Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

December 15, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Byron Station Units 1 and 2
Emergency Plan
NRC Docket Nos. 50-454 and 50-455

References (a): August 29, 1980, letter from L. O. DelGeorge to D. G. Eisenhut.

(b): March 11, 1982, letter from B. J. Youngblood to L. O. DelGeorge.

(c): March 22, 1982, letter from T. R. Tramm to H. R. Denton.

(d): May 25, 1982, letter from T. R. Tramm to H. R. Denton.

(e): August 17, 1982, letter from T. R. Tramm to H. R. Denton.

Dear Mr. Denton:

This is to provide information regarding the emergency plan for Byron Station. Review of this information should help close Outstanding Item 16 of the Byron SER.

As indicated in references (a) and (c) preliminary evacuation time studies for Byron and Braidwood stations were developed in 1980. The Byron estimates have been revised in a detailed study that has been conducted in accordance with the guidance contained in Appendix 4 to NUREG 0654/FEMA-REP-1, Rev. 1. This study has been recently completed in parallel with the preparation of initial state and local emergency plans contained in "The Preliminary Illinois Plan for Radiological Accidents (IPRA) Byron", Vol. VI, Revision 0, 12/82. The new evacuation time estimates are documented in the enclosed report.

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A draft of the public information brochure required to satisfy the requirements of 10 CFR 50.47(b)(7) has been prepared by CECo and is being provided in Attachment A to this letter. This draft is very similar to the brochures which have been used for the last two years for our other nuclear generating stations. Prior to public distribution in 1983, we anticipate revising the format of all these brochures in conjunction with appropriate offsite agencies.

The information presented will not be changed in any substantial way. Unless other arrangements are made, the final version of this brochure will be provided to the NRC at the same time it is distributed to the public in April, 1983.

According to our records, we have now provided all of the information requested by the NRC regarding the Byron emergency plans. Only the full-scale exercise, scheduled for May 11, 1983, remains to be completed.

Please contact this office if there are additional questions.

One signed original and fifteen copies of this letter and the attachment, and the enclosed are provided for your review.

Very truly yours,

T. R. Tramm

T. R. Tramm
Nuclear Licensing Administrator

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Attachment

Enclosure: "Evacuation Time Estimates Within the Plume Exposure Pathway Emergency Planning Zone For the Byron Nuclear Generating Station," December, 1982.

5535N

ATTACHMENT A

DRAFT

BYRON STATION

PUBLIC INFORMATION BROCHURE

5535N

What To Do In Case Of A Nuclear Station Emergency

Dear Citizen:

We are providing this booklet to you because one of our nuclear generating facilities operates in the area where you live, work, or are visiting, and we want you to read and understand the plans that have been developed for your safety in the event of a serious accident at this facility.

We have never had a serious accident, and it is not likely that we ever will. However, as with all potential emergencies, your safety could depend on your preparedness.

Please—read this booklet carefully. Remember what you read. Although this information focuses on a potential nuclear facility emergency, most of it is useful for any major emergency, so try to keep this booklet where you can later find it and refer to it.

If you would like additional information, please write: Supervisor of Public Affairs, Commonwealth Edison Company, P.O. Box 767, Chicago, Illinois 60690. Or call (312) 294-4321 and ask for Public Affairs.

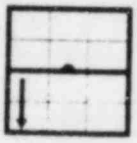
COMMONWEALTH EDISON

Emergency Instructions

Nuclear generating stations cannot explode. If there was an incident, unlike other man-made or natural accidents, there would be time to take precautionary measures. Also depending on atmospheric conditions, only limited areas would be affected. If there ever is a problem:

Stay indoors until you are instructed to do otherwise.

Stay tuned to your radio or television stations for information and instructions. (Refer to pages 10 and 11 in this booklet for specific information concerning your area.)



Close all windows and doors tightly.

Turn off all combustion heating and cooling systems.

If your building has a basement, take a radio and go there.

If you do not have a basement, keep away from doors and windows.

Use the telephone only in emergency situations.

Keep calm at all times. Panic is your greatest enemy in any emergency.

Nuclear Emergency Protection

The purpose of this booklet is to tell you what to do in case of a nuclear generating station emergency, although such an emergency is a very remote possibility. But, because it *could* happen, we have to be prepared. For that reason, we think it's important that you not only understand the plan but also radiation and how it affects us all.

First, radiation is simply energy which travels in the form of particles, or bundles called waves. One kind cooks our food in microwave ovens. Another is the x-ray. A third, the radio wave, carries sound. Yet a fourth, a wave of higher energy, transmits TV pictures.

But radiation isn't just man-made. It's a natural phenomenon, too, all around us, all the time. It comes from the sun, the stars, the soil beneath our feet, the air we breathe, the water we drink, the food we eat, the stone, brick or wooden walls that shelter us, even the potassium and carbon in our own bodies.

To measure the amount of radiation a person receives, a unit called millirem is used. In the northern Illinois area natural background radiation results in an annual radiation dose of 100 millirem. Someone standing at a nuclear plant boundary for a year would receive an extra ½ millirem. An x-ray may expose the affected part of the body to 75 millirem or more.

To be sure, radiation can be dangerous. But that depends on the amount we receive. As you can see from the preceding paragraphs, we're all exposed to low levels of radiation every day of our lives. But because we can't see it, feel it, smell it, hear it or taste it, it's easy to fear it. And panic can be the most pervasive danger in the event of a nuclear station emergency.

Studies which tracked people exposed to far more radiation than people normally receive in the northern Illinois area have found no excess leukemia, other cancers, or genetic damage due to low-level radiation.

This plan is designed to prevent people from being exposed to large amounts of radiation if a serious accident actually occurred. Sheltering, or in extreme cases, evacuation would be recommended as needed to keep radiation exposure to the general public well below the limits for nuclear plant workers of 5,000 millirem.

What all this means is that we shouldn't panic at the first warning of a nuclear station accident. We should take precautions, however, just as we would during a tornado. Or, in the case of a chemical spill, when it's often necessary to evacuate an area.

Like so many other things we live with, radiation can be harmful. But treated with caution and common sense, it needn't be frightening.

Plans for Emergencies

Special plans have been developed to protect the public in the event of a nuclear generating station accident. The Illinois Plan for Radiological Accidents would go into effect as soon as conditions at the station indicated even the potential for a dangerous release of radioactivity.

This would trigger a coordinated response by the Illinois Emergency Services and Disaster Agency, the Illinois Department of Nuclear Safety, Commonwealth Edison, and the Nuclear Regulatory Commission; this could ultimately also include other state, local, and civil defense agencies, the American Red Cross, and the Salvation Army. These organizations would work together with a single goal—to protect the public. To ensure that the plans themselves are up to this task, they are rehearsed periodically in "drills" and "exercises" that simulate actual emergency response.

Special attention has been devoted to people within 10 miles of the nuclear station, in what is called the Emergency Planning Zone. Studies by the Nuclear Regulatory Commission and the Federal Emergency Management Agency have set 10 miles as the maximum distance that could require evacuation or sheltering following an accident. A Public Notification System has been installed within the Emergency Planning Zone, consisting primarily of outdoor sirens and vehicle-mounted public address equipment. Although designed to warn the public of a problem at the nuclear station, this system may be activated for other emergencies as well.

In an emergency involving the nuclear station, the news media would be given recommendations by the State and local authorities for the general public. They would also be given continual status reports directly from Commonwealth Edison. This information would then be transmitted to you on your local radio or television stations over the Emergency Broadcast System, which goes into effect the minute an emergency is declared. Your local radio or TV station is your best source of up-to-the-minute information and instructions (traffic reports, shelter locations, evacuation directions, etc.).

What To Do

If you hear a continuous siren blast lasting 3 minutes or more, or if you are notified in any other way that an emergency may exist, you should tune your radio or television to a *local* station and await information and instructions. Your local primary emergency information

radio stations are listed on page 11.

Your best source of up-to-the-minute information and instructions is the Emergency Broadcast System, through your local radio or TV station.

Do not call the police, sheriff, fire department, or anyone else unless it is absolutely necessary (and then try to limit your call to one minute). The phone lines must be kept clear for use by emergency personnel.

Respond promptly to all official instructions. You may be advised to take shelter indoors, or you may be advised to evacuate. State and local authorities will determine which of these actions is the safest, and advise you accordingly.

Staying Indoors: "Shelter-In-Place"

A *shelter-in-place* announcement means "stay indoors" or "get indoors." This is the most likely protective action. Evacuation is much less likely and in many cases affords less protection than shelter-in-place. If you're outside at the time shelter is recommended, head for home immediately (or, in a pinch, for any place that'll take you). Wherever you end up, though (even if you are in a car), take the following precautions to reduce the risk of radiation exposure.

1. Make sure the doors and windows are shut and tightly sealed.

2. Turn off the combustion heating or cooling system if it's bringing air in from the outside (if instructed to do so).

3. Take a radio or television and move to the basement if you have one. If not, stay away from the doors and windows.

4. Keep everybody — including pets — inside, stay calm, and tune into a local radio or television station for further instructions.

5. Refer to pages 10 and 11 in this booklet for information on evacuation routes and Primary Relocation Communities in your area in case instructions are changed to "evacuation."

6. If you are not within the take-shelter area, do not enter it. When it is safe to re-enter the area, you will be informed.

7. If you must go outside, place a handkerchief or a protective mask over your nose and mouth. Limit your time outside as much as possible.

Evacuation

Do not try entering the evacuation area for any reason whatsover. If you've been asked to evacuate, do not hesitate or waste time trying to take all your possessions with you. Instead:

1. Gather the people in your home together. If your children are in school and the school is in an evacuation zone, do not try to pick them up. They will be transported out of the area to a safe location where you may go to get them

   The same applies for nursing home residents and hospital patients.

2. Pack only essential items (see checklist on page 9).

3. Turn off gas, electricity and water to the same extent as if you were leaving for a week.

4. Lock the windows and doors.

5. Don't get on the road with a car in poor running condition or that has a nearly empty gas tank. Carpool with a neighbor or call your local Emergency Services Coordinator on the phone number listed across from the map.

6. Keep your pets indoors unless you have a place to go other than the designated Relocation Centers. *Relocation Centers will not accept pets.* If you do have a place to take them, bring them along. But then, remember to take leashes, dishes, carriers, etc., and a supply of pet food.

7. If you have livestock, shelter them. And, if possible, make provisions for feeding and watering them. Stored feed should be used if possible. As soon as it's safe, you'll be permitted to return and care for them.

8. Know where you're going . . . which direction is safe, which routes are open, where you can stop for the night, etc.

9. Don't rush. You're a lot more likely to get hurt that way than you are by the release of radiation.

Words To The Wise: Preparing For Emergencies

Since you may have to leave your home on short notice for any one of a number of accidents including nuclear, flooding and chemical spills, you can do some things now to make things easier later. Here are four sensible ways to prepare yourself for *any* emergency.

1. Collect your important papers and store them in a safe place. They should all be together so that you can take them with you, if you want, without wasting time searching for them.

2. Set aside another place for emergency gear such as flashlight, extra batteries, extra sets of car keys, First Aid kit, fire extinguisher, and other items that you may want quickly.

3. Make a list of things you'll need to take with you, and make sure you always have them on hand.

4. Keep your car in good running order with an adequate supply of fuel.

For The Disabled

Special provisions will be made to provide care and transportation for all the disabled. It is important that you let your needs be known, so contact in advance your city or county Emergency Services Coordinator as listed at the back of this brochure.

For More Information On:

Nuclear Power

Supervisor of Public Affairs, Commonwealth Edison Company, P.O. Box 767, Chicago, Illinois 60690

State Protection Action Plans

Illinois Emergency Services and Disaster Agency
Public Information Office
110 East Adams Street
Springfield, Illinois 62706

For local protective plans, contact your city or county Emergency Services Coordinator as listed on page 11.

If you are disabled, or without any means of transportation, or know of someone who needs special help, contact your city or county Emergency Services Coordinator in advance.

What You May Want To Take Besides Your Loved Ones

These are only general suggestions for any evacuation. They obviously don't apply to everyone. Shelters in host towns will provide food and bedding.

Clothing

A. Enough seasonal clothing for one week

Medical Supplies

A. First Aid kit
B. Prescription medicines and prescriptions

Personal Items

A. Soap and towels
B. Shaving articles
C. Toothpaste and toothbrushes
D. Sanitary supplies
E. Required papers (auto registration and credit cards)

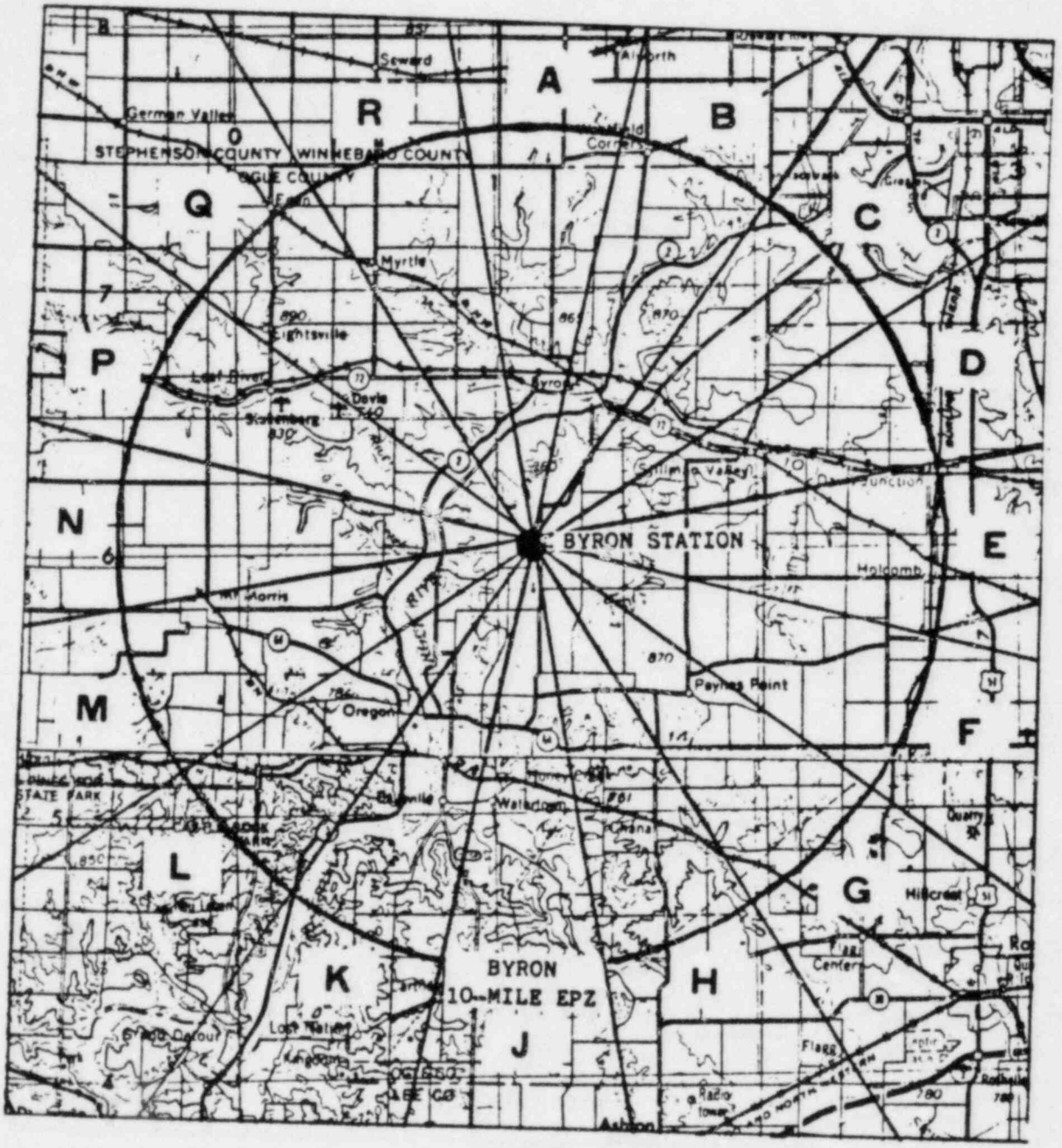
Children And Infants

A. Disposable diapers and powder
B. Bottles
C. Milk/formula

Other Supplies

A. Flashlight
B. Candles/matches
C. Portable radio/batteries
D. Plastic or paper bags
E. Hand tools (for car repairs)

10-Mile Emergency Planning Zone



NOTE: Figure to be redrawn to emphasize recommended evacuation routes.

Relocation Communities And Directions

The following communities are likely to serve as host shelter areas in the event of an evacuation request. To plan your route, travel to one of the roads shown on the map, use the map to get to one of the major highways, and follow the directions below to the host shelter areas. Additional or alternate communities and routes may be utilized, depending on weather and road conditions. Specific emergency information about what to take, what relocation centers will be open, and how to get there will be broadcast as information becomes available by the radio stations that are listed on page 11.

(SEE NOTE BELOW)

Primary Emergency Information Radio Stations:

(SEE NOTE BELOW)

Emergency Services Coordinators

The disabled and those requiring transportation for an evacuation should contact in advance their Emergency Services Coordinator listed below.

(SEE NOTE BELOW)

NOTE: The information to be inserted here is to be taken from "The Preliminary Illinois Plan for Radiological Accidents (IPRA), Byron", Vol. VI, Revision 0, 12/82.

Commonwealth Edison
Public Affairs Department
P.O. Box 767
Chicago, Illinois 60690

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EVACUATION TIME ESTIMATES

WITHIN THE PLUME EXPOSURE PATHWAY EMERGENCY PLANNING ZONE FOR THE BYRON NUCLEAR GENERATING STATION

COMMONWEALTH EDISON COMPANY

DECEMBER 1982