

THE LEAGUE OF WOMEN VOTERS OF GREATER YORK

EVACUATION STUDY UPDATE

APRIL 17, 1981

The League of Women Voters of Greater York found during their study of nuclear power during the fall and winter of 1979-80 that, among other things, evacuation planning in general as well as locally had been neglected as a vital health and safety measure for the communities surrounding Three Mile Island Nuclear Station. The NRC's own Special Inquiry Group reviewing the accident stated evacuation planning must be considered as an independent means of protection for citizens living near a nuclear plant over and above the engineered safety system designed to mitigate an accident and prevent releases.

It was because of this observation we voted to conduct a further study this fall into the present status of evacuation planning for York County, particularly as it applied at the county, municipal and school district levels. We also reviewed broadly the roles of the various departments of state.

We first met in September, 1980. Laid out were the plans to do the four reviews and then see to it that the public be given maximum opportunities to learn about the plans as we felt ultimately public awareness would increase public input and study and ultimately plan effectiveness. Because of time problems we decided to do just an overview of state planning, give some consideration to the county plan and focus more on the municipal and school district levels.

There were twelve members on the committee, approximately three members to each subcommittee formed to cover the above reviews. Phone

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or in-person interviews were conducted with representatives from FEMA and other state agencies; the NRC; FEMA; the Bureau of Radiation Protection of the Pennsylvania DER; Kline and Knopf; Maryland Department of Health; as well as with the emergency management coordinator, or if he or she didn't exist, a local official from each of the 14 municipalities within the 10-mile radius; Randy Curry, who is the York County Emergency Management Coordinator; his predecessor; June Snyder, who is the Health and Medical Officer for York County; a prison warden; as well as others.

We met regularly and reported on our subcommittee progress.

Ultimately, when all our data was collected and reviewed, we completed our summary and presented it twice, on November 19, 1980, and on January 7, 1981 to the League and to the interested public.

We decided to do an update of the major part of our study this spring. We concentrated on repeat interviews with the representatives of the municipalities and of the school districts, and in addition, bus companies, and selected follow-ups at the county level. The following is a summary of our update.

MUNICIPALITIES

Table 4 summarizes many of the areas reviewed.

1. SIRENS

In general most still have inadequate siren systems but some have heard informally or by rumor that additional ones are to be installed soon. Specific numbers of sirens and areas of placement are not known. The Manchester Township coordinator felt 10 new sirens would not adequately notify his township because of the interstate and other large thoroughfare traffic noise as well as noise from its large number of industries and also interference secondary to the undulating topography of the township. A few

other coordinators were concerned about obstructions to hearing the sirens such as air conditioners, adverse winds, TV's and radios. A few (Lewisberry, Goldsboro) were entirely satisfied with their present systems.

2. ANNUAL EXERCISE

Virtually all of the plans (except for Goldsboro) called for no exercise of their plan at all.

3. POTASSIUM IODIDE

Mr. Curry has contacted some of the coordinators to get total numbers of emergency workers, apparently for potassium iodide dose estimates needed. Where and if doses would be stored was not made clear. The rest had no new knowledge of plans for potassium iodide.

4. RADIOS, TELEPHONES, MONITORS

a) Radios

Concerns were again raised about inadequate radiocommunication. It became apparent that many municipalities were going to be relying on the county fire frequency 3390 alone. Chief Schaeffer of Manchester Township felt this was one of the biggest problems, predicting "one big jam." He pointed out that with even much more minor incidents, such as woodfires they had recently, that the frequency quickly gets "voice-locked" --where, with 2 or 3 people speaking at once, they cut each other out with the overriding of the voices on the radio. He would very much like to obtain his own township radiofrequency to improve the chances of intra-township communication during a general emergency but can't acquire funding for this. Fairview has had its own township radiofrequency for years and its coordinator feels this will amply aid communication. Newberry is presently attempting to raise funds within its township for more radios

and Goldsboro, too, is anxiously seeking 6-7 additional portable radios to speed up evacuation. Most of the municipalities, in general, feel they need more radios.

b) Telephones

Again, phone jams were anticipated with most of the municipalities; putting in additional lines was another expense for the township or borough. Newberry township feels additional phones is a high priority need. The coordinator expressed a worry about how difficult it would be to reach by phone many of the emergency personnel if, for example, an accident occurred in the middle of the day, as many work far away, and he "would have one heck of a time getting them together." He criticized the county's placing its telephone number on the evacuation brochure front as he predicted many would try to call that number for information at a time lines would be most needed to contact and line up emergency personnel. The coordinator for Mt. Wolf reported that Mr. Curry urged him to get licensed ham radio operators lined up because of anticipated radio and CB jamming.

c. Monitors

Goldsboro is trying to drum up one thousand dollars for a CPM monitor and is hoping to get another portable one. Many have no change in the number of their monitors. East Manchester Township has a Ludlum monitor but Mr. Grim, its coordinator, who is one of the few who have taken the formal monitoring course from Penn. State, has requested it be removed as he cannot afford the gas and time it takes him personally to read it each day.

5. WORKING WITH SCHOOLS

As noted in Table 3 of the first summary, there are 2 municipalities (Goldsboro and Lewisberry) which have no schools to deal with. Warrington

and Fairview noted no change in the involvement of the school districts in planning. The Dover representative stated the schools are taking full responsibility and has done no further work with them. The Hellen coordinator felt cooperation and communication with the Eastern schools was no problem. The E. Manchester coordinator stated the Northeastern Superintendent informed him there was a plan but it's futile because parents will come and pick their children up. He understood the State Board of Education will cut off aid if the school districts do not hand in a report or a plan and he asked, "Why can't the school districts be made to talk to coordinators," as he, along with the coordinators of Mt. Wolf, Manchester Borough, and York Haven have complained of lack of cooperation with the Northeastern Superintendent in coordination of planning efforts. Newberry's coordinator felt West Shore was on top of things.

6. SHELTERING

Many felt sheltering was dependent on the type and length of the accident. If an evacuation was ultimately necessary, they felt preliminary sheltering was not a good idea. Most have done no work specifically dealing with sheltering and view their efforts at planning right now to be directed solely to evacuation. The Newberry coordinator noted that FEMA had sent him some sheltering information in its newsletter but, because he's so busy with everything else, he hasn't had time to read it.

7. PUBLIC INFORMATION NOTICE

About half of the municipalities were copying and sending out the county's evacuation brochure to their own constituents with many, if not all, doing it at their own expense. Warrington intends to draw up an additional flyer to be passed out at the time of an emergency only. Goldsboro has its own flyer as does York Haven and Fairview will probably make up one at some future time.

The county brochure refers to, "the reception points designated by your local officials," "If you do not have transportation, go to one of the pick up points in your municipality," "If you are physically unable to leave your home, contact your local emergency management coordinator"-- all dead-end references if no other more local information has been given out prior to an accident. The brochure also does not follow the guidelines set forth in NUREG-0654 Revised.

8. EQUIPMENT

Most municipal coordinators need some forms of equipment both large and small to effectuate the plan. A few were satisfied with what they have, at least as it related to evacuating that portion of their municipality that lies within the 10 mile radius. It was the general feeling that neither the equipment nor monies for it would be coming from any other level than their own...if there.

9. AMBULANCE FUNCTIONS

It is the ambulance which carries the county control radio in Lewisberry and will, therefore, serve as a main source of communication with the county. East Manchester has no ambulances and plans to rely on Manchester, understanding they'll be second in line. York Haven is similarly strapped and planning to rely on Newberry or Manchester. Other coordinators envisioned their ambulances to function as means of evacuating non-ambulatory residents. The Hellam coordinator has listed priorities, with the latter first followed by helping victims of stress, then car accident victims. Newberry assumes the police cars will remove the invalids and ambulances will serve more for accidents that may occur in the evacuation process. Manchester Township plans the same as the latter for its municipality and expects June Snyder's Pa. Dept.

of Health group to provide ambulances for the nursing homes and homebounds. In general, then, there is some confusion about their roles at times. In addition, the coordinator of Newberry Township raised concerns about priorities. He pointed out his township has 2 ambulances. It has a list of 10 invalids. He wonders how one would make the choice between hauling the invalids and victims in an accident(s), on I-83 for instance. And he further questioned where the victims would be taken. He wondered, too, if additional ambulances that might be requested from elsewhere would get cooperation from their volunteer club drivers if these drivers have to risk exposure to radiation. He pointed out, lastly, if volunteer club drivers do come from other counties, it will take them a significant time to arrive.

10. BUSES AND BUSDRIVERS

A few of the coordinators found their greatest concerns lay with the evacuation of the children in their communities. The Dover town manager, for instance, is convinced parents will ignore school evacuation plans and will make every effort to obtain their children directly from school, resulting in traffic problems and panic. (This was the feedback we received from many parents when we presented our study). The coordinators of East Manchester, Mt. Wolf, York Haven and of Manchester Borough have all been given that same impression by the Superintendent of their mutual school district. The coordinator from Manchester Township felt availability of the busdrivers was not to be counted on. He pointed out that they drive part-time and, and not being paid to stay by the phone, they do shopping, farming, etc. and generally are not necessarily available at a moment's notice to drive the schoolchildren out. He gave the example of a fire recently in Central High School while school was in session.

The decision was made to send the children home but they couldn't get hold of the drivers to bus them. They even called to a firehall to persuade one of the firemen to drive a bus. He queried, "Here, a small fire in one school, what's it going to be like if there's a major disaster like TMI?" The Newberry coordinator raised doubts about whether the drivers would stay to bus if there was a rapidly occurring radiation accident (this is discussed further below). He said that though he expected sufficient numbers of busses in West Shore, he wasn't sure who would go get them. He feels some of this community would be reassured knowing their children were taken out but others would be demanding their children be brought home, concluding, "There are mass differences on what should be done and not done." The summary of the school district subcommittee update will pursue this later.

11. COMMITMENT

Lewisberry and Hellam coordinators felt confident about getting the commitment to stay and perform assigned duties from their emergency personnel (with Hellam specifically addressing a 10 mile evacuation plan only). The coordinator from Mt. Wolf felt he had a respectable level of commitment from his people as did Mr. McCollum from Fairview. On the other hand, to quote the coordinator from East Manchester, "It ain't gonna work." He noted only 50% of his volunteers showed up for a meeting recently and feels even less would show up for an accident. Mr. Lankford of Dover questioned as noted before, "How do we mandate that a man stay here to work when in his mind his first responsibility may be his family?" A representative from Conewago Township expressed worries about getting commitments for a radiation accident specifically though not for a general accident.

Both the Newberry and Goldsboro coordinators stated, depending on the type and severity of the accident, they would take their families out first as they were their first priority and they felt their police and firemen would leave as well. Mr. Hamsher, the FMO in Goldsboro, felt half of the helicopter pilots available to aid in his area would participate. Mr. Forry, the coordinator in Newberry Township, said if given a gradual situation (similar to the 1979 accident) many of his people, including the busdrivers would stay and help. But if there was a more immediate danger, they would head south with the rest of the population. He felt this was the most severe problem by far in the evacuation planning. If an accident happened suddenly, "people would be in a pure panic just trying to get away," he observed, and he cited examples of what actually occurred during the course of the March 28th accident as part of the basis for his observation. He interviewed his firemen and was given the indication from them that the majority would not necessarily stay--that their families were first. They would take them away and only then return to help. Mr. Forry stated he wouldn't return if the area was irradiated and doubted many would. He predicted no one would sit and direct traffic, that it, "would be like suicide." He feels people are fooling themselves if they feel volunteers will stay. "Being a Christian, I have to tell the truth, evacuation won't work," and he added, "It's ridiculous for anyone in their right mind to say, 'We've got a plan,' that it's humanly possible."

All of the coordinators interviewed are volunteers. FEMA was and still may be requiring formal training for its emergency management coordinators; it also discourages coordinators to also be the fire or police chiefs or other day-to-day municipally responsible people such as that. Virtually all have other paying jobs, some within their municipality, some not. Most commented on the difficulties involved in developing a plan

with all that entails in their little spare time. Mr. Casswint of Warrington Township felt they would have to have someone paid fulltime to have everything down pat.

12. BRP/DER

A follow-up interview with Maggie Reilly of the Bureau of Radiation Protection was conducted. She noted that the previously broad-sided van is back in operation and the mobile lab is now considered functional. Their staffing situation is the same.

The potassium iodide supply is in Alabama and its shelf-life is soon to be up. As far as sheltering is concerned, she viewed the EPA's elaborate scheme for determining sheltering vs. evacuation to be too complicated to be useful at the time of crisis. She felt sheltering was only advisable for extremely rapid, short term threats. It is not to be considered a measure that will eliminate dose exposure, but may reduce it.

Table 4

MUNICIPALITY	PLAN COM- pleted	PUBLIC INFO. SOURCE	SIRENS	FINANCIAL AID	PERSONNEL TRAINING	INDEPENDENT TIME ESTIMATE	NEEDS EQUIP - MENT	EMC
CONEWAGO	-	-	?	-	-	-	?	-
DOVER	+	**	-	-	+	**	-	+
E. MANCHESTER	**	-	-	twsp:monitors, radios	-	-	+	+
FAIRVIEW	-	★	-	-	-	-	+	+
GOLDSBORO	+	+	?	boro:CPM moni- tor **	-	informal	+	+
HELLAM	**	-	-	?	-	-	+	+
LEWISBERRY	+	★	?	-	-	-	-	+
MANCHESTER b.	-	★	?	-	-	-	+	±
MANCHESTER t.	+	-	-	-	-	in process	+	+
Mt. WOLF	**	?	+	boro:radios	-	-	-	+
NEWBERRY	+	★	?	-	-	+	+	+
SPRINGETTSBURY	**	-	?	-	**	-	?	+
WARRINGTON	-	★	-	-	-	-	+	+
YORK HAVEN	+	+, ★	-	-	-	-	+	+

** soon

★ county's brochure

EMC=emergency management coordinator

SCHOOL DISTRICTS

(November 19, 1980 Summary)

A group of us interviewed 8 school superintendents. Of the group, 6 had schools entirely within the 10 mile radius, and the other 2 were within the 20 mile radius. The school district is responsible for developing and implementing procedures to transport all school children (if school is on session) out of the risk area. They are to be taken out in busses and each bus is to be accompanied by a teacher. Most superintendents weren't certain this latter requirement wouldn't be a problem; many teachers aren't aware of that rule. The superintendents are in charge of notifying bus drivers, of establishing routes of travel, reception centers, estimated times and are to see to it that parents receive an information source explaining all of the above. In Table 4 (Nov 19, 1980 Table of School Plans for York County), we list 9 questions posed to these superintendents and their responses.

To summarize, there are many more busses needed than available presently. Notification of drivers by phone may be difficult. In most cases, at this point in time, the school districts were planning to go to areas distinct from those planned by York County.

Three major problems cropped up in the interviews:

1. Coordination in Plan Development

This was particularly noticeable in the northern portions of the county where school districts overlap with Cumberland County. Involvement of the schools in planning was felt essential by the superintendents. They were told to develop their plans only—without any give and take. They fear they may plan one move only to be told later to change it. There is no mention anywhere of plans to care for children in nursery schools or day-care centers.

2. Communication During an Accident

There is genuine fear the phone lines will get jammed. We knew this occurred during the accident last year. One superintendent would like a lead time of 1 to 2 hours before the public is notified in order to get his children out.

3. Transportation

The number of available drivers is questioned. We found approximately 75% of them are women, many with young children. It may be difficult to have busses return for a second run if necessary because of lack of drivers, their cooperation, or their being able to fight exiting traffic. The routes to be taken include small main county or heavily travelled main routes. Most expressed hopes there would be drills.

Lastly we will mention some of our broad concerns that were raised during the study.

* The plans are based on several assumptions which might be called into question:

1. key personnel will be available, including coordinators, bus drivers, alert teams, fire and policemen, etc.

2. key personnel will be trained

3. unmet needs such as monitoring, transportation and communications equipment can be obtained or purchased elsewhere to be useful at the time of an accident.

* We are concerned people outside the 10 mile radius will try to evacuate with others if an evacuation of only 10 miles is called for.

* At this point in time, effective thyroid prophylaxis may not be able to be distributed in a timely basis.

* Funds needed to obtain the elements needed to effectuate the plan are probably not going to be generally available.

* These plans do not deal with a worst case accident.

* Mr. Curry, the Emergency Management Coordinator for York County, is very overextended. In addition to his job as coordinator, he has been put in charge of Veteran's Services. A study estimating coordinator needs in relationship to population would call for 4-6 people for our area.

November 19, 1980

Table of School plans for York County:

Questions:

	<u>West Shore</u>	<u>Western</u>	<u>Central</u>	<u>Northern</u>	<u>Eastern</u>	<u>Dover</u>	<u>W. York</u>	<u>Suburban</u>
1. Do you have a plan?	no	no	yes	yes	no	no	no	no
Total # of children?	8100	3100	3328	3000	2591	3467	2900	3420
Total # of busses, available?	60	23	32	28	23	33	12	19
Total # of busses needed to evacuate all children at once?	120	43	50	53	46	58	45	49
Source of Busses?	own	lease (Gross)	own	lease (Donson & Rohrer)	own	own 5 lease 28	lease	lease
How and how long to notify bus drivers in emergency?	phone -	phone 1 hr	phone 1/2 hr	phone 1 1/2 hr	phone -	-	bus co. -	bus co. -
Do you have a plectron receiver?	yes	yes	yes	no	no	-	yes	yes
Last known evacuation area to go to (Nov. 19, 1980 Study)	Dillsburg	Susquehannock	Susquehannock	Bermudian Springs	Clearview	Gettysburg	Susquehannock	Susquehannock
Evacuation area listed in York County Plan (Sept 3, 1980)	Carlisle	Susquehannock	Susquehannock	Bermudian Springs	South Eastern	North Oxford	Hanover	Hanover
Bus shortage (from above chart)	60	20	18	25	23	25	33	30 (=234)

Summary - School Data Follow-up

April 24, 1981

In our original study, several League members studied the sections of the York County Protective Action Plan dealing with school evacuation plans. From this we formulated questions which we posed to eight superintendents or their designees. The Plan specified that superintendents were responsible for formulating plans so it was logical to speak with these individuals.

We conducted follow-up interviews with the six superintendents or their designees whose schools lie within the 10 mile radius or part of whose district lies within it. This was to determine whether there had been any substantive changes in their plans or whether there had been any further contact between them and officials since our original interview in November. Questions and a tabulation of their responses are listed in Table # . In addition we made telephone interviews of bus contractors who lease buses to some districts. The questions and responses are tabulated in Table # .

There have been no major changes in the plans of any of the schools. Some additional contacts have been made and some additional information has been given to the schools. But the problems cited in our first summary remain: (1) transportation, (2) communications, (3) co-ordination.

The issue of responsibility for private school children is an important one. We found that there has been no direct contact between private school directors and public school superintendents and no coordination of effort in devising a plan to retrieve these children in the event of a serious emergency. In some cases superintendents have assumed responsibility to take private school children with public school children to the evacuation site. But this has not been communicated to the private school directors.

April 24, 1981

Those who were contacted expect the districts which normally delivers the children to retrieve them as usual. Some superintendents have said they would attempt to retrieve their own district children attending private schools in districts other than their own. Others have said that this would be impossible. Without some guidelines and coordination, mass confusion could be the result.

Reports which give totals of students to be evacuated and available buses to transport them and which include only the buildings of a school district within the 10 mile radius are deceptive. The reports ignore the fact that some children whose school building is outside the 10 mile radius live within it. No indication is given in the recent Parsons Brinkerhoff report than any thought has been given as to where to take these children.

Such reports also ignore the phenomenon known as the "shadow phenomenon" which is described in the Geographical Review, January 81, p.7. This article states that many people from a much larger area than is officially declared an evacuation zone will attempt to evacuate. For example, the Northern School District which has a formal evacuation plan, but whose schools lie outside the 10 mile radius, has told us they would take their children to the reception center beyond the 20 mile zone. Therefore the shadow phenomenon must be considered in the planning process because of inevitable traffic congestion and confusion resulting from such responses to emergency notification designed specifically for the 10 mile radius.

At no time has anyone polled bus drivers concerning their willingness to drive during an emergency, or their willingness to go to unfamiliar

districts during a severe emergency. Some superintendents and contractors have talked with their drivers and have the impression that they would report for work. But some had evacuated early during the last crisis and there is no guarantee that enough drivers would be available.

The time factor in contacting drivers is significant, depending upon the severity of the emergency. Even on snow emergency days it takes from 1/2 to 1-1/2 hours to contact drivers. On such days, when obvious bad weather can be reasonably anticipated, drivers usually leave numbers where they can be reached. Mobilization of drivers from far away for an unanticipated emergency could take much longer.

Our figures differ significantly from others that have been reported. This is because we have gotten them from the individuals directly involved in planning for the safety of children. These persons have been told to develop a plan for evacuating children and have received varying amounts of information and guidance. Our conclusions are that there is a serious need for coordination and communication between the school districts and the counties, in some cases between the counties themselves, and between the private schools and public schools whose responsibilities to the children are not clear. And all plans must then be communicated to the public so that parents will know exactly what is being planned for their children's well-being.

Table 1

Follow-up questions to School Superintendents

	West Shore	North Eastern	Central	Northern	Eastern	Dover
1. Have you been contacted by Parsons, Brinkerhoff, et al	Not directly	Yes	No	No	No	No
2. Any changes in plans since November interview	No	No	No	No	No	No
3. Have copy of York County plan dated 9/3/80?	Yes	Yes	Yes	Yes	Yes	Yes
4. Have copy of Lower Dauphin School District plan?	Yes	Yes	Yes	Yes	Yes	Yes
5. Any direct contact with private school directors?	No	No	No	No	No	No
6. Are you responsible to transport private school students within your district who live outside	No	Not applic	Yes	Yes	Not applic	Not applic
7. Are you responsible for retrieving your students from private schools outside your district?	Yes	No	No	No	Yes	Yes
8. Any contact with drivers re evacuation emergency	No	Yes	Yes	No	Yes	No
9. Are you prepared to shelter children in a nuclear emergency?	No	No	No	No	Yes	Yes
10. Have you received guidelines on sheltering?	Yes	Yes	No	No	No	Yes

Table 2

Questions posed to Bus Contractors

	Donson	Rohrer	Gross	Red Lion
1. Have you been contacted by Parsons, Brinkerhoff et al	No	No	Someone from Chicago	No
2. Direct contact with school districts re evacuation planning?	Yes	Yes	Yes	Yes
3. Contacted by anyone else re bus use or numbers available	No	Cumberland Co. & Perry Co.	Yes	Not since original crisis planning
4. Total number of buses, including spares	9	106	25	90 school 30 other
5. Total number of drivers, including subs	11	120	29	110
6. Driver Profile				
Men	9	Some	Some	
Women	2	Most	90%	
Full time	1	8	None	Few
Other occupations	Variety	Housewives	Housewives	Variety
7. Drivers polled re nuclear emergency evacuation	No	Variety	Variety	
8. Rent to which School Districts	Northern	No	No	No
		Northern & 5 others	Northeastern	Red Lion
			Others in Chester Co	Vo Tech
9. Where are buses kept?	Dillsburg R.D./#3	1/2 Central location & 1/2 at Drivers homes	10 Central location	Vo-Tech & Red Lion
			15 Drivers homes	

Appendix C

School Summaries 11/19/80 & 4/17/81

CONTACTS

1. Arthur Hendricks - Supt., Northeastern School District - Interview by A.M. 10/28/80
2. Arthur Hendricks - " " Interview by J.H. 4/21/81
3. Wm. Snyder - Supt., Central School District Interview by L.S. 11/6/80
4. Wm. Snyder - " - Telephone Interview by A.M. 12/30/80
5. Wm. Snyder - " Telephone Interview by A.M. 4/15/81
6. John Allison - Asst. Supt., Northern School Dist. Interview by A.M. 11/13/80
7. John Allison - " - Telephone Interview by A.M. 4/13/81
8. Dr. Thos. Jenkins - Supt., Eastern School District Interview by S.M. 11/13/80
9. Dr. Thos. Jenkins - " Interview by S.M. 4/10/81
10. Dr. Richard Wendler - Supt., Dover School District Tele. Interview by S.M. 4/15/81
11. Dr. Richard Wendler - " " " by P.M. 11/81
12. Dr. Wentzel - Supt. West Shore School Dist. Interview by J.H. -
13. Dr. Wentzel - " Telephone Interview by J.H. 4/21/81
14. John Schwartz - Rohrer Bus Co. - Telephone Interview by A.M. 4/14/81
15. Floyd Warner - Red Lion Bus Co. Telephone Interview by S.M. 4/14/81
16. Mr. Weire - Gross Bus Co. Telephone Interview by J.H. 4/22/81
17. Charles Lehman - Supt., Suburban School District Interview by S.M. 11/11/80
18. Charles Lehman - " Interview by S.M. 4/9/81
19. Mr. Altland - Business Mgr., West York School Dist Interview by P.W. 11/80
20. John Webb - Official, York City School District - Telephone Interv. by A.M. 1/12/81
21. Mr. Robinson - Official, Red Lion School Dist. " " by A.M. 1/12/81
22. Mr. Argie - Official, Dallastown School District " " by A.M. 1/12/81
23. Mr. Teague - Director, York Christian - " " by A.M. 1/5/81
24. Dr. Richer - Asst. Dir. LIU-12 " " by A.M. 12/30/80
25. Dr. Karim - Director, LIU-12 " " by A.M. 1/5/81
26. Mr. Forgen - Director, York Catholic " " by A.M. 1/5/81
27. Director, West Side Baptist " " by A.M. 1/5/81

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SUMMARY OF THE LEAGUE OF WOMEN VOTERS OF GREATER YORK
STUDY OF EVACUATION PLANNING OF YORK COUNTY FOR TMI

One of the results of a study done last year on nuclear power and TMI by the League was a proposal to look at York County evacuation plans as they pertain to a nuclear accident at the plant at Middletown. We saw that both the Kemeny Commission and the NRC's own study of the TMI accident found that in-depth safeguards incorporated into the design of a reactor are not sufficient protection for the public as was assumed prior the March 1979 accident.

Because of the immensity of the project, we decided to establish a fundamental idea of the role of the NRC and FEMA (Federal Emergency Management Agency) and then limit our study to a broad view of the state's plans and more concentrated examinations of the county, municipal and school district plans.

NRC and FEMA

The NRC is requiring all evacuation plans for areas encompassing an approximate 10 mile radius around nuclear plants to be submitted in some form by January, 1981. They're supposed to be able to be implemented by April, 1981 and public notification systems have to be in place by July, 1981. The utility has the responsibility to see a plan exists.

Guidelines for utility, state and local planning were drawn up by the NRC and FEMA to gather and put forth as interim in January of this year; with a few clarifying changes these are now the standards by which evacuation plans will be judged adequate or inadequate. Though what will be judged acceptable compliance with these standards is a bit fuzzy, it is mandated now that without approval of these plans, the NRC will not issue a license to a nuclear electric facility. Existing reactors will, apparently be given a period of about 4 months to correct any deficiencies.

FEMA's recent involvement in the evacuation planning issue gives them a different role. A regional assessment committee will receive a particular plan in its drafting stage initially. It will then critique it, and return it with suggestions as often as is deemed necessary. When felt appropriate by the state and local officials preparing the plan, it is again submitted as final. At that point, the regional committee will observe and evaluate a full scale exercise of the plan involving all key personnel. Following this, a public meeting is supposed to be held - open to all for criticism, suggestions, etc. of the plan. The specifics regarding the TMI area are not known yet. After all of this, the FEMA committee decides whether or not the particular plan meets the standards set forth by NRC and FEMA.

When the NRC receives a plan from a specific reactor site, it will look to the FEMA regional assessment committee for their conclusions and will count them heavily in its decision to issue a license on their findings. Obviously, with 75 reactors and a relatively small staff, paperwork delays are inevitable.

The overall objective of the guidelines, called NUREG 0654, is to provide dose savings (and in some cases immediate life saving) for a spectrum of accidents with significant off-site releases of radioactivity. Releases can occur as early as one-half hour and can continue for several days. They can travel 5 miles in 15 to 20 minutes, 10 miles in 1 to 4 hours. We listed the most important guidelines below, mainly for state and local plans:

STATE

The state plan is geared for an approximate 10 mile radius and assumes about 50% will leave on its own. There are four classes of emergencies including unusual event, alert, site emergency and general emergency; it is the latter we concentrated on. Specific roles were reviewed.

- Department of Agriculture: evaluate the status quo for the farmers, maintain a list of livestock, collect and dispose of contaminated resources, supply information on alternate food sources.
- Communications Directorate: the press secretary for FEMA serves as spokesperson, establish a rumor control center, meet with the news media.
- Department of Education: aid school administrators in getting plans together, aid schools in mass care set ups, help obtain buses and provide a public information source.
- Department of Environmental Resources, Bureau of Radiological Protection: they are in charge of monitoring and recommending protective actions to be taken (see below)
- Department of Health: take care of major medical plans, provide a list of medical facilities, keep list of radiation victims, also in charge of the distribution of potassium iodide for protection of the thyroid against the effects of radioactive iodine. The status of their planning is very questionable. The location and type of medication is not clear. There are some problems with FDA approval of it as a radioprotective drug. To be effective, it must be ingested prior to exposure.
- Department of Military Affairs: in charge of traffic control, securing areas, helping in re-entry.
- FEMA- coordinate with the counties, provide unmet needs, train emergency management coordinators.
- State police: traffic control.
- Department of transportation: assist in movement plans, assist in marking routes, help distribute emergency fuel.

Bureau of Radiological Protection:

Initial notification is as follows:

Utility notifies FEMA

FEMA notifies BoRP

BoRP calls utility for descriptions of what is going on and prognosis. They then engage in environmental sampling, supported as much as possible by the use of mobile vans containing machinery that can interpret on the spot readings taken on monitors placed at different locations in the radii around the reactor. Other monitors need to be taken to a central lab for interpretation and certain radioactive product measurements need to be sent to distant labs for analysis.

BoRP notifies FEMA to give protective action guidelines and will recommend sheltering, evacuation, thyroid prophylaxis, respiratory protection.

The Bureau of Radiological Protection also notifies the Department of Agriculture, federal laboratories, and the Bureau of Water Quality Management (important concerning drinking water). There are problems with personnel and equipment. Although there are plans to increase the staff, imminent success is not expected. Of the present 13 health physicists around Pennsylvania, 6 may be cut back. There is one nuclear engineer for the whole state. They would like to have 4 or 5 but find that their salary hardly competes with those offered by the utilities and even the NRC. The one functioning mobile van they've had was recently broadsided and is temporarily out of commission. A second van and its machinery are secured but not put together. The Bureau has approximately 35 monitors around TMI in addition to those placed by the utility, the EPA and others.

York County Plan

This plan, which has been approved by the county commissioners, encompasses a 20 mile radius. This is partly due to the fact that during the 1979 accident, the key county personnel were called several times during its evolution - called first for a 5 mile plan preparation, then a 10 and then later a 20 mile plan. Responsibilities are assigned to several groups. Notification to the county would be by FEMA. It would include an executive group made up of the emergency management coordinator (Mr. Randy Curry), the commissioners, operations group chief and a public information officer. It also involves a situation analysis group which consists of radiological and agricultural agents. Also included in notification are the superintendents of the school districts and the municipal coordinators for the 14 municipalities within the 10 mile radius. The emergency management staff includes, also, fire and chief personnel; it also is supposed to have established liaisons with the state of Maryland for various needs.

York County (Continued)

Monitoring equipment is supposed to be available from FEMA, to be dropped in key areas by helicopter at the time of an accident, not at all necessarily before. Monitors presently at fire companies are tagged to be used to take readings at certain points along evacuation routes. Fire companies are to assist in notification and decontamination. Decontamination itself is supposed to occur at 12 sites: Spring Grove High School, Gettysburg High School, Clearview Middle School, Susquehannock High School, overpasses on Routes 516, 83, 74 and 15, also somewhere in Emmittsburg, N. Harford, Timonium Fairgrounds and Manchester High School, Maryland. The plan involves hosing down people and vehicles as necessary. At each mass care center, there are to be 6 personnel and two monitors assigned to deal with radiation victims.

As far as National Guard involvement is concerned, their availability depends on being called up only by the governor. They could generally augment evacuation, traffic and security control as well as transportation and re-entry. The second battalion of the 12th infantry at Lewistown, PA. is assigned York County should it be needed. According to Mr. Curry, this could arrive in York about 6 hours after being called up.

The Emergency Operations Center is located in the Court House (downtown York). The County operation plans to notify all the local personnel by telephone. Radio will be used to notify hospitals, fire companies, ambulances and amateur radio assistance if the telephones are overloaded.

Plans for Mass Care were reviewed. The following four schools have been selected as reception centers, with other schools in their respective districts, it is assumed, available for overflows.

Table 1

<u>Mass Care Reception Center</u>	<u>Total Capacity</u>	<u>Total District Capacity</u>
Spring Grove High School	1,351	5,066
Susquehannock High School	905	3,420
Clearview Middle School		
Hanover High School	1,019	3,932

The State of Maryland has apparently agreed to handle overflow populations. (~~See supplement~~)

Transportation of various populations of concern in York County was explored. YATA is to assist with the transportation of folks in nursing homes. We charted the information we did find below:

Table 2

<u>Population of Concern</u>	<u>No. of People</u>	<u>Place to Go</u>	<u>Transportation</u>
Nursing Homes	2,194	Acute Care: Hanover Hospital Rest: Southwestern & Hanover H.S.'s	30 buses with seats 30 without 50 ambulances (from Md.)
Elderly Housing (3 units)	718	?	?
Prison	207	Have their own plan	Plan to charter school buses
Hospitals	?	Acute care- Hanover H.S., Maryland facilities. have their own plan	
Sheltered Workshop	180	Hanover Elementary	Their own buses

LOCAL MUNICIPAL PLANS

Two of us interviewed a representative, usually but not always the emergency management coordinator, of each of the 14 municipalities within the 10 mile radius. We found that virtually all of those who had a plan being worked on were using a guideline drawn up by a group hired by General Public Utilities called Kline and Knoff, from Harrisburg. Most had not even heard of NUREG 0654, the NRC/FEMA guidelines. Mr. Knoff stated NUREG 0654 was used in the development of his plan but it is hardly reflected in it. The following lists a few important things found. (see Table 3)

We got many other observations when speaking with the emergency coordinators and town managers. Some, not all, complained of minimal or superficial county interaction in the development of their plans. Many had not received a recent copy of the County plan and weren't sure, for instance, where the county planned routes. Also, the emergency coordinators are all volunteers. They all work other jobs, at times away in another township, so are not always immediately available. According to the state plan, they are supposed to receive special training but very few have. Interpretation of this requirement is supposedly being considered by the attorney general and it may lean toward county coordinators only. Some municipalities are short the local people needed to fill out alert teams, etc. Trained personnel to read radiation monitors are scarce at this point in time. Most places stock no radioprotective clothing. One cannot always get commitments to stay and help for this kind of evacuation, a problem probably related to the fact that a radiation accident is qualitatively, essentially different from a more tangible situation like a flood. To quote one town manager, "How do we mandate that a man stay here to "work" when, in his mind, his first responsibility may be his family?" This concern was expressed by many we spoke with.

Some feel FEMA has remained too aloof in aiding plan development. Another problem is that some names and numbers are not up to date or are extremely difficult to reach as far as key personnel are concerned. Radio frequencies planned for emergency communication too easily get jammed and may be less than useful in a radiological accident. Virtually no time estimates are done at the local level and in the revised version of WRESC 0654, requirements for sophisticated estimates for both good and adverse weather make this an even more glaring deletion.

It is the utility's responsibility to see adequate notification means exist. As we saw in Table 3, only 3 out of 14 have an adequate siren system today. It is not clear how the gaps will be filled and there is no question this will cost someone a significant amount of money. One town manager mentioned that emergency monitors (something resembling a clock-radio to be placed in the homes or workplaces of certain key personnel) might be substituted. If this is true, new problems arise because these require being turned on; someone must be there to hear them; and have no backup auxiliary power like found in sirens.

SCHOOL DISTRICTS:

A group of us interviewed 8 school superintendents. Of the group, 6 had schools entirely within the 10 mile radius and the other 2 within the 20 mile radius. The school district is responsible for developing and implementing procedures to transport all school children (if school is in session) out of the risk area. They are to be taken out in buses and each bus is to be accompanied by a teacher. Most superintendents weren't certain this latter requirement wouldn't be a problem; many teachers aren't aware of that rule. The superintendents are in charge of notifying bus drivers, of establishing routes of travel, reception centers, estimated times and are to see to it parents receive an information source explaining all of the above. In Table 4, we list 9 questions posed to these superintendents and their responses.

Table 4

Questions	West Shore	N. Eastern	Central	Northern	East.	Dover	West York	Sub- urban
1. Have a plan?	no	no	yes	yes	no	no	no	no
2. # children	8100	3100	3328	2913	2913 2640	3467	2900	2621
3. #available buses	60	23	32	28	23	33	12	19
4. #buses needed to evacuate all children at one time?	120	43	50	53	46	58	45	49
5. Source of buses own		lease (Gross)	own	lease (Donson & Rohrer)	own	own 5, lease 28	lease	lease
6. Notification of drivers-how long would it take?	phone	phone 1 hr.	phone 1/2 hr.	phone 1 1/2 hr.	phone	phone	bus co.	co.

Table 4 (Continued)

Questions	West Shore	N. Eastern	Central	Northern	East.	Dover	West York	Sub- urban
7. Electron receiver available (notification source from county)	yes	yes	yes	no	no	-	yes	-
8. Last known evacuation area to go to	Dills- burg	Susque- hannock	Susque- hannock	Bermudian Springs	Clear view	Gettys- burg	Surge- hannock	-
9. Evacuation area listed in York Co. Plan	Carlisle	same	same	same	S.East- ern	North Oxford	Hanover	-

To summarize, there are many more buses needed than available presently. Notification of drivers by phone may be difficult. In most cases, at this point in time, the school districts were planning to go to areas distinct from those planned by York County.

Three major problems cropped in in the interviews.

1. Coordination in plan development. This was particularly noticeable in the northern portions of the county where school districts overlap with Cumberland County. Involvement of the schools in planning was felt essential by the superintendents. They were told to develop their plans only - without benefit of any give and take. They fear they may plan one move only to be told later to change it. There is no mention anywhere of plans to care for children in nursery schools or day-care centers.

2. Communication during an accident. There is genuine fear the phone lines will get jammed. We knew this occurred during the accident last year. One superintendent would like a lead time of 1 to 2 hours before the public is notified in order to get these children out.

3. Transportation. The number of available drivers is questioned. We found approximately 75% of them are women, many with young children. It may be difficult to have buses return for a second run if necessary because of lack of drivers, their cooperation or their being able to fight exiting traffic. The routes to be taken include small main, county or heavily travelled main routes. Most expressed hopes there would be drills.

Lastly, we will mention some of our broad concerns that were raised during this study.

-The plans are based on several assumptions which might be called into question.

1. Key personnel will be available, including coordinators, bus drivers, alert teams, fire and policemen, etc.
2. Key personnel will be trained.
3. Unmet needs such as monitoring, transportation and communications equipment can be obtained or purchased elsewhere to be useful at the time of an accident.
4. Parents will not panic and try to get their children at school.

-We are concerned people outside the 10 mile radius will try to evacuate with others if an evacuation of only 10 miles is called for.

-At this point in time, effective thyroid prophylaxis may not be able to be distributed in a timely basis.

-Funds needed to obtain the elements needed to effectuate the plan are probably not going to be generally available.

-These plans do not deal with a worst case accident.

-Mr. Curry, the Emergency Management Coordinator for York County, is very overextended. In addition to his job as coordinator, he has been put in charge of Veteran's Services. A study estimating coordinator needs in relationship to population would call for 4-6 people for our area.

Supplement

Information calculated from plans:

<u>Relocation Centers</u>	<u>Numbers of people to be taken care of</u> (from 20 miles)
Spring Grove	31,125
Jusquehannock	102,326
Clearview	50,793
Hanover	54,424
Gettysburg	54,424

Table 3

<u>Municipality</u>	<u>Popula-</u> <u>tion</u>	<u>% with-</u> <u>in 10</u> <u>miles</u>	<u>Emerg.</u> <u>Coord.</u>	<u>Plan</u> <u>Complete</u>	<u>Plan</u> <u>Adop.</u>	<u>Annual</u> <u>Exercise</u>	<u>Adequate</u> <u>Sirens</u>	<u>Public</u> <u>Informa.</u> <u>Source</u>	<u>Monitors</u>	<u>15 minute</u> <u>notifica.</u> <u>in plan</u>	<u>Worked</u> <u>with</u> <u>schools</u>
CONEWAGO	4539	15	-	-	-	-	-	-	some?	-	-
DOVER	12,322	5	+	+	+	-	-	-	inadequate	-	-
E. MANCHESTER	3640	5	+	+	-	-	-	-	2	-	-
FAIRVIEW	12015	10	+	-	-	-	-	-	2	-	-
GOLDSBORO	3547	100	+	+	+	+	+	-	1	-	none
HELLAM	3856	2	+	-	-	-	-	-	2	-	+
LEWISBERRY	650	100	+	+	+	-	+	-	1	-	none
MANCHESTER boro.	1700	100	±	-	-	-	-	-	---	-	-
MANCHESTER twns	7093	40	+	+	+	-	-	-	2	-	+
MOUNT WOLF	1900	100	+	+	-	-	+	-	6-8	-	-
NEWBERRY	9365	75	+	+	+	-	-	-	1	-	-
SPRINGETTSBURY	22873	1	+	-	+	-	-	-	-	-	-
WARRINGTON	3088	10	+	-	-	-	-	-	4-6	-	-
YORK HAVEN	703	100	+	+	+	-	-	+	1	-	-

**NUREG 0654 - Criteria for Preparation and Evaluation of Radiological
Emergency Response Plans and Preparedness in Support of
Nuclear Power Plants. published 1/80 by NRC/FEMA**

SUMMARY OF SOME OF THE STATE AND LOCAL RESPONSIBILITIES (unless stated)

- Emergency management coordinator, organization, and place of operation
- Twenty-four hour manning of communication links
- Offsite radiological monitoring equipment and ability to use it
- Inventory and inspection of all necessary equipment 4 times a year
- Utility has responsibility to ensure notification means exist.
- State and locals have responsibility to activate such a system
- Periodic dissemination of information to the public regarding how they will be notified and what their actions should be including, at least,
 - a) education about radiation b) contact for additional info. c) respiratory protection d) sheltering e) evacuation routes. These also have to be made available to all spots involving transients.
- annual review program with the news media
- maps showing evacuation routes, relocation centers, hospitals and other medical facilities.
- Means to notify all the population within about 10 miles
 - 5 mile radius 100% within 15 minutes
 - 10 mile radius 90% within 15 minutes (slightly less exact in final)
- Provisions for dealing with traffic impediments
- Time estimates for evacuation during best and adverse weather situations, and using local involvement in obtaining these (originally due 1/80)
- Means of decontamination of emergency personnel, supplies, etc.
- Describe arrangement for local and back-up hospital and medical services
- Ability to evaluate radiation exposure, using trained personnel
- state has to show map of all places around capable of dealing with radiation victims
- Describe arrangements for transporting radiation victims.
- Exercise done prior to adoption of the plan (and prior to issuance of an operating licence) at least once a year
- Public and volunteers urged to participate in above-listed exercises.
- Expected FEMA to contribute money. Has since been told NO by Congress.
- Expects substantial corporate and private sector organization resources should supplement initial response of operator
- Medical emergency drill with simulated contaminated individual once/yr.
- Radiological response training for appropriate individuals
- Training programs for coordinators, accident assessment and radiation monitoring teams, police and firemen, first aid, rescue and medical support personnel
- cross-referenced with NUREG 0654

Qualifications of Dr. Mary E. Ryscavage

Dr. Ryscavage is a graduate of Trinity College, Washington, D.C. with a B.A. in 1969 and of the Georgetown University School of Medicine with an M.D. in 1973. After an internship at Geisinger Medical Center in Danville, Pennsylvania (1973-1974) she has been in general outpatient practice of pediatrics. Presently she is practicing at the York Hospital's Mother-Child Clinic.

She joined the League of Women Voters of Greater York in 1978 soon after she moved to the area and has been a board member of the organization for 2 years. She published the Facts For Voters for 1979. She co-chaired the nuclear energy study group in 1979-1980 and then chaired the Evacuation Planning study now presented.

Qualifications of Mrs. Arlene Miller

Mrs. Miller received a B.A. in sociology and psychology from Elizabethtown College in 1965; and her M.A. in French in 1969 from West Virginia University.

She was an instructor of French at Penn State, York from 1969- 1978 and is now on leave to care for her family.

Mrs. Miller has been a member of the League since September, 1980 and has been on the League Board of Directors since January 1981. She lead the League's sub-committee on schools for the Evacuation Study. She resides at RD 4, Spring Grove.

Qualifications of Mrs. Judith Hilliard

Mrs. Hilliard resides in Manchester, within the five-mile radius of TMI. She has been an active member of the league for ten years and has participated in many of their studies and projects. She and her husband have been active in local politics and community work; she is very familiar with the local area and with the local people who are responsible for planning at the school and municipal level. She did interviews and reseach in the school and municipal planning areas for the League's Evacuation Study.

Mrs. Hilliard holds a B.S. degree in Mechanical Engineering from Virginia Polytechnic Institute and University, Blacksburg, Va.

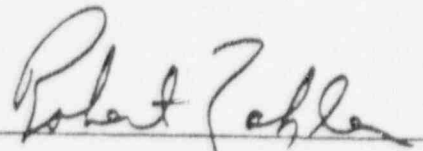
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONBEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
METROPOLITAN EDISON COMPANY)
(Three Mile Island Nuclear)
Station, Unit No. I))

Docket No. 50-289
(Restart)

CERTIFICATE OF SERVICE

I hereby certify that copies of the "Testimony on Behalf of the Anti-Nuclear Group Representing York on Municipal and School Emergency Planning In York County, PA and York County Emergency Response To Three Mile Island", which was picked up by Licensee from Gail Bradford in York on April 27, 1981, were served upon the parties identified on the attached Service List by deposit in the United States mail, first class, postage prepaid, this 28th day of April, 1981.



Robert E. Zahler

Dated: April 28, 1981

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

METROPOLITAN EDISON COMPANY

(Three Mile Island Nuclear
Station, Unit No. 1)

Docket No. 50-289
(Restart)

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