps. The other pump continues to operate normally. However, during this time, there is a slow build-up of hydrogen in containment along with slowly increasing core temperatures and radiation levels in containment. Attempts to light off the hydrogen recombiners are delayed due to the delay in delivery of oxygen. The second recirculation pump fails. The operator's attempt to align recirculation through the RHR system is unsuccessful due to the inoperability of valve MOV 885-A (RHR suction from the containment sump), which fails to open from the control room. The SWS must then dispatch an NPO to open the valve locally. The time lapse to perform these operations is sufficient to partially uncover the reactor core and the operator receives indications of severe core degradation from the following:

- area radiation monitor (ARM) R-10 is greater than 330 mR/h
- In-core thermocouple measurements exceed 700°F

These events result in a General Emergency classification.

After this, the operator receives indication of a hydrogen burn by a muffled sound from containment and containment pressure suddenly reading off-scale.

Containment purge exhaust valves are damaged and appear to be partially open as the station vent radiation monitors indicate high activity levels.

Eventually, efforts to close containment purge valve FCV-1173 (outside containment) are successful. The operator continues in the long-term cooling mode to cold shutdown.

1.5.3 Description of State and Local Resources

It was to be the responsibility of all emergency response agencies to ensure that their resources were actually deployed in adequate numbers to provide a reasonable test of their notification, mobilization, command, coordination, and communications capability. Except as noted below, state and county agencies were to have total authority in determining the degree of mobilization and deployment of their resources in a radiological emergency at IP 2. Consistent with this intent, the decision to demonstrate or to actually deploy resources was to be made at the time of the exercise.

The following personnel and resources were to be deployed by the state and local governments to demonstrate the capabilities of their emergency resources. Also provided below are specific off-site demonstration objectives.

Public Notification

During the exercise an actual test of the sirens and an accompanying EBS announcement and EBS-activated tone alert radios were to be demonstrated. Additional exercise EBS messages were to be prepared. Actual transmission of these additional messages to the primary insert station (CPCS-1), WABC, and broadcasting by the EBS network were to be simulated.

Radiological Field Monitoring Teams

In addition to off-site monitoring teams to be dispatched by IP 2, the following county radiological monitoring field teams were to participate:

Westchester County	2 teams
Rockland County	2 teams (state teams)
Orange County	2 teams
Putnam County	2 teams

Each team was to be supplied with a controller. The controllers were to have simulated field data, which were to be provided to the field teams to determine local dose rate readings consistent with the scenario. Each team was to have had the necessary equipment to determine both actual area gamma dose rates and airborne radioiodine concentrations. The monitoring teams were not to be suited up in anticontamination clothing.

Completion of Bus Routes for Evacuees

Each of the four 10-mile plume exposure pathway EPZ counties was to activate evacuee bus routes as follows:

Westchester County	5 bus routes
Rockland County	3 bus routes
Orange County	1 bus route
Putnam County	1 bus route

In general, bus routes were not to be preselected, although federal observers were to be preassigned to specified transportation companies. The exercised bus routes were to be "free played" except in Westchester County. This approach was to contribute to the realism of the exercise by allowing the federal observers to select which bus routes were to be demonstrated on the day of the exercise. Westchester County, in addition to four general-population bus evacuation routes, was to demonstrate the peripheral bus route linking the various reception centers. Rockland County was to demonstrate a bus route from a school within the affected area to a host (reception) school in addition to two general-population bus evacuation routes. The bus drivers were to assemble at their normal dispatch location and were to be assigned appropriate routes, briefed, and deployed in accordance with the appropriate procedures. The buses were to complete their assigned route but not pick up any volunteer evacuees. Upon completion of the general population route, the buses were to report to appropriate reception/congregate care centers. The buses and drivers were then to be released.

Evacuation of Noninstitutionalized, Mobility-Impaired Persons

Each county was to demonstrate procedures for the identification and notification of noninstitutionalized, mobility-impaired persons and to determine the availability of appropriate transportation for their evacuation. In addition, federal observers were to select a limited number of addresses for mobility-impaired persons in both Westchester and Rockland Counties. Vehicles for transporting the handicapped were to be dispatched to these addresses for simulated evacuation.

Traffic Control Points

Local agencies, supplemented by state resources, were to deploy personnel to demonstrate activation of a sample of traffic control points (TCPs) for major evacuation routes in each county.

<u>County</u>	<u>TCPs</u>
Westchester	6
Rockland	4
Putnam	2
Orange	1

Traffic control points were not to be preassigned or prepositioned. To provide a greater test of the capability to respond to an actual incident and to allow more free play in the exercise, the federal observers were to provide information on the locations of traffic control points to be demonstrated during the course of the exercise.

Once traffic control points were established and observed by federal observers, local officials were to release personnel to normal duties and simulate the continuation of control points where required. For training purposes, selected traffic control personnel were to report to personnel monitoring centers after they were secured from their exercise assignment.

Impediments to Evacuation

Federal observers at the county EOCs were to introduce free play events to test the procedures for the removal of impediments from evacuation routes. This demonstration was to include the actual dispatch of a police or other emergency vehicle to the scene, a report from the scene to the EOC requesting appropriate resources, the identification of the availability of the required resources (e.g., tow truck, public works equipment), and an estimation of the times of arrival at the scene and for clearing the impediment.

Westchester County	2 locations
Rockland County	1 location
Putnam County	1 location
Orange County	1 location (simulated dispatch of emergency vehicle)

Personnel Monitoring Centers

Each county was to set up and demonstrate a PMC for local emergency workers. During the exercise, the processing of selected emergency workers

who had completed their exercise participation was to be demonstrated. Decontamination actions were to be simulated. At the PMC, anything that may damage property (such as parking vehicles on grass) was to be simulated. All necessary equipment was to be assembled at the PMC. Detailed simulation actions were to be implemented at the center by the PMC leader. In addition, the state was to demonstrate the activation of a PMC for state emergency workers.

Relocation Centers

At least one reception/congregate care center was to be opened and staffed for evacuees of each of the four counties in accordance with respective local emergency response plans. Supplies required for long-term mass care (cots, blankets, food, etc.) were not to be acquired or brought to the centers. However, the center was to estimate how many evacuees would be arriving if the exercise were a real emergency. The center personnel were then to make the necessary estimates of supplies required for the potential evacuees. Sources of the required supplies were then to be located and the means for transportation of the supplies was to be determined. A limited number of volunteers were to be processed through the registration area. Procedures for monitoring and decontaminating evacuees were to be demonstrated at reception centers. Federal observers were to introduce free play problems to test procedures for handling evacuees arriving at a congregate care center without appropriate documents from the referral reception center. Because of logistics and the need to arrange access to relocation centers before an exercise, these relocation centers were to be preselected before the exercise.

Westchester County	1 - Reception/Congregate Care 1 - Congregate Care (in Putnam Co.)
Rockland County	1 - Reception 1 - Congregate Care (in Bergen Co., N.J.)
Orange	1 - Reception 1 - Congregate Care
Putnam	1 - Reception/Congregate Care (in Dutchess Co.)

Medical Drills

Medical drills were to demonstrate the treatment of contaminated injuries at hospitals on both sides of the Hudson River. These drills were to involve the following types of problems:

Westchester County - on-site contaminated injury
Rockland County - off-site contaminated injury

Ingestion Sampling

The state was to demonstrate the analysis and decision-making process for selection of ingestion exposure pathway samples consistent with the hypothetical problem posed by the exercise parameters. Ingestion pathway samples were to be collected primarily from open sources of public drinking water. Analysis of the samples was to be simulated.

Volunteer Organizations

Volunteer response organizations identified in the plans were to participate in the exercise. However, for purposes of the exercise, the staffing of these volunteer organizations was to be on an as-available basis.

2 EXERCISE EVALUATION: DEFICIENCIES AND RECOMMENDATIONS

On the basis of criteria set forth in NUREG-0654/FEMA-REP-1/REV.1 (November 1980), objectives established for the March 9, 1983, exercise of IP 2 and the evaluations of federal observers present at the exercise, this section provides a detailed assessment for each emergency function. Recommendations to correct deficiencies identified at this exercise are summarized at the conclusion of each section. FEMA will participate with the state and local governments in determining the corrective actions needed to resolve the deficiencies in accordance with established criteria and guidelines.

2.1 STATE AND SOUTHERN DISTRICT EOCs

2.1.1 Emergency Operations Facilities and Resources

Both the southern district and state EOCs are large, well-planned facilities with rooms located to accommodate different functions and minimize distracting noises. Internal communications and the system of message distribution were good. A new executive hot line between the state and county EOCs was in operation. This new system for direct communications corrects a deficiency identified at the 1982 exercise. A backup radio system also existed to supplement any possible disruption in telephone line communication and to verify messages. The public information officer's (PIO's) office was well equipped with telephones and telefax machines.

Internal information, maps, charts, and message boards were clearly displayed. Two maps that were readily observed summarized the distribution of populations within emergency response planning areas (ERPAs) and field sampling locations.

Only one minor interruption, which delayed the transmission and receipt of telefaxed messages from the EOF, was observed.

Security was outstanding, and unauthorized persons were not permitted in restricted areas.

- Deficiency: Telefaxed messages required an excessive amount of time for complete message transmissions between the EOF and the state EOC (NUREG-0654, II.F.1.d).
- Recommendations: EOC and EOF messages should be brief. An investigation should be made to examine the possible use of a second telefax machine.

2.1.2 Alerting and Mobilization of Officials and Staff

Two representatives were available from each state agency and schedules were provided for 24-hour coverage. Because of state trooper coverage, communications can easily be maintained in the EOC on a 24-hour basis. Observers were not able to see an actual shift change. The demonstration of this capability should be included in future exercises.

There was approximately a 30-60 minute delay between the declaration of the Alert classification by the licensee and receipt of the Alert classification notification by the state, Westchester, Orange and Putnam Counties. The lack of timely receipt and/or handling of the notification of the emergency status is especially important because the dismissal of students from schools, which is precautionary to a potential evacuation of the general population, may be initiated at the Alert classification.

- Deficiency: Officials of the state, Westchester, Orange and Putnam Counties who are responsible for the mobilization of emergency resources did not receive notification of the Alert classification in a timely manner (NUREG-0654, II.E.1).
- Recommendation: Representatives of the state, Westchester, Orange and Putnam Counties should meet with the utility to review and modify, if necessary, the procedures for ensuring that notification messages are verified by county officials responsible for the mobilization of emergency resources.

2.1.3 Emergency Operations Management

The demonstration of leadership on the part of the decision makers was very good. Decisions were based upon clear understanding of the issues and the Chairman of the Disaster Preparedness Commission (DPC), who has been involved in several exercises, demonstrated complete control of the situation. The roles of all participants were clearly defined. Decision makers displayed the ability to anticipate, analyze, and synthesize the information received.

Twenty-four-hour coverage is maintained by delegation of authority to predesignated state officials.

Briefings were held frequently, approximately every half hour, in order to keep state agency representatives aware of decisions and the status of the emergency situation. This procedure was in response to recommendations made at the 1982 exercise.

2.1.4 Public Alerting and Notification

These functions were not observed by federal observers reviewing activities at the state facilities in Albany and Poughkeepsie, New York, which are both outside the 10-mile plume exposure EPZ.

2.1.5 Public and Media Relations

At the state EOC in Albany, the PIO was well informed and provided evidence of 24-hour coverage in the EOC. The PIO apparently had personnel available to circulate within the EOC to gather information.

At the joint media center, state PIOs assumed the lead PIO function after the Governor's declaration of a state disaster emergency. The emergency public information system functioned well. State PIOs had access to pertinent information and there were adequate channels for obtaining additional information to meet press inquiries. All EBS messages were approved by lead government officials on hot lines. (See Sec. 2.3 for further discussion of joint media center operations.)

2.1.6 Accident Assessment

Staffing for the radiological assessment unit was adequate to process and analyze the data telemetered to the state EOC by the utility. Meteorological data were used to estimate the plume location by computer. The EOC accident assessment staff was in constant contact with the utility. In addition, the capability in the use of county and utility field data for locating and monitoring the plume boundaries has been improved compared to capabilities demonstrated at the 1982 exercise.

Programmable calculators are now available to expedite the calculations of projected dose to the general population. In the 1982 exercise the absence of this equipment was identified as a minor impediment to the speedy analysis of technical data.

2.1.7 Actions to Protect the Public

Adequate staff was available to implement protective action procedures, based on needs at the state EOC.

The state demonstrated the capability to obtain and analyze a surface water sample. Plans were also in place to continue analysis until acceptably low levels of radiation are reached for recovery and reentry.

Information on the location of dairy farms within the 50-mile ingestion exposure pathway EPZ was used in deciding how long farmers should keep cows on stored food.

2.1.8 Health, Medical, and Exposure Control Measures

Radiological exposure control procedures were acceptable at the state's PMC. The operations space may be too confined at the state police substation in Hawthorne, New York, to provide for the acceptable separation of contaminated and noncontaminated emergency personnel. Monitoring staffs need additional training to properly monitor incoming individuals in a timely manner.

Radiological exposure control functions were not observed at the state EOCs in Albany and Poughkeepsie, New York, which are outside the 10-mile plume exposure pathway EPZ.

2.1.9 Recovery and Reentry Operations

Recovery and reentry operations were not called for in the scenario. Decision makers did, however, present a method by which recovery of the contaminated area would be accomplished.

2.1.10 Relevance of the Exercise Experience

Some weaknesses in the scenario were identified and questioned by state EOC radiological assessment staff. Generally, however, the exercise was seen by federal observers as a good training experience for the participants at the state and southern district EOCs.

2.2 NEAR-SITE EOF

2.2.1 Emergency Operations Facilities and Resources

Overall facilities and resources were good at the EOF; only minor problems were noted. The communications system included separate telephone lines with radio backup for each county and for the state representatives assigned to the EOF. The southern district defense preparedness officer is assigned to the state staff at the EOF. This individual had a hand-held radio and a mobile radio (in the defense preparedness officer's vehicle), both of which are available for backup communications from the EOF to the state and county EOCs. The availability of this equipment corrects the deficiency in backup communications equipment identified at the 1982 exercise.

Working space within the EOF was good. The county and state representatives had separate working space on the balcony above the utility's work area. It was observed, however, that internal communications between state and county representatives and utility personnel were sometimes hampered. On

several occasions it was difficult to get utility personnel to answer the telephone intercom. It may be helpful to add a light to the intercom telephone to signal incoming calls from the balcony area. Despite this minor difficulty, technical interaction between state and county representatives and utility personnel were good. The state and county representatives had access to the utility's work area and technical information.

Appropriate maps showing the locations of field monitoring points, projection of the plume path, and the distribution of population by ERPAs were on display at the EOF. The improvement of these displays in response to recommendations from the 1982 exercise has corrected the previous deficiency.

2.2.2 Alerting and Mobilization of Officials and Staff

The alerting and mobilization of staff assigned to the EOF was good overall. State and some county personnel arrived at the facility during the alert classification.

The capability for 24-hour continuous emergency operations varied among the state and county staff observed at the EOF. The state did not demonstrate a shift change and did not have sufficient staff at the EOF to cover all functions on a 24-hour basis. However, although a shift change of personnel was not observed, based on a review of the roster available at the exercise, it is assumed that 24-hour staffing of state functions can be accomplished in a timely manner. The counties generally had enough personnel available at the EOF to cover all functions on a 24-hour basis.

2.2.3 Emergency Operations Management

The EOF was activated as part of the overall emergency response for the IP 2 exercise. The active participation by all state, county, and utility organizations at the EOF as well as their knowledge and conduct of their responsibilities was outstanding.

County representatives at the EOF had roles similar to those of the state representatives, which involved relaying technical data to their respective EOCs. Technical information was compiled at the EOF and transmitted to the EOCs by the liaison officers at the EOF. The roles of state and county personnel at the EOF are clearly defined in the plans as liaison officers in supplying the utility's data to their EOCs for use in accident/dose assessment. The clarification of the role of these liaison officers in the Westchester, Orange, and Putnam county plans is in response to the RAC's previous recommendation that the role of county representatives at the EOF needed to be better defined.

2.2.4 Public Alerting and Notification

These functions were not observed at the EOF.

2.2.5 Public and Media Relations

These functions were not observed at the EOF.

2.2.6 Accident Assessment

All accident assessment analyses are carried out at the state and county EOCs. The EOF serves as the central point for the collection and distribution of radiological field monitoring data. Overall, the EOF capabilities to perform these functions were good.

Technical data were rapidly sent from the EOF to the state and county EOCs. However, as mentioned above, the transmission of these data tied up the telefax machine and on several occasions delayed the receipt of hard copy communications at the EOF.

County field survey report forms were received at the EOF without county names included on them. It was possible to identify the reporting county by identifying the locations of the samples being reported, but inclusion of the county name on the report form would facilitate handling of the field data at the EOF. Westchester County transmitted a field summary sheet over the telefax telecommunications line which could not be read as received at the EOF. The standard data reporting forms were transmitted legibly throughout the exercise. All counties should use this standard form when transmitting data to the EOF.

2.2.7 Actions to Protect the Public

These functions were not observed at the EOF.

2.2.8 Health, Medical, and Exposure Control Measures

All state and county personnel at the EOF had dosimeters except the volunteer civil defense (CD) representative from the southern district ODP. This individual reported to the EOF from work rather than from the ODP where dosimeters are stored. All personnel at the EOF should be trained in radiological exposure control procedures and should be aware that they should wear recommended dosimeters when they leave the EOF. The utility monitored doses at the EOF.

2.2.9 Recovery and Reentry Operations

These functions were not observed at the EOF.

2.2.10 Relevance of the Exercise Experience

The exercise was generally considered an outstanding training experience for participants at the EOF.

2.3 JOINT MEDIA CENTER

Overall, the emergency public information system functioned in a timely and effective manner. The Westchester County PIO, in coordination with other county and state PIOs issued EBS messages and news releases from the joint media center in Verplanck, New York. PIOs at the joint media center had open telephone links with their respective EOCs along with telecopy capability. All EBS messages, as well as news releases, were approved by lead officials on the executive hot line and reviewed by PIOs, including utility PIOs, at the joint media center. Hardcopy of EBS messages and news releases were telecopied back to the EOCs.

During the simulated evacuation of the joint media center, transfer of the EBS function from the Verplanck joint media center to the Westchester EOC in White Plains, New York was successfully demonstrated. The demonstration included notifying the press, simulating issuance of an EBS message from the new joint media center, and providing other information.

There was no evidence of communication among the counties to ensure that the notification of early dismissal of school children is coordinated at the local level. The early school dismissal notification system should be reviewed to insure coordination of early dismissal announcements by all four counties to avoid confusion.

EBS messages for evacuation and sheltering are necessarily quite lengthy due to the need to include descriptions of ERPA boundaries and evacuation directions. Formulation of such lengthy EBS messages is time-consuming. The PIOs developed and used a system of pre-typed peel-off labels of each ERPA. Other ways to reduce the critical time being spent on EBS formulation should be explored (e.g., word-processing equipment).

ERPA maps and checklists were used to record and chart protective measures. County and state PIOs had access to pertinent information and adequate channels for obtaining addition information to meet press inquiries.

2.4 WESTCHESTER COUNTY, NEW YORK

2.4.1 Emergency Operations Facilities and Resources

Overall, the emergency facilities and equipment at the Westchester County EOC were good. Working space was acceptable. However, the central operations area was small and the noise level was high. Separate rooms were provided for radio communications, accident assessment, and management personnel. These separated work areas facilitated operations at the EOC. Internal communications within the EOC were good. Periodic briefings were delivered over a public address system and kept the entire EOC staff informed of the status of the emergency and actions that were being taken. Displays and maps were adequate. Since the 1982 exercise, the county has secured a new electronic display board that indicates both evacuated ERPAs and host areas.

There were sufficient lines to accommodate telecommunications and the equipment necessary to transmit and receive hard copy messages was available and operational. Since the 1982 exercise, Westchester County has established a new communications system providing individual telephone lines for each agency representative. This new communications system reduced the confusion that was observed during the last exercise. Radio Amateur Civil Emergency Service (RACES) radio support and backup communications capabilities were adequate. The hot lines, including the new dedicated communications line between the EOC and EOF, worked very well.

Security was adequate at the Westchester EOC and the reception/congregate care center at Fox Lane High School in Bedford, New York.

2.4.2 Alerting and Mobilization of Officials and Staff

The overall alerting, mobilization, and capability for 24-hour staffing of emergency operations was acceptable in Westchester County. The Westchester County Department of Public Safety was responsible for the notification of EOC personnel and the Westchester County Department of Public Safety communications center is staffed on a 24-hour basis.

Staffing was very good at the county EOC and the various emergency response organizations evidenced depth of staff, organization of responsibilities, and change of shift capabilities.

Notification and response of field staff was generally good for the radiological monitoring teams, PMCs, and evacuation personnel. Backup support was evident for all functions.

2.4.3 Emergency Operations Management

The overall management of emergency operations during the exercise in Westchester County was good. Management of the EOC was excellent. The County Executive's staff and commissioners were highly qualified and well trained in emergency practices and procedures. The County Executive was clearly in charge of operations at the EOC and the structure and lines of authority of the county's emergency preparedness organization were evident. The County Executive requested and received reports from county staff regarding emergency recommendations and resource requirements. In several instances, the County Executive demonstrated independent leadership and anticipatory management of decisions involving the evacuation of parks, EBS messages, declaration of the emergency, public evacuation, and theft control.

The internal flow of information at the county EOC was facilitated by periodic general briefings of the staff, which were given approximately every hour, and individual management sessions with key personnel. Briefings on the status of the plant and emergency classification updates were given as soon as the information was received at the EOC. In addition, field observers reported that the PMC and reception/congregate care center were well managed and that these staffs had been informed of recovery progress and activities pertaining to closeout of the exercise.

The county was concerned over the state role and its assumption of a leadership position during the exercise. Westchester County officials felt that the state role should be to supplement county emergency response efforts. These officials also felt that the state assumed control when events were clearly within the capabilities of county government. The role taken by the state may have been necessitated by scenario events and circumstances.

2.4.4 Public Alerting and Notification

Public alerting and notification in Westchester County were good. The siren system for alerting the public was activated in a timely manner and worked well. However, based on spot-check interviews on the day of the exercise, the public apparently has limited understanding of the appropriate response to these alert sirens.

Sirens followed by an EBS message were used to alert the public of a Site-Area Emergency at approximately 9:45 a.m. The sirens were simultaneously activated by the county commissioner/sheriff in Hawthorne and the county Office of Disaster and Emergency Services at the EOC in White Plains. There are no verification procedures or equipment such as control panel lights to insure that the sirens are sounding. FEMA currently is developing guidance and regulations which will constitute the requirements for fully testing alerting and notification systems. Until this process is complete, only spot-check observations can be made of the effectiveness of these systems. With

the exception of populations at Kings College in Briarcliff Manor and St. Augustine School in Ossining, most of the people interviewed in the field on the day of the exercise reported to federal observers that they heard the alerting sirens. However, based on spot-checks by the federal observers, most of the public interviewed did not understand the meaning of the sirens nor did they know that they were to listen to EBS messages broadcast over WABC (AM 770). (See Sec. 2.3.5 for a discussion of public education issues.)

A spot-check of schools, nursery schools, and special facilities including nursing homes and hospitals indicated that such institutions were equipped with tone alert radios that worked well. The successful notification of schools with tone alert radios was verified by federal observers in the field and staff at the county EOC. The EBS worked well. PIO staff at the Westchester County EOC coordinated the preparation of EBS messages and simulated their dissemination through the joint media center in Verplanck, New York.

2.4.5 Public and Media Relations

Overall public and media activities need improvement. However, the system for handling media relations through the joint media center in Verplanck, New York, was very effective; no inquiries were received at the Westchester County EOC. (See Sec. 2.3 for further discussion of joint media center operations.)

Despite efforts by Westchester County in recent months including releasing public service announcements and newspaper advertisements, there was little evidence that the public understands what they should do in a radiological emergency. The new public information brochure has not yet been distributed to the public, nor was there evidence that notices had been posted to inform transients of the alert and notification system and actions they should take in the event of a radiological emergency at the Indian Point Nuclear Power Station. Although the public education program is on-going in Westchester County, a new instructional brochure that is being finalized had not been distributed during the last year prior to the March 9 exercise. Spot-checks on the day of the exercise of hotels and motels showed that signs or notices had not been distributed to or posted in hotels and motels to provide emergency information to transient populations within the 10-mile plume exposure pathway EPZ. The lack of awareness among some Westchester County residents regarding what they should do in the event of a radiological emergency limits the effectiveness of the prompt alerting and notification systems. (See Sec. 2.4.4 above.)

The rumor control telephone number was tested by federal observers in Westchester County and the information obtained was excellent.

- Deficiency: The annual public education brochure, currently in review, has not yet been distributed in Westchester County (NUREG-0654, II.G.1).
- Recommendation: Publication and distribution of the public education brochure for Westchester County should be expedited.
- Deficiency: There was no evidence of signs or notices posted in hotels and motels within the 10-mile plume exposure pathway EPZ to provide helpful emergency information to the transient population (NUREG-0654, II.G.2).
- Recommendation: As soon as possible, the necessary public information materials should be distributed and posted in public places for the use of transient populations who may come into the 10-mile plume exposure pathway EPZ.

2.4.6 Accident Assessment

The overall accident assessment capability demonstrated by Westchester County was good. The field monitoring instruments and personal dosimetry equipment used in this exercise were a significant improvement over previously observed equipment. All of the monitoring equipment observed during the exercise had been recently calibrated.

The technical staff at the EOC was well managed and able to accurately assess the accident using data received from the field. Map overlays were used to project the potential magnitude of doses to the population. However, the means of communications for transferring technical data from the field to accident assessment personnel at the county EOC needs to be improved. Standardized forms should be established to report field data. This standardization would reduce the number of repeated messages that were required during the exercise and would lessen the potential for errors.

Coordination of the field monitoring teams improved since the previous exercise. Specific monitoring locations were used and the travel times between locations were acceptable. Monitoring teams also collected some field data while moving into the plume. The coordination of accident assessment activities between the EOC and Westchester County as well as between the state and the county was good.

New equipment was available for the monitoring teams and allowed the two teams to independently measure for radioiodine. The use of silver zeolite absorption media for monitoring radioiodine was simulated. Only one of the two field monitoring teams was asked to take an air sample for radioiodine. A few more measurements would have better demonstrated this capability.

Permanent radiation dose recording devices, thermoluminescent dosimeters, (TLDs) were worn by all field monitoring personnel throughout the exercise. Also, 0-5 R dosimeters were worn by all field monitoring personnel and most also wore a 0-200 R dosimeter.

Twenty-four-hour response capabilities were evidenced for accident assessment personnel at the EOC and the field monitoring teams by lists of trained personnel assigned to second shifts. Alternate field monitoring personnel were also provided for the exercise.

There were large differences in the ability of the two field monitoring teams that were observed during the exercise. Additional training of personnel is required to ensure that field measurements are properly taken.

Coordination was good between EOC and county personnel and between state and county accident assessment personnel. The development of protective action recommendations was well coordinated between Westchester County and New York State. County and state health officials were in communication throughout the exercise and the county's independent dose assessment calculations were frequently compared with the state's dose assessment calculations.

2.4.7 Actions to Protect the Public

In the event of a radiological emergency at IP 2 an evacuation of Westchester County would be accomplished by means taken either by private individuals (e.g., privately owned vehicles) or with county assistance (e.g., buses, vans, ambulances). During the exercise, federal observers reviewed both modes of evacuation and numerous issues regarding the capability to accomplish a significant evacuation of the county were assessed.

At the Alert classification, the County Executive ordered the schools closed and school children sent home. County transportation resources were notified at the Site-Area Emergency classification. Buses were activated and dispatched for evacuation of the general population at 11:50 a.m. It was evident that the transportation personnel have not all been adequately trained regarding evacuation procedures, the routes they should follow to pick up evacuees, and the location of reception centers.

Buses for evacuation were tested using preselected routes. A brief summary of the observation of these routes follows:

- Route A - Initially would not participate and was not prepared.
- Route B - Driver departed the dispatch point prematurely at the siren (approximately 9:45 a.m.) instead of awaiting the evacuation order.

- Route C - Driver had previously driven the route and did a good job.
- Route D - Driver did not know the evacuation route for which the driver was responsible.
- Route E - Driver knew the peripheral route tested but had not been trained regarding requirements for a radiological emergency.

In general, sufficient personnel and resources were available to complete all of the four general-population bus evacuation routes tested during the exercise. Emergency transportation workers had received guidance regarding their involvement in the March 9 exercise, including maps and instructions regarding the evacuation routes they would drive. However, despite the guidance that was given prior to the exercise, it was evident that additional training is necessary to insure that the bus dispatchers and drivers are properly acquainted with the evacuation procedures, the routes they should follow to pick up evacuees, and the location of reception centers. Therefore, the capability to implement an evacuation of the general population in Westchester County remains questionable. All buses except one were equipped with radio communications, and all buses are due to be installed with radios in April 1983. Communications between the bus companies and the Westchester County Department of Transportation were good.

A comprehensive study of bus routes and evacuation procedures is currently under way and is expected to be completed in December 1983. This study should address possible alternatives to street pick-up points, such as grouping evacuees in secure buildings, resulting in an improved evacuation plan for Westchester County.

Evacuation of selected noninstitutionalized, mobility-impaired persons was tested in accordance with free play provided in the scenario. On the basis of this demonstration, ambulance personnel did not know their responsibilities, were not trained in evacuation procedures for a radiological emergency, and did not have the necessary dosimetry equipment. Procedures for evacuating institutionalized, mobility-impaired persons are still being finalized. The responsibility for this function is shared by four agencies led by the County Department of Hospitals.

Selected traffic control points were activated as part of the free play of the exercise. However, these traffic control points were not observed due to scenario events and federal observers' time constraints. Observers at the Westchester County EOC were informed that the county Department of Public Safety had made major changes in the scope and location of evacuation traffic control points. These changes should be incorporated in the Westchester County Radiological Emergency Response Plan.

Impediments to evacuation were handled in accordance with the free play provided by the off-site scenario and the test appeared successful.

Other issues affecting evacuation capabilities in Westchester County include the following:

- Vehicle evacuation - Most people would be evacuated from the 10-mile plume exposure pathway EPZ by privately owned vehicles. The success of this effort in Westchester County is a function of time, events, and available resources.
- Evacuation of the elderly - During the exercise, several county officials, including the County Executive and Commissioner of Health, requested that sheltering rather than evacuation be considered for the elderly. It was suggested that moving the elderly would involve more risk of injury than would they risk from radiation if they remained sheltered.
- Training of bus drivers - Bus personnel are in need of training for evacuation route location and radiological health and exposure control measures. Radiological training should be conducted for volunteers who may be recruited for evacuation service. (See Sec. 2.3.8 for a discussion of the need for training in radiological exposure control measures.)

Emergency response personnel at reception and congregate care centers appeared to be well trained to perform their responsibilities. However, monitoring personnel at the reception center at the Fox Lane High School in Bedford, New York, utilized a slow scan rate in monitoring evacuees as they arrived. The monitoring capability observed at this facility could be improved by training the existing staff; these resources may need to be supplemented with additional monitoring personnel and equipment. It was suggested that consideration be given to collocating reception and congregate care facilities. The congregate care facility observed at the exercise was too small to accommodate the capacity indicated in the plan.

- Deficiency: Westchester County transportation personnel have not been adequately trained regarding evacuation procedures, the routes they should follow to pick up evacuees and the location of reception centers (NUREG-0654, II.J.10.a, II.J.10.g).
- Recommendation: Bus drivers responsible for evacuation services should be trained regarding evacuation procedures and supplied with better maps and instructions concerning the routes and locations of reception centers.

- Deficiency: Additional training and possibly additional resources, including personnel and vehicles, are needed for the evacuation of institutionalized and noninstitutionalized, mobility-impaired persons (NUREG-0654, II.J.10.d).
- Recommendation: Transportation personnel responsible for the evacuation of mobility-impaired persons should be trained in evacuation procedures, and the supply of ambulances for the evacuation of nursing homes should be reviewed.
- Deficiency: The capacity of the congregate care facility is too small to accommodate the capacity specified in the plan (NUREG-0654, II.J.10.h).
- Recommendation: The capacity of congregate care facilities in Westchester County should be reviewed and additional facilities should be identified if necessary.

2.4.8 Health, Medical, and Exposure Control Measures

The overall procedures for controlling radiological exposure of emergency workers was acceptable. The thyroid blocking agent potassium iodide (KI) was, in accordance with the plan, available for distribution to emergency workers. Emergency workers had been instructed in its use and some workers simulated its use during the exercise. Transportation companies involved in the exercise apparently did not have adequate supplies of KI and some drivers who may be called upon to enter the 10-mile plume exposure pathway EPZ were not trained in how they would receive instructions for its use.

Centers for the monitoring and decontamination of emergency workers and vehicles were tested and considered acceptable. The control of water that becomes contaminated as a result of decontaminating the general population, emergency workers, and vehicles was simulated at the PMCs and reception centers.

The reception centers and decontamination areas observed during the exercise did not have arrangements to provide an adequate supply of clothing to replace any contaminated clothing which may have been worn to the center. The medical drill at the hospital demonstrated adequate response capabilities.

Personal dosimetry equipment was worn by most of the emergency workers in Westchester County. However, transportation companies did not have an adequate supply of dosimeters and the bus and ambulance drivers were not consistently trained in the use of these devices.

- Deficiency: Transportation companies involved in the exercise apparently did not have adequate supplies of dosimeters (NUREG-0654, II.K.3.a).

- Recommendation: Permanent record dosimeters (e.g., film badges, TLDs) should be provided to emergency workers.
- Deficiency: Bus and ambulance drivers who may be called upon to enter the 10-mile plume exposure pathway EPZ were not consistently trained in the use of dosimeters and KI (NUREG-0654, II.K.3.b).
- Recommendation: All emergency workers should be fully trained in radiological exposure control including the use of dosimeters and KI.

2.4.9 Recovery and Reentry Operations

Reentry operations were tested using simulated events as specified in the scenario. Based on interviews with personnel at the Westchester County EOC, it was determined that a generally acceptable capability exists to recover and reenter the area after a radiological emergency in Westchester County.

The scenario used for the March 9 exercise did not call for a thorough assessment of recovery and reentry operations. However, county officials did their best to simulate the necessary response functions. For example, the Commissioner of Health reported that the department would take air and water samples in those areas that were exposed to radiation and work with the Agriculture and Markets Department to impound contaminated food. In addition, the County Executive appointed a fact-finding committee to ensure that the proper data would be collected and a recovery committee to direct the reentry operations.

2.4.10 Relevance of the Exercise Experience

The overall relevance of the exercise was good. The scenario provided a good test of Westchester County's ability to mobilize local emergency response personnel, as well as its capability to work with the state and surrounding New York counties. The scenario of exercise events was complemented with free play of traffic control points, response for the evacuation of noninstitutionalized mobility-impaired persons, and police response to impediments that would hinder evacuation of the population. Selected evacuation bus routes also were tested. The cooperation and participation of county officials, professional response organizations, and volunteers contributed to the success of the exercise as a training experience for most of the participants. The participants generally felt that the exercise encouraged them to become more familiar with the Westchester County RER plan, helped point out deficiencies that will lead to the resolution of identified problems, was a

good learning experience, and provided training for primary and backup personnel.

2.5 ROCKLAND COUNTY, NEW YORK

Rockland County Nonparticipation. At this writing, Rockland County has not completed a radiological emergency response plan for the Indian Point Nuclear Power Station. Under the authority of Resolution No. 320 of 1982, as amended by Resolution No. 829 of 1982, the county disavowed the "Radiological Emergency Response Plan prepared for Rockland County by Con Edison and PASNY," and has undertaken the preparation of a new plan. Since the draft Rockland County Radiological Emergency Preparedness Plan being developed by Rockland County was not yet approved, Rockland County decided, pursuant to Resolution No. 156 of 1983, not to participate in the March 9, 1983, radiological emergency preparedness exercise. However, Office of Emergency Preparedness staff did undertake emergency functions up until the beginning of normal business hours at 9:00 a.m. Several county officials observed the exercise as nonparticipants. These included the Chairman of the Legislature, the Commissioner of Health, the Sheriff, the Transit Coordinator and the Emergency Preparedness staff. State personnel used the Rockland County EOC to direct state employees and some local employees and emergency response volunteers in Rockland County. No employee of Rockland County participated in the March 9 emergency preparedness exercise for IP 2.

In accordance with Resolution No. 320 of 1982, the Rockland County Legislature directed its Chairman "in the event of a nuclear occurrence at the Indian Point Facilities ... to take any and all action in coordinating and cooperating with any and all Federal and State agencies to protect the lives and property of the citizens of Rockland County ...".

State Compensating Measures. The New York State Indian Point Site-Specific Radiological Emergency Preparedness Plan (REPP) contains provisions intended to assure adequate protection of the public during radiological accidents in counties that are unable, or do not elect, to respond themselves. The state decided to implement these "compensating measures" at the March 9, 1983, exercise when it learned that Rockland County would not participate. Therefore, the only evaluation that can be made of the actual performance of radiological emergency response personnel in Rockland County is of the New York State employees who substituted for Rockland County personnel pursuant to the compensating measures in the New York State State Indian Point Site-Specific RERP.

An accurate evaluation of the state's performance in implementing its compensating measures in Rockland County requires an understanding of how the compensating measures are to operate. The New York State Indian Point

Site-Specific RERP (p. III-6) provides that the Governor is to declare a state disaster emergency in any nonparticipating county and is to direct various state agencies, under the direction of the Disaster Preparedness Commission (DPC), to implement the emergency response using the county plan as a framework. As its compensating measures for Rockland County, the DPC has elected to use the draft Rockland County Radiological Emergency Preparedness Plan. In two different places in the New York State Indian Point Site-Specific RERP (pp. I-12 and III-6), it is stated that the compensating measures are to be carried out using "State and local resources and personnel." That the compensating measures contemplate state employees acting at the behest of the Governor to direct both state and county emergency response personnel to implement the county plan is confirmed by section 2 of S.B. 7122, as reproduced in the New York State Indian Point Site-Specific RERP (second page following p. A-31), which states that "[u]pon declaration of a disaster arising from a radiological accident, the Governor or his designee, shall direct one or more chief executives ... to ... take appropriate protective actions pursuant to the radiological emergency preparedness plan ...". Thus, the state's RERP compensating measures require state employees to direct the response, but also involve county resources and personnel as well as local and volunteer resources and personnel acting in accordance with the county plan.

The state's exercise of the New York State Indian Point Site-Specific RERP compensating measures did not demonstrate this assignment of responsibility. Rather than directing the participation of county emergency response personnel, the state substituted its own employees for all demonstrated functions that are the responsibility of county employees. As the compensating measures are described, one would have expected to observe state employees controlling the response with the assistance of county resources. What was actually observed was that state employees assumed the responsibility for implementation of the emergency response and for all management and control functions as well as all support emergency response functions that are the responsibility of county employees.

Conclusion. The radiological emergency response demonstrated in Rockland County at the March 9, 1983, exercise was inadequate for two reasons.

First, Rockland County has not finalized and adopted a radiological emergency response plan and did not participate in the exercise. FEMA's operative regulations, 47 Fed. Reg. 36,588 (1982) (to be codified at 44 C.F.R. pt. 350) (proposed August 19, 1982), in section 350.7(a), cites Part I.E of NUREG-0654/FEMA-REP-1, Rev. 1, in order to explain what must be included in local government plans. Part I.E (p. 19) states that "[t]he concept of Emergency Planning Zones necessarily implies mutually supportive emergency planning and preparedness arrangements by several levels of government: Federal, State, and local governments, including counties, townships, and even villages ...". Section 350.5(a)(14) requires exercises to be conducted to

evaluate emergency response capabilities. In failing both to adopt a radiological emergency response plan and to exercise it in the March 9, 1983, exercise, Rockland County did not adequately comply with these regulatory requirements.

Second, by substituting its own resources and personnel for those of Rockland County, New York State did not implement its plans at the exercise as required by 44 C.F.R. Section 350.9. Therefore, it must be concluded that New York State's implementation of its compensating measures during the exercise was inadequate.

- Deficiency: Rockland County has not finalized and adopted a radiological emergency response plan and procedures to respond to an emergency at IP 2 (NUREG-0654, I.E.).
- Recommendation: Rockland County should finalize and adopt a radiological emergency response plan and procedures to respond to an emergency at IP 2.
- Deficiency: Rockland County officials and personnel did not participate in the IP 2 exercise of March 9, 1983 (NUREG-0654, II.N.1.b).
- Recommendation: Rockland County should participate fully in the next exercise of radiological emergency response plans and preparedness for IP 2.
- Deficiency: New York State did not implement its compensating measures in a manner consistent with its plan or procedures (NUREG-0654, II.A.1.b).
- Recommendation: New York State should improve its capability to implement compensating measures in light of the nonparticipation by Rockland County emergency response personnel at the March 9, 1983, exercise.

The sections that follow are an evaluation of the emergency response capabilities implemented by state personnel, demonstrating the New York State compensating measures in Rockland County.

2.5.1 Emergency Operations Facilities and Resources

Emergency operations facilities and resources were acceptable, with the exception of deficiencies noted below. Communications systems with contiguous state and local governments, the nuclear facility, and the near-site EOF were good. Dedicated telephone lines were used as the primary communications systems with radio backup by the New York ODP and RACES. Communications

between the Rockland County and Bergen County EOCs need improvement: two systems were used, a radio channel and telephone. However, because the radio channel also was used for communications with field monitoring teams in Rockland County, the large volume of communications traffic between field monitoring teams and the Rockland County EOC limited the availability of this system to the Bergen County, New Jersey, EOC. On several occasions, the Bergen County EOC director had difficulty in reaching his counterpart in Rockland County on the telephone.

Deficiencies in equipment and procedures for external communications were noted at the 1982 exercise. Equipment deficiencies have been corrected by the installation of a backup radio system between the EOF and both the EOC and County Warning Point (CWP), and an extension of the RECS line in the dose assessment room. Staff support was adequate once the state takeover of the EOC was complete.

The working space and amenities of the EOC were good. The dose assessment function was performed in a large, well-equipped room. This improvement corrects a deficiency identified at the 1982 exercise.

Internal communications within the EOC were acceptable. Status boards were posted and, in general, kept up to date. Since the 1982 exercise, internal communications have been improved by the installation of several status boards. These status boards were clearly visible in the operations room, and were frequently updated. At the early stages of the exercise, when the EOC was not fully staffed, delays arose in relaying information to the operations staff.

Maps, displays, and EOC security were acceptable. Maps of population distribution, by ERPA, and evacuation routes were posted in the main operations room. Maps of evacuation routes and field sampling points were posted in the accident assessment room. A number of maps also were posted in the PIO room and in the command room; it is recommended that a full set of maps be posted in each room. A map of congregate care and reception centers listed the centers in Rockland County, but not those in Bergen County.

- Deficiency: Communications systems between the EOCs in Rockland County and Bergen County, New Jersey, need improvement (NUREG-0654, II.F.1.b).
- Recommendation: Another communications link between the Rockland County and Bergen County EOCs is desirable, whether another radio channel, a dedicated telephone line, or an extension of RECS.
- Deficiency: Maps showing the location of congregate care centers in Bergen County, New Jersey, were not posted in the Rockland County EOC (NUREG-0654, II.J.10.a).

evaluate emergency response capabilities. In failing both to adopt a radiological emergency response plan and to exercise it in the March 9, 1983, exercise, Rockland County did not adequately comply with these regulatory requirements.

Second, by substituting its own resources and personnel for those of Rockland County, New York State did not implement its plans at the exercise as required by 44 C.F.R. Section 350.9. Therefore, it must be concluded that New York State's implementation of its compensating measures during the exercise was inadequate.

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- Recommendation: New York State should improve its capability to implement compensating measures in light of the nonparticipation by Rockland County emergency response personnel at the March 9, 1983, exercise.

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- Recommendation: A map of congregate care centers in Bergen County should be posted in the Rockland County EOC.

2.5.2 Alerting and Mobilization of Officials and Staff

Alerting and mobilization of officials and staff were acceptable. However, inevitable delays of 60-90 minutes were observed in the arrival of some New York State personnel who served as officials and staff in the place of Rockland County personnel in the exercise.

The capability for 24-hour initial emergency response is provided by the CWP, which is staffed on a 24-hour basis and is located on the same floor as the county EOC. The state warning point, which is also staffed on a 24-hour basis, was used to notify state personnel called in to participate in the state compensating measures.

The ability to sustain 24-hour continuous operations was not fully demonstrated in the March 3, 1982, exercise. This year, the state demonstrated an acceptable capability to sustain continuous operations in Rockland County. Sufficient backup personnel were available, and shift changes were demonstrated. However, the Department of Health (DOH) personnel from Monticello did not demonstrate a shift change; they were unaware of procedures for 24-hour operations and are in need additional training.

Procedures for notifying emergency response organizations and for alerting, notifying, and mobilizing emergency response personnel were good, given the inherent delays in mobilizing those state personnel from outside Rockland County. The utility notified the CWP of an Unusual Event classification. Because Rockland County did not participate in the exercise, a request was made to the Southern District ODP in Poughkeepsie for state assistance, which carried out the alerting and notification of state emergency response personnel. Initial activation and staffing of the EOC by state personnel took 60-90 minutes. This is about the best that could be expected in light of the distances traveled: personnel were mobilized from Albany, Monticello, Poughkeepsie, and Rockland County.

Telephone and radio communications equipment used for alerting and activating emergency response personnel were good. The notification and mobilization of evacuation bus drivers were not demonstrated; drivers were prepositioned at the Haverstraw Transit Co. depot. According to the dispatcher at the Haverstraw Transit Co., past experience in snow and other emergencies indicates that 90 drivers can be notified by telephone and mobilized within 30 minutes. It is recommended that the bus company acquire radios to communicate with its buses and the Rockland County EOC so that telephones need not be relied on as the sole communications system. The capability to communicate with fixed and mobile medical support facilities was good: all ambulances have radio links directly with all hospitals and with the ambulance coordinator in his car or through the sheriff's office.

- Deficiency: DOH personnel based in Monticello were unfamiliar with procedures for 24-hour continuous emergency response operations (NUREG-0654, II.A.4).
- Recommendation: DOH personnel with duties in Rockland County should be given additional training in Rockland County plans and procedures.
- Deficiency: The bus company communications which were activated for the exercise to communicate with both the EOC and its drivers depend on commercial telephone lines exclusively; these lines may be unreliable during an actual emergency (NUREG-0654, II.E.1, II.E.2).
- Recommendation: Each Rockland County transportation company with an emergency response mission should acquire equipment to permit radio communications with its vehicles and with the transit coordinator in the EOC.

2.5.3 Emergency Operations Management

Emergency operations management by the state management team in the EOC was good. The state DPC representative demonstrated effective control of emergency response and held staff briefings on a regular basis. The emergency classification system was used correctly. The state established field monitoring teams, FMCs for monitoring and decontaminating emergency workers, and a reception center for evacuees. State personnel at these facilities demonstrated good capabilities.

2.5.4 Public Alerting and Notification

Public alerting and notification in Rockland County were good. The systems used for prompt notification of the public included outdoor sirens and tone alert radios at special facilities. The siren system and tone alert radios were activated at the Site-Area Emergency classification in a timely fashion.

FEMA currently is developing guidance and regulations that will constitute the requirements for fully testing alerting and notification systems. Until this process is complete, only spot-check observations can be made of the effectiveness of these systems.

Field observers reported, on the basis of personal observation and interviews with residents, that the sirens generally were audible within the 10-mile plume exposure pathway EPZ. This is a marked improvement from the 1982 exercise, at which the siren system was reported by many observers to be inaudible. A number of facilities that were to receive tone alert radios were

surveyed. Many reported that the units functioned properly. However, some locations have not yet received their radios, and other facilities where the radios had been installed reported that their personnel had not been trained in their use.

Activation of the EBS system was coordinated with the sounding of sirens within the 10-mile plume exposure pathway EPZ and it functioned in an acceptable manner. However, the public has not yet received the new brochure containing instructions to turn to the EBS station for information when the sirens are sounded. This may limit the effectiveness of public alerting and notification in Rockland County. (See Sec. 2.5.5 for a discussion of public education issues.)

During the exercise, the early dismissal of school children was simulated at the Alert classification. This activity was reported in a (simulated) press release at 9:45 a.m., and in the first rumor-control tape shortly thereafter. However, early school dismissal was not announced in an EBS message until 11:38 a.m. The state's compensating measures and the school evacuation procedures should clarify procedures for notifying parents of early dismissal of school children.

2.5.5 Public and Media Relations

Public and media relations in Rockland County need improvement. The 1982 post-exercise assessment questioned the effectiveness of the public education program in Rockland County. As the Rockland County plan has not been completed, no public education brochure has been distributed to Rockland County residents during the last year. Spot-check interviews with residents on the day of the exercise indicate that, although the sirens were heard, the public is not aware that instructions are to be transmitted via EBS, and have no understanding of what protective actions may be required. Several hotels in Rockland County within the 10-mile plume exposure pathway EPZ were visited on March 8 and 9, 1983; none were equipped to advise their guests on steps to take during a radiological emergency at the Indian Point Nuclear Power Station. Thus, the public education program for the permanent and transient population in the 10-mile plume exposure pathway EPZ needs to be improved. The limited public education program in Rockland County impacts the effectiveness of the prompt alerting and notification systems (see Sec. 2.5.4, above).

Communications between the Rockland County EOC and the joint media center in Verplanck, New York were good. State personnel demonstrated a good capability to replace county PIOs at the Rockland County EOC and the joint media center in Verplanck. State PIOs at the two facilities communicated over a telephone line that was kept open throughout the exercise. Hard copy press releases and EBS messages were exchanged over the telefax. At the joint media center, the telefax machine was not operating at one point, but this situation was rectified. (See Sec. 2.3 for further discussion of joint media center operations.)

Coordinated arrangements for rumor control were good. The rumor control system was operated from the joint media center. Test calls by federal observers demonstrated that individuals staffing the telephones had up-to-date information and were able to obtain additional information as needed. Radiological conditions required officials to transfer the media center to an alternate location. The capability to maintain rumor control activities during the (simulated) process of relocating the joint media center was adequately demonstrated.

- Deficiency: The annual public education brochure has not been distributed in Rockland County (NUREG-0654, II.G.1).
- Recommendation: Publication and distribution of the public education brochure for Rockland County should be expedited.
- Deficiency. There was no evidence of signs or notices posted in hotels and motels within the 10-mile plume exposure pathway EPZ to provide helpful emergency information to transient population (NUREG-0654, II.G.2).
- Recommendation: As soon as possible, the necessary public information materials should be posted in hotels and motels to inform transient populations who may come into the 10-mile plume exposure pathway EPZ in Rockland County.

2.5.6 Accident Assessment

Accident assessment functions which were carried out by state personnel normally based in Albany and Monticello were good. The two state field monitoring teams demonstrated a good capability to take radiological measurements within the 10-mile plume exposure pathway EPZ; adequate equipment was available, and teams demonstrated acceptable to good levels of familiarity with field monitoring procedures. The three models of monitoring instruments available to field monitoring teams spanned the recommended range of 0.1 to 50 R/hour. All instruments had been calibrated according to the schedule specified in the state plan, and operability checks were performed immediately prior to use. The two field monitoring teams were familiar with their procedures; readings in mR/hour and counts per minute were accurately taken, properly recorded on data sheets, and transmitted to the EOC. The air sample was taken and analyzed as specified; procedures for measuring radiiodine concentrations in the plume, including the use of silver zeolite cartridges, were well understood.

Several areas for improvement, however, were noted; one field monitoring team was not aware of the requirement for cloud gamma surveys at six inches and three feet above ground level, with open and closed window on the CDV-700 instruments, nor of the three-point, equilateral triangle survey

pattern called for in the procedure in the kit. Collection of the air sample was performed correctly. However, it required an excessive time; this could be detrimental under actual field conditions. Additional training for members of field monitoring teams beyond the 10 to 12 hours each received could significantly improve performance in these areas.

The Rockland County EOC was established as a central point for the receipt and analysis of field data and samples. The state field monitoring teams in Rockland County demonstrated a good capability to relay data to the EOC, using RACES. However, some minor delays in communications were noted.

Dose assessment staff in the Rockland County EOC demonstrated a good capability to independently evaluate the potential magnitude and location of radiological hazards. This assessment was coordinated with the state and utility through the use of telefax and dedicated telephone line communications systems in the Rockland County EOC. Dose calculations, which were made using hand-held calculators, could be improved by using preprogrammed calculators.

The state dose-assessment staff in the Rockland County EOC demonstrated an excellent capability to develop independent protective action recommendations based on projected or actual conditions. Recommendations were coordinated with the state EOC.

2.5.7 Actions to Protect the Public

State personnel demonstrated several protective actions in Rockland County during the exercise. Although these actions were capably performed, they were not performed according to written plans or procedures, since evacuation of the transit-dependent population is not covered in the state compensating measures. The bus company that was used, and the routes that were driven, are not specified in the draft Radiological Emergency Response Plan for Rockland County. Therefore, the actions that were performed during the exercise do not show that the public could be protected in an actual radiological emergency at the Indian Point Nuclear Power Station. Simulation of procedures for identifying and dealing with potential impediments to evacuation was good. State police were dispatched to the scene of a simulated impediment and coordinated with state and local fire protection personnel to identify the resources needed to clear the impediment.

The bus company demonstrated an acceptable capability to mobilize the vehicles and drivers required to serve two evacuation bus routes for the general population; several noninstitutionalized, mobility-impaired persons; and a school. All drivers were briefed on their assignments before being dispatched and drove their routes easily. Buses used for evacuation were not equipped with radios. (See Sec. 2.5.2, above.)

The capability for processing evacuees at a reception center was acceptable. State employees performed all functions that would normally be

carried out by Rockland County personnel. Personnel contamination scans were demonstrated; instrumentation and procedures complied with requirements of the "New York State Emergency Worker Reference Manual." Measures for separation of contaminated and clean persons, waste disposal, record keeping, and communications were adequately demonstrated. However, staff at the facility had only four to five hours of training in the use of radiological survey equipment; additional training is needed to familiarize staff with the use of survey equipment and the interpretation of survey results.

- Deficiency: Due to the absence of detailed evacuation plans and procedures for Rockland County in the state compensating measures plan, the capability to implement actions to protect the public could not be measured against a plan (NUREG-0654, II.J.10.g).
- Recommendation: Detailed evacuation plans and procedures should be developed and incorporated within the plans.
- Deficiency: The buses used for evacuation were not equipped with radios (NUREG-0654, II.J.10.g).
- Recommendation: Each bus used for evacuation should be equipped with a radio.

2.5.8 Health, Medical, and Exposure Control Measures

Health, medical, and exposure control measures in Rockland were acceptable, with the exception of the deficiencies noted below. State personnel at the Rockland County EOC, field monitoring teams, reception center staffs, and state police in the field demonstrated a good capability to implement health, medical, and some radiological exposure control measures. However, many of the emergency response personnel lacked either radiological exposure-control equipment, training, or both.

Potassium iodide was distributed to field monitoring teams, workers at PMC, and New York State Police, all of whom had been trained in its use. Bus company personnel had not received KI, although as emergency workers they should be given KI and trained in its use. Provisions at the EOC for use of KI by emergency workers were outstanding; periodic projections were made of radioiodine doses for emergency workers. These projections were compared with the action level (25 R) specified in the plan; the EOC would have directed emergency workers to take KI if doses of 25 R were projected.

The capability to determine doses received by emergency workers, including frequent readings of dosimeters and maintenance of dosage records, was highly variable:

- The monitoring teams and FMC personnel demonstrated an outstanding capability. All team members had 0-5 R dosimeters, took frequent readings, maintained records, and relayed readings to the EOC. Team members also had TLDs.
- Capability of state police needs improvement. Protective clothing was available, as specified in the plan. Although state police stationed at the Rockland County EOC has TLDs, not all state police assigned to field locations were issued those devices. Both 0-5 R and 0-200 R dosimeters were available; state police took periodic readings and maintained dose-record cards.
- Capability of staff at the reception center needs to be improved. Staff were issued 0-200 R dosimeters, but did not have permanent-record dosimeters or dosimetry record cards. Moreover, they were not adequately trained in dosimetry; one monitor reported a reading of 7 R at 12:30 p.m., after having zeroed the dosimeter that morning. The monitor showed no awareness of allowable dose or of procedures for reporting an accumulated dose beyond the 100 mR specified in the plan.
- Capability of the bus company dispatcher and drivers was lacking. Nine 0-200 R dosimeters and one charger were available for 90 drivers. The dispatcher acknowledged unfamiliarity with dosimetry procedures, including re-charging of dosimeters and maintenance of records. Drivers had not been trained in the reading of dosimeters, nor had they received instructions to report their accumulated dose to the dispatcher. No permanent-record dosimeters were available for bus company personnel.

Personnel at the FMC demonstrated an outstanding capability to determine the need for decontaminating personnel and equipment, and had established adequate procedures, facilities, and supplies for carrying out the decontamination operations. Personnel were identified for continuous 24-hour operation of the facility.

A separate medical drill was conducted the evening of March 8, 1983. An ambulance transported an off-site radiological accident victim to Good Samaritan Hospital in Suffern; the hospital was notified by the ambulance crew to prepare for a contaminated patient. The capabilities of the hospital were good. The hospital had calibrated monitoring instruments and adequate procedures for monitoring and decontaminating the patient. The procedures for decontaminating a compound fracture were adequately demonstrated. A health physicist on the hospital staff was available for assistance during this procedure.

- Deficiency: Permanent-record dosimeters and self-reading pocket dosimeters were not available in sufficient numbers for all emergency workers (NUREG-0654, II.K.3.a).
- Recommendations: Both permanent-record dosimeters and self-reading pocket dosimeters should be procured for distribution to all emergency workers.
- Deficiency: Bus drivers and dispatchers were untrained in exposure control procedures (NUREG-0654, II.K.3.b).
- Recommendation: All emergency workers should be fully trained in radiological exposure control procedures, including the use of dosimeters and KI.

2.5.9 Recovery and Reentry Operations

State personnel in the Rockland County EOC demonstrated a good capability for recovery and reentry operations. The EOC director consulted with heads of all departments. Dose assessment personnel considered the data on radiation levels and made recommendations as to when each affected ERPA could be safely reentered. On the basis of these recommendations, the EOC director consulted with the state EOC in Albany for a final decision on reentry. The PIO, after consultation with the radiological specialist, drafted an EBS message on reentry. In an actual emergency, this message would have been telefaxed to the joint media center, where PIOs for all jurisdictions would coordinate a joint EBS message. A committee was established to plan long-range recovery operations, particularly for the 50-mile ingestion exposure pathway EPZ.

2.5.10 Relevance of the Exercise Experience

The scenario provided a good test of the ability of the state to supplement county resources as called for in the compensating measures.

2.6 ORANGE COUNTY, NEW YORK

2.6.1 Emergency Operations Facilities and Resources

Overall, the Orange County emergency operations facilities and resources were good. The emergency response personnel in the Orange County EOC in Goshen operated in a professional manner throughout the exercise. In response to a deficiency identified during the 1982 exercise, office space was

reorganized to facilitate better use of the facility and the deficiency is corrected.

The equipment for Orange County's external communications with the two state EOCs as well as the Orange County executive hot line worked well. This equipment was deficient in the 1982 exercise and has been corrected. The support provided by the County of Orange Emergency Volunteer Service, which is the local RACES organization, was outstanding. Nine new telephone lines, including three dedicated lines, were added and operational, also correcting deficiencies noted in the 1982 exercise.

Internal communications deficiencies identified in the 1982 exercise were corrected by maintaining up-to-date status boards and displaying well-marked maps showing evacuation routes, sampling points, and reception and congregate care centers. Each player was also provided with a county population map, and agency log sheets were distributed to all players. After the 1982 exercise, the RAC recommended that radiological field monitoring data should be transmitted directly to the accident assessment room; however, the chief radiological officer felt this would be distracting. The communications center handled the data expeditiously, and the deficiency identified in the 1982 exercise stands corrected.

The EOC working space and equipment were adequate to support the required emergency responses. Adequate security measures were taken and comprehensive logs were kept, again ensuring the smooth operation of the EOC.

2.6.2 Alerting and Mobilization of Officials and Staff

The alerting and mobilization of officials and staff were good. The activation and staffing of the Orange County EOC were accomplished efficiently, with key personnel arriving within 25 minutes of the Alert classification. Full staffing was achieved 45 minutes after the declaration of Alert classification. The utility notified the CWP over the RECS telephone system and verified the receipt of notification by land lines. The county also has a private telephone company which can call officials and staff. This private system was not used during the exercise because it is quite expensive to operate. Most of the personnel responsible for other emergency response activities outside the EOC were notified expeditiously and facilities were promptly activated.

Sufficient staff were available to provide 24-hour emergency response capability. There are backup staff for key personnel, and they have been trained and have attended meetings to discuss EOC operations, thereby correcting a deficiency noted in the 1982 exercise.

Communications systems among all county response agencies and field support staff operated effectively. These systems include civil defense radios, RACES, RECS, and walkie-talkies. Meetings have been held to provide

additional training to facilitate communications with field personnel and the deficiency noted in the 1982 exercise has been corrected.

A county representative was not dispatched to the EOF, since the representative chosen is being trained.

2.6.3 Emergency Operations Management

Emergency operations management was good. The Orange County Executive was responsible for overall management of the EOC with the Assistant Director of the Office of Natural Disaster and Civil Defense delegated responsibility for internal operating decisions. The County Executive was directly involved in major decisions. However, it is suggested that additional support staff be provided to handle routine activities, thereby freeing senior management for more-critical functions.

An emergency classification system consistent with that of the utility was effectively used and conveyed to EOC staff and other emergency response organizations.

All emergency response organizations listed in the plan were represented in the exercise (at least one of each category was activated — PMC, congregate care center, reception center, etc.) and were effectively managed. Response organizations were familiar with their standard operating procedures (SOPs) which served as action checklists. There was some initial confusion with the evacuation of school children but the school superintendent quickly clarified the problem. The bus coordinator at the bus company servicing the evacuation route tested in this exercise responded in an especially professional manner indicating familiarity with all procedures related to evacuation.

Staff briefings were held on a regular basis at the EOC, occurring approximately every half hour. In the 1982 exercise, a deficiency indicated that the wall between the executive room and the main operations area of the EOC should be removed to facilitate effective communication. However, it was demonstrated during the March 9, 1983, exercise that this wall actually minimizes noise and provides privacy required for the County Executive's decision-making responsibilities. Therefore, it was determined that the previously recommended change in the EOC layout is no longer necessary.

2.6.4 Public Alerting and Notification

Public alerting and notification in Orange County were good. FEMA currently is developing guidance and regulations which will constitute the requirements for fully testing alerting and notification systems. Until this process is complete, only spot-check observations can be made of the effectiveness of these systems. Most of the people interviewed in the field

on the day of the exercise reported to federal observers that they heard the alerting sirens. However, it was also determined that most of those interviewed neither understood the meaning of the sirens nor knew that they were to listen to EBS messages broadcast over WABC (AM 770). The sheriff effectively simulated procedures for notifying residents and transients in parks and trails.

School administrators were notified by telephone to effect an early dismissal of school children. There was some internal confusion related to the dismissal of school children and adequate notification of the public. However, schools were promptly closed and there was simulated notification of radio stations that students should remain at home.

EBS messages were posted and distributed to staff, thus correcting a deficiency identified in the 1982 exercise. The telefax machine linking the Orange County EOC with the joint media center in Verplanck, New York was not operating at one point, but this situation was rectified. (See Sec. 2.3 for further discussion of joint media center operations.) Federal observers made telephone calls to the rumor control number which were answered by a recording correctly reporting the emergency situation.

2.6.5 Public and Media Relations

Public and media relations were acceptable. Public information brochures had been disseminated to the public within the 10-mile plume exposure pathway EPZ during the week prior to the exercise. Public information posters were posted throughout the county, providing radiological emergency information for residents and transients. These actions correct a deficiency from the 1982 exercise by providing additional public education.

The PIO at the EOC served competently as a liaison between the Chief Executive Officer and the county PIO at the joint media center, communicating via an open telephone line.

The county PIO at the EOC viewed major media briefings on monitors, correcting a deficiency from the 1982 exercise. There were no media briefings at the EOC since the media were not admitted to the facility. The exchange and release of information went well between all counties and between the Orange County EOC and other Orange County emergency response facilities. However, there were several problems involving the timeliness and accuracy of news releases for Orange County issued from the joint media center.

- Deficiency: Some Orange County news releases were issued late and contained inaccuracies (NUREG-0654, II.G.4.b).
- Recommendation: The timeliness and accuracy of Orange County news releases should be improved.

2.6.6 Accident Assessment

Accident assessment was good. The accident assessment teams in both the Orange County EOC and the field demonstrated competency in completing their tasks. The teams demonstrated that they had been thoroughly trained.

The chief radiological officer directed the dose assessment effort. This officer chose to activate both primary and secondary teams to maximize the training value of the exercise. Even with excessive staff, the team performed smoothly.

The field survey teams thoroughly checked their equipment prior to leaving the EOC for their assigned locations. The teams had both low- and high-range monitoring instruments, correcting a deficiency noted in the 1982 exercise. All instruments were labeled with records indicating that they had been calibrated within the prescribed time period. The teams had silver zeolite filters for air sampling equipment, also correcting a deficiency noted in the 1982 exercise.

The teams followed the monitoring procedures. However, measurements could be taken faster with more practice. The independent external dose projections agreed with those made by the State Health Department.

Radiological field monitoring data was transmitted to the communications staff at the EOC. Although it was recommended after the 1982 exercise that these data go directly to the EOC assessment staff, the internal EOC communications personnel expeditiously transmitted the data to the accident assessment staff.

2.6.7 Actions to Protect the Public

Actions to protect the public were acceptable, although several areas need some improvement. Sufficient personnel and resources were available to implement protective actions.

The capability to evacuate the general population was successfully demonstrated. The ten bus drivers responsible for driving evacuation routes serviced by the bus company observed at the exercise have recently completed a comprehensive training program. Although the exercise required that only one route actually be demonstrated, six drivers were placed on standby at the Alert classification. Each driver is assigned one specific route, but all drivers are familiar with the area and can easily interchange route assignments.

The county has vehicles (ambulances and specially-equipped buses) to relocate noninstitutionalized, mobility-impaired persons. The state has identified those individuals in Orange County who may require special arrangements. This list should be provided to the county and maintained at

the county EOC. The capability to relocate noninstitutionalized, mobility-impaired persons was simulated.

The establishment of traffic control points was simulated, and one traffic control point was partially demonstrated. Although there was some confusion as to the exact location for setting up the barricades, the sheriff was clearly aware of the procedures for controlling traffic.

The reception center at Temple Hill School was located about 10 miles outside the 10-mile plume exposure pathway EPZ. The center has a clear management structure, adequate space, good communication facilities, and sufficient parking for segregating clean and contaminated vehicles.

The Orange County RERP requires that a reception center provide one set of directions, i.e., a map to the congregate care center for each group of four evacuees who require congregate care. When maps for one congregate care center have run out, that center can be assumed to be full. However, the reception center staff prefers to keep track of the number of people sent for congregate care; the staff informs the Commissioner of Social Services, who then makes the decision to activate another congregate care center. If the reception center chooses to use this system, the Orange County plan should be changed accordingly and personnel should be clearly informed of the changed procedures. The reception center does not have provisions for the handicapped such as wheelchairs and ramps. This is a deficiency that was also noted in the 1982 exercise.

The congregate care center that was activated at the Newburgh Free Academy was adequately staffed by the American Red Cross. The facility had adequate supplies and equipment, parking space, communications equipment, sleeping accommodations, and a nurse for health care. An evacuee who arrived at the congregate care center without papers indicating he had undergone monitoring was sent to the reception center for monitoring. This procedure is preferable to that specified in the plan, which requires that a monitoring team be dispatched to the congregate care center. The plan should be changed to reflect the procedure that was used during the exercise.

- Deficiency: Provisions for care of the handicapped such as wheelchairs and ramps, should be considered at the reception centers. This deficiency was also noted at the 1982 exercise (NUREG-0654, II.J.10.d).
- Recommendation: Provisions for care of the handicapped should be considered at reception centers.

2.6.8 Health, Medical, and Exposure Control Measures

Health, medical, and exposure control measures were acceptable. The Orange County Department of Health was aware of the criteria for issuance of

KI to emergency workers and KI was included in the field monitors' and bus drivers' kits.

The sheriff's forces were deployed quickly to provide traffic control. However, they were not aware of the procedures for radiological exposure control and did not have KI or dosimeters. The sheriff's personnel who are involved in evacuation activities should be trained in exposure control measures.

Other than the sheriff's personnel, all emergency response personnel observed in the Orange County portion of the 10-mile plume exposure pathway EPZ had KI, self-reading dosimeters, and permanent record dosimeters. All of the emergency personnel observed knew how and when to read the dosimeters issued to them.

The method for radiological monitoring of evacuees at the reception center and emergency workers at the PMC did not follow the procedures in the plan, which calls for scanning at a rate of approximately one foot per second at a distance of one inch from the surface of the area being monitored, and establishes a dose rate of 0.1 mR/hour or above for decontamination. The monitoring of evacuees and emergency personnel was completed at a slower rate than prescribed in the plan and this could potentially inhibit the flow of persons. Additional training would speed up their activities. Also, the method in the plan could be utilized for initial monitoring of evacuees and vehicles at the reception center. Any evacuee or vehicle contaminated with more than the 0.1 mR/hour limit should be sent for more comprehensive scanning. Levels for decontamination should be posted in the reception center. Procedures for decontamination at the reception center should be reviewed; it is not necessary to shower when only a portion of the hand is contaminated. Waste disposal bags should be provided for permanently disposing of contaminated clothing. As was recommended after the 1982 exercise, workers performing radiation monitoring and decontamination have undergone additional training, and the deficiency noted in the 1982 exercise is corrected. However, additional ongoing training will certainly further benefit emergency workers.

The PMC personnel did an excellent job of decontaminating personnel, equipment, and vehicles.

- Deficiency: The sheriff's personnel who are responsible for traffic control were not aware of the procedures for exposure control and did not have KI or a dosimeter (NUREG-0654, II.K.3.b).
- Recommendation: All emergency workers should be fully trained in radiological exposure control including the use of dosimeters and KI.

2.6.9 Recovery and Reentry Operations

Recovery and reentry operations were good. Agency representatives at the EOC were aware of their recovery and reentry responsibilities as described in the plan. Operations were successfully simulated but these simulations were limited by the duration of the exercise. Simulated activities included soil and water sampling, air monitoring, and spot-checks on food supplies and buildings. The determination to permit reentry was based on this simulated information.

2.6.10 Relevance of the Exercise Experience

The relevance of the exercise was good. The exercise was beneficial for players, allowing them to demonstrate capabilities and receive on-the-job training and experience. Players did not indicate a preknowledge of the off-site emergency response activities called for by the scenario.

The scenario was adequate but limited the functions which the county was called on to perform. Orange County appeared capable of successfully demonstrating many more activities. In fact, the bus coordinator indicated a desire to run more evacuation routes.

All county agencies participated fully in their required response activities. All elements of the plan and county response agencies were tested. The county successfully demonstrated the capability to work with the state, other affected counties, and local resources.

2.7 PUTNAM COUNTY, NEW YORK

2.7.1 Emergency Operations Facilities and Resources

Emergency operations and facilities in the Putnam County EOC were good. The EOC was promptly activated, fully staffed, and well managed throughout the exercise. Space within the EOC is limited, but this did not impair emergency response operations. Effective security was quickly established. A sheriff's deputy was stationed at the EOC entrance and controlled access throughout the exercise. A log was kept of persons entering and leaving the EOC. Displays in the EOC were generally good. A status board and maps showing evacuation routes, ERPAs, population distribution, and monitoring points were all visible, but a clearly marked map showing congregate care centers and reception centers was not displayed.

Communication links were effectively and efficiently monitored. The primary system for communication with state and local governments within the 10-mile plume exposure pathway EPZ was by RECS line, with radio and commercial telephones available as backup. Communication from the EOF was by radio,

verified with hard copy from a telefax. During the morning of the exercise, the EOF did not receive radiological data transmissions from the Putnam County EOC because the telefax telephone line used by the Putnam County staff was not the one over which staff at the EOF expected to receive data. This problem was corrected at one over 2:00 p.m. Internal communications were very good and consisted of frequent briefings, as well as distribution of messages to players.

2.7.2 Alerting and Mobilization of Officials and Staff

The overall alerting, mobilization, and capability for 24-hour staffing of emergency operations were good in Putnam County. Emergency response personnel were quickly alerted and mobilized. All personnel were notified approximately 20 minutes after activation of the EOC, and the EOC was fully staffed within 90 minutes. In particular, the field monitoring teams responded expeditiously. The RACES volunteers proved to be an outstanding communications resource.

The county possesses sufficient staff for continuous operations on a 24-hour basis, although the proficiency of the individuals varies. The field teams demonstrated two shift changes. However, a shift change for the radiological officer was not observed.

2.7.3 Emergency Operations Management

Emergency operations management at the EOC was good. All response organizations sent representatives to the EOC, and these representatives effectively coordinated the actions of their organizations. The County Executive, the County Executive's deputy, and the Civil Defense Director provided outstanding leadership and actively participated in decision-making. Both the County Executive and Civil Defense Director periodically gave effective and professional staff briefings. The limited size of the EOC made effective control essential, and control was maintained throughout the exercise. The emergency classification system was used in the initial notification and changes in the emergency status were clearly displayed in the EOC throughout the exercise.

Written SOPs were available for all emergency response personnel. Each agency representative reported to the EOC with their action guides and contact list. These players referred to these materials as the exercise progressed.

2.7.4 Public Alerting and Notification

Public alerting and notification in Putnam County were good. Public alerting was accomplished by the use of sirens and tone alert radios within the 10-mile plume exposure pathway EPZ. The sirens sounded at approximately 9:45 a.m.; public interviews indicated that people heard the sirens.

FEMA currently is developing guidance and regulations that will constitute the requirements for fully testing alerting and notification systems. Until this process is complete, only spot-check observations can be made of the effectiveness of these systems. Many of the people interviewed in the field on the day of the exercise were aware that they should turn their radios to the EBS station after hearing the sirens, and indicated that they were aware of this procedure from information received in utility brochures mailed to their homes and from radio reports.

The EBS system was promptly activated when the sirens sounded. Additional EBS messages were prepared throughout the day, and their transmission was simulated. (See Sec. 2.3 for further discussion of joint media center operations.) Tone alert radios functioned well. Calls were made to nearly all of the private and public schools, nursing homes, day care centers, convents, and monasteries that have tone alert radios. All but one confirmed the activation of tone alert radios at 9:45 a.m.

2.7.5 Public and Media Relations

Public and media relations were good in Putnam County. Public information activities were fully coordinated between the EOC and the joint media center. The county had a PIO in the joint media center and another in the EOC throughout the exercise. These individuals were in constant communication and exchanged hard copy news releases by telefax machine. The PIO in the EOC was in constant communication with the media center and with decision-makers in the EOC. Based on these conversations the PIO was able to produce timely and informative press releases. Backup capability was evident from a call list that showed several persons with PIO training. The county PIO spokespersons had access to pertinent information and there were adequate channels for obtaining additional information to prepare press releases. The appropriate agency representatives were consulted prior to preparing releases. Releases were received from other jurisdictions.

An adequate public information brochure has been developed, and was recently mailed to the public within the 10-mile plume exposure pathway EPZ. This is an improvement since the 1982 exercise.

Emergency procedures posters have been distributed; however, they were seen in only a few locations.

A separate telephone line was provided for the public in Putnam County to call and obtain emergency information. This telephone number was listed in the brochure mailed to the public. The telephone line was continually monitored and received approximately 12 calls on the day of the exercise. The operator was located in the EOC, within sight of the operations board, and had access to all up-to-date information.

2.7.6 Accident Assessment

Accident assessment in the EOC and the use of field monitoring teams were acceptable. However, operating procedures that appear to conflict with training received by field personnel need to be reviewed. Each monitoring team was furnished with the required equipment to carry out its duties. Information was effectively transmitted back to the EOC, but necessary updates were not transmitted to the field teams.

Radiological instruments available to the field monitoring teams included a CDV-700, a CDV-715, a RM-14, and a PRM-7. The instruments were checked before departure from the EOC, and all instruments had stickers indicating that they had been calibrated within the past year and mostly within the past month, correcting a deficiency from last year. Field data were easily transmitted to the EOC through the RACES operator. However, information flowed in only one direction, into the EOC. Therefore, field teams were not kept informed of current emergency escalation, meteorological data, or releases of radioactive material.

The radiological officer received and analyzed the field data. At one point some confusion arose concerning measurements requested by the EOC. The field team could not make the measurements requested and reported "off-scale" readings. The radiological officer was not familiar with the available instrumentation and procedures used by the field team. These field monitoring procedures were changed within the week prior to the exercise. Additional training for both the field teams and the radiological officer would improve capability.

Four monitoring teams were mobilized for the exercise. Two were dispatched to the field and two were held in standby to replace the first two teams. Twenty-six people can be available; however, there is no backup equipment for these teams. The teams were deployed to specific coordinates to take measurements requested by the EOC. The radiation readings were performed accurately; however, the plan calls for a 10-ft³ air sample, but the teams were instructed to take a 30-ft³ sample. Field teams knew it was necessary to leave the plume to count their air samples, but did not know the maximum background activity level in the plan (500 cpm) they must be below. Teams were not aware that they should notify the EOC if they reach a field which is 2 times background. Teams had not seen the procedure manual in their kits before the exercise. More training consistent with established procedures needs to be provided.

Field survey techniques (operation of hand-held instruments) were good, but could be improved if the teams took readings at ground level and at a height of about 3 feet to determine if they are in the plume. Air samples had silver zeolite cartridges available, which corrects a deficiency from the 1982 exercise.

- Deficiency: Although field teams demonstrated capability and resources for field monitoring within the 10-mile plume exposure pathway EPZ, they were not completely familiar with the procedures outlined in the procedure manual (NUREG-0654, II.I.7).
- Recommendation: Field teams need additional training consistent with procedures outlined in the procedure manual.
- Deficiency: Although field data were effectively transmitted back to the EOC, necessary information updates were not transmitted to the field monitoring teams (NUREG-0654, II.F.1.d).
- Recommendation: Information exchange between the EOC and field monitoring teams needs to be improved so that field teams are kept informed of emergency escalation and meteorological data.

2.7.7 Actions to Protect the Public

Actions to protect the public (evacuation, activation of reception and congregate care centers, and transportation) were generally good. The congregate care facility was fully staffed, equipped, and well organized. The evacuation capability, which relies on commercial buses, is acceptable; however, the number of trained drivers and radios for buses are limited. All mobility-impaired persons can be evacuated by county vans.

A reception/congregate care center located in Dutchess County, New York was activated for the March 9, 1983 exercise. The facility had radio communication with the Putnam County EOC, police and security protection, nursing staff, cots and blankets, sufficient space to handle the potential number of evacuees, and separate rooms available for persons with special needs. Shelter personnel were trained in handling mass evacuees. Registration and record-keeping procedures were good. The facility had radiological monitoring capability and a separate decontamination area. The personnel monitoring procedures were good. Traffic patterns were separated for contaminated and uncontaminated evacuees, and the monitoring personnel were very thorough.

One bus was dispatched to test evacuation procedures. The bus driver was given a map of the evacuation route and arrived at the first stop within five minutes of leaving the bus depot. The bus stopped at all designated pick-up points and completed the evacuation route in 13 minutes. The bus was not equipped with a radio. The bus driver had received emergency response training; however, other drivers at the bus company have not been trained.

All drivers need additional training in evacuation procedures, routes to follow to pick up evacuees, and the location of reception centers.

Two traffic control points were established during the exercise. County police officers were dispatched to each location and arrived promptly. Both officers were knowledgeable about procedures to direct and reroute traffic in case of an evacuation. In accordance with the free play provided by the scenario, a traffic impediment resulting from an accident was simulated. Sheriff's deputies and state police officers were dispatched to the site, responding in six minutes.

The county has identified approximately 12 noninstitutionalized, mobility-impaired persons who would require special assistance during an evacuation. This special assistance can easily be provided by existing public resources, and was demonstrated by a van which was dispatched to one person's address.

- Deficiency: Putnam County transportation personnel have not been adequately trained regarding evacuation procedures, the routes they should follow to pick up evacuees and the location of reception centers (NUREG-0654, II.J.10.a, II.J.10.g).
- Recommendation: Bus drivers responsible for evacuation services should be trained regarding evacuation procedures and supplied with better maps and instructions concerning the routes and the locations of reception centers.
- Deficiency: The bus used for evacuation was not equipped with a radio for communication (NUREG-0654, II.J.10.g).
- Recommendation: Each bus used for evacuation should be equipped with a radio.

2.7.8 Health, Medical, and Exposure Control Measures

The adequacy of health, medical, and exposure control measures varied considerably in Putnam County. Field monitoring teams displayed a good knowledge of dosimetry; however, county police officers and bus drivers were not sufficiently aware of procedures for reading dosimeters and maintaining dose records. Scanning at the PMCs was also generally good. Control of access to evacuated areas was not demonstrated for this exercise; however, county police officers were knowledgeable about the procedures that would be used.

Each field monitoring team member was given three dosimeters (0-200 R, 0-5 R, and 0-200 mR) before deployment to the field. Emergency personnel were aware that the dosimeters should be read every 30 minutes, and that the EOC

should be notified if dosimeter readings approached 1 R. However, the latest revision of the Putnam County Radiological Emergency Response Plan calls for the reporting of dose readings of 100 mR. The radiological officer had appropriate log sheets for recording doses; however, these records were not maintained for the exercise. Initially, field monitoring teams did not call in readings because they were not given any numbers by the controllers. Some numerical readings were called into the EOC later in the day, but were not received by the radiological officer. The radiological officer demonstrated the ability to estimate doses based on field data and the time spent by emergency workers in the field. Each team member also had a TLD, correcting deficiencies identified in the 1982 exercise.

The two county police officers monitoring the traffic control points and the bus driver had dosimeters (1-5 R) and TLDs; however, the bus company had only one dosimeter. Additional dosimeters need to be provided for all drivers who might be called upon in a real emergency. Bus drivers and county police officers need to be better informed about dosimetry. Instructions on how often to read a dosimeter, the threshold limit, and the recording of doses were either lacking or confusing.

Both the reception center at John Jay High School and the PMC at Carmel Fire Station used a level of 0.1 mR/hour above background as a criterion for decontaminating equipment, vehicles, evacuees and emergency personnel. At the Highland Fire Department PMC there was some confusion about the decontamination limit. The PMC director had been informed that the decontamination level should be significantly higher than 1 mR/hour, but when questioned he indicated he would decontaminate anything above background. Typically, personnel were knowledgeable about monitoring methods and the need for decontamination.

Emergency personnel were documented upon arrival. Both congregate care centers were aware that personnel arriving without forms from a reception center or PMC had to be monitored before entry. This was demonstrated at the George Fisher Middle School. Both the reception/congregate care center and the PMCs had appropriate monitoring and decontamination facilities, including registration and record keeping for personnel. However, the Hopewell Junction reception/congregate care center did not have capabilities for monitoring or decontaminating vehicles. Additionally, personnel monitoring at the reception/congregate care center required 5-6 minutes per person. This will limit the ability to handle large numbers of people. Both the reception center and PMCs had appropriate waste disposal capabilities for solid and liquid waste, which corrects a deficiency noted in the 1982 exercise.

All emergency workers had KI with them and were aware that it should not be taken without specific authorization. Most emergency response workers were aware that the State Commissioner of Health is responsible for any instructions on the use of KI.

Although actual control of access to evacuated areas was not demonstrated for this exercise, the county police officers were knowledgeable about the procedures that would be used. Both officers observed mentioned the need to find out from headquarters what specific kinds of emergency vehicles would be allowed back into the evacuated area and the type of identification that would be required.

- Deficiency: Bus drivers and county police officers are not familiar with procedures for reading dosimeters, reporting and recording doses, exposure threshold limits and the use of KI (NUREG-0654, II.K.3.b).
- Recommendation: All emergency response personnel should be fully trained in radiological exposure control procedures, including the use of dosimeters and KI.

2.7.9 Recovery and Reentry Operations

Reentry operations were tested using simulated events as specified in the scenario. Based on interviews with personnel at the Putnam County EOC, it was determined that a generally acceptable capability exists to recover and reenter the area after a radiological emergency. The County Executive gave a brief oral description of what would have been done according to the plan. The radiological officer and deputy were also questioned and were aware of the procedures for extended monitoring and sample collection.

2.7.10 Relevance of the Exercise Experience

The overall relevance of the exercise experience was good. The scenario tested the capability to activate the Putnam County EOC and carry out the emergency response functions according to the county RER plan. The scenario also provided the opportunity to free play traffic control points, a bus evacuation route, police response to impediments of evacuation, and evacuation of mobility-impaired persons. Although the ability to monitor traffic control points and execute an evacuation route was tested, these events in no way taxed the ability of county and local personnel to respond, due to the limited number of points selected.

Local and state players and volunteers in general responded very well, and participated fully by actively carrying out assignments and responsibilities. It appears that all players learned things which would improve their performances in future exercises or emergencies. Some of the participants in key roles in the EOC were new to their assignments. The exercise was particularly valuable to these persons since it was their first experience.

2.8 DUTCHESS COUNTY, NEW YORK

Dutchess County is a host area for evacuees from Putnam County. The Dutchess County EOC was mobilized to coordinate the activation of the John Jay High School reception/congregate care center in Hopewell Junction. Due to the limited role of Dutchess County in the IP 2 exercise, only certain limited functions were observed.

2.8.1 Emergency Operations Facilities and Resources

The Dutchess County EOC had good facilities and resources to support emergency operations. The facility was somewhat crowded; however, this did not impair performance. Security measures were good. A guard was posted at the door and a record was kept of all people entering and leaving the EOC. Displays in the EOC were good. Maps showing evacuation routes, relocation centers, shelter areas, and population distribution were available. All maps and status boards were clearly visible to EOC staff. Although there was no weather status board or chart, current weather information was announced at the podium with a microphone. The communication systems functioned effectively. The primary communication system with state and local governments was by telephone, with a two-way radio providing a backup capability.

2.8.2 Alerting and Mobilization of Officials and Staff

Although a federal observer was not present and did not observe the alerting and mobilization of EOC staff, a detailed plan was available that summarized procedures. When the federal observer arrived at 12:00 noon, all EOC staff were present. Although a shift change was not demonstrated, each organization has backup personnel capable of providing continuous 24-hour emergency response capability.

2.8.3 Emergency Operations Management

The Dutchess County EOC displayed outstanding emergency operations management capability. The facility was fully staffed by dedicated and informed personnel, and it was well managed throughout the entire exercise. The County Commissioner was present and participated in decision-making. Primary and support functions had been assigned to specific organizational elements, and written SOPs for the various emergency classification levels were available for all organizations. All staff members were briefed regularly and on an as-needed basis. Briefings were clear, concise, and professional.

2.8.4 Actions to Protect the Public

A reception/congregate care center was activated in Hopewell Junction to receive Putnam County evacuees.

2.8.5 Relevance of the Exercise Experience

The exercise scenario was adequate to test the capability of Dutchess County to act as a host county.

2.9 BERGEN COUNTY, NEW JERSEY

Bergen County, New Jersey, is a host area for evacuees from Rockland County who require congregate care. The Bergen County EOC was activated on a limited basis, along with one congregate care center at the Arcola Methodist Church. Due to the limited role of Bergen County in the IP 2 exercise, only certain limited functions were observed.

2.9.1 Emergency Operations Facilities

Emergency operations facilities were acceptable, given the limited role of Bergen County in the exercise. The EOC was small, but adequate to accomplish the required emergency response tasks. There was a separate communications room, equipped with various radio systems; only two units were actually used in the exercise. The EOC was staffed by a director and a communications officer, so internal message handling was not a problem. Radio messages were recorded on a message form, and a log was kept by the EOC director. Although maps of New Jersey and Bergen County were posted, the EOC should also have maps of the 10-mile plume exposure pathway EPZ, with population by ERPA, evacuation routes, reception centers and relocation centers designated. A status board was not used, nor was the emergency classification posted.

- Deficiency: Maps of the 10-mile plume exposure pathway EPZ, including population (by ERPA) and evacuation routes, and maps of reception centers and relocation centers in Rockland and Bergen Counties were not posted in the Bergen County EOC (NUREG-0654, II.J.10.a, II.J.10.b).
- Recommendation: Maps of population by ERPA, evacuation routes, reception centers, and relocation centers should be posted in the Bergen County EOC.

2.9.2 Alerting and Mobilization of Officials and Staff

Alerting and mobilization of EOC and relocation center staff were good. The county civil defense administrative telephone is staffed on a 24-hour basis by an answering service, which is instructed to notify the civil defense director and radio operator, or their alternates, in an emergency. The Bergen County Sheriff's Department monitors a NAWAS point on a continuous basis. The American Red Cross, which is responsible for activating the relocation center, maintains a 24-hour notification system with staff on page call.

Both EOC and relocation center (Red Cross) staff have a capability to sustain continuous (24-hour) operations. However, a shift change was not demonstrated.

2.9.3 Emergency Operations Management

Bergen County has not formally adopted a radiological emergency response plan, nor defined the role to be played by its EOC in an incident at the Indian Point Nuclear Power Station. The Bergen County EOC was activated and was staffed with capable, well-informed people, but they had little to do. Communications with Rockland County occurred on a sporadic basis.

The American Red Cross, operating through its own channels, established a congregate care center in Bergen County and the transfer of 1000 people from Rockland County to that facility was simulated. However, neither the Red Cross nor the Bergen County EOC coordinated this activity with New Jersey State or Bergen County law enforcement agencies that would be called upon to establish traffic control.

- Deficiency: The American Red Cross and the Bergen County, EOC did not coordinate their activities with New Jersey law enforcement agencies (NUREG-0654, II.A,1.a).
- Recommendation: The New York State compensating measures for Rockland County should include provisions enabling the American Red Cross and the Bergen County EOC to coordinate their activities with New Jersey law enforcement agencies responsible for traffic control.

2.9.4 Actions to Protect the Public

The American Red Cross demonstrated an excellent capability to establish, equip, and staff a congregate care facility in Bergen County, New Jersey. This facility, designed for occupancy by 80 persons, provided space for cooking, recreation, a nursing station, and offices. A one-step entrance was available for handicapped persons. Communications systems included

telephone, RACES, and American Red Cross radio. The Red Cross provided cots, blankets, food, and medical supplies. Congregate care center managers were clearly in charge. Red Cross staff were experienced in actual disaster relief, and were prepared to register and monitor evacuees and provide nursing care and basic services. Staff referred evacuees without papers from a reception center to a radiation monitoring station at a separate entrance. There was a "holding area" for contaminated persons, who would be sent elsewhere for actual decontamination.

2.9.5 Relevance of the Exercise Experience

The scenario was adequate to test Bergen County's role as a host area for Rockland County. The limited activity in the Bergen County EOC was a result of inadequate planning in Bergen County rather than deficiencies in the scenario itself.

3 SCHEDULE FOR CORRECTION OF DEFICIENCIES

Section 2 of this report lists deficiencies based on the findings and recommendations of the federal observers at the March 9, 1983, exercise of the Indian Point Nuclear Power Station, Unit No. 2. These evaluations are based on the applicable planning standards and evaluation criteria set forth in NUREG-0654-FEMA-1, Rev. 1 (November 1980) and objectives agreed upon for the exercise. The attached table summarizes recommendations to correct those deficiencies that were identified as requiring corrective actions based on this exercise. For purposes of verification, the attached table compares these recommendations with the recommendations based on the March 3, 1982, exercise. The present status is indicated for all recommendations.

The Regional Director of FEMA is responsible for certifying to the FEMA Associate Director, State and Local Programs and Support, Washington, D.C., that any deficiencies that require corrective actions have been corrected and that such corrections have been incorporated into the plans as appropriate.

FEMA requests that both the state and local jurisdictions submit the measures they have taken or intend to take to correct these deficiencies. FEMA recommends that a detailed plan, including dates of completion for scheduling and implementing recommendations, be provided if remedial actions cannot be instituted immediately.

Table 1 Recommendations to Correct Deficiencies Identified in Radiological Emergency Response Preparedness at Exercises for the Indian Point Nuclear Power Station of March 9, 1983, and March 3, 1982

No.	Recommendations	NUREG-0654 FEHA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹
			Deficiency Identified		
			Exercise 3/9/83	Exercise 3/3/82	
<u>Introduction to Rockland County</u>					
	Rockland County should finalize and adopt a radiological emergency response plan and procedures to respond to an emergency at IP 2.	I.E	X		Rockland N
	Rockland County should participate fully in the next exercise of radiological emergency response plans and preparedness for IP 2.	II.N.1.b	X		Rockland N
	New York State should improve its capability to implement compensating measures in light of the nonparticipation by Rockland County emergency response personnel at the March 9, 1983, exercise.	II.A.1.b	X		State N
1.	<u>Emergency Operations Facilities Resources</u>				
	Communications systems between the state EOCs and other EOCs should be improved.	II.F		X	C
	Additional maps for displaying populations within ERPAs and field sampling locations should be provided in the Albany EOC.	II.J.10.a		X	C
	More space is needed for effective display of information in the EOF, and a single-floor area would ease communications.	II.H.2		X	C

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹
			Deficiency Identified		
			Exercise 3/9/83	Exercise 3/3/82	
	The communications system needs improvement, and backup telephone lines should be available.	II.F		X	C
	EOF and state EOC messages should be brief. An investigation should be made to examine utilization of a second telefax machine.	II.F.1.d	X		State N
	The arrangement of tables and the locations for each emergency worker in the EOC should be reviewed in order to minimize the impact of the small space on the operation of the EOC.	II.H.3		X	Westchester C Orange C
	A dedicated line between the EOF and the EOC should be installed to improve communications.	II.F.1.d		X	Westchester C
	Orange County EOC executive hot line should be made operational so that all the county EOCs can communicate with each other readily (e.g., Orange with Westchester).	II.F.1.d		X	Orange C
	A population distribution map should be displayed in the EOC.	II.J.10.b		X	Westchester C
	Backup communications systems and procedures should be reviewed to reduce dependence on the commercial telephone system, since this may be overloaded in a real emergency.	II.F.1.e		X	Westchester C

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹
			Deficiency Identified		
			Exercise 3/9/83	Exercise 3/3/82	
	It is recommended that workers in the EOC wear identification badges that give their names, their organizations (e.g., Red Cross, etc.) and their functions, in order to expedite the flow of messages and orders.	II.H.3		X	Westchester C
	Substantial improvement is needed in equipment and procedures for external communication. The RECS line system needs to be made more reliable. Staff support is needed to relieve principals from phoning tasks.	II.F.1.b		X	Rockland C
	Consideration should be given to allotting more space to the accident assessment room.	II.H.3		X	Rockland C
	A procedure is needed for keeping the operations-room staff better informed. It is suggested that the operation log be updated frequently and circulated to provide a chronological record of activities.	II.F.1.d		X	Rockland U
	The plan should be revised to coordinate contact between the counties, the Coast Guard, the railroad, and federal agencies where multiple contacting may also occur.	II.F.1.c		X	Rockland U
	Another communications link between the Rockland and Bergen County EOCs is desirable.	II.F.1.b	X		Rockland N

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹	
			Deficiency Identified			
			Exercise 3/9/83	Exercise 3/3/82		
	A map of congregate care centers in Bergen County should be posted in the Rockland County EOC.	II.J.10.a	X		Rockland	N
	Additional telephone lines or equivalent systems should be provided in the EOC to serve as an additional backup for dedicated telephone.	II.F.1.b		X	Orange	C
	The plan for internal communications and dissemination of information within the EOC should be improved to increase efficiency and coordination. Radiological field monitoring data should be transmitted directly into the accident assessment room.	II.F.1.d		X	Orange	C
	EOC workers should be familiarized with displays.	no reference		X	Orange	C
	Maps of population by ERPA, evacuation routes, reception centers, and relocation centers should be posted in the EOC.	II.J.10.a, II.J.10.b	X		Bergen	N
	Procedures for security should be reviewed.	no reference		X	Putnam	C

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹
			Deficiency Identified		
			Exercise 3/9/83	Exercise 3/3/82	
2.	<u>Alerting and Mobilization of Officials and Staff</u>				
	Improvement is needed in the flow of information back to the EOF from state and local response organizations.	II.F		X	
	Additional consideration should be given to staffing of critical positions by backup personnel.	II.A.1.e		X	Rockland U
	More effective methods are needed for initial call-out to emergency personnel.	II.E.2		X	Rockland U
	There was insufficient staff available for alerting and mobilizing emergency personnel and a 24-hr capability for most functions was not demonstrated. These have not been addressed.	II.A.1.e		X	Rockland U
	DOH personnel with duties in Rockland County should be given additional training in Rockland County plan and procedures.	II.A.4	X		Rockland N
	Each Rockland County transportation company with an emergency response mission should acquire equipment to permit radio communications with its vehicles and with the transit coordinator in the EOC.	II.E.1, II.E.2	X		Rockland N
	Provide more comprehensive training for key backup personnel.	II.A.4		X	Orange C

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹	
			Deficiency Identified			
			Exercise 3/9/83	Exercise 3/3/82		
	Provide additional training and resources for communication with field support personnel.	II.F.1.d		X	Orange	C
	Alternates for the Civil Defense Director and RADEF Officer should be trained as soon as possible.	II.A.4		X	Putnam	C
	An emergency power generator should be considered for use during a power failure.	II.A.4		X	Putnam	C
	Monitoring teams should be dispatched to the field at the earliest possible time, so that they are in position to provide data for an independent early assessment of the emergency.	II.H.4, II.I.8		X	Putnam	C
	Procedures for transmitting meteorological data, plant emissions data, and data obtained by the utility field monitoring teams from the utility and EOP to the EOC should be reviewed and strengthened.	II.F.1.d, II.I.8		X	Putnam	C
	Representatives of the state, Westchester, Orange and Putnam Counties should meet with the utility to review and modify, if necessary, the procedures for ensuring that notification messages are verified by county officials responsible for the mobilization of emergency resources.	II.E.1	X		State Westchester Orange Putnam	N N N N

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		
			Deficiency Identified		Present Status ¹
			Exercise 3/9/83	Exercise 3/3/82	
3.	<u>Emergency Operations Management</u>				
	State support agencies should be given more involvement in the exercise.	II.A.1.b		X	State EOC C
	The role of county representatives at the EOF needs better definition.	II.B.6		X	EOF C
	Emergency staff would benefit from more familiarity with the response procedures.	II.A.1.b		X	Rockland U
	More effective management of the EOC is needed to ensure efficient operation.	II.A.1.d		X	Rockland U
	The divided floor plan within the EOC requires that effective communication flow and procedures be established to ensure efficient management.	II.F.1.d		X	Orange C
	The New York State compensating measures for Rockland County should include provisions enabling the American Red Cross and the Bergen County, New Jersey, EOC to coordinate their activities with New Jersey law enforcement agencies responsible for traffic control.	II.A.1.a	X		Rockland Bergen N
5.	<u>Public and Media Relations</u>				
	Intense efforts should be made to make the public aware of the meaning of the siren signals.	II.G.1		X	Westchester R Putnam C Rockland R Orange R
	Publication and distribution of the public education brochures for Westchester and Rockland Counties should be expedited.	II.G.1	X		Westchester N Rockland N

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		
			Deficiency Identified		Present Status ¹
			Exercise 3/9/83	Exercise 3/3/82	
	In conjunction with county PIOs, criteria should be developed to determine what type of information will be issued via EBS and what type via news releases.	II.E.5		X	C
	Procedures for quickly activating rumor-control telephone numbers and procedures should be formalized.	II.G.4.c		X	C
	Additional public education is needed so that the public will understand the locations of the areas that are to take protective actions, and will know how to carry out the protective actions. Consideration should be given to ascertain whether a significant number of people did not receive the pamphlets. If this is the case additional distribution should be made.	II.J.10a, II.G.1	X	X	Westchester R Rockland R Putnam C Orange C
	County PIOs should attend all major media briefings.	II.G.4a		X	Westchester C
	Emergency workers in the EOC should be kept better informed of the information being released to the public.	II.E.5		X	Orange C
	Will EOC emergency workers be instructed as to where they may find these posted messages?	no reference		X	Orange C
	Press briefings should be announced in advance so that PIOs can attend.	II.G.4.a		X	Orange C

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹
			Deficiency Identified		
			Exercise 3/9/83	Exercise 3/3/82	
	The public education program should be reviewed to determine whether efforts are needed to improve its effectiveness.	II.G.2	X	X	Westchester R Rockland R Putnam C Orange C
	A very complete educational campaign regarding ERPAs should be implemented that includes distribution of detailed maps showing these areas.	II.J.10.a, II.G.1		X	Westchester not observed
	As soon as possible, the necessary public information materials should be distributed and posted in public places for the use of transient populations who may come into the 10-mile plume exposure pathway EPZ.	II.G.2	X		Westchester R
	As soon as possible, the necessary public information materials should be posted in hotels and motels to inform transient populations who may come into the 10-mile plume exposure pathway EPZ in Rockland County.	II.G.2	X		Rockland R
	The timeliness and accuracy of Orange County news releases should be improved.	II.G.4.b	X		Orange N
6.	<u>Accident Assessment</u>				
	Additional calculating equipment should be considered to expedite dose calculations.	II.I.8		X	State C

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-NEP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹
			Deficiency Identified		
			Exercise 3/9/83	Exercise 3/3/82	
	The state may wish to consider its own field monitoring capability which would allow the state to make an independent accident assessment.	II.1.7		X	State - Not observed
	Response time for analyzing changes in dose calculation parameters should be shortened.	II.1.8		X	EOF Not observed
	Procedures should be developed for obtaining the field data measured by the utility's field monitoring team in a timely manner.	II.1.8		X	Westchester C Putnam C
	An improved communications system is needed to support assessment activities and timely use of field data.	II.F.1.d	X	X	Rockland R
	Additional training of field teams would be beneficial to increase their familiarity with equipment and procedures. Responsibilities for field radiiodine measurements should be clearly defined.	II.1.8, II.1.9		X	Rockland U
	The duties of the county representative at the EOF should be more clearly defined.	II.C.2.a		X	Rockland U EOF

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		
			Deficiency Identified		Present Status ¹
			Exercise 3/9/83	Exercise 3/3/62	
	Silver zeolite filters should be used in the air sampling equipment that is used for measuring radioiodine. NOTE: Charcoal filters may be used during drills and exercises, but the silver zeolite filters must be in the instrument kits ready for use in an actual emergency	II.1.9		X	Westchester C Orange C Putnam C
	The sequence of sample points used (routes driven by the monitoring teams) should be carefully chosen to give the maximum amount of data for use in making the early independent assessment.	II.1.8		X	Westchester C
	Field teams need additional training consistent with procedures outlined in the procedure manual.	II.1.7	X		Putnam N
	The number of samples needed for an independent early assessment, and the possible hindrances to fast deployment of the field monitoring teams, should be reviewed to assess the possible need for additional field monitoring teams.	II.1.8		X	Westchester C Putnam C
	Field teams should demonstrate familiarity with instruments having response ranges that might be needed during an actual event.	II.1.8		X	Orange C

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹	
			Deficiency Identified			
			Exercise 3/9/83	Exercise 3/3/82		
	Information exchange between the EOC and field monitoring teams needs to be improved so that field teams are kept informed of emergency escalation and meteorological data.	II.F.1.d	X		Putnam	N
7.	<u>Actions to Protect the Public</u>					
	Procedures for staffing control points in a timely manner need to be reviewed and strengthened.	II.J.10.j		X	Westchester	Not observed
	Procedures for dealing with impediments to evacuation need to be developed and exercised. These impediments include auto accidents, auto breakdowns, severe road conditions, and the unavailability of gasoline when needed.	II.J.10.k		X	Westchester	C
					Putnam	C
	Bus drivers responsible for evacuation services should be trained regarding evacuation procedures and supplied with maps and instructions concerning the routes and the locations of the reception centers.	II.J.10.a, II.J.10.g	X	X	Westchester	R
					Putnam	N
	Procedures and equipment for the evacuation of mobility-impaired persons need to be improved.	II.J.10.d	X	X	Westchester	R
	Additional training is needed for the reception center personnel who do radiation surveying and decontamination.	II.J.12	X	X	Westchester	R

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹
			Deficiency Identified	Exercise 3/9/83	
	Means for obtaining prompt and accurate field measurements of radiiodine should be specified to provide guidance on protective action decisions.	11.1.9	X	X	Orange C
	Provisions for care of the handicapped should be considered at reception centers.	11.J.10.d	X	X	Orange R
	Additional training for those workers performing radiation monitoring and decontamination procedures is recommended.	11.J.12	X	X	Orange C
	Transportation personnel responsible for the evacuation of mobility impaired persons should be trained in evacuation procedures and the supply of ambulances for the evacuation of nursing homes should be reviewed.	11.J.10.d	X		Westchester N
	The capacity of congregate care facilities in Westchester County should be reviewed and additional facilities should be identified if necessary.	11.J.10.h	X		Westchester N
	Detailed evacuation plans and procedures for Rockland County should be developed and incorporated within the plans.	11.J.10.g	X		Rockland N
	Each bus used for evacuation should be equipped with radios.	11.J.10.g	X	X	Putnam Westchester Rockland ¹ N

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		Present Status ¹
			Deficiency Identified		
			Exercise 3/9/83	Exercise 3/3/82	
8.	<u>Health, Medical, and Exposure Control</u>				
	More sensitive self-reading dosimeters (e.g., 0-200 mR, 0-20 R) should be provided to emergency workers.	II.K.3.a		X	Westchester C Orange C Putnam C
	Permanent record dosimeters (e.g., film badges, TLDs) should be provided to emergency workers.	II.K.3.a	X	X	Westchester R Orange C Putnam R Rockland R
	Methods for permanently disposing of contaminated liquid and solid wastes need to be developed for the decontamination centers.	II.K.5.b		X	Westchester C Rockland - not observed Orange R
	Monitoring equipment should be recalibrated periodically according to the schedules set forth in the plan.	II.H.10		X	Westchester C
	On-the-job training would make procedures flow more smoothly at the congregate care centers.	II.J.12		X	Rockland C
	Additional training is needed at local hospitals on radiation monitoring.	II.L.1		X	Orange - not observed
	Both permanent record dosimeters and self-reading pocket dosimeters should be procured and distributed to all emergency workers.	II.K.3.a	X	X	Rockland R

Table 1 (Cont'd)

No.	Recommendations	NUREG-0654 FEMA-REP-1 Rev. 1, Reference	Verification of Exercise		
			Deficiency Identified		Present Status ¹
			Exercise 3/9/83	Exercise 3/3/82	
	Procedures should be clarified so that all personnel know which individual (e.g., the County Executive) can approve emergency workers receiving a radiation exposure in excess of the PAGs.	II.K.4		X	Putnam C
	All emergency workers should be fully trained in radiological exposure control including the use of dosimeters and KI.	II.K.3.b	X		Rockland N Putnam N Westchester N Orange N
10.	<u>Relevance of the Exercise Experience</u>				
	Future exercises should include more extensive participation by police, sheriff, fire, and ambulance services. Training needs in these areas should be identified.	II.B.9	X	X	Rockland R

¹R - Repeated deficiency from 1982 exercise.

C - Deficiency corrected based on verification.

N - New deficiency.

U - This deficiency, identical during the 1982 exercise, called for remedial action by Rockland County. Since Rockland County has not adopted a plan and state personnel substituted for county emergency response employees, Rockland County's capability for this activity could not be verified at the March 9, 1983, exercise.

12/82

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