

BUCKET NUMBER 50-289
PROD. & UTIL. FAC.



Intervenor Aamodt Findings of Fact
on Emergency Planning Contention 2
(Aamodt Contention 5 - Livestock)



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1. Contention EP - 2 states: It is contended that present evacuation plans do not provide for care and/or relocation of livestock. It is further contended that such provision should be made before restart of TMI-1.

2. The Aamodts adopt, in general, the findings of Angry and Newberry Township that relate to their contention. The following findings are to supplement and emphasize.

3. The Commonwealth, and licensee, recognized the unique problems of the agricultural community in event of an accident at TMI-1. The Commonwealth and the counties plans have each included special planning for farmers, however noone, Commonwealth, licensee or counties have devised plans that meet NRC criteria of adequacy and implementability.

4. Noone, the Commonwealth, county agents or licensee, knows the number of farms, farmers and livestock that are effected by the emergency plans, or those farms which lie within NRC 10 mile evacuation zone and the 50 mile ingestion zone.¹ Tr. 20, 404 (Fouse); Stewart and Smith, ff. 20243 at 2, 2. Commonwealth figures on agriculture are reported by counties.

5. The Commonwealth's figures for the five counties surrounding TMI-1 give some close approximation of the numbers of livestock in the 50 mile EPZ. However, other counties, including Chester and Berks, are within the 50 mile EPZ and highly agricultural.

¹ The Commonwealth stated that they did not have this information in discovery. The Board denied a later motion to obtain this information. (April 28, orally).

6. The livestock population in the 50 mile EPZ is sizeable. Just considering the five counties, there are over 800,000 farm animals, not counting horses. There is a large horse population on equine farms as well as at the Penn National Race Track. Stewart and Smith, ff. 20243 at 14².

7. The evaluation of these animals is important in emergency planning because of the effect on their keepers' choices of their own protective actions. Commonwealth Ex. 2, ff. 20,400 at 17. The Commonwealth figures appear lower than current market value, and do not take into account exceptional animals; however the total for the farm animals (not horses and other than the five counties) is over 225 million dollars. This investment is held by about 2000 farmers, averaging over \$100,000 investment. Stewart and Smith, ff. 20243 at 14.

8. The Commonwealth is interested in protecting the farm animals, particularly the dairy cows, by sheltering from radiation, so that the food supply is protected. Commonwealth Ex. 2a, ff. 20,400 at 1 - 38. The Department of Agriculture is to interface with the agricultural community to minimize exposure of food and livestock. Id., at 8. The farmer is to be given recommendations for sheltering livestock from radiation. Id., Annex B.

9. The welfare of the farmer, both economic and physical, is not considered in the Commonwealth's plan. In order to shelter animals the Commonwealth proposes extensive renovations of farm buildings and recommends a number of measures which will necessarily expose the farmer to high levels of radiation, in

²Numbering of pages of County Agents Testimony should begin at 1 for the Summary and end at 14.

the event of an accident at TMI-1.

10. At the same time, the food chain is not being adequately protected. Although the public reluctant to accept any food that has been subjected to radiation, the Commonwealth has plans to introduce radiated products into the food chain. Id., at 22. Contaminated milk may be directed to animal feed, used in processed dairy products or diluted with uncontaminated supplies.* Id.; Tr. 20253, 20236-7 (Stewart); Stewart and Smith, ff. 20243 at 4. There is no plan to test forage, the most common food of other than dairy animals and no plans to test meat products. Corbin, ff. 20286 at 1. The sampling points for milk testing may, either through sheltering of animals and feed, or through a narrow configuration of a plume, not be representative of the food supply in general. Tr. 20405-¹⁶(Fouse). In addition, individual situations such as a farm family with grazing cows and other animals, drinking fresh milk and eating from a single food supply, could be subjected to hazardous radiation undetected by the program. Tr. 20,405 - 16 (Fouse).

11. The plan discusses very briefly protective actions available to the farmer, himself. Commonwealth Ex. 2, ff. 20,400 at 15, 16. One, thyroid prophylaxis, will not be provided to the farmer. Another, sheltering of the farmer, is impossible for the farmer in view of the number of duties to care for animals, which are increased in an emergency. A third is evacuation of the farmer and abandonment of the livestock, which is unthinkable to most farmers. Tr. 18,691 (Lytle); Tr. 19,769 - 70, 75 -6 (Samples). The plan recognizes that none of these is a viable option for the farmer. It concludes

*This latter option may have been rejected during the hearing.

by suggesting that the farmer keep in touch with the county agricultural agent and county emergency management officer so the farmer can obtain advise and assistance. Id., at 17.

12. Communicating with the county agent of management officer is clearly not a reasonable option. The latter persons in Dauphin and York Counties show no expertise in agriculture within their credentials. The plan neglects to name the means of communication, since general instructions (county) curtail telephone use. Commonwealth Ex. 4, 5, 7, ff. 18073, 18074, 19683. Lines are expected to be jammed anyway, and it is unlikely that a farmer in trouble would make a choice to seek advise that would be delaying and not clearly helpful. (Two thousand calls from the two thousand farms in the five county area would clearly swamp five agricultural agents, including assistants.)

13. Further, the county agents had not received any training in radiation detection or protection since the 1960s. One did not know how to use a dosimeter; the other would not recognize radiation sickness. One agent did not interpret his job as providing emergency workers as suggested in the event of prolonged radiation and cumulative exposure of the farmer. Van Buskirk and Cable, ff. 18296 at 2; Stewart and Smith, ff. 20243 at 3. In fact, the agent felt his responsibility was simply to advise the farmers to stay or leave. Tr. 20,236 (Stewart). The agents both expressed concern for their own safety, one stating that he would remain as long as he and his family was safe. Stewart and Smith, ff. 20243 at 2, 8.

14. Although the Commonwealth is directing the farmers to the County agents, the agents do not appear on the Department of Agricultural organizational chart. In fact, the agents are federal employees. The Commonwealth witnesses who were making this suggestion had no acquaintance with the local agents, nor had they consulted them. Tr. 18321 (Van Buskirk, Cable). The Board was concerned about the alleged interface between the Commonwealth and the farmers.

15. The option of evacuation of livestock, and therefore the farmer, is discussed, and rejected because of several spurious arguments. The first is that cattle trucks on the roadways would be disruptive. Commonwealth Ex. 2, ff. 20400 at 17. Without ^{a count of} the numbers of cattle in the 10 mile EPZ, and study of the impact on traffic, this is simply an opinion not a reason. The testimony has been that planning has opened roadways for evacuation.. Trucks are noted for moving along.

16. The second argument against evacuation of cattle is clearly spurious. The plan states that the stress of moving and exposure to disease would present a great risk to animals, more than exposures to high level radiation. The range of exposures which are ^{cited as} preferable/are in the range of 250 to 400 Rems. That sickness and death from high level radiation can occur in animals as well as genetic damage is ignored. Accentuated is the minimal risk from shipping fever which can be prevented by medication. Also accentuated are the few and unusual isolated occurrences of disease. The herds of Pennsylvania are exceptionally clean and healthy and a single case of brucellosis or pseudorabies is noticed and quickly quarantined. Stewart and Smith, ff. 20243, at 5, 9.

17. Then the plan refutes its own arguments against the safety of evacuation of cattle by stating that evacuation of valuable animals is expected. Certainly the poorer choice would not be made for the best animals. Commonwealth Ex. 2, ff. 20400 at 18.

18. However, the Commonwealth plans to give no assistance to these farmers who insist on evacuating their livestock; the Director of the department of animal husbandry and other personnel had no interest in availability of cattle haulers or relocation sites. Van Buskirk and Cable, ff. 18296, at 2. The farmer must make his own arrangements; however without coordination, the farmers may be contesting for the same trucks.³ They appear to depend on the truckers at the Lancaster Stockyards. Tr. 20234 (Stewart); Tr. 20241 (Smith); Tr. 18727 (Lytle).

19. The animal husbandry personnel indicated that they may impose some instructions to any cattle movement. Farmers may not be permitted to move livestock until radiation doses are considered hazardous to livestock. Since the plan considers doses of 400 Rem tolerable to horses and 250 Rem to cattle, and these doses far exceed tolerable doses to man, movement of cattle at such a time would be impossible.

20. Farmers would also have to prove that their animals were free of disease. The animal husbandry personnel indicated that the farmer would have to go through channels in the state department, without clearly outlining those channels.⁴ Tr. 18311 (Van Buskirk).

³Dauphin County planned at one time to evacuate cattle in an emergency. They located trucks within the county to move 3/4 of the livestock in the 10 mile EPZ. This page (attached) no longer exists in that county's plan.

⁴They failed to note that the county agents have this information. Stewart and Smith, ff. 18749 at 5.

21. The area of freedom of choice of the farmer to take his own protective actions needs to be clarified, as well as coordination of various options. The Commonwealth testified that advanced preparations were indicated to protect the farmer, however they failed to demonstrate any advancement. Tr. 18332 (Cable).

22. Having inadequately and inappropriately considered the evacuation option, the Commonwealth recommends sheltering of livestock against radiation. The Commonwealth uses recommendations developed in the 1950s in response to threat of nuclear war. These federal guidelines were adopted without consultation with county agents, farmers or veterinarians in the area. The guidelines are not responsive to farming in the 1980s or TMI-1 area.

23. The county agents have had copies of the federal guidelines for sheltering cattle in their Handbooks for over twenty years, however they did not know whether any farmers had implemented the guidelines. Tr. 20269-70 (Stewart). The agents apparently did not take this federal disaster plan seriously. An essential element of the plan is storage of water in 55 gallon drums, however the agents had no idea of the availability of drums.⁵ Stewart and Smith, ff. 18749 at 4.

24. The Commonwealth's Department of Animal Husbandry witnesses apparently were also unacquainted with the availability of a supply of clean drums. However, more distressing was their extreme lack of knowledge or inquisitiveness relative to the specific attributes of local agriculture. They did not know what kinds of housing of animals were used or whether the farming operations were primarily beef or dairy. They had no statistics

or overview of agriculture's response to the TMI-2 accident. Tr. 18308-10, 18329-30. (Cable, Van Buskirk); also Tr. 18336-7.

25. Although these witnesses were supporting the Commonwealth's recommendations for protecting cattle from radiation, they lacked knowledge in basic areas of radiation protection. They did not know the shielding factors of various structures, a basic element of the Commonwealth's plan. Tr. 18330 (Cable).

26. These witnesses were acquainted with the plan in general and admitted that it is unlikely that animals could not be sheltered. Tr. 18329 (Van Buskirk). They admitted that water storage was also a short-coming of the plan, in terms of getting the water to the animals. They felt that the water would be spilled and unavailable to the animals in a short time. Tr. 18326 (Van Buskirk).

27. These witnesses promised that if the farmer wants to evacuate because of hazard to his health, assistance can be arranged in caring for that farmer's livestock. The witnesses had not decided how many emergency workers might be needed or where they would be obtained. Van Buskirk and Cable, ff. 18296 at 2; Tr. 18304, 8 (Cable).⁵

28. Dr. Robert Weber, a veterinarian for the past 33 years to the herds west of TMI, stated that the Commonwealth's plan is inadequate to protect the health and safety of the livestock and their caretakers. Dr. Weber stated that the farms should be closed if the plant should reopen without the development of an adequate plan. Lytle, et. al., ff. 18749 at 4; Tr. 18772, 18786 (Weber).

⁵ It is surprising that such an offer would be made ^{so lightly} in view of the expertise needed to handle animals, particularly ones unaccustomed to the handler. Tr. 18725 (V. Fisher).

29. Dr. Lawrence Samples, a large animal veterinarian practicing generally on the east side of the river, also found the Commonwealth's plan inadequate. Dr. Samples was not requested by the Commonwealth to help in developing a plan or commenting on the plan, although he is a member of the Radiation Protection Emergency Management Committee, a state committee formed after the TMI-2 accident. Dr. Samples is a member of the Pennsylvania Veterinarian Medicine Association as well as a number of other organizations including a committee to advise state legislature relative to livestock problems. Tr. 18755 - 19776 (Samples).

30. The Commonwealth's plan for sheltering livestock is essentially fourfold: providing housing; restricting ventilation, using stored feed and providing uncontaminated water. Some of the problems involved in providing this kind of shelter are generic and others are specific to TMI-1 area.

31. Most farmers in the TMI-1 area do not have sufficient barn space to shelter their animals. Most dairy farms have open housing and lots for dairy cattle. Many farmers have gone to open housing or no housing for beef cattle. Some have three-sided structures and can only get cattle under a roof at most (and at the cattles' inclination). Tr. 17765-7 (Samples).

32. Mr. Paul Lytle, a dairy farmer for 30 years tilling a 500 acres three miles north of TMI-1, can not provide housing for his 200 dairy cows and heifers. The barns are not closed, so that he cannot confine the cows within the barns. Mr. Lytle considers his operation typical of the farms in his area. Tr. 18708, 18695 (Lytle).

33. The plan suggests that the farmers remodel their barns either on a temporary or permanent basis to increase shielding.⁵ It suggests raising window sill heights, filling cores of concrete block buildings with sand or gravel, or placing earth, hay, sacked feed or fertilizer, or concrete blocks over and around barns. It cautions to hire a contractor if additional bracing is needed to keep buildings from collapsing. Commonwealth Ex. 2, ff. 20400 at Annex B, 5, 6. In addition to the financial and technical difficulties of this plan, the acceptability of unsightly renovations is unthinkable in view of the general beauty of the area.

34. The suggestion that the most valuable animals be sheltered is unworkable, since open housing precludes doors or small openings which could be gated. The plan suggests that the farmer build a hay or straw wall to retain the cattle, a preposterous suggestion in terms of labor and permanence. Tr. 18738 (Lytle).

35. Mr. Lytle testified that he does not expect to remodel his barns; he cannot afford to build or remodel to provide shelter for all his animals. Tr. 18694, 18726 (Lytle). Mr. Lytle found the use of hay and other materials to create temporary shielding unworkable. Tr. 18738 (Lytle).

36. The plan also suggests that animals be herded into woods or under highway overpasses, however not taken into account is the need for fencing to retain the animals. These fences would need to be particularly sturdy since animals do not readily adapt to change, particularly that of confinement. Commonwealth Ex. 2, ff. 20400, Annex B at 14.

⁵ The plan's rating of shielding of types of shelters appears to

37. Water must also be shielded. Since some farms draw water from open supplies, they are advised to store water in 55 gallon drums to provide a 48 hour supply.

38. If farmers were to implement this plan for water storage, a considerable number of drums would be needed. For instance, Mr. Lytle, who draws his water from the municipal supply, would need about 75 drums to supply his 200 animals for two days, according to the water requirements set forth in the plan. There is no indication from the Commonwealth of the availability or cost of drums. Id., at 14, 16, 20 and 22.

39. Dr. Samples considered this recommendation too foolish to discuss seriously. He wondered how the cows would open the tightly-covered drums described in the plan. Id.; Tr. 18770 (Samples). The animals would not ration the water as is presumed in the plan's calculations of adequate supply. Commonwealth's witnesses described other drawbacks. Finding 26.

40. A primary factor in shielding is ventilation; the plan calls for reduced ventilation in the barns. However cattle develop respiratory problems in a few hours when ventilation is severely reduced; in 24 hours they are sick and can die. Chickens die in several hours with inadequate

in error. Free running and grazing animals are said to be shielded from 30% of the radiation dose, presumably by their coats. Since animals cannot take off their coats, they eventually receive this dose as radiation shakes off onto the ground or other cattle, so that these animals would receive a full dose. It should be noted that the particulate matter in the fur of the animal poses a threat to the farmer. Tr. 18317 (Cable).

ventilation. Drs. Weber and Samples felt that the ventilation recommendations of the plan were not consistent with animal health. Tr. 18786 (Weber); 17765, 67 (Samples).

41. A number of the plans' other recommendations are also hazardous to the animals' health. The plan suggests putting out two days feed at one time to the animals. There is no suggestion as to how this would ^{be} rationed over two days rather than consumed at initial feeding. Cattle can die or bloat from having their rations suddenly doubled. Commonwealth Ex. 2, ff. 20400, Annex B at 12, 13.

42. The plan suggests that baby calves should be put with valuable lactating cows. It assumes that a cow will allow an unfamiliar calf to nurse. Dr. Samples assured the Board that such is not the case, and that a farmer who followed this advice could expect injury or death to the calf. Id., at 13. Tr. 18777 (Samples).

43. There is no evidence as to the condition of a cow who is lactating but not emptied for 48 hours, however the consensus is that there would be problems. Tr. 17768 (Samples). Mr Lytle's cows developed mastitis after missing a single milking, approximately 20% of the herd being afflicted. Tr. 18691 (Lytle). Cows sometimes develop allergies through reabsorbing their milk. Tr. 17767 (Samples). Some may dry up permanently. Tr. 18712 (J. Fisher). The Commonwealth plan ignores these problems.

44. The recommendations of the plan, if followed, would seriously threaten the health and lives of the animals, adding to the injury from radiation exposure.

45. The plan, in attempting to provide protective action for the livestock, increases the hazards to the health and safety of the farmer and his family. The range of times between onset of an accident and the start of a major release is in the order of one-half hour to several hours. In this short span, the farmer is to milk all of his cows, try to locate and place baby calves with his cows, provide at least a 2 week supply of covered feed and water (the labor involved varying greatly according to season), arrange drums of water to be accessible to the animals, fill between 20 and 75 drums with water if needed, cover other feed and hay with canvas or plastic sheeting, put out feed, herd animals into shelters, construct fences or other barriers and arrange for the needs of his family. Most tasks listed would take longer than the time before a major release. Commonwealth Ex. 2., ff 20040 at 8, 12, 13.

46. The plan indicates that an electrical generator should be located near the family shelter. Id., at 13. It does not explain how this will protect the farmer since he must travel between buildings to take advantage of the power.

47. The farmer is to exercise care in removing coverings of feed so that fallout does not contaminate the stack. No word about protecting the farmer. Id., at 12.

48. Although the Commonwealth is encouraging the farmer to greatly increase the hazards to his health and safety in order to protect the food supply, the Commonwealth does not plan to provide protective equipment to the farmer to reduce their risk. Tr. 18320 (Van Buskirk).

49. Testimony of the farmers, county agents and veterinarians strongly indicated that they would be unwilling to abandon their animals. Tr. 20253 (Smith); Stewart and Smith, ff. 20243 at 10; Tr. 18691 (Lytle); Tr. 19769-70, 75-76 (Samples).

50. A plan to have the farmers evacuate for part of the day and return to do chores is unrealistic in most cases. Mr. Lytle's cows require 16 man hours for milking. Tr. 18739 (Lytle).

51. Licensee has taken a position that livestock are property, and therefore not the concern of the hearing. Tr. 20333-4 (Zahler).

52. The Board allowed as a limited appearance exhibit a letter from the Humane Society of the United States which summarizes the testimony of the farmers and agents that farmers do not consider their animals as impersonal property. Tr. 20331-2 (Smith).

Evacuation strategies that require abandonment of animals ignore the strong bond between humans and animals. The intensity of people's responses to endangered animals can be so powerful as to prompt their refusal to evacuate their neighborhoods, or they jeopardize their own lives attempting to rescue animal disaster victims. Evacuation plans that require animals be abandoned may be disregarded or, even worse, may result in refusal of residents to themselves comply with orders to leave endangered communities.

Aamodt Ex. 6, ff. 20331, at 1, rejected. Although this exhibit is rejected, the words expressed in it can rely as fully on the testimony of the county agents, veterinarians and farmers referenced in Finding 49.

53. One farmer testified most clearly concerning the farmer's dilemma. Mr. Jeremiah Fisher farms within three miles of TMI-1; the towers of the plant are clearly visible from his farm. His family have lived and worked on this farm for over 200 years. Tr. 18698 (J. Fisher). Mr. Fisher has farmed since his childhood, helping his widowed mother; presently he tills 200 acres and dairies, owning about 77 head of cattle. Lytle, et. al., ff. 18749, at 2. Mr. Fisher has one son who was terrified by his father's daily forays back to the farm after the family evacuated during the TMI-2 accident. His son's fears have interfered with his schooling and happiness. Mr. Fisher realizes that abandoning his cattle and farm could mean economic ruin and he has compassion for his cattle, however he is aware that remaining on the farm during a crisis at TMI-1 would inflict mental cruelty on his son. Tr. 18702-3, 18711-2 (Fisher). The testimony of the farmers, veterinarians and county agents consistently demonstrated this dilemma, and the Board acknowledged the dilemma. Ref. same as Finding 49; Tr. 18706 (Smith).

54. As expressed in Mr. Fisher's testimony, the nature and extent of the farmers' financial investment ^{also} works/against the option of the farmer to take protective action for hi self. Short of a total disaster, the farmers' investment is in greater jeopardy than other businesses and homeowners. He cannot leave it and expect to find it undamaged after the all-clear is sounded. The Commonwealth fails to recognize this difference in planning for farmers. Van Buskirk and Cable, ff. 18296 at 3.

55. The average investment of the farmers is considerable as set forth in Finding 7. The average price of a good dairy cow is \$1800 to \$2000. Tr. 18758 (Samples). Dairy farms average from 70 to 75 head of lactating cows. Tr. 18757 (Samples). Mr. Lytle's 100 lactating cows are the results of years of breeding management. Tr. 18690 (Lytle).

56. One of the greatest concerns with radiation exposure of animals is genetic damage to breeding stock, however the plan does not consider the risk to this investment and the effect on the owners and caretakers option to take protective action. These kinds of investments often exceed insurance coverage, are not coverable for radiation damage, and ^{their} values are not totally financially based. Although FEMA recognized that the farmers' investments should be protected by insurance, they were not aware of any such coverage available or provided. Tr. 19019 (Adler).

57. The Commonwealth plan evaluates radiation hazards to cattle in terms of survival. It is unclear whether these figures are for survival of 50% of the herd for 30 days. Commonwealth Ex. 2, ff. 20400 at 17, Annex B at 11, 21. Tr. 18332 (Cable). The significance of the Commonwealth's ^{particularly} figures ~~for~~ genetic protection is dubious,

58. In addition to the problems that radiation exposure could cause the numbers of small farms that depend on breeding stock, the Commonwealth needs to consider the exceptional operations within the TMI-1 area. For instance, Hempt Farms at Mechanicsburg is the largest standard breeding farm in the world. Tr. 18758 (Samples). A cow whose heifer calves are worth one-half a

million dollars (each) lives in York County. Stewart and Smith, ff. 20243, at 4. The personnel employed at such operations share the responsibilities and some of the same feelings toward these animals, and their options for taking protective action are limited by the lack of planning provided by the Commonwealth.

59. Mr. Lytle had arranged to move his cattle during the TMI-2 crisis, based on his experience from an earlier flood. Shipping charges cannot have compared with the flood losses incurred through the damage done to cows by missing a single milking. Mastitis and reduced production in the cows contributed to a \$65,000 loss that took three years to pay. Tr. 18693 (Lytle).

60. The Board indicated that individuals must let authorities know when plans are not adequate to protect their needs. Tr. 19353, paraphrasing of Smith (Brooks). Seven witnesses, well-acquainted with agriculture in the TMI-1 area, testified that the Commonwealth and Licensee plan for farmers was unworkable. Yet, in the face of these testimonies, the state went ahead with plans to distribute fact sheets from the plan to the farmers. Tr. 20421-2 (Furrer).

61. Distribution of an inadequate plan to the farmers will not only provide them with erroneous information, it will also heighten distrust of authorities. The worksheets, which are totally inapplicable, may make the farmers feel that there is no potential seriousness in an emergency at TMI-1, further impeding the farmers' inclinations to plan.

62. One of the farmers who testified, Mr. Vance Fisher, is unlikely to follow any instructions or recommendations in an emergency. Although he has farmed all of his life, he and other farmers in the area have experienced a number of unusual problems with their animals' health since 1975-6. They attribute these problems to TMI-1 and feel that the authorities, both public and private, have not responded honestly to their problems. Mr. Fisher does not believe that any information that he would be given in an emergency would necessarily be truthful. Tr. 18734-5; 18739-41; 19,700-1; 18710 (V. Fisher).

63. The Commonwealth's brochure stated that the safety of the public would be assured from any threats caused by the operation of a nuclear power plant. Commonwealth Ex. 3, ff. 18206. This brochure deliberately misleads the farming community since the state continues to support this pamphlet and at the same time is aware of the inadequacy of the plan for agriculture.

Conclusions of Law

1. The Commonwealth and Licensee plan for sheltering livestock provides no assurance that animal health effects attendant to radiation will be even minimally mitigated. Rather, the plan recommends faulty livestock management procedures which in themselves severely hazard the health of the livestock.

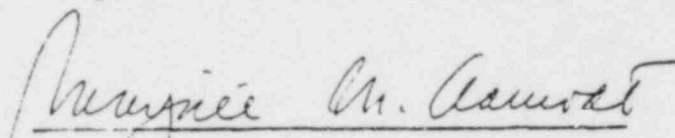
2. The Commonwealth and Licensee plan, and the County plans, for the agricultural communities in the TMI-1 EPZ, in making provisions for protection of the food chain, provide for livestock-sheltering and those procedures which put the farmer at unique risk relative to the non-farm population.

3. The Commonwealth and the Licensee incorrectly regard livestock as impersonal property. They disregard the living and individual quality of the individual animals and the farmers bond to these animals through long association, as attested by the county agents and veterinarians. This error in judgement results in the farmer being placed in a dilemma regarding evacuation or remaining for which he has no viable option, and, therefore cannot be expected to cooperate in the implementation of the emergency plans.

4. The Commonwealth and Licensee plan lacks input from the agricultural community surrounding TMI-1.

5. The agricultural emergency plans so far devised to provide for the care and/or relocation of livestock are grossly inadequate. TMI-1 may not restart until this inadequacy is resolved, with a coordinated plan developed which provides for protection of livestock without prejudicial insult to members of the farm community.

Respectfully submitted,


Marjorie M. Aamodt

August 13, 1981

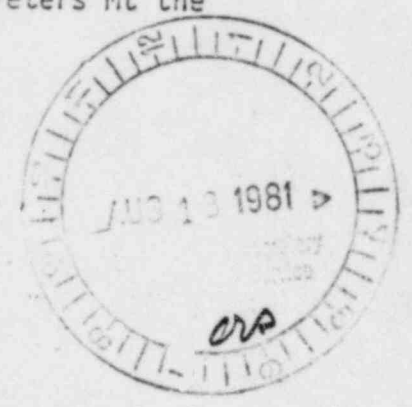
Appendix 15

AGRICULTURE

The following information pertains to the responsibility of the Pennsylvania Department of Agriculture, the County Agriculture Extension Agency, and the U.S. Department of Agriculture County emergency Board.

- A) The Penna. Dept. of Agriculture will be responsible for sampling activities to include the picking up and delivery of samples to State laboratories and for the reporting of sample results to the County office.
- B) The county extension agent or his assistant will report to the County EOC when requested.
- C) There are approximately 300 farms South of Peters Mt in the 20 mile zone. All 300 raise some type of crops...
- D) Approximately 200 farms have livestock. South of Peters Mt the numbers include:

Milk Cows.....	3,700	head
Calfs.....	2,300	head
Beef Cattle.....	5,000	head
Sheep.....	350	head
Horses.....	1,500	(On farms)



- E) There are approximately 100 farms involved with Poultry.
- F) To move livestock from the 10 mile zone would involve the use of some 600 vehicles. There are enough transport units in the County to transport approx. 75% of livestock on farms.
- G) While it would appear that actual movement of livestock might not occur, the thought should always remain. Animals would be moved to the Northern section of Dauphin County and into Northumberland County if necessary. It is known that some farmers have in fact already made provisions for housing of animals if the movement of such should occur...
- H) The County Agricultural Extension Agent will maintain appropriate liaison with the USDA County Emergency Board.
- I) Contacts include; John Harris 652-8460 W
599-5769 H

Harold Steward 545-1589