

STATEMENT
BEFORE THE
SUBCOMMITTEE ON NUCLEAR REGULATION
OF THE
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
BY
HERMAN DIECKAMP, PRESIDENT
GENERAL PUBLIC UTILITIES CORPORATION

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SENATOR HART, MEMBERS OF THE SUBCOMMITTEE ON NUCLEAR REGULATION OF THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, MY NAME IS HERMAN DIECKAMP. I AM PRESIDENT OF GENERAL PUBLIC UTILITIES CORPORATION AND A DIRECTOR OF EACH OF THE THREE GPU OPERATING SUBSIDIARIES, METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY, THAT ARE THE OWNERS OF THE THREE MILE ISLAND NUCLEAR GENERATING STATION AND I AM ALSO ACTING PRESIDENT OF METROPOLITAN EDISON.

I APPEARED BEFORE YOUR SUBCOMMITTEE ON APRIL 23, 1979, OR ABOUT THREE WEEKS AFTER THE ACCIDENT, TO PRESENT OUR PRELIMINARY UNDERSTANDING OF A NUMBER OF THE ASPECTS OF THE ACCIDENT. I AM HERE TODAY AT YOUR INVITATION TO REPORT ON THE STATUS OF THE RECOVERY EFFORT FROM THE ACCIDENT. WITH ME IS MR. RICHARD WILSON, DIRECTOR OF TECHNICAL FUNCTIONS OF THE GPU SERVICE CORPORATION STAFF, WHO IS COORDINATING SOME PHASES OF THE RECOVERY ACTIVITIES.

LAST WEEK THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND, ISSUED ITS SUMMARY REPORT AND A LARGE NUMBER OF SUPPORTING STAFF REPORTS. THE CENTRAL FINDING OF THE COMMISSION WAS THAT THERE ARE PROBLEMS WITH ALL ELEMENTS OF THE STRUCTURE THAT MANUFACTURES, OPERATES AND REGULATES NUCLEAR POWER PLANTS, AND THE COMMISSION SUBMITTED A NUMBER OF RECOMMENDATIONS TO DEAL

WITH THOSE PROBLEMS. FOR OUR PART, WE ARE COMMITTED TO THE IMPLEMENTATION OF THOSE RECOMMENDATIONS THAT ARE APPLICABLE TO US. THESE RECOMMENDATIONS ARE CONSISTENT WITH THE ISSUES IDENTIFIED IN THE NRC ORDER OF AUGUST 9, 1979 THAT MANDATED A PUBLIC HEARING PRIOR TO THE RESTART OF TMI UNIT 1. ALL OF THE EQUIPMENT, PROCEDURAL, AND MANAGEMENT CHANGES THAT WE ARE MAKING WILL BE REVIEWED BY AN ATOMIC SAFETY AND LICENSING BOARD (ASLB). IT IS OUR HOPE THAT THESE HEARINGS, TO BE CONDUCTED IN THE HARRISBURG AREA WILL AFFORD AN OPPORTUNITY FOR THE PUBLIC TO BECOME AWARE OF THE DILIGENCE OF THE COMPANY IN ASSURING SAFETY AS WELL AS AN OPPORTUNITY TO WITNESS THE REGULATORY PROCESS.

TURNING NOW TO THE SUBJECT OF THE TMI-2 RECOVERY EFFORT, I BELIEVE THAT IT IS IMPORTANT TO RECOGNIZE THAT THE ACCIDENT HAS LEFT US WITH QUANTITIES OF RADIOACTIVE FISSION PRODUCTS THAT ARE CONTAINED WITHIN THE REACTOR AUXILIARY BUILDING AND THE CONTAINMENT BUILDING. THESE MATERIALS ARE CONTAINED WITH LESS LONG-TERM RELIABILITY THAN WOULD HAVE BEEN PRESENT IN THE ABSENCE OF AN ACCIDENT. THESE MATERIALS SHOULD BE FIRST IMMOBILIZED AND SECOND REMOVED FROM THREE MILE ISLAND AND PLACED IN STORAGE OR DISPOSAL FACILITIES SPECIFICALLY DESIGNED AND LICENSED FOR THAT PURPOSE. THESE MATERIALS DO NOT PRESENT A SPECIFIC IMMEDIATE THREAT TO THE LOCAL POPULACE, BUT WE THINK PRUDENCE REQUIRES DELIBERATE PROGRESS TOWARD THE REDUCTION AND ULTIMATE ELIMINATION OF THE POTENTIAL VULNERABILITY OF THE AREA TO FUTURE UNCERTAINTIES. WE ARE CONVINCED THAT THE REMOVAL OF THESE MATERIALS FROM THREE MILE ISLAND IS IN THE BEST INTEREST OF THE NEIGHBORS OF THE PLANT.

THE CURRENT STATUS OF TMI-2 IS AS FOLLOWS:

1. THE REACTOR SYSTEM IS STABLE AND COOLING IS BY MEANS OF NATURAL CIRCULATION WITH TEMPERATURES IN THE RANGE OF 170°F AND PRESSURE OF ABOUT 300 psig. CORE DECAY HEAT IS AT A LEVEL EQUIVALENT TO 0.3MW. WE ARE WORKING TO BE IN A POSITION TO TRANSFER TO A FORCED CIRCULATION MINI-DECAY HEAT SYSTEM WITH TEMPERATURE IN THE RANGE OF 110-130°F AND PRESSURE IN THE RANGE OF 50-100 psig.
2. THERE ARE NO SIGNIFICANT ACTIVITY RELEASES FROM THE SITE.
3. EPICORE II HAS BEEN PLACED IN OPERATION AND IT IS WORKING WELL. WITH IT WE ARE CAPTURING THE FISSION PRODUCTS (EXCEPT TRITIUM) CONTAINED IN THE AUXILIARY BUILDING WATER WHICH TOTALED ABOUT 400,000 GAL., AND WE ARE RELIEVING STORAGE LIMITATIONS.
4. THE AUXILIARY BUILDING IS PARTIALLY DECONTAMINATED.
5. LIMITED RADIOACTIVE WASTE STORAGE CAPABILITIES HAVE BEEN INSTALLED AT THE SITE.
6. PROBES HAVE BEEN INSERTED IN THE CONTAINMENT BUILDING AND LIMITED SAMPLES WITHDRAWN, SUCH THAT THE CONTAMINATION LEVEL HAS BEEN BETTER CHARACTERIZED.

SHORTLY AFTER THE ACCIDENT WE ENGAGED BECHTEL POWER CORPORATION TO UNDERTAKE A STUDY OF THE ENTRY, AND DECONTAMINATION, OF THE REACTOR CONTAINMENT BUILDING AND THE RESTORATION TO SERVICE

OF TMI-2. BECHTEL IS A LEADING ENGINEERING AND CONSTRUCTION FIRM IN THE NUCLEAR POWER INDUSTRY AND HAS ALSO HAD EXPERIENCE WITH THE DESIGN OF NUCLEAR FUEL CYCLE FACILITIES INVOLVING DECONTAMINATION PROBLEMS.

BECHTEL COMPLETED ITS INITIAL REPORT ON THE TMI-2 RECOVERY PLANNING STUDY EARLIER THIS YEAR. THE REPORT ITSELF IS APPROXIMATELY THREE INCHES THICK AND CONTAINS SEVERAL HUNDRED PAGES. ESSENTIALLY, BECHTEL'S CONCLUSIONS WERE:

1. ALTHOUGH A DECONTAMINATION EFFORT OF THIS MAGNITUDE IS A MAJOR UNDERTAKING, THE TECHNOLOGY AND TECHNIQUES ARE WELL KNOWN, HAVE BEEN PREVIOUSLY DEMONSTRATED AND CAN BE SAFELY ACCOMPLISHED.
2. THE BECHTEL ESTIMATE OF COST OF DECONTAMINATION AND REACTIVATION OF TMI-2 IS APPROXIMATELY \$320 MILLION. THIS FIGURE INCLUDES \$80 MILLION FOR CONTINGENCIES BUT DOES NOT INCLUDE REPLACEMENT OF THE FUEL CORE. AT THE TIME OF THE ACCIDENT, THE INVESTMENT IN THE CORE WAS \$35 MILLION. WITH INCREASED URANIUM PRICES, ENRICHMENT AND FABRICATION COSTS, A NEW CORE WOULD COST \$60 TO \$85 MILLION.
3. ABSENT EXTRAORDINARY LEGAL, POLITICAL OR REGULATORY DELAYS (WHICH COULD ALSO ADD TO COSTS) DECONTAMINATION AND REACTIVATION OF TMI-2 SHOULD TAKE ABOUT FOUR YEARS.

A COPY OF THE BECHTEL REPORT CAN BE AVAILABLE IF YOUR COMMITTEE DESIRES.

BASED UPON THE BECHTEL STUDY, GPU IS USING AN ESTIMATE OF \$400 MILLION AS THE COST TO DECONTAMINATE AND RECOMMISSION, AND A RESTART SCHEDULE OF MID-1983. THE COMPANY CARRIED \$300 MILLION OF PROPERTY DAMAGE INSURANCE WHICH SHOULD BE AVAILABLE TO OFFSET THESE COSTS. NONE OF THE FOREGOING NUMBERS INCLUDES THE COST OF REPLACEMENT POWER. WE MUST EMPHASIZE THAT THE SCHEDULE AND COST OF THE RECOVERY OF TMI-2 MUST REMAIN UNCERTAIN UNTIL ENTRY AND DECONTAMINATION EFFORTS CAN PROVIDE AN EXPERIENCE BASE FOR ANY RE-ESTIMATE AND UNTIL THE REGULATORY AND PUBLIC ACCEPTANCE ENVIRONMENT HAVE STABILIZED.

THE SIGNIFICANT TMI-2 RECOVERY ACTIVITIES AND ASSOCIATED DATES IDENTIFIED BY THE COMPANY AND BY BECHTEL ARE GENERALLY AS FOLLOWS:

1. DECONTAMINATION OF THE AUXILIARY BUILDING TO PERMIT ITS NORMAL OCCUPANCY BY THE END OF THIS YEAR.
2. REMOVAL (VENTING) OF THE RESIDUAL GASSEOUS FISSION PRODUCTS FROM THE CONTAINMENT BUILDING ATMOSPHERE BY EARLY 1980.
3. REMOVAL OF THE CONTAINMENT BUILDING COVER BY THE SECOND HALF OF 1980.
4. INITIAL ENTRY AND START OF DECONTAMINATION OF THE BUILDING IN THE SPRING OF 1980. (I SHOULD POINT OUT THAT INITIAL ENTRY INTO THE CONTAINMENT BUILDING MAY TAKE PLACE EARLIER.)
5. FOLLOWING ENTRY AND REMOTE DECONTAMINATION, THE CONTAINMENT BUILDING WILL BE ACCESSIBLE FOR HANDS-ON DECONTAMINATION, AND WE ANTICIPATE THE CLEANUP OF THE BUILDING TO THE POINT OF BEING ABLE TO REACH THE TOP OF

THE REACTOR VESSEL WILL TAKE APPROXIMATELY ONE YEAR. THUS, IN THE SPRING OF 1981, WE EXPECT TO BE ABLE TO REMOVE THE REACTOR VESSEL HEAD TO GAIN ACCESS TO THE CORE.

6. COMPLETION OF REMOVAL OF THE FUEL FROM THE CORE WILL TAKE AT LEAST SIX MONTHS AND WOULD BE COMPLETED BY THE FALL OF 1981.
7. ONCE THE FUEL IS REMOVED, WE WILL BE ABLE TO DECONTAMINATE THE REACTOR COOLING SYSTEM, INSPECT ITS MAJOR COMPONENTS AND DETERMINE THE DEGREE OF DAMAGE TO THE REACTOR COOLING SYSTEM PIPING AND THE THICK-WALL VESSELS. THIS EFFORT WOULD TAKE US INTO THE FALL OF 1982.
8. FINALLY, IT WILL TAKE APPROXIMATELY NINE MONTHS TO REPAIR OR REPLACE THE SYSTEMS AND EQUIPMENT DAMAGED AS A RESULT OF THE ACCIDENT. THEREAFTER, UNIT 2 SHOULD BE READY FOR RESTART IN THE SUMMER OF 1983.

THE CLEAN UP IS MORE THAN A TECHNICAL MATTER: IT INVOLVES ACTIVITIES WHICH HAVE BEEN PERCEIVED BY THE LOCAL PUBLIC AS IMPOSING AN UNKNOWN HAZARD. THE ACCIDENT HAS MADE SOME SEGMENTS OF THE PUBLIC SO CONSCIOUS AND FEARFUL OF RADIATION THAT THERE IS A GREAT TENDENCY TO ACCEPT NOTHING. FEDERAL REGULATIONS AND PLANT TECHNICAL SPECIFICATIONS ARE IN PLACE GOVERNING THE HANDLING, TRANSPORTATION, AND DISCHARGE OF RADIOACTIVE MATERIALS. THESE REGULATIONS ARE THE RESULT OF EXTENSIVE REVIEW AND STUDY OF ALL RELEVANT DATA AND HEALTH EFFECTS. THEY WERE PROMULGATED BY THE

NRC LONG BEFORE THE ACCIDENT FOR THE EXPRESS PURPOSE OF PROTECTING THE GENERAL PUBLIC FROM RADIATION DERIVED FROM NUCLEAR POWERPLANTS. WE ARE OBLIGATED AND OUR EMPLOYEES AND MANAGEMENT ARE COMMITTED TO THE FULL IMPLEMENTATION OF AND TO COMPLIANCE WITH THESE REGULATIONS.

THE ACCIDENT HAS CAUSED THE PUBLIC TO BE SKEPTICAL ABOUT THE EFFICACY OF GOVERNMENT REGULATION AND THE COMPETENCE OF THE COMPANY. THERE IS A NEED FOR PUBLIC OFFICIALS AND COMMUNITY LEADERS TO SUPPORT THE REGULATORY PROCESS AND FOR THE COMPANY TO RE-ESTABLISH IT'S CREDIBILITY IN THE COMMUNITY.

BEYOND THE INCENTIVES TO CLEAN UP THE RESIDUALS OF THE ACCIDENT, THE RECOVERY EFFORT CONSTITUTES AN OPPORTUNITY TO ADD TO THE NATION'S NUCLEAR EXPERIENCE. DECONTAMINATION ALONG WITH THE RADIATION PROTECTION AND WASTE DISPOSAL PROBLEMS CAN PROVIDE SIGNIFICANT OPPORTUNITIES FOR LEARNING. THE ACCIDENT EXPOSED NUMEROUS INSTRUMENTS, ELECTRICAL COMPONENTS, AND OTHER MATERIALS TO ENVIRONMENTAL EXTREMES. THESE ITEMS CONSTITUTE A STOREHOUSE OF INFORMATION ON ENVIROMENTAL EFFECTS WHICH ARE OF GREAT VALUE TO FUTURE DESIGNS AND TO SAFETY EVALUATION. THE REACTOR CORE WAS SUBJECTED TO THE EXTREME EFFECTS OF SEVERE UNDERCOOLING AND RESULTING HIGH TEMPERATURES. THE CORE STRUCTURE AND ITS MATERIALS CONSTITUTE AN INVALUABLE DATA POINT FOR THE VALIDATION OF ANALYTICAL METHODS FOR THE ASSESSMENT OF LIMITING ACCIDENTS.

DISCUSSIONS HAVE BEEN UNDERWAY FOR SOME TIME WITH DOE, NRC, AND EPRI CONCERNING PARTICIPATION IN THE RECOVERY PROGRAM. WE WOULD URGE THAT THE NATION TAKE FULL ADVANTAGE OF THIS OPPORTUNITY FOR LEARNING AND THAT SUCH LEARNING NOT BE LIMITED BY THE ABILITY OF OUR COMPANY AND OUR CUSTOMERS TO ENDURE THE COSTS.