# The History and Overview of the REP Program [Transcript]

[NARRATOR] Welcome to the HSEM online training course “The history and overview of the REP program”. Please type your name, both first and last and press enter. Type your agency name and press enter. This training session will begin with its history. Leading off with the Three Mile Island incident which was the initiating event resulting in the establishment of the REP program. In the second portion we will discuss the importance of Minnesota chapter 12 and what that means for the REP program in Minnesota. From there we will look at the two nuclear power plants in Minnesota and all of the parts that make up the REP program in our state.

## Establishment of the REP Program

The accident at Three Mile Island was the incident that touched off a series of events that ultimately led to the establishment of the Radiological Emergency Preparedness Program. It all began about 4 a.m. on March 28, 1979 when a relatively minor malfunction in the secondary coolant to cause the temperature to rise in the primary coolant to rise. This in turn caused the reactor to shut down automatically. At this point a relief valve failed to close but instrumentation did not reveal that and so much of the primary coolant drained away that the residual decay heat in the reactor core was not removed.

The core suffered severe damage as a result. In the afternoon of March 28th hydrogen gas gathered at the top of the reactor vessel. From March 30th thru April 1st  operators removed this hydrogen gas bubble by periodically opening the vent valve on the reactor cooling system pressurizer. For a time the NRC believed the hydrogen gas bubble could explode though such an explosion was never possible since there was not enough oxygen in the system. When the accident at Three Mile Island is recalled it is often in the context of what happened with the gas bubble on Friday and Saturday, March 30th and 31st as this newscast from Friday March 30, 1979 indicates.

[Walter Cronkite] “This is the CBS Evening News with Walter Cronkite – good evening, the world has never known a day quite like today. We face the considerable uncertainties and dangers of the worst nuclear power plant accident of the atomic age and the horror tonight is it could get much worse. It is not an atomic explosion that is feared, the experts say that is impossible. But the specter was raised that perhaps the next most serious kind of nuclear catastrophe, a massive release of radioactivity. The nuclear regulatory commission cited that possibility with an announcement that, while it is not likely, the potential is there for the risk of an ultimate meltdown of the Three Mile Island Atomic Plant outside of Harrisburg, Pennsylvania. Robert Shakney reports from Washington.”

[Narrator] Two weeks after the accident at Three Mile Island, the Kemeny Commission was set up to investigate the incident. The report was issued in October of that same year. The heaviest criticism concluded that to prevent nuclear accidents as serious as Three Mile Island, fundamental changes will be necessary in the organization, procedures, and practices and above all in the attitudes of the Nuclear Regulatory Commission. In addition the Kemeny Commission report recommended that FEMA be responsible for reviewing and approving offsite radiological planning. So, in December of 1979 President Carter transferred the Federal lead role in off-site REP activities from the NRC to FEMA. In return, FEMA established the REP program to ensure that the public health and safety around nuclear power plants would be adequately protected.

It is important to remember that FEMA REP program responsibilities encompass only offsite activities which include state, tribal and local governments. Onsite activities continue to be the responsibility of the NRC. The accident that occurred at Three Mile Island on March 28th 1979 was the most serious in U.S. commercial nuclear power plant operating history. The accident was caused by a combination of personnel error, design deficiencies and component failures. As a result, sweeping changes occurred in the nuclear power industry.

These changes involved enhancements in many areas including: emergency response planning, reactor operator training, radiation protection and offsite communications. All told these changes significantly enhanced public safety.

## REP Program in Minnesota

In Minnesota Statute Chapter 12, section 21 it states that during the existence of an emergency resulting from an incident at a nuclear power plant that poses a radiological or other health hazard, the governor may assume direct operational control over all or any part of the emergency management functions within this state. Also in Chapter 12, section 13 it states, in addition to requirements imposed by federal law, the state director shall assess the need for protective actions required to mitigate the effect of an incident at a nuclear power plant.

What this means for disasters such as floods and tornadoes, the local units of government are responsible for and in charge of planning, preparedness, response and recovery however when the incident involves a nuclear power plant the state government is responsible for and in charge of the planning, preparedness and response and recovery efforts. Therefore in Minnesota, the coordination of the REP program is the responsibility of the Department of Public Safety’s Division of Homeland Security and Emergency management. The HSEM REP program works to inform and educate the public, local emergency managers and responders about radiological preparedness. In addition, HSEM coordinates and conducts full-scale biannual drills and exercises with each nuclear power plant in Minnesota.

There are two nuclear power plants in Minnesota, both located along the Mississippi River. There is the Monticello Nuclear Generating Plant located in Monticello and the Prairie Island Nuclear Generating plant located on the Wisconsin border just outside of Red Wing.

Within a 10 mile radius of the two nuclear power plants are five counties designated as risk counties – these include Wright and Sherburne around the Monticello plant and the Minnesota counties of Dakota and Goodhue as well as Wisconsin’s Pierce county around the Prairie Island Nuclear Generating Plant. This 10 mile radius is named the Emergency Planning Zone or EPZ. In addition there is a 50 mile radius termed the ingestion planning zone or IPZ. Within this ring are many more counties including the entire metro area.

The Radiological Preparedness Program in Minnesota is very large and it has many moving parts. In the center of a picture of Minnesota is the state Emergency Operation Center which acts to coordinate all the state agencies which would be part of a response to an accident at nuclear power plant. The agencies include: Minnesota Department of Health, Minnesota Department of Agriculture, Department of Natural Resources, Department of Human Services, American Red Cross, Emergency Medical Services, the State Patrol, Minnesota Department of Transportation, our federal partners and Military Affairs.

In addition, the two counties where the power plants are located activate their Emergency Operations Centers as would Sherburne and Dakota and the city of Red Wing. Due to its location across the river from Wisconsin, if an exercise or incident were to occur at the Prairie Island Nuclear Generating Plant the Wisconsin state Emergency Operations Center would activate as would the Pierce county EOC. Field teams coordinated by a command van would be out tracking the plume and taking air, water, vegetation and soil and other samples as necessary. These samples would then be sent to the Minnesota Department of Health lab to be analyzed. The DNR and the Departments of Agriculture and Health would all have Department Operation Centers or DOCS set up and activated to coordinate their responses. Reception centers would be set up to monitor and decon as necessary members of the general public who have evacuated. Finally hospitals and ambulances would be set up and prepared to transport and treat contaminated and injured individuals. Of course a full activation as outlined here would only occur in a worst case scenario. However, it is exactly this type of scenario that we exercise every other year for each nuclear power plant in Minnesota.

## Quiz

Thank you for completing the history and overview of the REP program. By clicking next you will access the assessment portion of the training module. Please complete each question and click the submit button when you have selected your answer. At the end of the assessment you will receive your score.

### Question 1

Minnesota and Wisconsin must coordinate their response during an exercise with the Prairie Island Nuclear Generating Plant.

True

False

### Question 2

Shows a map of two areas and asks you to click on the Monticello Nuclear Generating Plant

### Question 3

Match the Nuclear Power Plant with the county in which it is located.

Column 1 has Monticello Nuclear Generating Plant and Prairie Island Plant

Column 2 has as choices: Sherburne County, Wright County, Dakota County, Pierce County and Goodhue County

### Question 4

Which federal agency is responsible for Offsite response to a nuclear power plant accident?

DHS

DOE

NRC

FEMA

### Question 5

Select the 2 counties that are within the 10 mile EPZ of the Monticello Nuclear Generating Plant.

Choices are:

Washington

Dakota

Goodhue

Wright

Sherburne

### Question 6

What Minnesota state agency is responsible for coordinating the response to a release at a nuclear generating plant?

MDH

DNR

HSEM

AG

### Question 7

Select the 3 counties that are within the 10 miles EPZ of the Prairie Island Nuclear Generating Plant.

Choices are: Dakota, Goodhue, Pierce, Wright, Sherburne.

### Question 8

There are two planning zones surrounding each of the Nuclear Generating Plants in Minnesota. A 10 miles EPZ and a 50 mile IPZ

True or false

Which federal agency is responsible for Offsite response to a nuclear power plant accident?

FEMA

NRC

DOE

DHS

The Kemeny Commission was set up to investigate the problems that resulted in the accident at the Three Mile Island nuclear Generating Plant?

True

False

### Question 9

The command van has the capability to analyze its own radiological samples and so would not send samples to the MDH lab.

A)True

B)False

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