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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
LOUISIANA POWER & LIGHT)	
COMPANY)	Docket No. 50-382
)	
(Waterford Steam Electric)	
Station, Unit 3))	

APPLICANT'S TESTIMONY OF ROBERT G. AZZARELLO,
ALEXIS TSAGGARIS, AND RONALD J. PERRY
ON RADIOLOGICAL EMERGENCY RESPONSE PLANS,
CONTENTIONS 17/26(1)(a), (c), (d), (e) AND (f)

The purpose of this testimony is to address the concerns raised by the Joint Intervenors in their Contentions 17/26(1)(a), (c), (d), (e) and (f). These stated concerns all relate to the adequacy of certain aspects of the radiological emergency response plans with respect to evacuation of the public within ten miles of the Waterford Steam Electric Station, Unit 3 ("Waterford 3") should that become necessary, in the event of an accident involving radiological releases from the plant site.

Emergency planning for Waterford 3 has been guided by two general principles. The first recognizes that effective

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planning is largely an educational activity. Emergency planning is much more than the preparation of written plans, which are too often viewed as ends in themselves; instead, planners focus on educating themselves and others who may be involved in emergency response, anticipating events and problems, identifying resources, and developing efficient and effective responses utilizing available resources. The second related principle acknowledges that planning is a continuous activity -- a process, not a product. The development of a written plan at a particular time is only one part of the total planning process. Indeed, written plans are "living documents," which by their very nature must be periodically updated to reflect significant developments resulting from the ongoing planning process. The planning process for Waterford 3 is continuing, and indeed will continue, throughout the operating life of the Waterford 3 plant.

The radiological emergency response plans for Waterford 3 consist of two separate and coordinated emergency plans. The onsite plan, known as the Waterford 3 Steam Electric Station Emergency Plan, referred to as the "Waterford 3 Plan", is developed and implemented by Louisiana Power & Light Company, operator of the nuclear facility. The offsite plan is the State of Louisiana Peacetime Radiological Response Plan, Annex J, Appendix 7, Louisiana Preparedness Plan for Emergency Operations, referred to as the "State Plan". Attachment 1 to the State Plan is specific to the Waterford 3 Steam Electric

Station and incorporates the individual radiological emergency response plans of St. Charles Parish and St. John the Baptist Parish ("Parish Enclosures"). The plume exposure pathway Emergency Planning Zone ("plume EPZ"), which lies totally within the State of Louisiana, encompasses parts of both Parishes within a radius of approximately ten miles of the Waterford 3 plant. This testimony, in response to the Joint Intervenor's contentions related to evacuation of the public, deals primarily with the offsite plan.

The Waterford 3 Plan provides direction for onsite personnel to respond to emergencies varying in severity from minor personnel injuries to situations involving real or potential offsite radiological hazards. Louisiana Power & Light developed the plan in compliance with Section 50.47 and Appendix E of 10 C.F.R. Part 50 and with the joint NRC/FEMA planning standards and criteria set out in "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," NUREG-0654/FEMA-REP-1, Rev. 1, November 1980 (known as NUREG-0654).

The State Plan provides direction for State and Parish offsite organizations to respond to an accident at a fixed nuclear facility within or affecting Louisiana. The plan provides a framework for coordination among response organizations and requirements for preparedness programs for the protection of public health and safety. It establishes

responsibilities and response procedures for departments of state government to assure technical and resource support to affected areas. The Louisiana Nuclear Energy Division (LNED) is the lead State agency for the technical analysis and response to an accident. The Louisiana Office of Emergency Preparedness (LOEP) is the lead State agency for coordination of general state level emergency plans and programs. LOEP coordinates all phases of disaster operations, including the emergency response of designated State agencies, FEMA, and other states, when appropriate. LNED, in coordination with other organizations and support from Louisiana Power & Light, developed the State Plan in compliance with 10 C.F.R. §50.47, Appendix E of 10 C.F.R. Part 50, NUREG-0654 and 44 C.F.R. Part 350 (proposed FEMA regulations) to meet the State's mandate to preserve the safety and well-being of its citizens.

The Parish Enclosures (in Attachment 1 to the State Plan) provide direction for St. Charles and St. John the Baptist Parish offsite organizations to respond to an accident at the Waterford 3 site. The Parish Enclosures detail actions to be taken by local response organizations for the protection of persons within affected areas of the Parishes. They establish responsibilities and response procedures for departments of Parish government and other local response organizations, including Parish officials, emergency preparedness/civil defense, law enforcement, fire and rescue, schools, transportation, public works and industry. Each Parish Emergency

Preparedness/Civil Defense Director, acting as the chief of staff for the Parish chief executive, is responsible for directing and coordinating protective response to an accident at Waterford 3. St. Charles and St. John the Baptist Parishes, in conjunction with LNED and in coordination with other State organizations, and with support from Louisiana Power & Light, developed the Parish Enclosures for incorporation into the State Plan in compliance with 10 C.F.R. §50.47, Appendix E of Part 50, NUREG-0654, and 44 C.F.R. Part 350 (proposed) and to meet the Parishes' mandate to preserve the safety and well-being of their citizens.

Each of the plans was developed in coordination with the others and according to the guidance established by the U.S. Nuclear Regulatory Commission and the Federal Emergency Management Agency in NUREG-0654. Each plan contains several protective action options, e.g., sheltering, respiratory protection, access control, and evacuation. The option selected for any given emergency situation depends upon many factors, including radiation levels. Evacuation is only one of the possible protective responses to an accident at Waterford 3.

Louisiana Power & Light has engaged the services of Energy Consultants, Inc. to assist the State and the two Parishes in the development of the offsite emergency response plans. Energy Consultants, Inc., with experience in the development and implementation of emergency plans, also assisted Louisiana Power & Light in the development of the Waterford 3 Plan. This

has resulted in a high degree of coordination between the onsite and offsite plans.

Joint Intervenors' Contention 17/26(1)(a): The provisions for notifying residents of evacuation procedures are inadequate.

As part of the State, Parish, and Louisiana Power & Light public education and information program, the public within the plume EPZ surrounding the Waterford 3 site will be provided in advance with printed information explaining procedures to be followed in the event of an evacuation. This will include information on the identification of risk areas, evacuation procedures, protective measures, pick-up points for those without transportation, evacuation routes, the location of reception centers, affected schools, and special information for handicapped persons and others with special needs (State Plan, Chapter 5; State Plan, Attachment 1, Chapter 1).

In particular, the advance information will advise the populace to tune in to identified local radio or cable TV stations for specific information and instructions upon activation of the early warning siren system. The advance information, together with the information broadcast at the time of the emergency, will ensure that the public will be notified of all necessary evacuation instructions and procedures (State Plan, Chapter 5; State Plan, Attachment 1, Chapter 1).

The Louisiana Nuclear Energy Division (LNED) will coordinate the development of the advance information and its annual

dissemination to the public so that the material can be reviewed in advance and will be available at the time of an emergency. Brochures containing the information will be mailed to area residents annually. Brochures will be distributed in bulk, or posters containing such information will be provided, to area industries, hotels, motels, post offices, libraries, and other public areas. The information will also be provided in local telephone directories (State Plan, Chapter 5; State Plan, Attachment 1, Chapter 1). In addition, special facility emergency plans have been developed for hospitals, nursing homes, school districts and jails.

In the event of an accident at the Waterford 3 site requiring offsite protective response, a more immediate, intensive, and detailed emergency information program will go into effect. Following the Parish executives' decision to implement evacuation for a risk area, the St. Charles and St. John the Baptist Parish Emergency Preparedness/Civil Defense Directors will sound the siren system to alert the public at risk that an emergency is in progress and to cue them to tune to a local radio or cable TV station to receive information about the nature of the emergency and instructions for evacuation. To supplement the siren system, the Directors will dispatch alert teams, including firemen and Sheriff's Department personnel, equipped with mobile public address systems, to inform the public at risk of the accident (State Plan, Chapter 4; State Plan, Attachment 1, Chapter 1; Parish Enclosures, Chapter 3).

Special arrangements exist between each Parish and local radio and cable TV stations for the provision to the public of detailed emergency information. In addition, the Emergency Broadcast System (EBS) will be activated to direct listeners to the appropriate stations to receive detailed information. Subsequent to the activation of the public alert/notification system, the Louisiana Office of Emergency Preparedness (LOEP), in conjunction with LNED, will coordinate the dissemination of continuing emergency public information over the EBS (State Plan, Chapter 4; Parish Enclosures, Chapter 3).

Upon tuning to a local radio or cable TV station, the public will hear a pre-prepared evacuation message containing specific emergency information, including a description of the area to be evacuated and instructions on transportation assistance, evacuation routes, reception centers and shelters,, and preparatory measures for leaving home. If school is in session, the public will also hear information on the destination of evacuated school children and instructions for meeting them. In addition to the pre-prepared broadcast messages, the Parishes will disseminate continuing emergency public information through the Parish Public Information Officers to the media, including local radio and cable TV stations. (State Plan, Chapters 4 and 5; Parish Enclosures, Chapter 3).

Notification and evacuation instructions to special facilities, i.e., schools, hospitals, nursing homes, industries and jails, will be coordinated by officers of the Parish

Emergency Operations Center (EOC) staff. Key officers, e.g., the School Services Officers and Health and Medical Officers, will be mobilized early to ensure prompt notification to administrators of special facilities for the timely implementation of the facilities' emergency response plans (Parish Enclosures, Basic Plan § D).

The NRC and FEMA planning standards and evaluation criteria in NUREG-0654 for notifying residents of evacuation procedures have been satisfied in the offsite radiological emergency response plans for Waterford 3.

Joint Intervenor's Contention 17/26(1)(c): The evacuation warning system is inadequate.

The public alert/notification system for the Parishes consists of a combination of alert systems (fixed sirens, tone-alert receivers, radios, mobile sirens, and mobile loudspeakers) as well as the Emergency Broadcast System (EBS) and local broadcast media.

The backbone of the early warning system is a network of 38 fixed location, rotating, radio-activated, battery-operated sirens to be located in St. Charles and St. John the Baptist Parishes. When activated, the sirens will produce a 3-5 minute steady signal. Residents, upon hearing the sirens, would then turn on local radio and cable TV stations to obtain the specific emergency broadcast information.

In developing the system, Louisiana Power & Light, through contract with Acoustic-Technology, Inc. and in coordination

with the Parish Emergency Preparedness/Civil Defense Directors, has identified the populated areas, conducted an extensive siren system acoustic study, and identified the locations for installation of the sirens.

The objective of the acoustic study was to develop and establish a siren system that meets the design objectives and acceptance criteria in Appendix 3 of NUREG-0654. The actual siren locations were selected after onsite inspection. Siren sound levels have been calculated, through the use of a computer model, to provide siren coverage of 60 dbC, which would produce a level of at least 10 dbC above average daytime ambient background in accordance with the target level criterion specified in Appendix 3 of NUREG-0654. The system design allows for either selective activation of individual sirens or activation of the entire system. A description of the siren system and its analysis for compliance with NUREG-0654 criteria is provided in a document prepared by Acoustic Technology, Inc. entitled "Verification of Siren Alerting System, Waterford 3 Nuclear Power Station of Louisiana Power & Light Company, New Orleans, Louisiana."

As indicated in Chapter 3, Tab 3 of the Parish Enclosures, and in Appendix 3 of the siren verification report, the sirens will be placed to provide a minimum 60 dbC coverage of the populated areas within the plume EPZ surrounding the plant. The siren system will therefore provide the capability for an instantaneous alert signal to essentially all of the population on an area wide basis throughout the plume EPZ.

In addition, major industries, hospitals, nursing homes, private schools, and the public school system will be notified directly from the respective Parish Emergency Operations Centers (EOC) by radio, tone-alert receiver, or telephone.

The areas not covered by the sirens are wetlands which are essentially uninhabited. Tone-alert receivers and radios will be used in hunting and fishing camps in the wetlands. State helicopters and boat resources will also be used for wetlands notification through the Department of Public Safety and the Department of Wildlife and Fisheries. In addition, alert teams staffed by Parish and State personnel may be dispatched, as conditions indicate, to provide supplemental notification to hunters, fishermen, or other transients who may be in the wetlands area. The State activities and resources will be coordinated by LOEP (State Plan, Basic Plan, §§IV.E, IV.G, V.E, VI.B.15, VI.B.17, and VI.B.20; Parish Enclosures, Chapter 3). In addition, manpower assistance and resources from the Louisiana National Guard is available upon order of the Governor of Louisiana.

When a decision is made to commence protective action to the public, the public alert/notification siren system will be activated by Parish officials. Activation of the siren system will take place from the Parish EOCs, with the Sheriff's offices as a back-up. Local residents will tune to local radio and cable TV stations for specific information about the protective actions to be taken. The Parish Public Information

Officers are responsible for disseminating continuing detailed emergency information directly to the local radio and cable TV stations (Parish Enclosures, Chapter 3). LOEP will also activate the Emergency Broadcast System for the broadcast of prepared messages providing information to the public on an area-wide basis.

The Parish Civil Defense and Emergency Preparedness Directors are responsible for conducting one complete system test and EBS activation each year, quarterly growl tests, and silent tests every two weeks. The respective Parish officials must certify the performance of these tests (Parish Enclosures, Chapter 3, §VI).

Thus, the public alert/notification system will provide adequate public notification, and meets the NRC and FEMA requirements for evacuation warning systems, including the design objectives and acceptance criteria in Appendix 3 of NUREG-0654.

Joint Intervenors' Contention 17/26(1)(d): There is not an adequate command decision structure, including appropriate guidance, for commencing evacuation.

In the event of an accident at the Waterford 3 site with the potential for offsite radiological consequences, the decision to evacuate or implement other protective responses is made by the St. Charles Parish President and the St. John the Baptist Parish Police Jury President for their respective Parishes. These decisions are made with the advice and counsel

of the St. Charles Parish Emergency Preparedness Director and the St. John the Baptist Parish Civil Defense Director (State Plan, Basic Plan, §V.G; Parish Enclosures, Basic Plan, §C). In addition, the Governor of Louisiana is empowered to declare a state of emergency and order an evacuation (State Plan, Basic Plan, §V.A; State Plan, Chapter 4, §III.D).

The Waterford 3 Plan and the State Plan specify mechanisms for providing the Parishes with extensive information from the Waterford 3 plant site and from State resources to assist the Parishes in making their protective action decisions. This information includes ongoing data and information on the details of the accident, the class of emergency, and recommendations from both the Waterford 3 plant and the State as to emergency response measures and protective actions to be taken (Waterford 3 Plan, Sections 5 and 6; State Plan, Basic Plan, §IV; State Plan, Chapters 1 and 6; Parish Enclosures, Chapters 1 and 4).

In the event of an accident at the Waterford 3 plant, the Waterford 3 Plan will immediately be implemented by the Emergency Coordinator at the plant site. The Emergency Coordinator is charged with the command and control of all accident mitigation actions at the site (Waterford 3 Plan, §3.2). The Emergency Coordinator will assess the emergency condition and simultaneously notify the Parishes and the Louisiana Nuclear Energy Division (LNED), and the Louisiana Office of Emergency Preparedness (LOEP) (Waterford 3 Plan,

Sections 5 and 6; State Plan, Basic Plan, §IV; Parish Enclosures, Chapter 1). The information provided will include the class of emergency; the type of actual or projected release; estimated duration; estimates of quantities of radioactive material released and points and height of releases; chemical and physical form of released material; meteorological conditions; actual or projected dose rates at the exclusion area boundary; projected dose rates and integrated dose at the projected peak and at two, five and ten miles; sectors affected; estimates of surface contamination; plant emergency response actions underway; recommended emergency actions, including protective measures; and the prognosis for worsening or termination of the event based on plant information (Waterford 3 Plan, Sections 5 and 6; State Plan, Basic Plan, §IV; State Plan, Chapter 1, §III; State Plan, Chapters 2 and 6). The Emergency Coordinator bases a recommendation for protective action upon his technical assessment of the accident and dose projections estimated through computer analysis of readings from onsite radiological monitoring systems, and dose projections estimated from offsite radiological monitoring efforts by utility field monitoring teams. The Emergency Coordinator will maintain continuing communications with the LNED, LOEP and the Parishes for continuous updating of the information and technical assessment (Waterford 3 Plan, Sections 5 and 6; State Plan, Basic Plan, §IV).

When the Parishes receive the notification, they will implement the notification and mobilization procedures for Parish personnel and resources as determined by the class of emergency. Each Parish will activate its Emergency Operations Center and will maintain continuous communications with the plant and with the State agencies to receive and evaluate updated information pertaining to the accident and recommendations from the plant and from State agencies. (State Plan, Basic Plan, §IV).

When LNED and LOEP are notified by the Waterford 3 Emergency Coordinator, LOEP will provide initial information, and LNED will provide subsequent information, to the agencies designated to support technical response as determined by the class of emergency. LNED will coordinate the technical response of State, Federal and private resources (State Plan, Basic Plan, §IV).

LNED will activate its operational headquarters in Baton Rouge, and LNED's Fixed Facility Response Team (FFRT) will conduct monitoring and sampling activities at predesignated sites in the plume EP7. LNED will conduct accident assessment using the information supplied by the Waterford 3 plant and the field monitoring data supplied by the FFRT. LNED will in turn disseminate timely technical information to the State Emergency Operations Center, which will have been activated by LOEP, and to the Parishes (State Plan, Basic Plan, §IV).

LNED will make protective action recommendations based on its accident assessment, which includes dose projections

developed at the LNED headquarters from offsite radiological monitoring information provided by the utility and by LNED field monitoring teams, and input from radiation specialists from the LNED. These accident assessments and recommendations will be forwarded to the Assistant Secretary, Office of Environmental Affairs (ASOEA), located at the State Emergency Operations Center, for evaluation. Upon the decision of the ASOEA, LNED will provide protective action recommendations to the Parishes (State Plan, Basic Plan, §IV; State Plan, Chapter 6).

Louisiana Power & Light's technical representative assigned to each Parish Emergency Operations Center provides input by translating technical information from the plant to assist the Parish chief executive in assessing the pertinent aspects of the accident. In addition, the Parish Emergency Operations Center staff provides input to help the Parish chief executive assess the public's readiness to respond. The staff is comprised of responsible Parish professionals, each assigned responsibilities within his areas of expertise. The EOC staff's knowledge of Parish resources is a valuable input in the decision-making process. (Waterford 3 Plan, Section 5).

Each Parish will have information, data, assessments, and protective action recommendations from both the Waterford 3 plant and from coordinated State resources to assist it in making its decisions with respect to evacuation or other protective actions (State Plan, Basic Plan, §IV). The decision

structure, including the arrangements and procedures for providing relevant information and recommendations to the Parishes, provides an efficient and effective mechanism for making informed, responsible, and timely decisions with respect to evacuation or other protective actions, all in conformance with NRC and FEMA guidance.

Joint Intervenors' Contention 17/26(1)(e): The Emergency Plan fails to provide for realistic and comprehensive evacuation drills in that provisions for moving individuals are not actually tested.

Maintenance of emergency preparedness is accomplished by periodic training, exercises and drills. The Waterford 3 Plan (Sections 3.4 and 8), the State Plan (Chapter 13) and the two Parish Enclosures (Chapter 3) detail the frequency, objectives, extent, functional areas, scenario content, observation and evaluation of exercises and drills. The full-scale exercise for Waterford 3, in conformance with the specific requirements of 10 C.F.R. §50.47(b)(14) and App. E, ¶IV.F, of the Commission's regulations will test as much of the Waterford 3 Plan and the State Plan, including the Parish Enclosures, as is reasonably achievable without mandatory public participation. The full-scale exercise will be designed to test all major elements of the plans.

In accordance with the specific requirements of ¶IV.F of Appendix E to 10 C.F.R. Part 50, the full-scale exercises conducted for the Waterford 3 site will be designed to insure

that the emergency response plan will be tested up to but not including the evacuation of the general public. The exercises will involve the participation of Louisiana Power & Light and the appropriate State and Parish agencies. The scenario will provide for an escalation of events such that all primary communications links will be exercised. Subsequent scenario events will require a simulation of the public alert/notification system activation as well as exercising the decision-making process necessary to determine the appropriate protective response to be implemented. Headquarters and field emergency operations centers will be activated and staffed and their internal procedures and displays tested. Accident assessment, field sampling and radiological exposure control procedures will be tested. Scenario events will require that officials with authority to implement the plans provide direction and control for protective response operations and coordinate with one another in accordance with the established emergency plans. Public information activities as well as control of recovery and/or reentry operations will be simulated. Federal, State and local observers will be placed at key locations during the exercise to insure that the exercise objectives are met and that problem areas are identified for resolution.

The radiological emergency response plans provide that exercises will be conducted in accordance with the NRC and FEMA planning standards and evaluation criteria in NUREG-0654.

Joint Intervenors' Contention 17/26(1)(f): Procedures are inadequate for evacuating people who are: (i) without vehicles; (ii) school children; (iii) aged or crippled; (iv) sick and hospitalized; (v) imprisoned; (vi) transient workers.

Each Parish government, as the primary implementer of protective actions and the entity most familiar with local needs and resources, is responsible for coordinating the evacuation of the special populations identified in the contention. The special populations requiring transportation support are summarized in each Parish Enclosure, at Tab 7 to the Basic Plan. For purposes of transportation, transient workers are considered members of the general public unless they do not have private transportation, in which case they are considered part of the population without vehicles.

A Transportation Officer has been appointed for each Parish to coordinate the utilization of pre-identified transportation resources in an emergency. In the event of an evacuation, all persons without vehicles would be directed, by broadcast message, to pre-identified pick-up points (listed in the emergency public information brochure), where they would be transported by bus to reception centers outside the plume EPZ. The emergency public information message which would be broadcast at the time of any evacuation also reminds people who have private transportation to check on the needs of those who may lack such transportation.

Each school district within the risk area has an emergency plan, which includes provisions for radiological emergencies.

Provisions for the evacuation of school children in the event of an accident at Waterford 3 are summarized in each Parish Enclosure, at Tab 6. Primary responsibility for the protection and/or evacuation of school students in a radiological emergency, while school is in session, rests with the respective school superintendents. School superintendents will receive notification in advance of any protective action decisions. This will facilitate advance notification to individual schools of the possible need for action and will enable early mobilization of school transportation resources.

If an evacuation is required, students attending schools within the risk area would be bused to relocation centers outside the plume EPZ, where they would be picked up by their parents. Students attending schools outside the risk area but who live within the risk area would remain at their schools until they were picked up by their parents. The pre-distributed emergency public information brochures and the emergency public information message which would be broadcast at the time of any evacuation instruct parents not to call the schools or attempt to pick up their school children at their schools. The brochures and broadcast messages assure parents that protective actions are being taken for their children, and direct the parents to meet their children at relocation centers outside the risk area.

Health care facilities (including hospitals and nursing homes) in St. Charles and St. John the Baptist Parishes have

incorporated protective action response procedures for fixed nuclear facility accidents into their emergency management (disaster) plans. These plans include detailed procedures for evacuation by ambulance and bus. Lists of appropriate transportation resources have been compiled. Support health care facilities prepared to receive evacuated patients/residents from the Parishes of St. Charles and St. John the Baptist have been identified and provided with evacuation support procedures for incorporation into their support facility disaster plans.

The Parish Health and Medical Officers will coordinate the evacuation of the aged or crippled non-ambulatory residents who are not institutionalized) requiring transportation assistance (Parish Enclosures, Chapter 6). The pre-distributed public information brochure requests that, in an evacuation, such persons try to obtain rides with friends, neighbors or relatives, and reminds the general public to check on the needs of those they know who may need transportation assistance. These recommendations are reinforced by the emergency public information message for broadcast at the time of evacuation, which reminds individuals having private transportation to check on the needs of others who lack such transportation, and asks that the Parish Emergency Preparedness/Civil Defense Office be notified of any special transportation needs.

In addition, self-addressed, stamped postcards will be enclosed with the pre-distributed public information brochure, to encourage individuals such as the aged and handicapped

requiring transportation assistance to notify the Parishes of their special needs in advance of an emergency. Further, rosters of aged and handicapped persons who need transportation assistance have been prepared, with the assistance of social service agencies and organizations. These rosters will be maintained in the Parish EOCs, and will be updated semi-annually. In an evacuation, the Parish Health and Medical Officers, in conjunction with the Transportation Officers, will use vans, buses and other available resources to transport aged and handicapped residents to reception centers.

The risk Parish Sheriff is responsible for the protection of prisoners incarcerated in the Parish Jail during a radiological emergency. Agreements have been reached with the sheriffs of neighboring Parishes for the confinement of risk Parish prisoners in an evacuation.

The Parish Emergency Preparedness/Civil Defense Director or his designee is responsible for providing alert/notification to industries (transient workers), for coordinating industry actions with those of the general public, and for coordinating industry resource requirements. Operations for accomplishing these responsibilities have been established for each class of emergency (Parish Enclosures, Tab 8). Rosters of the major industries have been prepared and will be used to provide those industries with early notification of of an accident at Waterford 3. This will give industries advance notice of the possible need for protective action. In the event of an

evacuation, transient workers with private transportation would evacuate in accordance with the procedures established for the general public (Parish Enclosures, Chapter 4, §IV.A.4). Transient workers lacking private transportation, like risk area residents without private transportation, would be directed to pre-designated pick-up points, where they would be bused to pre-designated reception centers outside the risk area.

ROBERT G. AZZARELLO

Engineer - Nuclear
Louisiana Power & Light Company

Education: B.S., Engineering (Electrical Option),
Louisiana State University of New Orleans,
1973.

Extensive training in emergency planning, radiological protection, fire protection and security planning for nuclear power plants, including courses sponsored by the NRC, Institute of Nuclear Power Operations, Atomic Industrial Forum, U.S. Civil Defense Council, TERA Corporation, Westinghouse and National Loss Control Service Corporation.

Experience: 1979 to Present: Utility Engineer and Engineer-Nuclear; Nuclear Project Support Group; Louisiana Power & Light Co. Responsibilities include coordinating the engineering, design and document development efforts pertaining to project emergency planning, fire protection and security. This position provides liaison with offsite personnel such as State and local government/agencies in developing and implementing their plans; coordinating the development and implementation of project security requirements with outside contractors and LP&L personnel; coordinating the development of and revisions to emergency, fire, and security plans; coordinating design, engineering, and construction of the Fire Protection System with the architect/engineer and insurance carriers; coordinating design, engineering and construction of the Security Systems. In conjunction with this position, participated as an observer at the Grand Gulf and Three Mile Island Emergency Planning exercises.

1977 to 1979: Substation Design and Construction Engineer; West Bank Substation; Louisiana Power & Light Co. Responsible for material and substation design and field and vendor inspection and testing.

1974-1977: Field Engineer; West Bank Division; Louisiana Power & Light Co. Responsibilities included the design of electrical distribution systems and components, performance of load flow studies, cost estimate studies and future systems studies.

Professional
Affiliations:

Registered Professional Engineer, State of Louisiana

Member, I.E.E.E.

Member, Louisiana Emergency Planning Committee.

ALEXIS TSAGGARIS

Education: B.S. Basic Engineering, Princeton University, 1970.
U.S. Navy Nuclear Power School, 1971.

Experience: Vice President and General Manager, Schneider Consulting Engineers, March, 1982 to present. Responsible for the overall management of an engineering consulting firm in the areas of electrical, civil, structural, mechanical, chemical and environmental engineering. Specialities include piping and HVAC systems, energy audits management, system designs for waste heat recovery, computer-aided design and graphics, and solid and hazardous waste management systems.

Vice President, Operations Services, Energy Consultants, Inc., September 1981 to March 1982. Responsible for directing a division providing services in the areas of training, emergency planning, licensing, radiological controls, environmental equipment qualification, reliability engineering and other technical services. The responsibilities of directing a variety of projects in these service areas include organizational development and staffing, formulation of marketing plans, business development activities, contract management and personnel administration. Responsible for the development of new service areas, product lines and the expansion of new business.

Vice President, Nuclear Services, Energy Consultants, Inc., August 1980 to September 1981. Responsible for the development of new service areas including nuclear training and emergency planning. Responsibility included developing staffing plans, initial marketing plans and client development, program development and department procedures and structure. Provided services as a senior consultant in the area of emergency planning to several nuclear plant sites, including Beaver Valley and Waterford 3.

Corporate Quality Assurance Manager, Schneider, Inc., June 1980 to August 1980. Responsible for all quality assurance and quality control activities

for a major mechanical construction company's nuclear and fossil plant projects. Responsibility included development and review of quality assurance manuals and procedures, staffing and training, site reviews, N-Stamp maintenance and regulatory compliance. Projects included piping and HVAC construction activities at multi-unit nuclear and fossil sites.

Quality Assurance Engineer, Schneider, Inc., January 1980 to June 1980. Responsible for the quality assurance activities of the mechanical engineering design group. These activities included the preparation, revision and review of quality assurance manuals and procedures, performance of audits and surveys, development of corrective action in response to client surveys, and interface with site construction quality assurance staff.

Director of Site Emergency Planning, Metropolitan Edison Company, 1979. Responsible for all post Three Mile Island accident emergency planning activities, including development of plans, procedures, organizations, facilities and communication systems, and the interface of these activities with NRC, state and local government agencies. Participated in hearings before the Advisory Committee on Reactor Safeguards and the Pennsylvania House Select Committee on Three Mile Island.

Supervisor of Maintenance, Metropolitan Edison Company, 1978. Responsible for all maintenance activities at a 3-unit coal fired generating station.

Director of Training/Supervisor of Nuclear Training, Metropolitan Edison Company, 1976 to 1978. Responsible for all training activities for generating station and corporate engineering personnel. This included all NRC required operations, maintenance and health physics programs at the Three Mile Island nuclear station. Planned, coordinated and executed the annual radiation emergency exercises.

Officer, U.S. Navy, 1970-1976. Trained at naval nuclear power school, prototype and submarine school. Positions held included Staff Training Officer, Lead Engineering Officer of the Watch

A. Tsaggaris

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at the DIG prototype plant, and various division officer positions aboard a fleet ballistic missile submarine. Qualified as Chief Engineer.

Professional
Affiliations:

American Nuclear Society
Health Physics Society of Western Pennsylvania.

RONALD J. PERRY

Education:

B.A., Temple University, 1970.
Master of Regional Planning, Pennsylvania State University, 1976.

Experience:

Emergency Planner, Energy Consultants, Inc., Offsite Emergency Planning Section, 1981 to Present. Responsibilities include the development of plans and procedures for state, county and municipal response to radiological emergencies at fixed nuclear facilities and providing training and assistance to offsite response organizations in preparation for graded exercises. In this position, Mr. Perry's specific experience has included assisting in the development of the State of Louisiana Radiological Emergency Plan and parish plans for Waterford 3 and in the development of plans and exercise preparation for Beaver County, Pennsylvania, including the lead staff responsibility for providing assistance in the development of the Louisiana State agencies and parish implementing procedures, school board plans and support parish plans.

Emergency Planner, Pennsylvania Emergency Management Agency, Plans and Preparedness Section, 1980 to 1981. Responsibilities included the development of programs in support of Pennsylvania's radiological emergency response plan and providing assistance to county governments in the development of radiological emergency response plans. Participated in the development of five county response plans and exercises for the Three Mile Island facility.

Planning Coordinator, South Central Regional Planning Council, Pennsylvania Governor's Justice Commission, 1978 to 1980. Developed plans and implemented programs for an eight county regional planning unit in the area of justice system improvement, including management information and communication systems.

Planning Analyst, Pennsylvania State University, Institute of State and Regional Affairs, 1974 to 1978. Participated in research projects in the areas of transportation, environment, information systems, energy and resources management. Edited technical papers for the Pennsylvania Governor's

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Science Advisory Committee. Prepared local environmental training programs.

Project Coordinator, School District of Lancaster, Pennsylvania, 1972 to 1974. Developed and administered training programs for school students.

Professional
Affiliations:

Associate Member, American Planning Association.
Board of Directors and Legislative Liason,
Pennsylvania Planning Association.