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Review of NUREG-0654, Supplement 3, "Criteria for Protective Action Recommendations for Severe Accidents"

Focus Groups and Telephone Survey

Office of Nuclear Security and Incident Response

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Focus Groups and Telephone Survey

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ABSTRACT

In the assessment of alternative protective actions for use in response to nuclear power plant (NPP) emergencies, consideration is given to the likelihood of the public implementing these actions. Understanding the public's knowledge and confidence in protective actions informs the decision process on development of protective actions. Focus groups were conducted to research the views of the public and emergency response personnel. A national telephone survey of residents living within NPP Emergency Planning Zones (EPZs) was conducted to obtain data for use in developing an understanding of public tendencies towards emergency preparedness. The conclusions of this research support the decision to update Supplement 3 to NUREG-0654 / FEMA-REP-1, Rev. 1. Additional observations and insights were gained from this research that may benefit NPP emergency preparedness programs.

Table of Contents

Appendixes

Figures

Tables

EXECUTIVE SUMMARY

Volume 1 of NUREG/CR - 6953 analyzed alternative protective action strategies to determine if such strategies would be more protective of public health and safety. As a result of that analysis, NRC is revising Supplement 3 to NUREG-0654 / FEMA-REP-1, Rev. 1, "Criteria for Protective Action Recommendations for Severe Accidents," dated 1996, ("Supplement 3"). The revision to Supplement 3 will integrate the insights gained regarding protective action strategies. Proposed enhancements to Supplement 3 include expanded use of sheltering and staged evacuation. Volume II of NUREG/CR - 6953 includes research of public and emergency worker acceptance of alternative protective action strategies.

Nuclear power plant (NPP) accidents are very unlikely, and accidents that would require the evacuation of the public are even more unlikely. However, to ensure adequate protection of the health and safety of the public, the NRC has required licensees to develop and maintain an emergency preparedness program. The focus of emergency preparedness is the implementation of protective actions to protect public health and safety in the event of a radiological accident. Protective action strategies include evacuation and sheltering of the public. Expediting evacuation of the population most at risk, by implementing a staged evacuation, is a strategy that can reduce consequences. To assess the likely success of this strategy it was necessary to broaden understanding of public beliefs regarding radiological emergencies. NUREG/CR-6864 "Identification and Analysis of Factors Affecting Emergency Evacuations," (NRC, 2005b) documents NRC research on public evacuations concluding:

- Evacuation is an effective protective action;
- Emergency responders will implement protective action orders; and
- The public will comply with protective action orders.

The public may be expected to behave similarly during an NPP emergency. Although NPP emergency plans have been used to support many evacuations they have never been implemented for a radiological event. The only evacuation ordered for an NPP accident was at the Three Mile Island NPP in 1979. Current emergency preparedness regulations were developed in response to this accident, and the plans in place today far exceed those required in 1979. The comprehensive emergency preparedness programs and infrastructure in place today render comparison to the Three Mile Island NPP emergency response inapplicable. With no applicable NPP incident to study, focus groups and a public telephone survey were conducted to gain insight into how the public may respond under the current emergency preparedness system. It is recognized that these methods only provide indicators of public action as the participants are responding to questions about an event they have never experienced. However, the results provide insights that support the conclusions of NUREG / CR 6984 (NRC, 2005b).

A national level public telephone survey was conducted among residents of NPP emergency planning zones (EPZ)[1]. The survey was designed to support assessment of

[1] EPZs are defined as the area of about 10 miles around an NPP for which planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of an accident.

public response and can be analyzed at the NRC regional level, but is not adequate for use in more detailed analyses at a State or reactor site level. The survey was authorized by the United States Office of Management and Budget in accordance with the Paperwork Reduction Act of 1995 and was conducted in March of 2008. Survey data indicates the following tendencies among the public residing within EPZs:

- Residents are generally well informed about what to do for an NPP emergency;
- Most residents remember receiving emergency response information from the NPP and keep it readily accessible;
- Most residents recall receiving information regarding evacuation and sheltering;
- Most residents would evacuate, shelter or monitor for more information if so directed;
- Most residents would support a staged evacuation order, (i.e., shelter while others evacuated);
- Many parents will go to schools to pick up children even if told they are already being evacuated; and
- Most "special needs" persons, not in special facilities, have not registered for evacuation assistance.

Focus groups were conducted with residents of EPZs to inform the development of the telephone survey. The focus group effort also included emergency responders to gain the insight of their experiences in dealing with the public. Although the focus groups do not represent a statistically significant segment of the EPZ population, the insights were instructive in the assessment of protective actions. Focus groups were conducted at five sites with a total of 57 members of the public and 111 emergency responders participating. The themes in Table ES-1 were derived from the focus group activities.

Table ES-1: Focus Group Themes

Public Focus Groups	Emergency Responder Focus Groups
• Evacuation is viewed as a more protective action than sheltering. • The public may not be well informed. • Providing additional information influenced participant's decisions. • Infrastructure has not kept up with evacuation demand. • The public prefers to respond as a family unit. • Evacuees are not likely to go to congregate care centers.	• Emergency responders will report for duty. • The public may not be well informed. • The public is more likely to evacuate than to shelter in place. • Providing additional information to the public improves public response. • Infrastructure has not kept up with evacuation demand.

The telephone survey data indicates that compliance with protective actions is likely and also identified that not all of the focus group themes were valid when assessed against the larger data set of the public telephone survey. For example, the survey results show that the public is better informed than the focus group participants expressed. Interestingly, data from the telephone survey showed that 14 percent of the respondents had been asked to evacuate in response to natural or technological hazards and, 10 percent of respondents had been asked to shelter-in-place. Select results of the

telephone survey that have a potential affect on emergency planning and preparedness are presented below:

- Most survey respondents believe they are likely to follow evacuation or shelter instructions. This data indicates that compliance with protective actions is likely.
- Over 75 percent of respondents remembered receiving emergency planning information, and the majority of these respondents keep the information readily accessible. Respondents generally expressed that the emergency planning information is easy to understand, clear, and helpful, with 19 percent indicating that not enough information is provided.
- Twenty percent of all respondents have packed supplies in preparation for an evacuation.
- Eight percent of respondents identified that someone in the household would need assistance from outside the home to evacuate, but only about a third of these respondents have registered with local authorities. This data suggests these individuals are not utilizing the registration programs available and that a more proactive means of registering special needs individuals who do not reside in special facilities may be beneficial.
- Respondents were asked how likely they were to evacuate if they were not in danger but saw others evacuating, and a majority believed they would evacuate. When informed that sheltering while others evacuated higher risk areas was necessary, a majority believed they would shelter, which is supportive of staged evacuation used as a protective action.
- A subsequent question asked of a smaller respondent set showed that 23 percent of respondents had previously evacuated when they were not under evacuation orders. This data provides insights into the potential for a shadow evacuation and emphasizes the need to communicate to the public in non-affected areas.
- Most survey respondents believe they would go to a congregate care center if told to do so, while the focus group participants indicated they are not likely to go to these centers.

During conduct of the focus groups, some participants were confused over the use of potassium iodide (KI). When the emergency alert system (EAS) message that was read to the group stated individuals should shelter, take their KI, and await further instruction, participants who did not have their KI were confused about their risk and believed they should evacuate.

Data from this research supports that alternative protective action strategies can be successfully implemented. Considering the results of this study and the health and safety benefit of alternative protective action strategies demonstrated in the technical analyses of Volume 1, it is recommended that alternative protective action strategies be implemented and included in the update to Supplement 3.

The assessment and conclusions presented within this report support the following recommendations. It is recognized that most of these recommendations are with regard to offsite enhancements and the recommendations therefore suggest supporting the

implementation of such offsite enhancements that would be implemented by the appropriate Federal agency.

1. The NRC should support the revision of Supplement 3 to NUREG-0654 / FEMA-REP-1, Rev. 1, to enhance the decision process for implementation of protective action strategies. The data obtained from this study should be used to support the revision to Supplement 3.

2. The NRC should include guidance in the update to Supplement 3 to support the implementation of staged evacuation as a protective action.

3. The NRC should include guidance in the update to Supplement 3 to identify the benefits and appropriateness of sheltering as a protective action strategy.

4. The NRC should support enhancements in the improvement of offsite communications that would include distributing information to the public in non-affected areas to reduce the potential of shadow evacuations.

5. The NRC should develop guidance for development of evacuation time estimates that includes consideration of shadow evacuations of up to 20 percent of the population of areas adjacent to the evacuation area.

6. The NRC should support enhancements in the improvement of offsite communications that would include distributing additional planning information to parents on the logistics of the evacuation of students to help reduce the number of parents attempting to pick up children. This would be implemented at sites where parents are discouraged from picking up children during an evacuation. It is recognized some sites allow parents to pick up children.

7. The NRC should support review of the current process of using registration cards as the primary means of identifying residents that may require assistance in an evacuation. These cards are distributed with emergency planning brochures, and the process yields a low number of responses. More comprehensive techniques have resulted in improved response in this area.

8. The NRC should support update of emergency planning brochures to include more descriptive instructions to evacuees on the management of pets at congregate care centers.

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ACRONYMS

CATI	Computer Assisted Telephone Interviewing
EAS	Emergency Alert System
EP	Emergency Preparedness
EPZ	Emergency Planning Zone
ER	Emergency Response
ETE	Evacuation Time Estimate
FEMA	Federal Emergency Management Agency
KI	Potassium Iodide
NPP	Nuclear Power Plant
OMB	Office of Management and Budget
PAR	Protective Action Recommendation
SAE	Site Area Emergency
SNL	Sandia National Laboratories
UNM	University of New Mexico

1.0 INTRODUCTION

The NRC establishes Emergency Preparedness (EP) program requirements for protective actions in 10 CFR 50.47(b)(10) which states in part, "A range of protective actions has been developed for the plume exposure pathway EPZ...". The current guidance for the development of protective action recommendations by licensees is provided in Supplement 3 to NUREG-0654 / FEMA-REP-1, Rev. 1, issued as a draft report for interim use and comment. In a severe reactor accident, Supplement 3 guides licensees to recommend evacuation within a 2-mile radius and five miles downwind. NRC has reinforced the guidance contained in Supplement 3 through outreach, training, and inspection. Licensees have implemented this guidance as the expected minimum protective action recommendation (PAR) given to offsite response organizations at the declaration of a General Emergency.

In the aftermath of the September 11, 2001 terrorist attacks, NRC initiated the study documented in this NUREG/CR to determine if alternative PAR strategies may be more protective of public health and safety. NUREG / CR-6953, Volume 1 provides technical analyses of alternative protective actions and indicates that enhancements can be made to NRC PAR guidance. This Volume assesses tendencies among the population living within EPZs to implement alternative protective action strategies.

The planned revision to Supplement 3, based on the analyses in Volume 1, will address staged evacuation and sheltering upon declaration of a General Emergency. The assessment of public tendencies provided in Volume 2 informs the revision to Supplement 3 and provides insights into methods to communicate protective action direction to the public. The focus of emergency preparedness is the implementation of protective actions to protect public health and safety in the event of a radiological accident. Protective action strategies use evacuation and sheltering of the public in order to reduce radiation exposure. Expediting evacuation of the population most at risk, through implementation of a staged evacuation, is a strategy that can reduce consequences due to exposure. To assess the likely success of this strategy it was necessary to obtain a broader understanding of public tendencies regarding radiological emergencies.

1.1 Objective and Scope

The primary objective of this effort was to gain a broader and deeper understanding of the views and reactions of the general public and emergency responders to protective action strategies developed for the 16 km (about 10-miles) plume exposure pathway EPZ.

The scope of this project included activities necessary to perform comprehensive evaluation of the current NRC PAR guidance for protective actions. The project was divided into two phases, each documented in a separate volume for this NUREG / CR. NUREG / CR 6953, Volume I included the selection of the source terms, identification of alternative protective actions and the consequence analyses.

Volume II includes an assessment of likely public response for the population that resides within EPZs and an assessment of the response expectations of emergency responders. This research addresses NPP emergency response planning and preparedness and the public's willingness or ability to implement protective actions in the unlikely event they are required. The following activities were included in this volume:

- Focus group interviews with members of the public;
- Focus group interviews with emergency response management and personnel;
- Cognitive response testing of focus group participants; and
- A national telephone survey of residents living within EPZs.

2.0 FOCUS GROUPS

Focus groups provide a structured method for obtaining information from population groups about select topics. Focus groups are led by a moderator to elicit information along a defined path of questioning. The moderator guides the discussion in a manner that attempts to minimize bias in the results. As a research method, focus groups can be advantageous in that they encourage group interaction. Baxter and Babbie (2004) note that "the group dynamics that occur in focus groups frequently bring out aspects of the topic that would not have been anticipated by the researcher and would not have emerged from interviews with individuals." Many questions, perspectives, and comments may come up in a focus group discussion that the researcher may not have considered (Andreasen, 1995). The extended and interactive nature of the discussion in a focus group enables the researcher to ask detailed follow-up questions and explore interesting, unanticipated topics that arise. Focus group results are useful in informing the development of a telephone survey.

The development of alternative protective action strategies should be informed by an understanding of public reaction tendencies during emergencies. Focus groups provide a means to enhance such understanding. This study has identified enhancements to the existing NRC PAR guidance. However, if the public will not follow this alternative protective action direction then even technically sound strategies will be less effective than desired. Perry and Mushkatel (1984) and others identified and confirmed propositions with respect to public response to disasters. Some of these propositions are identified below:

- The higher the level of perceived risk, the greater the probability of evacuation;
- The more specific the warning message, the higher the level of perceived personal risk;
- Receipt of a warning message from a credible source increases the level of perceived personal risk; and
- To the extent that family members are together at the time of warning, or otherwise accounted for, the probability of evacuation is increased.

These propositions were considered in the development and conduct of the focus groups.

2.1 Approach

Focus groups were conducted by the University of New Mexico (UNM) Institute for Public Policy following their standard protocols approved by the Institutional Review Board. Prior to initiating the focus groups and telephone survey, NRC conducted outreach to inform State, regional and local authorities, and licensees of the proposed activities. Conference calls were conducted with these participants and the scope and focus of the efforts were discussed.

Sandia and NRC staff observed focus group sessions via closed circuit television and reviewed final transcripts. The process for the conduct of focus groups is well

established. The topics and lines of questioning were developed and tested, participants recruited, focus groups conducted, transcriptions prepared and the data assessed. For each participating site, the intent was to conduct a minimum of one focus group of members of the public and three focus groups of emergency responders. In the actual establishment of the focus groups, however, some variation in the number of groups was allowed.

Focus group guides were developed with consideration of the following:

- Public's general knowledge of the NPP;
- Knowledge or opinion of evacuation and emergency plans;
- Time expected to prepare to evacuate;
- Likelihood of sheltering;
- Likelihood of following staged evacuation directions;
- Likelihood of going to a reception center; and
- Likelihood of picking up children from school.

Focus groups were comprised of individuals who live within 16 km (about 10-mile) NPP EPZs. Group dynamics were intended to be diverse, being comprised of various ages, races, ethnicities, educational background and socioeconomic standing. Focus groups were also conducted with emergency response agencies within NPP EPZs. At the completion of focus groups studies, results were assessed and used to develop a telephone survey instrument.

To identify focus group participants, geographically constrained telephone sample frames were procured, and a brief telephone recruitment survey was conducted of randomly selected households within the relevant EPZs. Screening for the public focus groups was conducted to eliminate participants who may be employees at the plant or those that may be emergency responders. ER participants were generally recruited from police and law enforcement agencies within EPZs. The population of the ER focus groups was diversified to some extent by allowing participation of individuals having public emergency responsibilities, but who were not responders. A target number of nine individuals was the preferred size for each focus group. This required recruiting more individuals for each group as experience has shown that not all participants may actually arrive for the study.

Emergency planning materials and content of messages vary from site to site; therefore, site specific brochures, evacuation materials, and emergency alert system (EAS) messages were obtained. To measure individual response to the materials and messages, questions were developed in a Public Focus Group Moderator's Guide (Appendix A). The Public Focus Group Moderator's Guide was used to provide the moderator with key questions to stimulate group discussions. An Emergency Responder Focus Group Moderator's Guide was also developed and used for all of the emergency responder groups (Appendix B). These guides were used to direct each focus group session in an attempt to obtain participant responses to the following basic research questions of interest:

- Do people intend to undertake protective actions?
- Are the EAS instructions providing adequate information for the public to implement protective actions?
- Does the public view protective action instructions as 'protective'?
- Does the public view protective action instructions as practical?
- Do people have confidence that undertaking protective actions will keep them safe?
- Does the public understand protective action strategies that may be implemented?

Cognitive response interviews were performed in a group setting at the end of focus group sessions to obtain more detailed information on select topics. These interviews complement the focus groups. The purpose of the cognitive group interview was to gain detailed, in-depth knowledge of participants' understanding and emotional response to instructions and information (Forsyth & Lessler, 1991; Sudman, Bradburn & Schwartz, 1996). Cognitive interviews allowed the facilitators to explore reactions and comprehension and to identify especially difficult or ambiguous language that would not normally come out during the focus groups.

Once the sessions were complete, the focus group audio tapes were transcribed. The transcriptions, combined with briefing notes from the moderators, were used in the analyses. A qualitative data analysis was performed that included interpreting, examining, comparing, and contrasting the data to identify relevant themes.

2.2 Focus Group Sites

Focus groups were conducted at five sites to include variance in populations represented and assure that emergency responder and public response behaviors were broadly understood from a variety of perspectives. There were 21 focus groups conducted with a total of 57 members of the public and 111 emergency responders participating. The site and number of participants are identified in Table 1. The listed EPZ populations were obtained from the June 2005 (Federal Emergency Management Agency) FEMA Nuclear Facilities and Population Density map (FEMA, 2005). All of the sites are in the top 15 of the largest population EPZs.

Table 1. Focus Groups by Type and Number of Participants

Site	Public 1	Public 2	ER 1	ER 2	ER 3	ER 4
Duane Arnold	7	8	11	8	--	--
San Onofre	7	--	4	5	6	--
Seabrook	10	--	6	6	1	--
Limerick	10	8	14	5	--	--
St. Lucie	7	--	16	12	9	8

Duane Arnold near Cedar Rapids, Iowa (EPZ population: 160,790)
Duane Arnold was selected as a large population EPZ located in the Midwest. The population within the EPZ is generally neutral or supportive of the plant. Emergency responders and the general public might be more candid regarding their issues and concerns. The population is expected to be less biased by the media attention that impacts some high population sites.

St. Lucie near Ft. Pierce, Florida (EPZ population: 193,001)
St. Lucie was selected as the largest population EPZ population in the southeast. The area is susceptible to hurricanes and both emergency responders and the general public may likely be prepared for an emergency event and familiar with protective action strategies. This site provides a good test of the public's knowledge, awareness, and perceptions of NPP emergency preparedness protective actions, in light of their experience with hurricane events. This site includes a barrier island, with associated traffic flow issues, and also has a large tourist population, which provides another set of emergency response issues to consider.

Limerick near Philadelphia, Pennsylvania (EPZ population: 216,988)
Limerick was selected because it has one of the largest EPZ populations and is located in the mid-Atlantic region. The site is located in Pennsylvania not far from Three Mile Island. Although the State of Pennsylvania does consider both evacuation and sheltering, their practice in exercises is for evacuation of the whole EPZ at a General Emergency declaration.

Seabrook near Portsmouth, New Hampshire (EPZ population: 140,882)
Seabrook was selected as a large population EPZ located in the northeast. Seabrook has a large seasonal population as well as a large tourist population that frequent the local beaches, providing another emergency response issue to consider.

San Onofre near San Clemente, California (EPZ population: 105,010)
San Onofre was selected because it has the largest EPZ population of all sites located in the west. California is susceptible to wildfires and earthquakes and residents and responders may prove to be more prepared in this region. San Onofre also has a beach population, providing another emergency response issue to consider.

2.3 Public Focus Groups

When all members of the group were present, the moderator explained that there are multiple parts to the discussion presented in a structured manner. For this project, a scenario was structured to simulate a progressive accident having an initial warning followed by the issuance of protective action recommendations. One task of the moderator was to ensure that all individuals participated. This was accomplished by asking participants directly when necessary, as well as sometimes asking more expressive participants to allow others time to respond. The UNM moderators were neutral, having a cursory understanding of nuclear accidents, and did not attempt to clarify technical details of the incident.

Each public focus group opened with a general question asking for participant's thoughts on the term 'emergency planning zone'. This initiated discussion on emergency planning in general, and was used to support questions on how people preferred to receive information. The next main topic in each public focus group was what people expect to do when they hear sirens sound at an unusual time. The time selected was a weekday at 12:30 pm and was explained as a time when sirens would not be tested. The scenario then continued, and participants were asked what they believed they would do if the sirens sounded and there was an immediate broadcast of an EAS message requesting a shelter-in-place protective action. Participants were next read an EAS message that requested action to evacuate.

Following each scenario, the participants were asked what they would do or how they felt in these situations. To reduce the potential of group thought, which is when the rest of the group simply agrees with the first participant response, for select questions the moderator requested that responses be written down. As the sessions progress, the moderator developed an awareness of those participants who were expressive and those who were less expressive. The moderator began directing the first question of a topic to different participants. Transcripts were prepared for each focus group session.

The first action with the transcripts was data reduction where off topic discussions were lined through to simplify the review process. Transcripts were then reviewed by the research team. Reviewers were instructed to focus on the discussions relating to the basic questions of interest and to identify themes of importance that emerge. To add emphasis to some of the themes that were developed, select quotes from some of the participants are included in the following sections. The following themes were derived from the public focus groups:

- Evacuation is viewed as a more protective action;
- The public may not be well informed;
- Communication influences decisions;
- Infrastructure has not kept up with evacuation demand;
- The public prefers to respond as a family unit; and
- Evacuees are not likely to go to congregate care centers.

Table 2 presents a summary of the public focus group themes.

Table 2. Public Focus Groups Themes

Evacuation is Viewed as a More Protective Action	Public may not be Well Informed	Communication Influences Decisions
• A portion of population will comply with any PAR. • Majority would evacuate if sirens were sounded. • Some will not shelter in place (SIP) or comply with a staged evacuation. • Many did not have KI which affected decision whether to shelter.	• Generally do not retain emergency materials being sent to them. • Frequently do not know where their emergency information is kept. • Misinterpretation of what is seen as safe or unsafe. • Shelter viewed by some as a lesser emergency. • Many initially not relating that when sirens sound more information is needed before evacuating.	• Many changed their response when additional information was provided. • Desire to have more information and know risks involved with PARs. • Providing additional information on the benefits of the PAR increased the number of participants that would comply. • Public trusts the media to provide them with current information. • Some do not trust decision makers.
Infrastructure has not Kept up with Demand	**Public prefers to Evacuate as a Family**	**Will not go to Congregate Care Center**
• Concern about traffic congestion within the 10 mile EPZ due to lack of roadway capacity in relation to population growth. • Traffic congestion exists on normal days. • Concern was expressed over the number of buses / drivers and length of time busing would take to support an evacuation.	• Public tends to want to evacuate as a family unit. • Parents generally want to pick up children from school, even if told not to. • Doubt that schools will be able to evacuate children in a timely manner. • Need time to gather family together. • Public will take pets with them.	• Most will not report to the Center. • More likely to go to stay with family, friends, or in hotels. • Need a place that will accept pets. • Publicized problems during Hurricane Katrina influenced some individuals.

2.3.1 Evacuation is Viewed as a More Protective Action

At all sites, a majority of the public stated that they would evacuate when the sirens were sounded. Some individuals would try and verify the credibility of the warning prior to evacuating. The thought of sheltering in place while waiting for additional information was accepted by a few members, while most indicated they would still evacuate if asked to shelter. When asked if additional information on the benefits of sheltering in place would change their minds, most individuals believed they would still evacuate, with some participants believing additional information would help them agree with a decision to shelter.

Some participants said they would evacuate quickly, within minutes, and would not take the time to turn on the television, while those that wanted to verify the information prior to acting would turn on the news, call friends, relatives or authorities, or search the Internet. It was noted that although many participants believed they would evacuate upon hearing a siren, in those instances when sirens have accidentally sounded, there has been no evacuation of the public. There have been numerous calls to emergency response agencies when sirens have accidentally sounded, but no one is known to have evacuated. This is an example of the difficultly of predicting how the public would respond in an emergency and why focus group results are viewed as a piece of the comprehensive project, but are not conclusive in themselves. An interesting point was that many participants did not immediately relate the sounding of the sirens to turning on the television or radio until specifically asked if that would be an action they would take.

An issue was identified when an EAS message for sheltering stated that individuals should close up the house, take their potassium iodide (KI), and wait for further information. Many participants could not remember receiving KI or did not know where they could find their KI. Thus, when told to take their KI and shelter, they were confused about their risk of sheltering without taking KI and believed they should evacuate. Another aspect that contributed to a preference for evacuation over sheltering was the uncertainty of sheltering being safe in an NPP emergency. Many viewed their home as "leaky" and felt that radiation would be able to enter. Others assumed that if they were directed to shelter, the nature of the incident must not be serious. When the gravity of the incident escalated, participants felt more comfortable evacuating.

There was a small portion of the participants that would immediately do as requested whether asked to shelter or evacuate. This appeared to be a relatively small percentage of the focus groups as a whole. A few individuals believed that they were more likely to follow protective action instructions if they understood what they are being asked to do and why it is beneficial, while others had little trust in the decision makers. How messages are conveyed was important to participants and having more or better information did affect some participants' decisions.

2.3.2 The Public May Not Be Well Informed

> "...I feel it's incumbent upon the emergency management system and [the Site] to do some pre-education so that the average person who doesn't have this type of background does understand what all this means..."

Inconsistency was prevalent among the participants in their knowledge of what an emergency could be, what the sirens mean, and what to do when sirens sound. Participants had varying levels of knowledge of the information they had received, ranging from those that had information at hand to those who had not seen any printed information on emergency response. The participants frequently did not retain the information that has been provided annually in the form of brochures, phone books, calendars, etc. A low level of retention of information was evident in most of the groups. Understanding of what to do in the event of an NPP emergency varied from turning on the news for more information to immediate evacuation. These inconsistencies were present in every public focus group and were reaffirmed in the ER focus groups. However, it will be noted later that the public telephone survey contradicts this theme.

Some participants remembered receiving and reviewing information and knew precisely where they kept it. Other participants had not spent much time reviewing information, did not know whether they kept it or where it was even if they had kept it. A small number did not remember receiving information at all.

> "They [schools] have plans, but their plans are not all that firm, and what happens is, most people here who have children want to go and pick them up."

Participants were also uninformed on the reasons why shelter in place may be favored over evacuation. This was not unexpected because the reasoning can be quite detailed. Participants were generally uncertain if sheltering was safe in an NPP emergency. A few felt their cars provided better protection than a house, while others believed there was no protection when dealing with an NPP accident.

Concerning the general expectations during an emergency at an NPP, some participants were very aware of what to do while more often members did not understand what may be expected. Individuals with school age children tended to be more aware and understand that the schools have plans for evacuating the students. Many participants who were parents remembered receiving emergency planning information from their children's schools each year. However, there was a general trend that these parents did not think the schools would safely evacuate their children. Even though many parents were aware of school evacuation plans, they felt their children would be safer if they were with the parent and stated they would try and pick up children from school. This was still generally the case when parents realized that by picking up their children additional traffic congestion could occur.

A small number of participants had pre-planned what they would do in the case of an NPP accident. Of this group, some had established a family plan while others had a bag ready with important documents, food, water, and their emergency information. One

individual had a 72 hour evacuation kit and was ready to leave at a moments notice. This was a relatively unique individual who also had protective clothing, gas masks, radiation detectors, water and food to last an extended time period if shelter were required. Most participants generally did not think about the power plant or potential emergencies on a day-to-day basis and had no preplanned preparations for evacuating. This did not seem to affect the expediency in which they believed they could, if necessary, mobilize and leave.

2.3.3 Communication Influences Decisions

> "I want as much information as they can get. I don't want generalities."

Communication is an overarching theme embedded within the other themes and is consistent with the propositions tested by Perry and Mushkatel (1984). In all focus groups, the desire for more information was expressed. There was an expectation that adequate instructions would be provided through the media during an emergency. The majority of the participants spent little time, if any, reviewing the annual information. A small number of participants had independently researched additional information on the topic.

Focus group participants had not generally reviewed emergency preparedness information and did not have a deep understanding of an NPP emergency. However, it will be noted later that the public survey did not support this circumstance as indicative of the EPZ population. It was apparent that participants perceived they would like more information, but they had not reviewed the information currently provided.

In reviewing the actual EAS message for each site, the participants were generally surprised at the short length of the message and in some cases did not understand the message. This was of particular concern when the EAS message would state that the protective action is to take your KI tablet and shelter in place. Individuals also questioned whether they might need to take their KI while in traffic during an evacuation, and how they would do so.

Communication was important in shaping decisions about whether participants would comply with a PAR to shelter in place. More often participants indicated they would do what they were told if they felt the information provided was realistic in terms of perceptions and expectations about the effects of radiation. However, there were some who believed they were not going to shelter under any circumstances. The method of communication was expected to be through the media during an incident. It was very evident that participants trusted the media to provide information on the incident, and often expressed the desire to have local news reports provide the information rather than national reports.

2.3.4 Infrastructure has not Kept Up with Evacuation Demand

> "I am concerned about evacuation routes and how efficient they're going to be. If I do leave the house and move out, am I just gonna be stuck in traffic?"

The groups generally expressed concern that infrastructure needed for evacuation has not kept up with population growth, and the ability

to evacuate quickly was not believed to be feasible. The discussions on this topic were influenced by the large scale evacuations in 2005 for Hurricanes Katrina and Rita. Some individuals stated they would check the traffic report to determine if the roadways were congested before deciding to follow an evacuation order believing that they would be safer in their home than in a traffic jam.

Participants expressed concern over the quantity of buses available to support an evacuation. They understand the need for these buses to move school children and believe that it will take too long for buses to become available to support the evacuation of the general public. This had a direct influence on those individuals who believed they would need the bus for evacuation.

> "But how do you get in your car and leave if you really doubt that the [school] bus driver is going to show up [to evacuate your children]?"

2.3.5 People Prefer to Respond as a Family Unit

The need to have the family together during an emergency of this nature was evident among the participants and is also consistent with the propositions tested by Perry and Mushkatel (1984). Participants with families frequently stated the need to bring the family together, and few would evacuate without their pets. Most participants that were parents stated they would pick up their children from school. This is an acceptable practice in some EPZs and is published as such in emergency planning brochures. However, in most EPZs, schools will evacuate the children, generally at Alert or Site Area Emergency (SAE) and emergency planning information specifically requests that parents not attempt to pick up their children. With a large number of participants stating that they will either pick up their children or have a neighbor or friend do so, this is an issue should be anticipated during an NPP emergency and addressed in evacuation planning.

> "I'd climb over hills to get them [her children]. And the brochure says, don't go get your children. Like I'm going to wait at the reception center at the fairgrounds for them to show up? No way. I'd crawl down there and get them."

2.3.6 Evacuees Are Not Likely To Go To Congregate Care Centers

When asked if participants would report to congregate care centers, the overwhelming response was they would not go to the centers. Participants believed they were more likely stay at hotels or with friends and relatives. There were a variety of reasons, including the need to take their pets and the understanding that congregate care centers generally do not allow pets. The highly publicized sheltering problems at the New Orleans Superdome in response to Hurricane Katrina appeared to influence decisions to avoid congregate care centers.

2.4 Emergency Responder Focus Groups

The objective of the ER focus groups was to understand the concerns of responders throughout an incident, and understand their expectations of public reaction to protective actions. Each focus group opened with a statement that either an SAE or a General

Emergency had been declared at the local NPP. Participants were asked if they understood the nature of NPP emergencies. A large number of participants understood the accident progression concept of NPPs, including the response modes of Alert, SAE, and General Emergency. Some expressed their understanding that entering an accident at SAE was very unlikely and that they would normally expect an Alert prior to a SAE.

Following the introductory questions, groups were presented with a brief hypothetical scenario where an accident was reported at the local NPP. Participants were told they had received notification, either through radio contact, pagers, etc., and that they are needed to support the response. Participants were asked to write down their top three thoughts or concerns at this time. Wind direction was frequently an initial thought as well as relating wind direction to population densities, and understanding that wind blowing out to sea would be a different issue than if the wind was blowing inland toward population centers.

The next line of questioning was centered on the same scenario, but the ER groups were informed that a shelter-in-place protective action decision had been ordered. The ER groups were asked if they believed that the public would shelter if requested. This prompted a wide range of discussion with some site specific instances, but in general, the participants did not believe there would be a high percentage of compliance with a shelter in place strategy. One group at Seabrook mentioned that in the summer of 2006 there was a severe hailstorm headed toward the beach and they were able to evacuate the beach in minutes. Working with the lifeguards, the beaches were emptied and the public sheltered in the local commercial area. However, this was recognized as a very different scenario than evacuating the public out of town.

Staged evacuation, where one area is evacuated while another area sheltered until it is their turn to evacuate, was then discussed. With few exceptions, participants did not believe that people would remain in their homes if they saw others evacuating. It should be noted that the telephone survey of the public did not support this impression.

The following themes were derived from the ER focus groups:

- Emergency responders will report for duty;
- Public response may be based on the whether the protective action is evacuation or sheltering;
- Communication influences decisions;
- Infrastructure has not kept up with evacuation demand; and
- The public may not be well informed.

Table 3 summarizes the themes from the emergency responder focus groups.

Table 3. Emergency Responder Focus Group Themes

Emergency Responders Will Report for Duty	Public Response may be Based on PAR	Communication Influences Decisions
• Deep sense of commitment to the public in all regions. • Responders expect to call their families to give them information, but do not feel a need to return home to support their family. • Many ER have existing plans or understandings with family. • Some concern that bus drivers may not report for duty.	• Most believe a high percent of the population will comply with an evacuation. • Most doubt public would respond well to shelter or staged evacuation. • Recognize a small percentage of the population will not evacuate. • Recognize special needs and other population groups will need assistance to evacuate.	• Concern that the media may sensationalize the incident. • Believe consistent / efficient information needs to reach the public for effective response. • Many believe that parents will attempt to pick up their children from school. • Recognize that States and licensees do a good job getting information to the public. • Many stated they understand the need to manage the chaos of the situation.
Infrastructure has not Kept up with Demand	**The Public may not be Well Informed**	
• Concern with traffic congestion. • Updates in infrastructure have not been implemented in relation to population growth. • Some concern that responders could be stuck in traffic and unable to report to duty quickly. • Some believe getting buses in to assist the special needs population will be difficult.	• Many believe the public is unprepared for an NPP accident. • Some believe the public is apathetic in their responsibility to be prepared. • Some public has taken their KI during siren tests while others have taken KI during accidental sounding of sirens. • Some believe schools will implement evacuation plans effectively.	

2.4.1 Emergency Responders Will Report For Duty

> "They all take risks. We all take risks. I'll stay there and do what I gotta do no matter what the risk."

Becker (2003) identified that emergency responders have concern for their families during a radiological incident, bringing to question whether they will respond to an emergency or place concern for their family ahead of their professional responsibilities. The Becker study did not appear to follow up on the immediate question of what it meant for responders to be concerned about their families. The ER focus groups conducted for this study addressed the issue directly. Consistent with the responses received by Becker, emergency responders frequently stated that they did have a concern for their families. Follow up questioning identified that responders expect to have time to call their families to inform them of the emergency and did not express a need to return home to support their family. Emergency responders generally stated that they understand the risks of their job and are well prepared to support an NPP emergency.

> "Everything has a risk, and I can't envision anybody leaving, at least the guys, you know, the people that we work with, the men and women involved. I don't foresee anybody walking away, you know. We're here because of a reason. We want to do the job, and that's part of it, and you use everything at your disposal as far as training, equipment and you make the choice of what to do."

Responders noted that typically they would be made aware of an emergency very early and would contact their families to make them aware of the issue and inform them of their need to evacuate. There were no instances of any responders stating that they would evacuate their family prior to reporting to work. On the contrary, responders frequently stated that they either had existing plans with their families or general understandings of what to do in an emergency.

In one focus group participants expressed that some of the younger generation responders may evacuate with their families. Though no one present stated they would not show up to work, there was a discussion that a small percent of younger staff may not show up for work in a nuclear emergency. This discussion was limited to what was described as the young generation of responders who are simply at work to collect a paycheck and have not developed the dedication to service of the seasoned veterans. Along with this discussion, the veterans stated that in real emergencies responders step up to the challenge and perform better than expected, thus mitigating any effects of those who may not respond. There was some discussion over whether volunteer fire department personnel would fully respond because these groups do not always have the same level of training.

Emergency responders expressed some concern that support personnel, such as bus drivers for school children and traffic control workers, may not respond for duty in a nuclear emergency. There was no sound basis for this concern in either experience or sociological study, but it was observed that these workers were not hired to perform hazardous duty operations. It should also be noted that in studies of large scale evacuations (NRC, 2005b, NRC, 2008) there have been instances where ER personnel drive buses when additional drivers are needed.

> "I have complete confidence in their ability to coordinate and move all school children, or at least have a good plan in place. And they drill a lot."

A greater number of ER participants than public participants had confidence that schools will implement their evacuation plans effectively; although it was not a clear majority. Having worked with the schools, these participants have seen orderly evacuations and many believed this would be the case in a nuclear emergency. The ER participants widely believed that parents would attempt to pick up their children. This has been experienced in many schools since lock-down procedures have been implemented in recent years.

2.4.2 Public Response May Be PAR Based

Emergency responders generally believed that if an evacuation is ordered, the public is likely to understand what is expected and a high percentage will comply. They did recognize that there is an element of the public that will not evacuate. The participants also believed that if a shelter in place protective action was ordered, the public would be unlikely to comply. This was especially true if other areas of the EPZ were evacuating, such as in a staged evacuation. There was discussion concerning the public's trust in the government making decisions that may not be in the best interest of families. Some expect that the public may not believe that the shelter protective action would be protective. While others expressed that the fear of the unknown associated with radiation will influence the public to evacuate. The ER participants clearly expect a large response if an evacuation is ordered and a lesser compliance with a shelter protective action.

> "I don't think they trust the system, they're gonna think whatever they're doing is the best for themselves."

ER participants frequently expressed that the public is likely to do what they feel is best for their family, even if it is different from the protective action recommended. This was commonly mentioned if a shelter protective action was ordered.

2.4.3 Communication Influences Decisions

Communication is important to ER just as it is to the public. The participants identified population groups that they believe may not always receive information. There was mention of large

> "I think it's going to be a matter of what type of information they get.... I think it's going to be how they get informed with it."

population groups of non-English speaking people. Emergency planning information, as well as real time information during an incident, must be available to these individuals.

Another population group discussed by the participants was the teenage population that is generally home alone after school or out, such as at the beach, during the summer. This population group would likely understand if there is an emergency, but may not know what to do in the event of an emergency. There was discussion on the widespread use of cell phones among teenagers, and communicating with parents may not be a large challenge, but it was expected that these children may be worried and looking for help or direction.

2.4.4 Traffic Infrastructure Has Not Grown With Population

> "There's going to be parents trying to drive to the schools, and every piece of highway will be grid-locked, and we're going to have a difficult time moving folks."

Traffic congestion was a concern in all of the ER focus groups, with the term gridlock frequently referenced. Limited infrastructure to support an evacuation was a concern expressed by participants. Participants discussed the fact that the nuclear power plants were constructed 20 to 30 years ago, and the population has grown significantly while the major roadways have not been significantly upgraded. Participants discussed traffic congestion on normal workdays during rush hour or special events. Concerns around evacuating people out of the area were expressed combined with facilitating individuals needing to re-enter the area to pick up children or relatives. The participants further expressed there may be problems with responders getting to their posts through the evacuating traffic. There was a general consensus that there will be a shadow evacuation of the surrounding areas and this will contribute to congestion.

There was a common reference to the difficulty of buses getting to collection points during an evacuation. Some large population EPZs require hundreds of buses to support the evacuation of schools, special needs populations, and those dependent on public transportation. The logistics of mobilizing bus drivers, as well as having these vehicles enter the EPZ while a large scale evacuation is leaving the EPZ was recognized as challenging.

2.4.5 The Public May Not Be Well Informed

Participants mostly agreed that the NPPs were doing a good job of getting brochures, calendars, etc., to the public, but generally believe the public may not be well informed. Focus group discussions revealed that at least two sites had sounded sirens accidentally within the last few years. There was no panic observed, instead there appeared little concern among the public. There were many calls to emergency management agencies questioning the sirens, but no one evacuated. At one site, KI had been distributed previously, and in some instances individuals who heard the sirens took their KI.

Participants mentioned there are population groups that may not be receiving emergency planning information. One of these population groups identified by the ER participants was elderly residents who do not drive, or may only not drive at night but do not have any other special need. In certain regions, this population group may also include a large number of "snowbirds," retirees that become semi-permanent transients because they move to a region during a select period of the year. This group of the public may not know there is an NPP in the vicinity, may not receive emergency planning information, and may not drive. ER participants expressed concern that this population group may not receive information and may not have registered for assistance.

> "We will be evacuating special needs people we don't even know exist."

2.5 Focus Group Summary

Many of the observations of both the public and ER focus groups are similar and are reflected in the common themes. Observations from the focus groups revealed that most of the individuals living within the EPZ do not pay much attention to the fact that there is a reactor in the vicinity. Frequently, when presented with additional information, public participants changed their initial decision based on the additional information. Emergency responders were very confident that they know their roles and responsibilities and have received sufficient training to understand the risks involved. Responders generally believed that they step up to the task during an emergency providing extra effort needed to support a response.

More specific observations include:

- For the three sites with beach populations, there was discussion around the age group of the beach population. During the summer months there is a very high population of teenagers on the beach and many are without vehicles. It was not known how many of these children would know what to do in the event that the sirens were sounded. The discussions then expanded to include children at home while their parents are working.
- There is a large population of 'snowbirds' or elderly people that spend the winter in the south. It was noted that many of these individuals are not familiar with the NPP and may not know what to do in the event of an emergency.
- There are elderly individuals that do not drive. These individuals frequently have no other special need and may not be on a special needs list, but would likely need transportation out of an EPZ in the event that an evacuation is ordered.
- There was a concern that 'special needs' lists were not adequate.
- Responders understand there is confusion in any large scale emergency response and their job requires management of such confusion.
- There was lack of trust among some of the public participants, but most believed that the information received would be honest and straightforward.
- There is some confusion on the use of KI. At one site where KI had been distributed, there were reports of individuals taking KI when sirens accidentally sounded. There were also concerns expressed in public focus groups over how to respond if an EAS message states to take KI and the residents could not find it.

Through the cognitive interviews, terms used to classify radiological events at NPPs were discussed. The NRC highest level of threat is a General Emergency, and some members of the public did not view this terminology as the worst case hazard. They felt that if it was a specific emergency or there was an immediate danger, the message would tell them in detail what was occurring. In effect, this is what would happen via an EAS broadcast.

3.0 TELEPHONE SURVEY

Information gained from the focus group activities was used to inform the development of a telephone survey questionnaire. Questions were developed to help understand if the themes derived from the focus group sessions are prevalent among residents of EPZs. The survey was conducted to gain a broader and deeper understanding of the views and reactions of residents who live within EPZs to protective actions and was not structured to obtain data from emergency responders. These residents receive NPP emergency preparedness information periodically and would be expected to have an understanding of their potential responsibilities in the unlikely event of an NPP accident.

A national telephone survey was administered to random members of households within each of 63 EPZs. The questionnaire was developed by Sandia National Laboratories (SNL) with assistance from the UNM Institute of Public Policy. The survey instrument was reviewed by the Office of Management and Budget (OMB) and notice was published in the Federal Register (FRN 72FR64249-111507) for review and comment. Comments received during the public review period were addressed, as appropriate, and changes were integrated into the survey questionnaire. The OMB clearance number was 3150-0207, and the final survey instrument is included in Appendix C.

3.1 Data Collection

The questionnaire was administered by a commercial market research firm. Telephone interviewers were first briefed and trained on the scope of the project and intent of the survey. Pre-testing of the survey was performed prior to full-scale implementation. A random sample, totaling 821 respondents, was interviewed in March 2008. Interviewing was completed using a Random Digit Dialing telephone number sample representing the various locations. Computer Assisted Telephone Interviewing (CATI) programming was used. The data was recorded and compiled, and analysis was completed by the Sandia research team.

All study participants live within the 16 km (about 10 miles) EPZ of a nuclear power plant. Respondents were screened out if they lived further than 10 miles from a plant even though in some instances this may be within an EPZ. No minimum quotas were set for regional representation. Study participants were at least 18 years of age. In order to reduce potential for bias, any household with a member employed by the electric company was not included in the survey.

The expected error and confidence interval vary depending on the number of respondents to each question and on the type of question. Using the process and Table 1 in "Questions and Answers when Designing Surveys for Information Collections", (OMB, 2006) for questions where the total sample number is 821, in general, the expected error is plus or minus 3.5% at 95% confidence. There are some questions that are not applicable to all respondents such as 'do your children attend school'. These questions were only asked of respondents who answered yes, for instance, when asked if they had children. Such questions vary in number of responses received, and the value 'n', which is the number of respondents, is noted where appropriate.

3.2 Analyzing and Reporting Survey Data

The questions within the survey were asked in different manners depending on the type of information being elicited. Some binomial questions, those that have a Yes/No response, were asked for such items as "do you have pets." Finite questions, which allow for a definitive response, were asked for such information as age, have you received information, etc. Respondents were also asked about the likeliness or confidence they have to a question. These responses are captured on a scale from zero to seven. This scale provides a means for assessment of the relative sense of confidence or agreement to the question posed. For questions in which the scale is used, the top three responses are generally considered as positive or likely that the respondent will do what they indicate. The bottom four responses indicate that the respondent is less certain in their action or are less likely to do what is requested. A zero represents the low end of the scale.

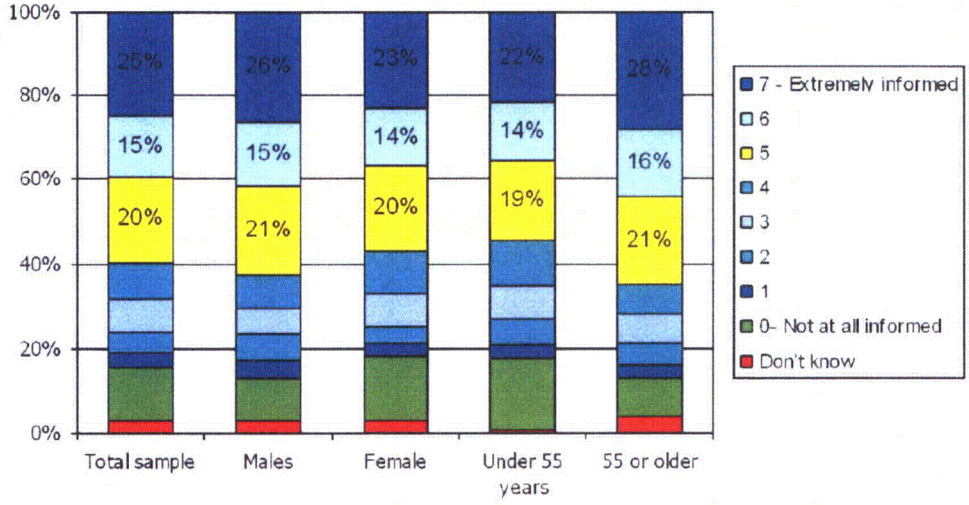
3.2.1 How Informed is the Public

After respondents passed the screening criteria, the first question was designed to establish a baseline understanding of whether the public believes they are informed on emergency planning within the EPZ. Respondents were asked how informed they believed they were about what to do if the sirens sounded for the NPP.

- Q6: On a scale from zero to seven where zero is "not at all informed" and seven is "extremely informed", how informed would you say you are about what to do if the sirens for the nuclear power plant in your area were to sound?

As indicated in Figure 1, the top three responses total 60 percent. This would indicate that a majority of respondents believe they are relatively well informed of what to do if sirens sound in an emergency. There were 12 percent of respondents that indicated they are not informed at all. Only minor variation across the demographics surveyed was observed.

Figure 1. Public is Relatively Well Informed



3.2.2 Emergency Preparedness Information

A set of questions was asked related to receipt and retention of emergency preparedness information. These questions include:

- Q7: To the best of your recollection, have you ever received any information such as a booklet, calendar, utility or electric bill, TV or radio message, phone book or something else that informs you about what to do if there was an incident at the nuclear power plant in your area?
- Q8a: What type of information was it? (Asked of those who replied 'yes' to Q7) n=643.
- Q8b: Do you recall receiving any information on this topic in the past year? (Asked of those who replied 'yes' to Q7) n=643.
- Q9: Do you keep this information in a place where you can readily access it? (Asked of those who replied 'yes' to Q7) n=643.
- Q10: To the best of your recollection, did the information that you received about what to do if there was an incident at a nuclear power plant in your area provide any information about any of the following? (Asked of those who replied 'yes' to Q7) n=643.

Of the 821 respondents, 78 percent recall receiving emergency planning information. Of those who recalled receiving the information (n=643), 64 percent received information in the past year and 60 percent of respondents keep the information readily accessible.

When asked what type of information was received, Q8a, respondents were read a list of choices and provided the following response. More than one choice was allowed in the response.

- Booklet or pamphlet 67%
- Calendar 36%
- Phone book 14%
- Television or radio message 12%
- Utility or electric bill 9%
- Something else 13%

When asked of topics respondents remembered being addressed in the emergency planning information (Q10), respondents recalled the following topics being addressed:

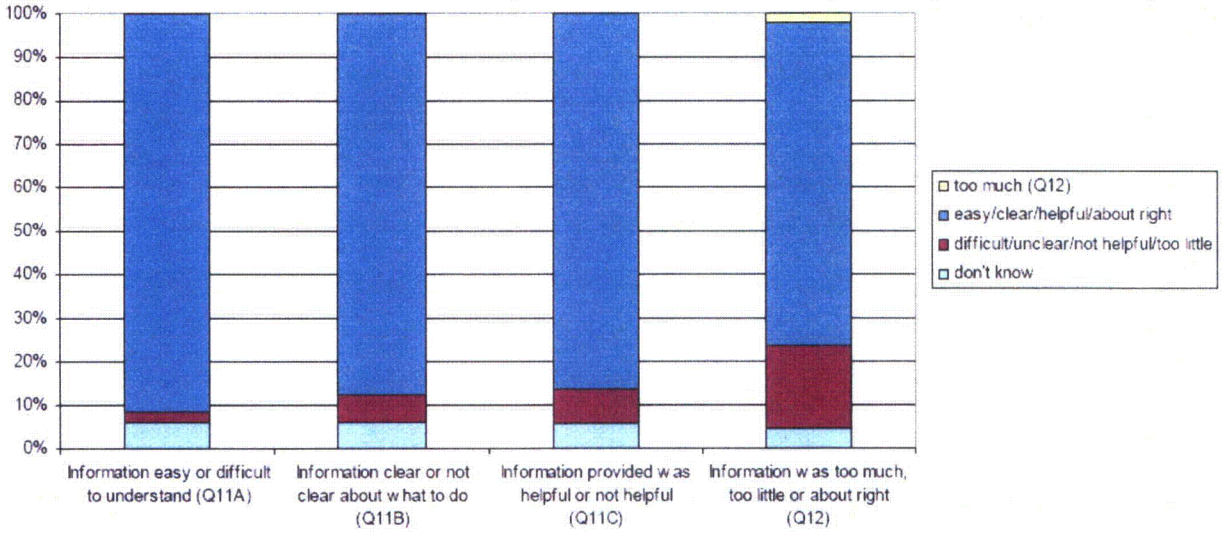
- Evacuation 84%
- What to do if you hear sirens 80%
- Sheltering 66%
- Where to get further information 64%
- What to do with children at school 52%
- Potassium Iodide (KI) 46%
- Reception Centers 41%
- What to do with pets 36%
- None of the above 8%

These results indicate a reasonably good penetration into the EPZ population. The data indicates that the NRC requirement for the dissemination of public information has achieved its goal of informing the affected public. The impression of emergency responders and citizens in focus groups was that the public is not well informed. The data shows that impression to be incorrect for protective actions such as sheltering and evacuation. It should be noted that the question about KI was asked of all respondents even though not all states include KI in their protective action strategy.

A set of questions was asked to determine if the information that residents receive is understandable and useful. These questions were asked of those who responded 'yes' to Q7 (n=643).

- Q11a: Was the information provided easy to understand or difficult to understand?
- Q11b: Was the information provided clear about what to do or not clear about what to do?
- Q11c: Was the information provided helpful or not helpful?
- Q12: Do you feel that information you have received is too much, too little or about right?

Figure 2. Emergency Planning Brochures are Clear, Understandable, and Helpful



Concerning information received, 91 percent indicated that the information received is easy to understand, 88 percent stated the information is clear, and 86 percent agreed it was helpful. When asked if enough information was provided (Q12), 74 percent believe the information is about right with 2 percent saying too much information is provided and 19 percent believing that too little information is provided. Five percent were not sure whether the information was adequate or not.

When assessing these responses together, about 90 percent of the 643 respondents to this question believe the information was easy, clear, and helpful. This aligns well the

amount of information received (Q12) and with how informed respondents believe they are (Q6).

The data indicates that public information brochures are well written and effective for the target audience.

Continuing with emergency preparedness information, a question was asked on the best ways to deliver information to residents.

- Q13: Which of the following would be the best way to get you information to read and save about what to do in case of an incident at a nuclear power plant? (Asked of those who responded 'yes' to Q7) n=643

As indicated below, pamphlets and calendars are the preferred information avenues.

- 57% pamphlets
- 37% calendars
- 26% emergency management website
- 19% phone book
- 4% did not know

3.2.3 Public Response to Protective Actions

Having completed the questioning on emergency preparedness information, questions were asked on protective actions. These questions are used to support an understanding of tendencies to comply with emergency management recommendations in the event of an emergency at a nuclear power plant.

3.2.3.1 Evacuation

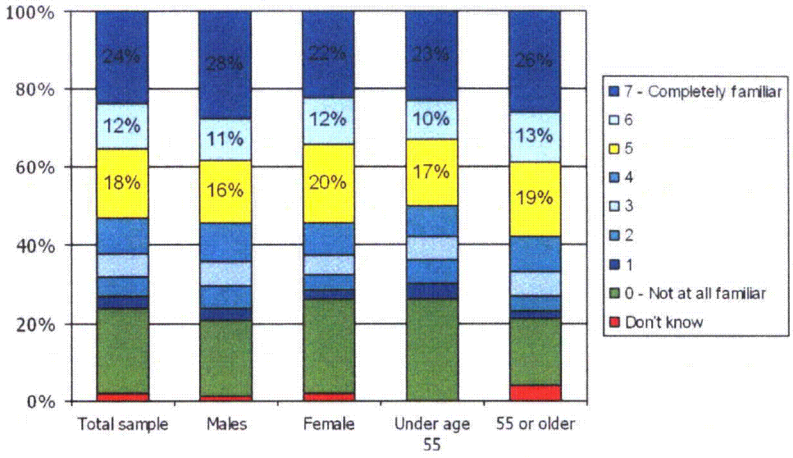
A set of questions was asked to gain an understanding of the views and reactions to evacuation. These questions were asked to all respondents, n=821, and are on a scale from zero to seven.

- Q17: Any serious incident at a nuclear power plant is unlikely and emergency plans are in place in the event that an accident was to occur. In such an event, you would be given instructions through the emergency alert system. Instructions may say to monitor the news for further information or could include instructions to evacuate or shelter in place, which means to stay where you are. If evacuation was the recommended action, on a scale from zero to seven where zero is "not at all familiar" and seven is "completely familiar", how familiar are you with the evacuation plan?
- Q18: How confident are you that the evacuation plan for your area would work?
- Q22: How confident are you that you would be safe in this emergency if you follow the evacuation instructions in the event of an incident at the nuclear power plant in your area?

- Q23: How likely do you think it is that you would follow evacuation instructions in the event of an incident at the nuclear power plant in your area?

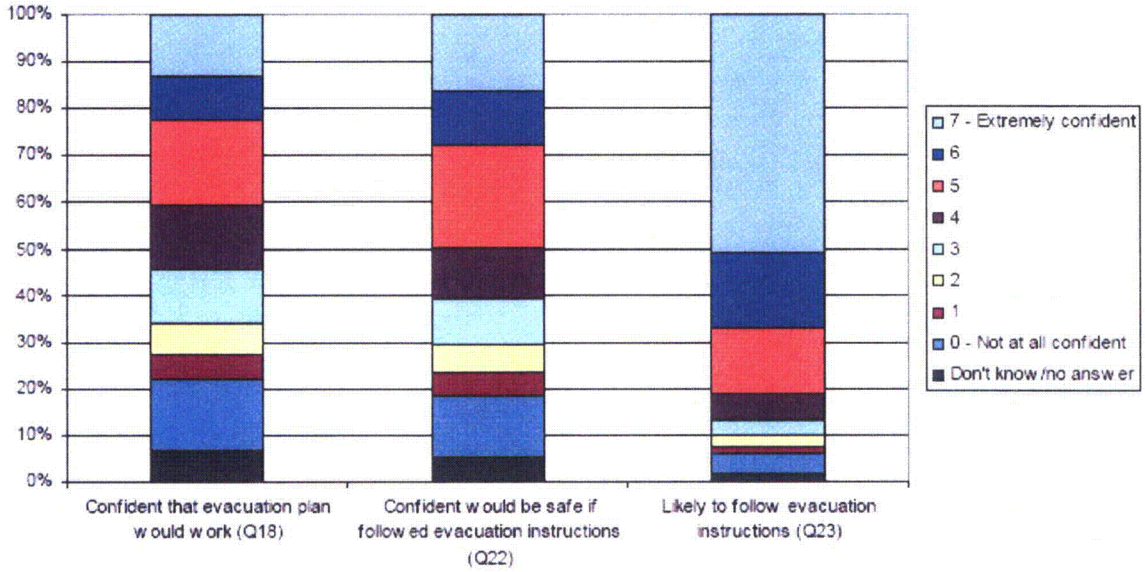
The top three responses to Q17 in Figure 3 indicate that 54 percent of all respondents are comfortably familiar with the evacuation plans.

Figure 3. Familiarity with Evacuation Plans



As indicated in Figure 4, for Q18 the top three boxes would indicate that only 40 percent have an elevated confidence that evacuation plans would work, while 50 percent have a relatively high confidence they would be safe if they follow evacuation instructions.

Figure 4. Majority of Public Expect to Follow Evacuation Instructions



The level of confidence in the evacuation plan does not appear to influence the decision to evacuate, as the top 3 responses for Q23 indicate that 81 percent are likely to follow instructions and evacuate. As observed in large scale evacuations (NRC, 2007; NRC, 2005b), a small percentage of respondents believe they are not likely to follow evacuation instructions. The 4 percent that believe they are not at all confident they would follow evacuation instructions, likely represent individuals who may refuse to evacuate along with some who would respond in what they believe is the most appropriate manner, rather than follow instructions from emergency responders.

The data indicates that evacuation instructions would be largely followed by the EPZ population. As evacuation remains the primary protective action recommendation for nuclear plant emergencies, this conclusion is supportive of the emergency preparedness planning basis.

3.2.3.2 Time Required to Prepare to Evacuate

A set of questions was asked to gain an understanding of the time residents may require in preparing to evacuate. Development of trip generation times for evacuation time estimates are much more detailed and address more scenarios (NRC, 2005b) than the few questions asked on this topic. This telephone survey presented an opportunity to gain some basic data on this topic, and the following questions were asked:

- Q19: Do you work away from home? n=821
- Q20: If you were at work during the middle of the day, how long do you think it would take you to leave from work, travel home and then gather your children, prepare your home, pack, get into the car and be ready to leave? (Asked of those who responded 'yes' to Q19). n=435
- Q21: If you were at home during the middle of the day and the emergency alert system told you to evacuate, about how long would it take you to gather your children, prepare your home, pack, get into the car and be ready to leave? n=821

Of the total respondents (n=821) 53 percent work away from home. When asked how long it would take to leave work, travel home and prepare for evacuation, 8 percent would require more than 4 hours, 25 percent would require 2 to 4 hours, 23 percent would require 1 to 2 hours, 39 percent would require less than 1 hour and the remaining 5 percent did not know how long it would take.

If evacuation was ordered when the respondents were at home, 1 percent would require more than 4 hours, 10 percent would require 2 to 4 hours, 12 percent would require 1 to 2 hours, 75 percent would require less than 1 hour and the remaining 2 percent were not sure how long it would take.

The response to "time required to prepare for an evacuation" is consistent with the observation of evacuations that a large portion of the public will respond quickly. There is also a segment of the population that takes longer to evacuate, which is usually referred to as the evacuation tail. The evacuation tail is frequently assumed to be the last 10 percent of the population who leave. The survey data shows that use of 10 percent as an assumption of the evacuation tail would be appropriate for an evacuation during weekday conditions. The evacuation tail may be shorter when people are at home. This data may be used to support development of guidance on trip generation times.

3.2.3.3 Actions taken to prepare for an evacuation

One question was asked to determine if residents have made any preparations for an evacuation. (n=821)

- Q36: Have you taken any of the following actions to prepare for evacuation in the event of an incident at a nuclear power plant in your area?

The response to Q36 is presented in Table 4. Of the 821 respondents, 60 percent have taken at least minimum steps to prepare for an emergency. The response is consistent with the Q6 response of those who believe they are well informed. The response did not vary considerably by NRC region.

Table 4. Actions Taken by Public to Prepare for an Emergency

Options read to respondents	Total	Region 1	Region 2	Region 3	Region 4
Options Read to Respondents	N = 821	N = 199	N = 404	N = 174	N = 40
Read the emergency planning Information	60%	59%	55%	69%	65%
Filed the emergency planning information in a safe place for future reference	44%	40%	41%	53%	45%
Packed supplies for an Evacuation	20%	19%	19%	20%	28%
Any others I have not mentioned	12%	16%	13%	6%	22%
Have taken no action	30%	34%	33%	20%	18%
Don't know / Refused	2%	2%	2%	2%	0%

It is observed that 44 percent of all respondents keep the information in a safe place for future reference. This is consistent with the response to Q9, which asks respondents if they keep emergency information readily accessible. Among the regions, there is a difference in the percentage of respondents who have taken no action, with as few as 18 percent in Region 4 to as many as 34 percent in Region 1. It is also interesting that 20 percent of respondents have packed supplies for an evacuation. Packing supplies was consistent across Regions 1, 2 and 3, with region 4 responding at 28 percent. Region 4 represents residents of California, Texas and Louisiana, which have all had large scale evacuations in the last few years. It should be noted that the sample size for Region 4 was small with respect to other regions.

The data indicates that a reasonable percentage of the EPZ population keeps the public information brochure where it could be used during an emergency. That 20% of the population maintains packed supplies for evacuation is somewhat surprising and may indicate the success of Department of Homeland Security, in addition to NRC efforts to increase public awareness of emergency response.

3.2.3.4 Shelter

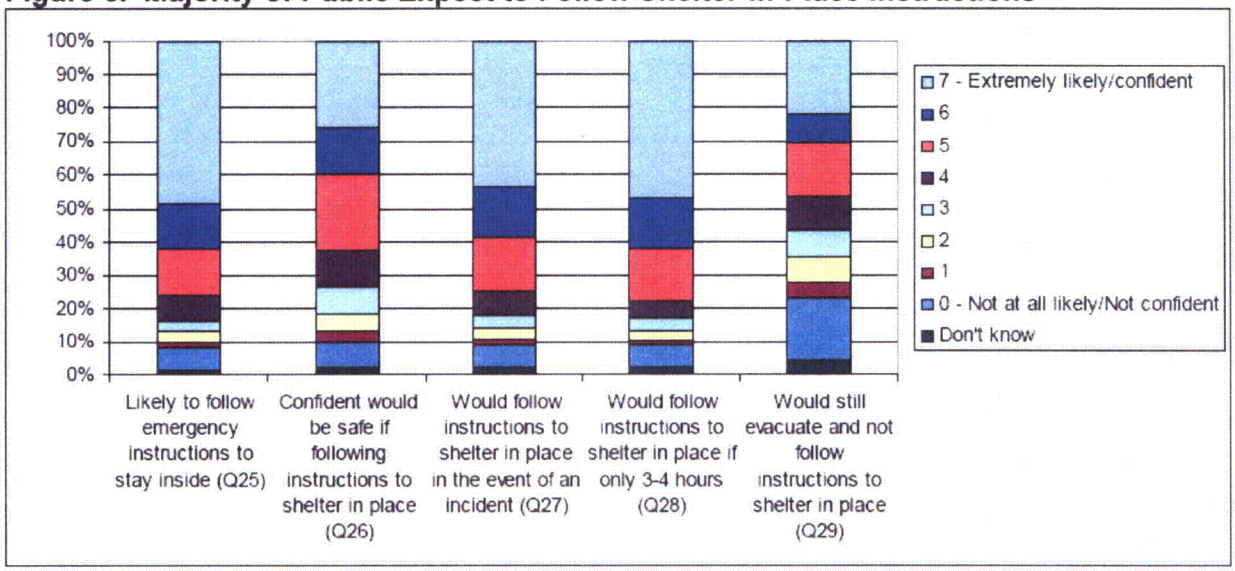
A set of questions was asked to gain an understanding of views and reactions to sheltering in place. These questions (Figure 5) were asked on a scale from zero to seven and include:

- Q25: If you heard a siren and then heard an emergency message on the radio or television that said there is no immediate danger and the message told you to

stay inside where you are right now and monitor the emergency alert station for further notice. How likely do you think it is that you would follow these instructions?

- Q26: How confident are you that you would be safe during this emergency if you follow directions to "shelter in place" – that is to stay where you are, in the event of an incident at a nuclear power plant near you?
- Q27: How likely do you think it is that you would follow shelter in place instructions in the event of an incident at the nuclear power plant in your area?
- Q28 How likely do you think it is that you would follow shelter in place instructions if it would only be for 3-4 hours?
- Q29 How likely do you think it is that you would evacuate rather than follow the instructions to shelter in place?

Figure 5. Majority of Public Expect to Follow Shelter-in-Place Instructions



When asked if respondents would shelter-in-place, 75 percent or more of respondents believe they would follow instructions to shelter. However, when asked if they would evacuate rather than shelter, almost half stated they would evacuate. This would indicate some uncertainty in the actual actions that might be taken. It should be noted that the public tends to follow directions when asked to take protective actions (NRC, 2005b), and as discussed later, 79 percent of the respondents that have been asked to shelter in place, complied with the instructions. When reviewing the top three responses for Q26, 63 percent believe they would be safe following shelter in place instructions. Of interest is that more respondents expressed confidence that they would be safe if they followed shelter in place orders compared to evacuation orders. However, respondents generally indicated they would be more likely to evacuate and not shelter in place.

This question was developed, in part to assess public tendencies toward the expanded use of sheltering and staged evacuation (for which another question follows). For higher population density sites, staged evacuation and sheltering can be more protective than immediate evacuation for some scenarios (NRC, 2007). The success of staged

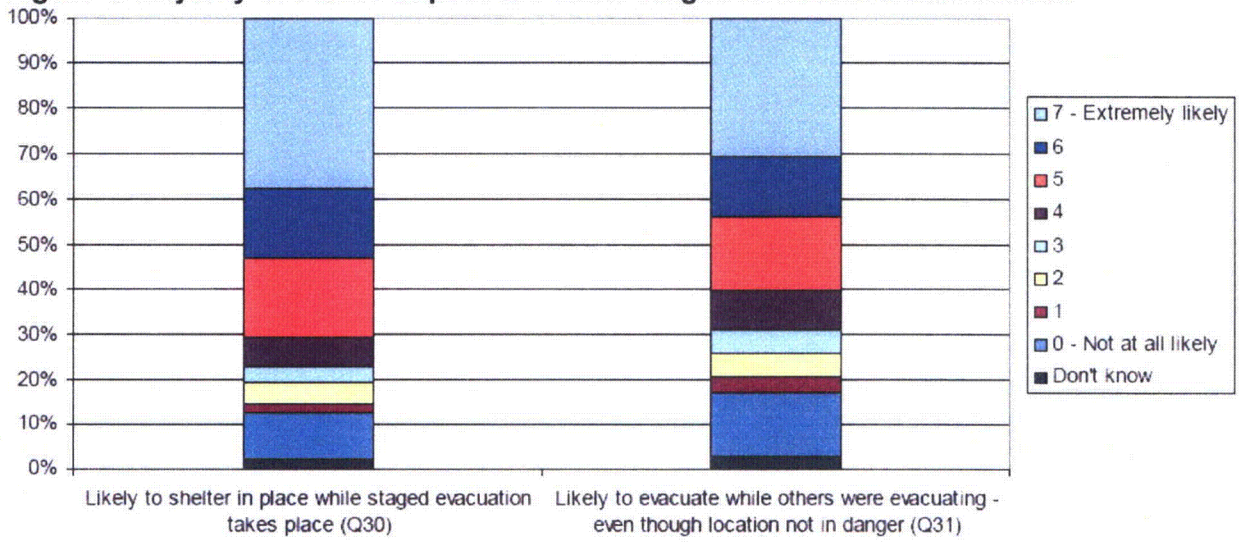
evacuation is dependant on public compliance with sheltering while the population most at risk is evacuated. The reasonable compliance with sheltering direction indicated by the survey supports the success of staged evacuation.

3.2.3.5 Staged Evacuation

A set of questions was asked to gain an understanding of the views and reactions to requests for a staged evacuation. These questions were asked on a scale from zero to seven and include (Figure 6):

- Q30: Now I would like you to consider in some instances it may be necessary to evacuate certain areas before other areas due to the nature of the risk presented. This is called a staged evacuation where one area may be required to shelter in place while an area more immediately affected is evacuated first. How likely do you think it is that you would follow these instructions and shelter in place until it is your turn to evacuate?
- Q31: How likely would you be to evacuate if you were told that other areas were evacuating but people in your area should not evacuate because they are not in danger?

Figure 6. Majority of Public Expect to Follow Staged Evacuation Instructions



In response to Q30, the top three responses total 70 percent for those that believe they would follow instructions and shelter in place while an area more immediately affected evacuates first.

To support identification of the potential for shadow evacuation, respondents were asked if they would evacuate if told others were evacuating but they were not in danger. The top three responses total 60 percent with respondents generally indicating they would evacuate if others were doing so. This data emphasizes the need for clear and direct communication not only to evacuees but to those near, but not within, the affected area. In Q30, the reason was clearly expressed as to why one may be asked to shelter while

others evacuated, and the response indicates more people would follow direction. In contrast, Q31 did not clearly identify why sheltering was necessary, and correspondingly, many respondents indicated that they would not follow directions.

When assessing this data, the bottom three responses to Q30 indicate that 17 percent of the respondents are not likely to shelter, even when informed that areas of higher risk need to evacuate first. This aligns with the Q46, discussed later, which asks respondents if they have ever evacuated from the area due to a concern about a potential hazard such as a natural disaster or industrial incident even though they had not been asked to do so? The response to Q46 indicates 23 percent of respondents had evacuated when they had not been asked to do so. The data from these questions appear to support that a shadow evacuation of about 20 percent may be anticipated in an NPP emergency when the public is well informed. The bottom three responses to Q31 indicate that 23 percent of the respondents are likely to shelter (i.e., they would not evacuate) even if they observe others in the area evacuating. The remaining respondents to Q31 were more likely to evacuate. For Q31, respondents were not given the reasoning behind why they were being asked to shelter in this question. The data supports that the shadow evacuation may be reduced through better communication with the public.

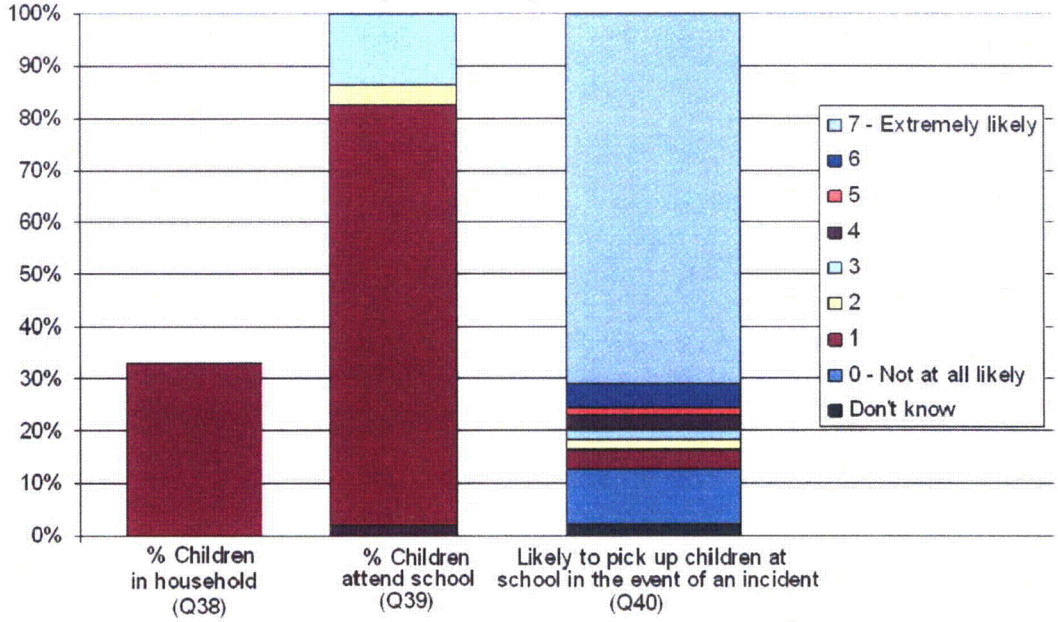
The data also indicates that staged evacuation can be successful if the emergency message is clear. The EPZ population will better comply with a staged evacuation strategy if the message explains that some members of the population are in danger and need use of the roads. However, if that message is not clear, the size of the shadow evacuation can be larger that desirable.

3.2.4 School children

The need to have the family together during an emergency has been demonstrated in large scale evacuations and was evident among the focus groups participants. This supported development of a series of questions with regard to family response to protective action recommendations.

- Q38: Now I would like to know if you have any children under the age of 18 living in your household. n=821
- Q39: Do they attend school in your area, are they home-schooled or are they not yet in school? (Asked of those who responded 'yes' to Q38) n=271
- Q40: Using a scale from zero to seven where zero is not at all likely and seven is extremely likely, how likely is it that you would try to pick your children up from school in the event of an incident at the nuclear power plant in your area? (Asked of those who responded they have children in school) n=219
- Q41: Using the same scale, how likely is it that you would try to pick your children up from school if you were told by local officials that your children were already being evacuated. (Asked of those who responded they have children in school) n=219

Figure 7. Parents are Likely to Pick Up Children from School



As indicated in Figure 7, 33 percent or 271 of the 821 respondents indicated they have children at home. Of these 271 respondents, 81 percent said their children attend school. For Figure 7, the legend at the right applies only to Q40 and shows that the top three responses total 77 percent for those who believe they are likely to pick up their children from school in an emergency, with more than 70 percent very likely. The large percentage of 'Very Likely' responses may be interpreted as due to the sensitivity and desire of the public to evacuating as a family. When provided additional information that authorities would evacuate their children (Q41), only 42 percent of respondents said they were likely to pick up their children from school. This difference emphasizes the importance of clear and timely communication to residents during an emergency.

Existing emergency planning brochures generally state that parents should not attempt to evacuate their children. Emergency responders have identified parents picking up children as a concern, and the data indicates that this issue may complicate emergency response if it is not anticipated by local authorities.

3.2.5 Special Needs and Transit Dependent Individuals

Research as well as information from the emergency responder focus groups indicates that individuals with special needs who do not reside in special facilities may be under served (NRC, 2007). Experience with large scale evacuations has shown that the planning for this segment of the population should be improved (NRC, 2008). A set of questions was asked to help understand the number of individuals that may require assistance, whether these individuals register with their county or local agency, or why they have not registered. These questions include:

- Q53: Would you or a family member require assistance from outside your home to help you evacuate? n=821
- Q54: Have you registered with your county or parish to inform them of your need for assistance? (Asked of those who responded 'yes' to Q53) n=69
- Q55: Briefly, why have you not registered for assistance? (Asked of those who responded 'no' to Q54) n=48

Of 821 respondents, 8 percent (n=69) identified someone in the household who would need assistance from outside the home to evacuate. Only 29 percent of these respondents have registered their need for assistance with local authorities. Those who have not registered provided a variety of reasons as indicated below. Respondents were allowed to identify more than one reason.

- 42% Did not know they could register
- 31% Did not know that assistance would be available
- 29% Did not know how to register
- 29% Have not taken the time to register
- 25% Believe they could evacuate without assistance if they had to
- 10% Do not think that an evacuation due to the NPP is ever likely
- 8% Do not want to provide personal information about their needs to others

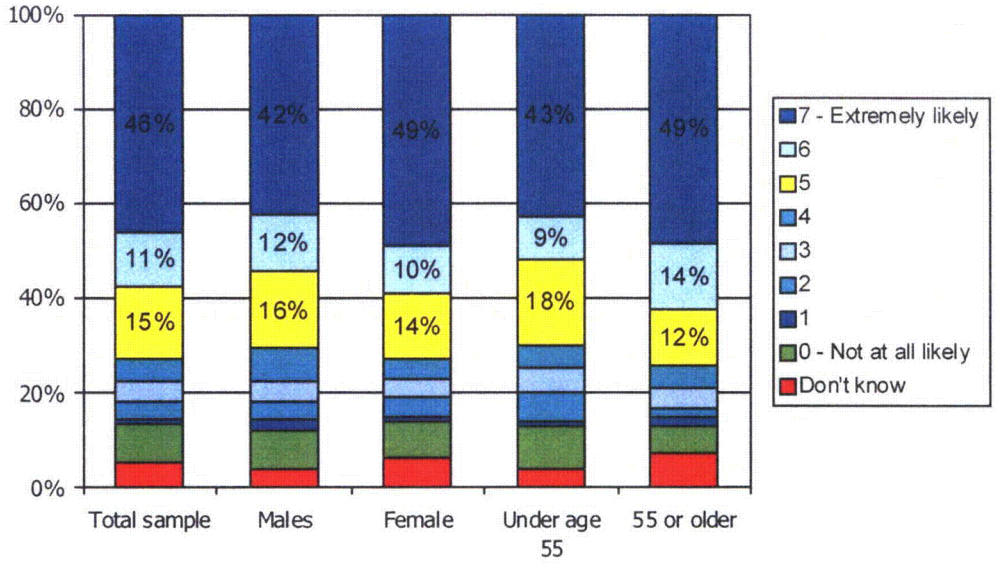
For the information received on special needs individuals who have not registered, it is noted that the sample size is small with n=48. The information is still useful in understanding reasons and concerns on registering.

This data is of interest because, with the exception of the evacuation for Hurricane Katrina, historically there are few instances of anyone being left behind because they could not evacuate (IES, 1981; NRC 2005b). When looking at those with special needs, 29 percent of respondents reported they had registered with their county or parish and 25 percent believe they could evacuate if needed. This total indicates 54 percent, or about half, of special needs individuals either can evacuate or have made plans to evacuate. Correspondingly, the remaining 46 percent, or about half, may not currently be included in the emergency response planning within EPZs. This data suggests that special needs individuals who do not reside in special facilities are not actively registering their need for assistance with local authorities.

To further understand the resources needed to assist those who can not evacuate on their own, a question was asked to obtain additional information on the likelihood that respondents would assist one another during an evacuation.

- Q32: How likely is it that you would stop to assist or provide a ride to an evacuee that you observed waiting at a bus stop for public transportation?

Figure 8. Evacuees are Likely to Assist those Who May Need a Ride



As indicated in Figure 8, a majority of respondents would stop and assist individuals waiting for public transportation. This is very consistent with research and historical observation that individuals do not get left behind in an evacuation.

3.2.6 Use of Congregate Care Centers

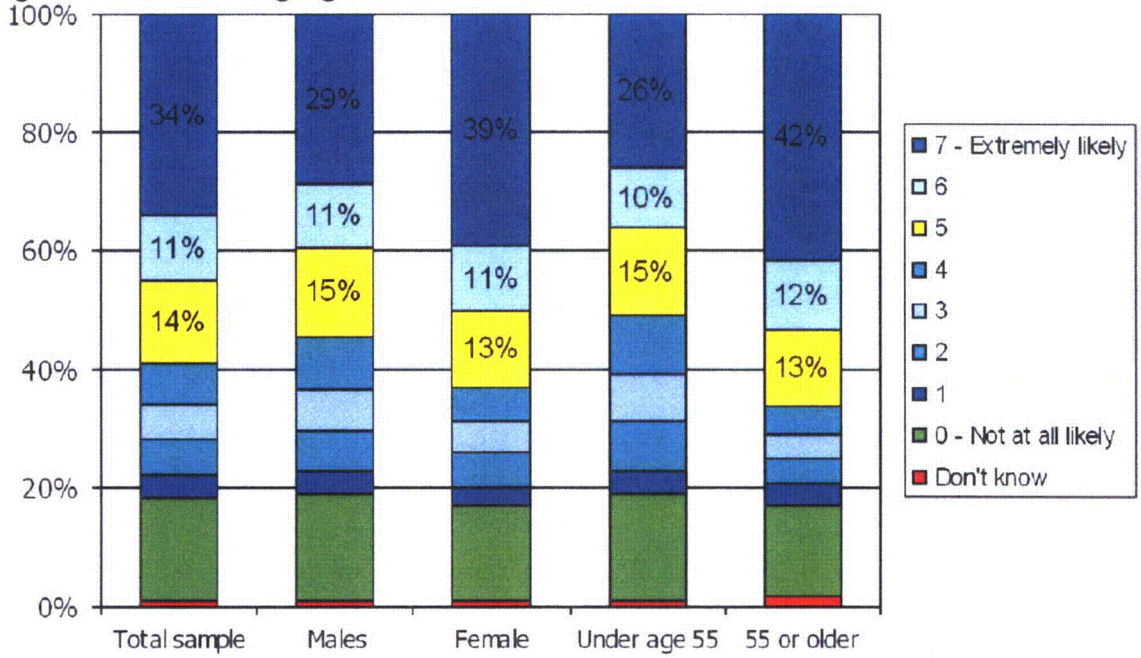
A set of questions was asked to determine the likelihood of residents reporting to congregate care centers. Because most emergency planning brochures for NPPs state that pets are not allowed at congregate care centers, questions regarding pets were also included in this set. Pets were included in the line of questioning to understand if owning pets influences the decision on whether to go to congregate care centers. These questions include:

- Q33: Reception centers are facilities that are established to provide a location for evacuees to go in the event of an incident. These facilities are sometimes called congregate care centers or public shelters. On a scale from zero to seven where zero is not at all likely and seven is extremely likely, how likely do you think it is that you would go to your designated reception center if asked to evacuate in the event of an incident at a nuclear power plant?
- Q34 Do you have pets? (Asked of those who responded other than 'not at all likely' to Q33) n=684
- Q35: If you were informed that pets are not allowed at the reception center, would you still go to your designated reception center? (Asked of those who responded 'yes' to Q34) n=399

For Q33, as indicated in Figure 9, the top 3 responses total 59% and represent individuals who believe they are likely to go to reception centers. Responses of zero, which correspond to not at all likely, are assumed to be firm decisions and were not

asked subsequent questions on pets. These results differ from the focus group theme that residents would not generally go to congregate care centers.

Figure 9. Use of Congregate Care Centers



Follow on questions were asked of all respondents who answered anything other than 'not at all likely' (n=684) to Q33. Of those who indicated they may go to a congregate care center, (n=684), 58 percent have pets. For those respondents who have pets, less than half, only 42 percent believe they would go to a congregate care center if pets are not allowed. Correspondingly, more than half of respondents believe they would not go to a congregate care center if pets were not allowed. The data shows that pets are a consideration in the decision to go to reception centers.

3.2.7 Previous Emergency Experience

Considering the large sample size and national approach to this telephone survey, questions were developed to understand if many respondents have been asked to take protective actions for any reason.

3.2.7.1 Experience with Evacuating

A set of questions was asked to determine the number of respondents who have been asked to evacuate for any reason. These questions include:

- Q43: Have you ever been asked to evacuate due to an emergency such as a natural disaster or industrial incident in the area in which you live? n=821
- Q44: How many times have you been asked to evacuate? (Asked of those who responded 'yes' to Q43) n=114
- Q45: Did you evacuate? (Asked of those who responded 'yes' to Q43) n=114

- Q46: Have you ever evacuated from the area due to a concern about a potential hazard such as a natural disaster or industrial incident even though you were told not to do so? (Asked of those who responded 'yes' to Q43) n=114

Of 821 respondents, 14% (n=114) have been asked to evacuate in the past. From this set of respondents (n=114), 49 percent had been asked to evacuate once, 28 percent had been asked twice, and 22 percent had been asked to evacuate more than two times. Of those that were asked to evacuate, 75 percent complied with evacuation orders.

Of those who have been asked to evacuate, the response to Q46 indicates 23 percent have also evacuated in situations where they were ***not*** asked to do so providing a quantitative value of actual shadow evacuations. Results from Q30, which were discussed previously, indicated a potential shadow evacuation of 17 percent. This data may be used as an indicator that potential shadow evacuations of about 20 percent may be anticipated in an NPP emergency. As discussed earlier, the data from Q30 and Q31 indicate that such a shadow evacuation can be reduced through better communication with the public.

3.2.7.2 Experience with Sheltering

A set of questions was asked to determine the number of respondents that have been asked to shelter for any reason. These questions include:

- Q47: Have you ever been asked to shelter in place due to an emergency in the area in which you live? n=821
- Q48: How many times have you been asked to shelter in place? (Asked of those who responded 'yes' to Q47) n=82
- Q49: Did you shelter in place? (Asked of those who responded 'yes' to Q47) n=82

Of 821 respondents, 10 percent (n=82) have been asked to shelter in place in the past. From this set of respondents (n=82), 43 percent had been asked to shelter once, 29 percent had been asked twice, and 27 percent had been asked to shelter more than two times. Of those that were asked to shelter, 79 percent complied with the protective action.

This data is consistent with the concept that the public will follow the direction of emergency response agencies. The data directly supports that compliance with a direction to shelter can be high if the proper message is delivered.

3.2.8 Communication

A set of questions was asked to understand communication with the public. For each of the following questions n=821:

- Q15: Have you ever heard an emergency siren test related to the nuclear power plant in your area?
- Q52: Have you ever heard the sirens in your area go off unexpectedly?

- Q16: If you heard an emergency siren in your area, would your initial thought be that the siren was for the nuclear power plant?
- Q24: Now I would like you to consider that people may be asked to tune in to a local radio or television station in the event of an incident at a nuclear power plant. If there is an incident at the nuclear power station and you were informed that you were currently not in danger, how long do you think you would be willing to monitor the situation and wait for further instructions before taking action on your own?
- Q50-51: Do you have access to a radio or television at home? At work?

The percent of respondents that had heard an emergency siren test was 67 percent and was very consistent across NRC regions. However, only 60 percent of respondents would initially relate a siren to an NPP emergency. This was also discussed in the focus group settings where residents stated that more often they would at least initially relate the sirens to a tornado or other hazard. Of the 821 respondents, 291 or 35 percent have heard sirens go off unexpectedly.

When asked how long people would be willing to monitor the radio or television, the following response was received:

- 28% More than 4 hours
- 22% 2 to 4 hours
- 14% 1 to 2 hours
- 32% Less than 1 hour
- 4% Don't know

Almost everyone, 98 percent, has access to a radio or television at home, and 59 percent have access to either a radio or television at work.

One question was asked of respondents on who they trusted more to make decisions about their safety in the event of an emergency at the nuclear power plant. Respondents were asked whether they trusted local, State or Federal decision makers.

- Q37: Considering the issues that we have been discussing, who do you most trust to make decisions about your safety in the event of an incident at a nuclear power plant in your area?

The results indicate that most of the respondents would trust local decision makers the most. The distribution of responses was:

- 63% local decision makers
- 11% State decision makers
- 11% Federal decision makers
- 8% Did not know
- 7% Preferred others

One question was asked on the terminology used in declaring emergencies. This question was developed from information gained during cognitive interviews when residents expressed a concern over emergency planning terminology. Respondents were asked which of the following would indicate the most serious type of an incident: General Emergency, Site Area Emergency, Alert, or Unusual Event. The list was randomized during the conduct of the survey.

- Q42: Now I would like to ask you to consider the four categories used to describe incidents at nuclear power plants and to tell me which one of the following you believe refers to the most serious type of incident.

As indicated below, respondents were generally not familiar with the level of severity of the emergency declarations.

- 28% Site Area Emergency
- 25% General Emergency
- 21% Unusual Event
- 17% Alert
- 9% Don't know

The level of severity for emergency declarations is defined as increasing from Unusual Event, Alert, Site Area Emergency, and finally General Emergency, as the most severe.

A question was asked on the best ways to provide information during an emergency. Respondents were asked to identify the best ways to provide information during an emergency and were given four choices including television, radio, internet, and don't know.

- Q14: In case a real incident should happen at the power plant and sirens are sounded, which of the following would be good ways to give you information? (n=821)

Respondents were allowed to identify more than one means resulting in the following response:

- 71% Television
- 60% Radio
- 24% Internet
- 2% Did not know what methods would be good

Television and radio were the predominant response. This corresponds well with Q50 and Q51 which asked if respondents had access to a television or radio at home and work respectively. At home, 98 percent of respondents have access to a television or radio, and at work, 59 percent have access to a television or radio.

3.2.9 Demographic Data

Basic demographics of respondents were captured as part of the survey.

Gender was inferred through voice recognition and only asked when not obvious:

- 45% Male
- 55% Female

Proximity to nuclear power plant:

- 71% 5-10 miles
- 19% 2-5 miles
- 6% 0-2 miles
- 4% Unsure

A distribution of age categories is provided in Table 5. A comparison is provided with the US Census data, and as expected with a random survey, some categories align better than others. The distribution does not affect the interpretation of the data as presented herein..

Table 5. Age Category of Respondents

Age Category	Total Respondents	US Census 2006
18 to 24 years	2.2%	9.7%
25 to 34 years	8.2%	18.4%
35 to 44 years	19.0%	20.2%
45 to 54 years	21.3%	20.0%
55 to 64 years	22.0%	14.6%
65 and older	26.9%	17.1%
Refused to answer	0.4%	0%
Totals	100.0%	100.0%

3.3 Telephone Survey Summary

The telephone survey included questions to which definitive responses are provided, such as 'what is your age', 'have you received emergency planning information', etc. The survey also included questions asking respondents the likelihood they would perform an action. For these questions which ask likelihood, the data is viewed as tendency of the respondent to do what is asked. Tendencies are developed from the data because it can be difficult for the public to provide a definitive response to a situation they have never faced. However, it is also noted that within this data set of 821 respondents, 14 percent have been asked to evacuate for natural or technological hazards and 10 percent have been asked to shelter in place, thus some respondents had first hand experience responding to emergencies.

The results of the focus groups indicated the public may not be well informed and an objective of the telephone survey was to better define the level of understanding. The results of the telephone survey indicate the majority of respondents believe they are well informed of what to do in an emergency, contrary to the theme observed in the focus

groups that they may not be well informed. Over 75 percent of respondents remembered receiving emergency planning information, and the majority of these respondents keep the information readily accessible. A large majority of those who remembered receiving information agreed that the information is easy to understand, clear, and helpful, and 20 percent of all respondents have packed supplies in preparation for an evacuation. These questions were definitive and provide a statistically relevant response.

A primary objective was to determine the likelihood of the public following various protective actions. Respondents were reasonably confident evacuation and shelter plans would work, confident they would be safe, and believe they are likely to follow evacuation, shelter, and staged evacuation instructions. A small number of respondents indicated they are very unlikely to follow instructions to shelter or evacuate during an emergency. Of interest is that more respondents expressed confidence that they would be safe if they followed shelter in place orders compared to evacuation orders. However, respondents generally indicated they are more likely to evacuate and not shelter in place. This data generally supports the theme that the public response may be based on the PAR, and the public views evacuation as a more protective action. The data also shows that compliance with shelter or staged evacuation is likely to be sufficient to support successful implementation of these protective actions.

In assessing the theme of evacuating as a family unit, most respondents with children in school believe they are likely to pick up their children from school in an emergency. When provided additional information on the evacuation of their children, fewer respondents indicated they would pick up their children from school. This difference emphasizes the importance of communication to residents during an emergency and supports the theme that families do prefer to evacuate as a family unit.

Eight percent of respondents identified that someone in the household would need assistance from outside the home to evacuate, but only about a third of these respondents have registered with local authorities. Many stated they did not know how to register or did not know that help might be available. Only eight percent of those with special needs did not want to release personal information to authorities. In presentations at the "Disaster Planning for the Carless Society Conference" in New Orleans, Louisiana on February 8 - 9, 2007, information was presented that a larger percentage of special needs individuals are hesitant to release personal information. The eight percent that reported this concern provides a promising observation that reasons for not registering may be more practical in nature and possibly easier to address. This data suggests that special needs individuals who do not reside in special facilities are not actively registering their need for assistance with local authorities.

Research has shown (NRC, 2005b) that evacuees generally do not go to public shelters; however, most respondents believed they were likely to go to public shelters that would be established during an NPP emergency. Public shelters established for NPP emergencies are called congregate care centers. When informed that pets would not be allowed at congregate care centers, more than half of respondents that are also pet owners would not go to the congregate care centers. Even when considering pets, it

appears a majority of respondents believe they will go to congregate care centers contrary to the theme derived from the focus groups.

To help understand the potential shadow evacuation, respondents were asked how likely they were to evacuate if they were not in danger but saw others evacuating, and a majority believed they would evacuate. A subsequent question asked of a smaller respondent set showed that only 23 percent of respondents had evacuated when told they were not in an evacuation zone. This response provided insights into the potential for a shadow evacuation and emphasizes the need to communicate to the public in non-affected areas.

The public appears to be generally well informed with respect to emergency planning and believe they are likely to go to congregate care centers contrary to the themes derived from the focus groups. Remaining themes derived from the focus groups were generally supported by data from the telephone survey. The telephone survey was not structured to address infrastructure concerns or specific information regarding emergency responders which were also themes derived from the focus groups.

4.0 CONCLUSIONS and RECOMMENDATIONS

To obtain information on the views and reactions to protective actions and the emergency planning in place for emergency planning zones, focus groups and a national telephone survey were conducted. Data from this research supports that alternative protective action strategies can be successfully implemented. Considering the results of this study and the health and safety benefit of alternative protective action strategies demonstrated in the technical analyses of Volume 1, it is recommended that alternative protective action strategies be implemented.

Some of the survey questions relate to actions that respondents believe they would take in the event of an incident that they may have never actually encountered. The results for these types of questions are discussed in the context of how likely respondents are to take the action. These results provide an important indicator of how people may respond. Of 821 respondents to the telephone survey, 14 percent had been asked to evacuate in response to natural or technological hazards and 10 percent of respondents had been asked to shelter in place, providing some respondents first-hand experience in responding to an emergency.

The information gained from the Emergency Responder focus groups provided insights on the concerns of responders and also reinforced the confidence that responders will support emergency response and will step up to any additional challenges the incident presents. The information received from the public focus groups provided insights and indications of how the public is likely to respond to a nuclear power plant emergency. Themes were derived from the focus group data to help categorize issues and support development of the telephone survey questionnaire. The following themes were derived from the public and Emergency Responder focus groups:

Emergency Responder **focus groups:**

- Emergency responders will report for duty.
- The public may not be well informed.
- The public is more likely to evacuate than to shelter in place.
- Providing additional information to the public improves public response.
- Infrastructure has not kept up with evacuation demand.

Public focus groups:

- Evacuation is viewed as a more protective action than sheltering.
- The public may not be well informed.
- Providing additional information influenced participants decisions.
- Infrastructure has not kept up with evacuation demand;
- The public prefers to respond as a family unit; and
- Evacuees are not likely to go to congregate care centers.

In addition to the themes derived from the focus groups, some high level observations were made including:

- Most residents of emergency planning zones do not worry or think about the nuclear power plant day to day.
- Providing additional information influenced people's decisions.
- First responders are confident they know their roles and responsibilities.
- First responders step up to the task during an emergency.

Results of the telephone survey suggest that the majority of survey respondents believe they are well informed of what to do in an emergency, contrary to the theme observed in the focus groups. Over 75 percent of respondents remembered receiving emergency planning information, and the majority of these respondents keep the information readily accessible. A large majority of those who remembered receiving information agreed that the information is easy to understand, clear, and helpful. Twenty percent of all respondents have packed supplies in preparation for an evacuation. The data from the survey suggests:

- Respondents are generally well informed with many having taken action to prepare for an emergency.
- Some respondents have first hand experience with evacuation and / or sheltering.
- Public information brochures are well written and effective for the target audience.

Most respondents believe they are likely to follow evacuation or shelter instructions. A small number of respondents indicated they are very unlikely to follow instructions to shelter or evacuate during an emergency. The data from the survey suggests:

- Targeting emergency communication messages and emergency response planning information to select population groups may improve compliance with protective actions.

Most respondents stated they are likely to go to congregate care centers. However, if the family had a pet, less than half stated they would still go to a congregate care center if pets were not allowed. The data from the survey suggests:

- It is important that emergency planning brochures provide adequate information on congregate care center management of pets.

Respondents with children in school stated they are likely to pick up their children from school in an emergency. Informing respondents that children would be evacuated by the schools decreased the number who would attempt to pick up their children by 20 percent. This difference emphasizes the importance of information provided to residents during an emergency and confirms the theme that communication influences decisions. The data from the survey suggests:

- The logistics of parents picking up children should be considered during evacuation planning.

- Providing additional communication to assure parents that children are safe may be beneficial.

There were eight percent of respondents who identified someone in the household who would need assistance from outside the home to evacuate. Only about a third of these respondents have registered their need for assistance with local authorities with many stating they did not know how to register or did not know that help might be available. The data from the survey suggests:

- Special needs individuals who do not reside in special facilities are not using resources available to actively register need for assistance.
- A more proactive means of registering these special needs individuals may be beneficial.
- Individuals are not as reluctant to provide emergency management agencies with personal data as previously believed.
- An informal rideshare network would occur with 72 percent of respondents indicated they are likely to provide a ride to individuals who need a ride or may be waiting for public transportation.

When asked if respondents would likely evacuate if they were informed they were not in danger, but they saw others evacuating, a majority believed they would evacuate. In a separate question, asked of respondents who had evacuated for any reason, 23 percent of these respondents had also evacuated when not asked to do so. These responses provide insights into the potential for a shadow evacuation. The data from the survey suggests:

- Communication with the public in non-affected areas that they are safe may be beneficial in reducing shadow evacuation.

The conduct of the focus groups and telephone survey provided insights, and observations that will be beneficial to the NRC emergency preparedness program. The use of focus groups allowed direct and extensive interaction with members of the public and emergency responders. This interaction allowed for the probing of issues and concerns to gain a broad understanding. The subsequent telephone survey provides substantial and quantitative data that indicate the public will adequately comply with protective actions.

Recommendations

The assessment and conclusions presented within this report support the recommendation that alternative protective actions be included in the emergency preparedness program. Additional recommendations are also presented below. It is recognized that most of these recommendations are with regard to offsite enhancements and the recommendations therefore suggest that NRC support the implementation of such offsite enhancements which would be implemented by the appropriate Federal agency.

1. The NRC should support the revision of Supplement 3 to NUREG-0654 / FEMA-REP-1, Rev. 1, to enhance the decision process for implementation of protective action strategies. The data obtained from this study should be used to support the revision to Supplement 3.

2. The NRC should include guidance in the update to Supplement 3 to support the implementation of staged evacuation as a protective action.

3. The NRC should include guidance in the update to Supplement 3 to identify the benefits and appropriateness of sheltering as a protective action strategy.

4. The NRC should support enhancements in the improvement of offsite communications that would include distributing information to the public in non-affected areas to reduce the potential of shadow evacuations.

5. The NRC should develop guidance that includes consideration of shadow evacuations that may include up to 20 percent of the population near, but not within the EPZ.

6. The NRC should support enhancements in the improvement of offsite communications that would include distributing additional planning information to parents on the logistics of the evacuation of students to help reduce the number of parents attempting to pick up children. This would be implemented at sites where parents are discouraged from picking up children during an evacuation. It is recognized some sites allow parents to pick up children.

7. The NRC should support review of the current process of using registration cards as the primary means of identifying residents that may require assistance in an evacuation. These cards are distributed with emergency planning brochures, and the process yields a low number of responses. More comprehensive techniques have resulted in improved response in this area.

8. The NRC should support update of emergency planning brochures to include more descriptive instructions to evacuees on the management of pets at congregate care centers.

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Appendix A

Focus Group Moderator's Guide for General Public

1.0 INTRODUCTION

The goal of the focus group is to gain a broader and deeper understanding of people's views and reactions to protective action strategies within the 16-km (10-mile) EPZ, and to assess the degree of public acceptance of those strategies. The primary objective of the *Focus Group Moderator's Guide* is to provide the moderator with key questions to stimulate the group discussion. A number of questions are asked to stimulate story telling, and then additional questions are asked to discuss the issues. This guide only provides the framework and is not a step-by-step instruction manual (i.e., it is not a "script" for the focus group session). This means that there are no set time limits for a particular line of questioning. However, if the discussion veers off course, it is the moderator's responsibility to steer it back to the issues of concern.

2.0 MODERATOR'S GUIDE

The moderator will guide the focus group discussion and ensure that everybody has an equal opportunity to express their views and concerns. The moderator will make a note of where each member of the focus group is sitting and address each person by their first name during the interactions. The session will be tape recorded to ensure that no important information is missed. Permission will also be obtained to use actual quotes in the written reports.

Introduction (Approximately 10 minutes)

- Hi, my name is <Name> and I work for the University of New Mexico Institute for Public Policy.
- Thank you for being here and for helping us with this important project. We are trying to learn more about people's views and responses to possible nuclear power plant emergency situations. I am not directly connected with emergency planning in your area so just be completely honest and share what you think. There are no right or wrong answers, only different ideas.
- I'd like to introduce our project team. (*Introduce research team members by name*). They are going to take notes during our discussion today.

Informed "Consent" (Approximately 10 minutes)

- Before we look at the materials, I'd like to review an important form with you. *[Project team distributes the "informed consent" document]*
- This paper explains the purpose of the discussion group and what you can expect while you're here.
- Let's take a few minutes to go over the key points.
- First, I want you to know that your participation today is completely voluntary and that you don't have to answer any question that makes you uncomfortable. You may leave at any time without penalty.

- Second, our discussion today will be tape recorded. This will allow us to pay close attention to your comments and make our notes more accurate. Only your first name will be identified in our transcripts and only our project team will have access to the recordings.
- The discussion will last no more than 2 hours.
- Potential benefits of participating in our discussion include being better informed about nuclear power plant emergency situations and having increased confidence in your ability to make an informed decision about nuclear power plant emergencies.
- Does anyone have questions?
- Okay, if no one has any more questions, could you please initial the first page of the informed consent form, and sign the second page?
- We've given you two copies. Please initial and sign both copies and <Name> will collect them. After we sign the forms, we can keep one copy and you can keep one copy for your records.
- *(Brief pause for completion of this process)*
- After you have signed the informed consent form, we would very much appreciate it if you could take a minute to fill out the demographic form if you have not already done so. We're not asking for your name, answering is voluntary, and you can refuse to answer any questions and still participate in the focus group. We put the information from all of our focus groups together so that we can get a sense of how many males and how many females participated, what the average age of the group was, and so on.
- Are there any questions?
- Okay, let's get started.

Guidelines (Approximately 5 minutes)

- We want to be sure that everyone has a chance to participate in today's discussion, so we'd appreciate it if everyone would follow a few easy guidelines.
- Please try to talk one at a time so that we can hear everyone.
- Remember, there are no right or wrong answers, only different ideas. So please be honest and share what you think.
- During our discussion, you may think of a lot of questions that you have about the kinds of nuclear power plant emergencies we are discussing. We'll make a note of your question and make every attempt to address it at the end of the session (parking lot concept).
- We won't be able to answer your questions during the focus group because what we say could affect the discussion. But once the focus group is over, we will do our best to answer any remaining questions you have.
- Also, at this time please turn off cell phones and pagers if you are able to.
- Are there any more questions before we begin?

(NOTE TO MODERATOR: If participants ask questions during the discussion, say: "*We can't answer your question now as it may influence the results of the discussion. Please write down your questions and we will try to answer them at the end of the focus group.*")

Icebreaker/Introductions (Approximately 5 minutes)

- We would very much appreciate it if you could use your first name before providing your input so that way we can identify one comment from another in the tape.

- Let's go around the room and please say your name and then tell us one of your favorite hobbies.
- Are there any questions?
- Okay, let's start.

Inform group that we will begin tape recording the session.

(Turn tape recorders on)

Scenario Rollout

- I am going to walk you through a made up story about what might happen if a nuclear power plant emergency situation took place.
- There are three parts to the story. After each part, we'll talk about your reactions and thoughts.
- I will read the story out loud and you can follow along on handouts that will be given to you.
- Please remember that what I'm telling you is made up. This is not happening now, and we hope it will never happen.
-

First Scenario, Part One (Approximately 30 minutes)

It is 12:30 p.m. on a weekday afternoon, and you are just getting ready to have lunch. The warning sirens for the Seabrook Station Nuclear Power Plant begin to sound. The sirens are normally not tested at this day/time.

Focus Group Guide Questions:

1. What is your first thought?
    - PROBE: What are your immediate concerns?
    - PROBE: What would you do after hearing the siren?
2. What would you want to know?
3. Where would you go for information?
    - PROBE: Why would you turn to these sources?
    - PROBE: What do you think the best source of information would be?
    - PROBE: Who would you trust the most to give you the information you need in this emergency?
    - PROBE: Is there any information available in your house that you would use?
4. What actions would you take if your children were at school, in the park, or at some other location?
    - PROBE: What would you do if your children were in a safe area?
    - PROBE: What would you do if your children were in an impacted area?

Okay, thank you, that was very helpful. Now let's go on to the next part.

First Scenario, Part Two (Approximately 30 minutes)

The following Emergency Alert System (EAS) message is broadcast to the public over television and radio:

The Emergency Alert System is being activated by the New Hampshire Bureau of Emergency Management to advise that a GENERAL EMERGENCY has been declared at Seabrook Station Nuclear Power Plant. A release of radioactive material has occurred.

Governor Lynch has declared a State of Emergency and ordered the following protective actions:

- *Persons currently in Seabrook, Hampton Falls, Kensington, South Hampton, Hampton and North Hampton are advised to EVACUATE.*
- *Persons currently in Brentwood, East Kingston, Exeter, Kingston, Newfields, Newton, Stratham, Greenland, New Castle, Portsmouth and Rye are advised to SHELTER-IN-PLACE.*
- *Persons who have potassium iodide in their possession may wish to ingest it now while continuing with other protective actions.*

Persons currently in Seabrook, Hampton Falls, Kensington, South Hampton, Hampton, North Hampton, Brentwood, East Kingston, Exeter, Kingston, Newfields, Newton, Stratham, Greenland, New Castle, Portsmouth and Rye are advised to stay tuned to WOKQ at 97.5 for further information. For additional information, refer to your emergency public information brochures.

This message contains information for New Hampshire communities only. If you are in northeastern Massachusetts, you should tune to a local radio station in Massachusetts, such as WQSX (93.7), WXRV-FM (92.5) or WNBP-AM (1450), for news about your community.

That concludes this broadcast of the Emergency Alert System message concerning the emergency at the Seabrook Station Nuclear Power Plant.

All of you are to assume that you are located in an area ordered to shelter-in-place.

Focus Group Guide Questions:

1. What is your first thought?
   - PROBE: What are your immediate concerns?
   - PROBE: What would you do after hearing this message?
2. The message asked you to seek shelter. What does this mean to you?
3. Why would you comply or not comply with the instruction to shelter?
4. After being told to prepare for a possible evacuation, how long would you wait for the next update before you took additional action?
   - PROBE: Would you evacuate immediately after being ready before a formal request to do so?

- PROBE: If you saw other individuals evacuating, what would you do?
- PROBE: Would your actions be different if you heard that an adjoining county had been told to evacuate immediately?
  - ➢ PROBE: If the benefits of sheltering were clearly explained to you, would that affect your actions?

Okay, thank you, that was very helpful. Now let's go on to the second scenario.

Second Scenario (Approximately 30 minutes)

It is 12:30 p.m. on a weekday afternoon, and you are just getting ready to have lunch. The warning sirens for the Seabrook Station Nuclear Power Plant begin to sound. The sirens are normally not tested at this day/time. You tune into your television or radio, and the same EAS message is broadcast. However, this time you are to assume that you are located in an area ordered to evacuate.

Focus Group Guide Questions:

1. What is your first thought?
   - PROBE: What are your immediate concerns?
   - PROBE: What actions would you take after hearing this message?
2. What steps would you take to evacuate your home?
3. How long would it take you to leave your home?
4. If you have pets, what would you do with them?
   - PROBE: If the reception center would not allow pets, what would you do?
5. If you have livestock, including horses, cattle, sheep, etc., what would you do with those animals?
6. Where would you go once you left the nuclear power plant emergency planning zone?

Conclusion (Approximately 5 minutes)

- This concludes our work for the day. Thank you again for volunteering to help us. Your comments have been extremely valuable.
- The information you have provided will help improve planning and preparedness for emergencies at nuclear power plants.
- If you have any questions, we will be happy to discuss them with you after the session. Also, we have provided a telephone number on the informed consent form. If you have any questions about the research, please feel free to contact us.
- Thank you again.

3.0 PROJECT TEAM REVIEW

At the end of each focus group, the project team will review how the discussion went and consider what worked and what did not. For example, is there a better way of asking the questions? Are there questions or concerns that have not been anticipated? Are there concerns that should be followed up on during the cognitive interviews? If necessary,

the Moderator's Guide will be revised to improve the next session. NRC and SNL will have the opportunity to participate in this review and provide input at this time. In addition, the transcription process will begin and a summary of the results and conclusions will be prepared shortly after completion of the focus group session while the information is still fresh in the researcher's minds. Final results will be submitted to NRC in accordance with the project schedule

APPENDIX B

Focus Group Moderator's Guide for Emergency Responders within the Nuclear Power Plant Emergency Planning Zones (EPZs)

1.0 INTRODUCTION

This *Focus Group Moderator's Guide* is an addendum to the original guide, "Focus Group Moderator's Guide for General Public within EPZ". This guide will be used during the sessions conducted with the emergency responders, including law enforcement, firefighters, emergency medical services (EMS), and federal and state agencies that would respond in a nuclear power plant (NPP) emergency. The primary objective of the sessions with the emergency responders is to identify whether or not they would respond to a nuclear event. Possible reasons for not responding include taking care of family and friends first, or fear of radiation, for example.

The primary objective of the *Focus Group Moderator's Guide* is to provide the moderator with key questions to stimulate the group discussion. A number of questions are asked to stimulate story telling, and then additional questions are asked to discuss the issues in depth. This guide only provides the framework and is not a step-by-step instruction manual. If the discussion veers off course, it is the moderator's responsibility to steer it back to the issues of concern.

2.0 MODERATOR'S GUIDE

The moderator will guide the focus group discussion and ensure that everybody has an equal opportunity to express their views and concerns. The moderator will make a note of where each member of the focus group is sitting and address each person by their first name during the interactions. The session will be tape recorded to ensure that no important information is missed. Permission will also be obtained to use actual quotes in the written reports

Introduction (Approximately 5 minutes)

- Hi, my name is <Name> and I work for the University of New Mexico Institute for Public Policy.
- Thank you for being here and for helping us with this important project. We are trying to learn more about the issues and concerns of emergency personnel who might respond to a nuclear power plant emergency. We have asked you to come here today to think about these emergency situations and tell us what you think. I am not directly connected with emergency planning in your area so just be completely honest and share what you think.
- I'd like to introduce our project team. (*Introduce research team members by name*). They are going to take notes during our discussion today.

Informed "Consent" (Approximately 10 minutes)

- Before we look at the materials, I'd like to review an important form with you. *[Project team distributes the "informed consent" document]*
- This paper explains the purpose of the discussion group and what you can expect while you're here.

- Let's take a few minutes to go over the key points.
- First, I want you to know that your participation today is completely voluntary and you don't have to answer any questions that you don't want to. You may leave at any time without penalty.
- Second, our discussion today will be tape recorded. This will allow us to pay close attention to your comments and make our notes more accurate. Only your first name will be identified in our transcripts and only our project team will have access to the recordings.
- The discussion will last no more than 2 hours.
- Does anyone have questions?
- Okay, if no one has any more questions, could you please initial the first page of the informed consent form, and sign the second page?
- We've given you two copies. Please initial and sign both copies and <Name> will collect them. After we sign the forms, we can keep one copy and you can keep one copy for your records.

  (Brief pause for completion of this process)

- After you have signed the informed consent form, we would very much appreciate it if you could take a minute to fill out the demographic form if you have not already done so. We're not asking for your name, answering is voluntary, and you can refuse to answer any questions and still participate in the focus group. We put the information from all of our focus groups together so that we can get a sense of how many males and how many females participated, what the average age of the group was, and so on.
- Are there any questions?
- Okay, let's get started.

<u>Guidelines (Approximately 5 minutes)</u>

- We want to be sure that everyone has a chance to participate in today's discussion, so we'd appreciate it if everyone would follow a few easy guidelines.
- Please try to talk one at a time so that we can hear everyone.
- Remember, there are no right or wrong answers, only different ideas. So please be honest and share what you think.
- We won't be able to answer your questions during the focus group because what we say could affect the discussion. However, we'll make a note of your question and make every attempt to address it at the end of the session (parking lot concept).
- Also, at this time please turn off cell phones and pagers if you are able to.

- Are there any more questions before we begin?

(NOTE TO MODERATOR: If participants ask questions during the discussion, say: "*We can't answer your question now as it may influence the results of the discussion. Please write down your questions and we will try to answer them at the end of the focus group.*")

Icebreaker/Introductions (Approximately 5 minutes)

- We would very much appreciate it if you could use your first name before providing your input so that way we can identify one comment from another in the tape.

- Let's go around the room and please say your name and then tell us one of your favorite hobbies.

- Are there any questions?

- Okay, let's start.

  Inform group that we will begin tape recording the session.

  (Turn tape recorders on)

  Scenario Rollout

- I am going to walk you through a made up story about a nuclear power plant emergency situation, and then we'll discuss your thoughts and reactions.
- I will read the story out loud and you can follow along on handouts that will be given to you.

Scenario (Approximately 60 minutes)

Note: Do not read this aloud. The timing of this scenario is faster than the drills the responders are used to, however, it is possible if very unlikely. Should the responders note the timing issue, guide them into accepting the unlikely scenario and responding to the questions as best they can.

It is 1:30 p.m. on a weekday afternoon, about an hour ago, your pagers went off and you and your team of responders were activated. Your facilities and emergency management are activated at this time. (**Do not read this aloud**: **please note, it is possible that some responders have more than an hour activation time, many have less).**

You were informed that a Site Area Emergency had been declared at the <Name> Nuclear Power Plant. **(Do not read aloud: There is an information issue here, some responders would likely know what the basis for the emergency is others would**

not, suggest asking attendees. If this is a terrorism event, it would be "Hostile Action within the protected area". If not use "Loss of 2 fission product barriers".)

Decisions have been made to:

- close schools and transport children in accordance with plans,
- close parks, beaches and other recreational facilities,
- implement traffic control measures in preparation for the possibility of an evacuation
- begin the evacuation of special needs populations,
- place hospital emergency rooms on standby and
- dispatch EMS, fire and police to the plant as was requested.

These actions are in various stages of completion.

At this point, the plant notifies emergency management that a General Emergency has been declared based on "loss of 2 fission product barriers and potential loss of 3rd" and that a keyhole evacuation has been recommended. About 15 minutes later, Emergency Management has decided an evacuation will take place and initiates the siren system and broadcasts an EAS to the public in which residents in your response area are asked to immediately evacuate. **(Do not read aloud: please note, Pennsylvania only implements a 10 mile 360 degree evacuation, but the plant will recommend a keyhole evacuation anyway.)**

Focus Group Guide Questions:

1. What are your immediate concerns?
2. Do you know what you will be expected to do?
    - PROBE: How do you know this?
3. How well prepared are you for this response?
    - PROBE: Do you feel that you have had adequate training, exercises, and drills?
        - ➢ PROBE: Has this training been specifically for response to a radiation incident?
    - PROBE: Do you have adequate equipment, including personal dosimetry, respirator, etc.
4. You are instructed to report near the plant to assist with the evacuation including door-to-door notification and traffic control **(or what ever your duties might be)**. Are there any issues or concerns that you have that could impede or inhibit your ability to conduct an adequate response to this event?
    - PROBE: Are there any circumstances that may cause you to not respond to these instructions?
    - PROBE: If the need to assist the public took several hours, would this affect any concerns you may have?
    - PROBE: Would the safety of your family impact your response in any way?

- ➢ PROBE: What would you do if a personal friend or family member was in an impacted area?
- ➢ PROBE: What would you do if this friend or family member was incapacitated by a chronic illness or injury, or did not have access to a personal vehicle, or if this was a child in the local school system?

5. If radiation was detected in the area you are supporting, either on your personal dosimeter or is reported to you over the radio, would this affect your response?
   - PROBE: Would you leave the area before being told to do so?
   - PROBE: What would you do if you happened to be actively assisting the public or if you knew that members of the public required your immediate attention when you received notice of elevated radiation levels in the area?

6. Are there any items (e.g., training, equipment, other support) that you feel could improve your response to this scenario?

7. What can the public do and what can emergency management do to improve evacuation effectiveness?

Conclusion (Approximately 5 minutes)

- This concludes our work for the day. Thank you again for volunteering to help us. Your comments have been extremely valuable.

- The information you have provided will help improve planning and preparedness for emergencies at nuclear power plants.

- If you have any questions, we will be happy to discuss them with you after the session. Also, we have provided a telephone number on the informed consent form. If you have any questions about the research, please feel free to contact us.

- Thank you again.

3.0 PROJECT TEAM REVIEW

At the end of each focus group, the project team will review how the discussion went and consider what worked and what did not. For example, is there a better way of asking the questions? Are there questions or concerns that have not been anticipated? Are there concerns that should be followed up on during the cognitive interviews? If necessary, the Moderator's Guide will be revised to improve the next session. NRC and SNL will have the opportunity to participate in this review and provide input at this time. In addition, the transcription process will begin and a summary of the results and conclusions will be prepared shortly after completion of the focus group session while the information is still fresh in the researcher's minds. Final results will be submitted to NRC in accordance with the project schedule.

APPENDIX C

Telephone Survey Instrument

SURVEY
FOR
NRC SURVEY OF PUBLIC PERCEPTION OF EMERGENCY RESPONSE ACTIVITIES

(3150-0207)

Telephone Survey Questionnaire

Introduction: Hello, my name is _____.

We are conducting research for the Nuclear Regulatory Commission regarding the public perception of emergency response activities. This is **not** a sales call, and your telephone number was selected at random. The survey should last no more than 15 minutes. I would like to speak to the person in your household age 18 or older who has had the most recent birthday. Do you or any member of your household work for the power company? [If yes, "Thank you. That concludes the survey.", if No, continue]

[ORIGINAL RESPONDENT] Should you choose to participate in our survey, your answers to the questions will remain confidential. We release no information as to how any particular individual answers the survey, and do not sell or give away the lists of randomly generated phone numbers used in our research. You can refrain from answering any questions that make you feel uncomfortable, and you can end the survey at any time. This call may be monitored for quality control purposes. Are you ready to begin?

[NEW RESPONDENT] Hello, my name is _____.
We are conducting research for the Nuclear Regulatory Commission regarding the public perception of emergency response activities. This is **not** a sales call, and your telephone number was selected at random. The survey should last no more than 15 minutes. Are you a person age 18 or older in your household? Do you or any member of your household work for the power company? [If yes, "Thank you. That concludes the survey.", if No, continue].

Should you choose to participate in our survey, your answers to the questions will remain confidential. We release no information as to how any particular individual answers the survey, and do not sell or give away the lists of randomly generated phone numbers used in our research. Information is kept anonymous and we destroy all identifiable information at the end of this project. You can refrain from answering any questions that make you feel uncomfortable, and you can end the survey at any time. This call may be monitored for quality control purposes. Are you ready to begin?

[ANSWERING MACHINES: Remember we only leave 2 messages!]
Hello, my name is _____. This is **not** a sales call. Our research group is conducting research for the Nuclear Regulatory Commission regarding the public perception of emergency response activities, and your participation would be greatly

appreciated. Your phone number was selected at random and your answers will be kept confidential. We'll call back in the next day or two. Thank you.

«Continue»

1. As a part of the survey, I am required to ask: are you male or female? [Ask only if Sex may not be ascertained by voice]

2. What is the zip code at your residence? «Integer: -99 I 99999 »

3. How old are you? «Integer: -99 ≤ i ≤ 99999 »

4. Now I would like to ask you some questions about where you live. To the best of your knowledge, is there a nuclear power plant located within 10 miles of your home?

   [If yes: then q5, else q6]

5. Approximately how many miles do you live from the nuclear power plant? a) 0 to 2 miles; b) 2 to 5 miles; c) 5 to 10 miles; d) not sure

6. On a scale from zero to seven, where zero is not at all informed and seven is extremely informed, how informed would you say you are about what to do if the sirens for the nuclear power plant in your area were to sound?

7. To the best of your recollection, have you ever received any information such as a booklet or pamphlet, calendar, utility or electric bill, TV or radio message, phone book, or something else, that informs you about what to do if there was an incident at a nuclear plant in your area? (Y/N)

   [If yes then Q8, else Q13]

8. What type of information was it? [READ--CHECK ALL]
   A. Booklet or pamphlet;
   B. Calendar;
   C. Utility or electric bill;
   D. TV or radio message;
   E. Phone book; or
   F. Something else.

8. Do you recall receiving any information on this topic in the last year? (Y/N)

9. Do you keep this information in a place where you can readily access it? (Y/N)

10. To the best of your recollection, did the information that you received about what to do if there was an incident at a nuclear plant in your area provide information about any of the following: [READ--CHECK ALL]
    A. What to do if you hear the sirens?
    B. Sheltering?

C. Evacuating?
D. Potassium Iodide or KI?
E. Reception Centers also called Congregate Care Center?
F. What to do with pets?
G. What to do if your children are at school?
H. Where to get further information?

11. Thinking about all of the types of information you have just been asked about, was the information provided (a) easy to understand or difficult to understand, (b) clear about what to do or not clear about what to do, and (c) helpful or not helpful. [Answer Each]

12. Do you feel that the information you have received is a) too much; b) too little; c) about right.

13. Which of the following would be the best way to get you information to read and save about what to do in case of an incident at a nuclear power plant? [Check All]
A. Calendar
B. Pamphlet
C. Phone book
D. Emergency Management Internet Website

14. In case a real incident should happen at the power plant and sirens are sounded, which of the following would be good ways to give you information about the incident and what you should do? [Check All]
A. Radio
B. Television
C. Internet

15. Have you ever heard an emergency siren test related to the nuclear power plant in your area? (Y/N)

16. If you heard an emergency siren in your area, would your initial thought be that the siren was for the nuclear power plant? (Y/N)

17. Any serious incident at a nuclear power plant is unlikely and emergency plans are in place in the event that an accident was to occur. In such an event, you would be given instructions through the emergency alert system. Instructions may say to monitor the news for further information or could include instructions to evacuate or shelter in place, which means to stay where you are. If evacuation was the recommended action, on a scale from zero to seven, where zero is not at all familiar and seven is completely familiar, how familiar are you with the evacuation plans?

18. On a scale from zero to seven, where zero is not at all confident and seven is extremely confident, how confident are you that the evacuation plans for your area would work?

19. Do you work away from home? (Y/N)

[If yes, then Q20, else 21]

20. If you were at work during the middle of the day, how long do you think it would take you to leave from work, travel home and then gather your children, prepare your home, pack, get into a car and be ready to leave? a) less than one hour; b) 2 to 4 hours; c) more than 4 hours.

21. If you were at home during the middle of the day and the emergency alert system told you to evacuate, about how long would it take you to gather your children, prepare your home, pack, get into a car and be ready to leave? a) less than one hour; b) 2 to 4 hours; c) more than 4 hours.

22. On a scale from zero to seven, where zero is not at all confident and seven is extremely confident, how confident are you that you would be safe in this emergency if you follow evacuation instructions in the event of an incident at a nuclear power plant in your area?

23. On a scale from zero to seven, where zero is not at all likely and seven is the extremely likely, how likely do you think it is that you would follow evacuation instructions in the event of an incident at a nuclear power plant in your area?

24. Now I would like you to consider that people may be asked to tune in to a local radio or television station in the event of an incident at a nuclear power plant. If there is an incident at the nuclear power station and you are informed that you are currently 'not' in danger, how long do you think you would be willing to monitor the situation and wait for further instructions before taking action on your own? a) less than 2 hours; b) 2 to 4 hours; c) longer than 4 hours

25. If you heard a siren and then heard an emergency alert message on the radio or television that said there is no immediate danger and the message told you to stay inside where you are right now and monitor the emergency alert station for further notice, on a scale from zero to seven, where zero is not at all likely and seven is the extremely likely, how likely do you think it is that you would follow these instructions?

26. On a scale from zero to seven, where zero is not at all confident and seven is extremely confident, how confident are you that you would be safe during this emergency if you follow directions to "shelter in place" that is stay where you are, in the event of an incident at a nuclear power plant in your area?

27. On a scale from zero to seven, where zero is not at all likely and seven is the extremely likely, how likely do you think it is that you would follow shelter in place instructions in the event of an incident at the nuclear power plant in your area?

28. On a scale from zero to seven, where zero is not at all likely and seven is the extremely likely, how likely do you think it is that you would follow shelter in place instructions if it would only be for three to four hours?

29. On a scale from zero to seven, where zero is not at all likely and seven is the extremely likely, how likely do you think it is that you would evacuate rather than follow the instructions to shelter in place?

30. Now I would like you to consider that in some instances it may be necessary to evacuate certain areas before other areas due to the nature of the risk presented. This is called a staged evacuation where one area may be required to shelter in place while an area more immediately affected is evacuated first. On a scale from zero to seven, where zero means not at all likely and seven means extremely likely, how likely is it that you would follow instructions and shelter in place until it is your turn to evacuate?

31. On a scale from zero to seven, where zero is not at all likely and seven is the extremely likely, how likely would you be to evacuate if you were told that other areas were evacuating, but people in your location should not evacuate because they are not in danger?

32. Using a scale from zero to seven, where zero is not at all likely and seven is extremely likely, how likely is it that you would stop to assist or provide a ride to an evacuee that you observed waiting at a bus stop for public transportation?

33. Reception centers are facilities that are established to provide a location for evacuees to go in the event of an incident. These facilities are sometimes called Congregate Care Centers or public shelters. On a scale from zero to seven, where zero is not at all likely and seven is the extremely likely, how likely do you think it is that you would go to your designated reception center if asked to evacuate in the event of an incident at a nuclear power plant?
[If Q33>0, then 34, else Q35]

34. Do you have pets? (Y/N)
[If yes then Q35, else Q36]

35. If you were informed that pets are not allowed at the reception center, would you still go to your designated reception center? (Y/N)

36. Have you taken any of the following actions to prepare for evacuation in the event of an incident at a nuclear power plant in your area? [Read and check all]

A. Have taken no actions.
B. Read the emergency planning information.
C. Filed the emergency planning information in a known area for future reference.
D. Packed supplies for an evacuation.
E. Other.

37. Considering the issues that we have been talking about, who do you most trust to make decisions about your safety in the event of an incident at a nuclear power plant in your area? a) local decision makers; b) State decision makers; c) Federal decision makers.

38. Now I would like to know if you have any children under the age of 18 living in your household.
[If yes then Q39, else Q42]

39. Do they attend a school in your area, are they home-schooled, or are they not yet in school?
[If Q39 is "school" then Q40, else Q42]

40. Using a scale from zero to seven, where zero is not at all likely and seven is extremely likely, how likely is it that you would try to pick up your children from school in the event of an incident at a nuclear power plant in your area?
[If Q40 < 1 then Q42, else Q41]

41. Using the same scale from zero to seven, where zero is not at all likely and seven is extremely likely, how likely is it that you would try to pick your children up from school if you were told by local officials that your children were already being evacuated?

42. Now I would like to ask you to consider the four categories used to describe incidents at nuclear power plants and to tell me which one of the following you believe refers to the **most serious** type of incident. Is it: an **unusual event**, a **site area emergency**, an **alert**, a **general emergency**. [These items will be randomized to reduce response-set ordering bias.]

43. Finally, I would like to ask you a few background questions. First, have you ever been asked to evacuate due to an emergency such as a natural disaster or industrial incident in the area in which you live? (Y/N)
[If no then Q47, else Q44]

44. How many times?
A. (1)
B. (2)
C. More than 2

45. Did you evacuate? [Yes, No, Sometimes]

46. Have you ever evacuated from the area due to concern about a potential hazard such as natural disaster or industrial incident even though you were told not to do so? (Y/N)

47. Have you ever been asked to shelter in place due to an emergency in the area in which you live? (Y/N)

[If no then Q50, else Q48]

48. How many times?
    A. (1)
    B. (2)
    C. More than 2

49. Did you shelter in place? [Yes, No, Sometimes]

50. Do you have access to a radio or television at home? (Y/N)

51. Do you have access to a radio or television at work? (Y/N)

52. Have you ever heard the sirens in your area go off unexpectedly? (Y/N)

53. Would you or a family member require assistance from outside your home to help you evacuate (such as use of an ambulance or other special medical care for transportation)? (Y/N)
    [If no then END, else Q54]

54. Have you registered with your county or parish to inform them of your need for assistance? (Y/N)
    [If no then Q55; else, END]

55. Briefly, why have you not registered for assistance? [READ – CHECK ALL]
    A. I believe I can evacuate my family without assistance if I had to.
    B. I do not know how to register.
    C. I have not taken the time to register.
    D. I do not think that an evacuation due to the nuclear power plant is ever likely to occur.
    E. I did not know that I could register.
    F. I did not know assistance was available.
    G. I do not want to provide personal information about my need to others.

END: Thank you, for taking the time to complete this interview. I would like to remind you that this survey is being conducted to help the Nuclear Regulatory Commission better understand the public perceptions of emergency response actions. There are no new issues or concerns with nuclear power; the Nuclear Regulatory Commission continually strives to ensure the best emergency preparedness plans are in place in the unlikely event they are needed. This information provided in this survey helps with our decisions. Good-bye.

APPENDIX D

Telephone Survey Data

Table 1-1
Gender

Gender

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	370	155	195	297	72	230	136	270	98	196	173	97	177	78	15
	45.1	46.4	45.2	44.7	51.4	44.8	46.9	44.1	51.0	47.1	43.0	48.7	43.8	44.8	37.5
Female	451	179	236	368	68	283	154	342	94	220	229	102	227	96	25
	54.9	53.6	54.8	55.3	48.6	55.2	53.1	55.9	49.0	52.9	57.0	51.3	56.2	55.2	62.5

Table 2-1
(Q3) Nuclear plant nearby

Now I would like to ask you some questions about where you live. To the best of your knowledge, is there a nuclear power your home?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 3-1
(Q4) Distance from plant

Approximately how many miles do you live from the nuclear power plant?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0 to 2	48	19	26	35	13	30	16	33	13	30	18	14	17	15	1
miles	5.8	5.7	6.0	5.3	9.3	5.8	5.5	5.4	6.8	7.2	4.5	7.0	4.2	8.6	2.5
2 to 5	155	55	88	123	27	84	66	110	42	73	81	42	69	31	10
miles	18.9	16.5	20.4	18.5	19.3	16.4 f	22.8 e	18.0	21.9	17.5	20.1	21.1	17.1	17.8	25.0
5 to 10	583	246	302	481	92	376	198	445	128	295	286	133	299	123	28
miles	71.0	73.7	70.1	72.3	65.7	73.3	68.3	72.7	66.7	70.9	71.1	66.8	74.0	70.7	70.0
Not sure	35	14	15	26	8	23	10	24	9	18	17	10	19	5	1
	4.3	4.2	3.5	3.9	5.7	4.5	3.4	3.9	4.7	4.3	4.2	5.0	4.7	2.9	2.5

Table 4-1
(Q5) Rating of informed for emergency

On a scale from zero to seven, where zero is not at all informed and seven is extremely informed, how informed would you say you are about what to do if the sirens for the nuclear power plant in your area were to sound?

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	489	253	217	407	74	336	145	374	106	228	260	120	243	103	21
	59.6	75.7 b	50.3 a	61.2	52.9	65.5 f	50.0 e	61.1	55.2	54.8 j	64.7 i	60.3	60.1	59.2	52.5
7 Extremely informed	203	116	81	165	36	145	57	152	48	92	111	52	90	51	10
	24.7	34.7 b	18.8 a	24.8	25.7	28.3 f	19.7 e	24.8	25.0	22.1	27.6	26.1	22.3	29.3	25.0
6	119	59	57	103	13	82	36	95	23	56	63	29	61	24	5
	14.5	17.7	13.2	15.5 d	9.3 c	16.0	12.4	15.5	12.0	13.5	15.7	14.6	15.1	13.8	12.5
5	167	78	79	139	25	109	52	127	35	80	86	39	92	28	6
	20.3	23.4	18.3	20.9	17.9	21.2	17.9	20.8	18.2	19.2	21.4	19.6	22.8	16.1	15.0
4	74	27	40	57	14	46	25	49	21	46	27	19	32	19	4
	9.0	8.1	9.3	8.6	10.0	9.0	8.6	8.0	10.9	11.1 j	6.7 i	9.5	7.9	10.9	10.0
3	61	14	45	51	10	35	26	48	13	32	29	14	31	13	3
	7.4	4.2 b	10.4 a	7.7	7.1	6.8	9.0	7.8	6.8	7.7	7.2	7.0	7.7	7.5	7.5
2	42	10	26	29	13	18	24	23	18	23	19	9	20	12	1
	5.1	3.0 b	6.0 a	4.4	9.3	3.5 f	8.3 e	3.8 h	9.4 g	5.5	4.7	4.5	5.0	6.9	2.5
1	26	7	19	19	7	15	11	18	8	13	13	4	9	8	4
	3.2	2.1	4.4	2.9	5.0	2.9	3.8	2.9	4.2	3.1	3.2	2.0	2.2	4.6	10.0
0 Not at all informed	105	15	76	84	20	49	51	81	22	69	36	26	58	15	6
	12.8	4.5 b	17.6 a	12.6	14.3	9.6 f	17.6 e	13.2	11.5	16.6 j	9.0 i	13.1	14.4 m	8.6 l	15.0
DK	24	8	8	18	2	14	8	19	4	5	18	7	11	4	1
	2.9	2.4	1.9	2.7	1.4	2.7	2.8	3.1	2.1	1.2 j	4.5 i	3.5	2.7	2.3	2.5
Mean (EX DK)	4.47	5.32 b	3.95 a	4.52	4.16	4.79 f	3.94 e	4.51	4.34	4.18 j	4.77 i	4.55	4.39	4.64	4.13

Table 5-1
(Q6) Recall information about incident - ever

To the best of your recollection, have you ever received any information such as a booklet or pamphlet, calendar, utility or el radio message, phone book, or something else, that informs you about what to do if there was an incident at a nuclear plant

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	78.3	87.7 b	74.0 a	78.2	77.9	81.7 f	73.4 e	79.2	75.0	76.0	80.8	76.4 m	76.5 m	85.1 kl	75.0
No	163	36	106	134	28	85	71	115	45	97	65	44	87	23	9
	19.9	10.8 b	24.6 a	20.2	20.0	16.6 f	24.5 e	18.8	23.4	23.3 j	16.2 i	22.1 m	21.5 m	13.2 kl	22.5
DK	15	5	6	11	3	9	6	12	3	3	12	3	8	3	1
	1.8	1.5	1.4	1.7	2.1	1.8	2.1	2.0	1.6	0.7 j	3.0 i	1.5	2.0	1.7	2.5

Table 6-1
(Q7) Type of information

What type of information was it?
Base: Recall information

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Booklet or pamphlet	431	195	220	348	72	287	135	326	96	205	224	102	179	121	26
	67.0	66.6	69.0	66.9	66.1	68.5	63.4	67.2	66.7	64.9	68.9	67.1 mn	57.9 mn	81.8 kl	86.7 kl
Calendar	235	107	113	189	41	151	78	174	53	106	129	48	146	39	1
	36.5	36.5	35.4	36.3	37.6	36.0	36.6	35.9	36.8	33.5	39.7	31.6 ln	47.2 kmn	26.4 ln	3.3 klm
Phone book	89	40	44	69	18	65	23	69	18	48	41	27	39	15	8
	13.8	13.7	13.8	13.3	16.5	15.5	10.8	14.2	12.5	15.2	12.6	17.8	12.6	10.1	26.7
Something else	85	32	48	61	22	57	28	64	18	42	43	20	44	15	6
	13.2	10.9	15.0	11.7 d	20.2 c	13.6	13.1	13.2	12.5	13.3	13.2	13.2	14.2	10.1	20.0
TV or radio message	75	47	27	66	8	56	18	59	15	33	42	17	43	11	3
	11.7	16.0 b	8.5 a	12.7	7.3	13.4	8.5	12.2	10.4	10.4	12.9	11.2	13.9 m	7.4 l	10.0
Utility or electric bill	58	33	22	47	11	48	10	47	10	33	25	11	30	13	3
	9.0	11.3	6.9	9.0	10.1	11.5 f	4.7 e	9.7	6.9	10.4	7.7	7.2	9.7	8.8	10.0

Table 7-1
(Q8) Recall information about incident - past year

Do you recall receiving any information on this topic in the last year?
Base: Recall information

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	408	200	192	335	66	284	120	322	80	215	193	97	189	98	20
	63.5	68.3 b	60.2 a	64.4	60.6	67.8 f	56.3 e	66.4 h	55.6 g	68.0 j	59.4 i	63.8	61.2	66.2	66.7
No	200	79	111	159	35	117	80	139	55	92	107	50	100	42	8
	31.1	27.0 b	34.8 a	30.6	32.1	27.9 f	37.6 e	28.7 h	38.2 g	29.1	32.9	32.9	32.4	28.4	26.7
DK	35	14	16	26	8	18	13	24	9	9	25	5	20	8	2
	5.4	4.8	5.0	5.0	7.3	4.3	6.1	4.9	6.3	2.8 j	7.7 i	3.3	6.5	5.4	6.7

Table 8-1
(Q9) Keep information accessable

Do you keep this information in a place where you can readily access it?
Base: Recall information

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	387	201	170	322	56	268	110	300	77	183	204	83	186	97	17
	60.2	68.6 b	53.3 a	61.9 d	51.4 c	64.0 f	51.6 e	61.9	53.5	57.9	62.8	54.6	60.2	65.5	56.7
No	241	85	143	185	51	144	95	174	63	126	113	63	117	48	13
	37.5	29.0 b	44.8 a	35.6 d	46.8 c	34.4 f	44.6 e	35.9	43.8	39.9	34.8	41.4	37.9	32.4	43.3
DK	15	7	6	13	2	7	8	11	4	7	8	6	6	3	-
	2.3	2.4	1.9	2.5	1.8	1.7	3.8	2.3	2.8	2.2	2.5	3.9 n	1.9 n	2.0	kl

Table 9-1
(Q10) What information contained

To the best of your recollection, did the information that you received about what to do if there was an incident at a nuclear pl provide information about any of the following:
Base: Recall information

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	643 100.0	293 100.0	319 100.0	520 100.0	109 100.0	419 100.0	213 100.0	485 100.0	144 100.0	316 100.0	325 100.0	152 100.0	309 100.0	148 100.0	30 100.0
Evacuating?	539 83.8	263 89.8 b	260 81.5 a	439 84.4	90 82.6	362 86.4 f	169 79.3 e	408 84.1	121 84.0	261 82.6	277 85.2	131 86.2	250 80.9 m	130 87.8 l	26 86.7
What to do if you hear the sirens?	513 79.8	255 87.0 b	242 75.9 a	417 80.2	88 80.7	351 83.8 f	156 73.2 e	392 80.8	114 79.2	254 80.4	259 79.7	126 82.9	238 77.0	119 80.4	26 86.7
Sheltering?	426 66.3	225 76.8 b	191 59.9 a	352 67.7	67 61.5	298 71.1 f	119 55.9 e	332 68.5 h	85 59.0 g	216 68.4	210 64.6	104 68.4	195 63.1	105 70.9	21 70.0
Where to get further information?	409 63.6	208 71.0 b	191 59.9 a	349 67.1 d	54 49.5 c	289 69.0 f	114 53.5 e	320 66.0 h	80 55.6 g	208 65.8	200 61.5	94 61.8	190 61.5	101 68.2	23 76.7
What to do if your children are at school?	331 51.5	173 59.0 b	151 47.3 a	276 53.1	49 45.0	227 54.2 f	97 45.5 e	257 53.0	67 46.5	184 58.2 j	146 44.9 i	82 53.9	145 46.9 n	83 56.1	20 66.7 l
Potassium Iodide or KI?	297 46.2	137 46.8	155 48.6	239 46.0	53 48.6	193 46.1	101 47.4	222 45.8	72 50.0	147 46.5	150 46.2	94 61.8 lm	145 46.9 km	45 30.4 kl	13 43.3
Reception Centers also called Congregate Care Center?	263 40.9	153 52.2 b	105 32.9 a	224 43.1 d	35 32.1 c	187 44.6 f	71 33.3 e	206 42.5	52 36.1	122 38.6	140 43.1	64 42.1	115 37.2	69 46.6	15 50.0
What to do with pets?	232 36.1	129 44.0 b	100 31.3 a	199 38.3 d	29 26.6 c	166 39.6 f	63 29.6 e	184 37.9	44 30.6	126 39.9	106 32.6	49 32.2	108 35.0	59 39.9	14 46.7
None of the Above	48 7.5	11 3.8 b	27 8.5 a	35 6.7	10 9.2	24 5.7	22 10.3	33 6.8	11 7.6	24 7.6	24 7.4	10 6.6	29 9.4	8 5.4	1 3.3

Table 10-1
(Q11A) Information understandable

Thinking about all of the types of information you have just been asked about, was the information provided easy to understand or difficult to understand?
Base: Recall information

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Easy to understand	588	277	289	480	97	396	183	449	127	286	300	144	276	136	28
	91.4	94.5	90.6	92.3	89.0	94.5 f	85.9 e	92.6	88.2	90.5	92.3	94.7 l	89.3 k	91.9	93.3
Difficult to understand	17	1	14	10	5	4	12	8	8	7	10	3	9	5	-
	2.6	0.3 b	4.4 a	1.9	4.6	1.0 f	5.6 e	1.6	5.6	2.2	3.1	2.0	2.9 n	3.4 n	lm
DK/REF	38	15	16	30	7	19	18	28	9	23	15	5	24	7	2
	5.9	5.1	5.0	5.8	6.4	4.5	8.5	5.8	6.3	7.3	4.6	3.3 l	7.8 k	4.7	6.7

Table 11-1
(Q11B) Information clear about what to do

Thinking about all of the types of information you have just been asked about, was the information provided clear about what to do or not clear about what to do?
Base: Recall information

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Clear about what to do	563	275	270	461	93	380	174	430	121	269	293	136	268	129	27
	87.6	93.9 b	84.6 a	88.7	85.3	90.7 f	81.7 e	88.7	84.0	85.1	90.2	89.5	86.7	87.2	90.0
Not clear about what to do	41	8	31	33	8	19	22	27	13	25	15	7	22	9	2
	6.4	2.7 b	9.7 a	6.3	7.3	4.5 f	10.3 e	5.6	9.0	7.9	4.6	4.6	7.1	6.1	6.7
DK/REF	39	10	18	26	8	20	17	28	10	22	17	9	19	10	1
	6.1	3.4	5.6	5.0	7.3	4.8	8.0	5.8	6.9	7.0	5.2	5.9	6.1	6.8	3.3

Table 12-1
(Q11C) Information helpful

Thinking about all of the types of information you have just been asked about, was the information provided helpful or not helpful?
Base: Recall information

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Helpful	555	278	256	468	76	383	162	434	109	267	286	130	264	129	29
	86.3	94.9 b	80.3 a	90.0 d	69.7 c	91.4 f	76.1 e	89.5 h	75.7 g	84.5	88.0	85.5 n	85.4 n	87.2 n	96.7 klm
Not helpful	51	7	40	26	23	15	35	24	25	33	18	13	28	9	-
	7.9	2.4 b	12.5 a	5.0 d	21.1 c	3.6 f	16.4 e	4.9 h	17.4 g	10.4 j	5.5 i	8.6 n	9.1 n	6.1 n	klm
DK/REF	37	8	23	26	10	21	16	27	10	16	21	9	17	10	1
	5.8	2.7 b	7.2 a	5.0	9.2	5.0	7.5	5.6	6.9	5.1	6.5	5.9	5.5	6.8	3.3

Table 13-1
(Q12) Amount of information

Do you feel that the information you have received is too much, too little or about right?
Base: Recall information

	Total	Q18 Confidence In Evacuation Plan 5/7 (a)	Q18 Confidence In Evacuation Plan 0/4 (b)	Q23 Likely to Follow Evacuation Instructions 5/7 (c)	Q23 Likely to Follow Evacuation Instructions 0/4 (d)	Q26 Safe with Shelter in Place 5/7 (e)	Q26 Safe with Shelter in Place 0/4 (f)	Q27 Likely to Follow Shelter Instructions 5/7 (g)	Q27 Likely to Follow Shelter Instructions 0/4 (h)	Age: Under 55 (i)	Age: 55 or older (j)	NRC Region: 1 (k)	NRC Region: 2 (l)	NRC Region: 3 (m)	NRC Region: 4 (n)
Total	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Too much	13	4	8	11	2	9	4	9	4	10	3	4	5	2	-
	2.0	1.4	2.5	2.1	1.8	2.1	1.9	1.9	2.8	3.2 j	0.9 i	2.6 n	1.6 n	1.4	kl
Too little	121	23	90	89	31	49	68	75	44	67	53	30	58	28	5
	18.8	7.8 b	28.2 a	17.1 d	28.4 c	11.7 f	31.9 e	15.5 h	30.6 g	21.2	16.3	19.7	18.8	18.9	16.7
About right	479	254	207	400	68	346	128	380	89	225	253	112	227	114	24
	74.5	86.7 b	64.9 a	76.9 d	62.4 c	82.6 f	60.1 e	78.4 h	61.8 g	71.2	77.8	73.7	73.5	77.0	80.0
DK/REF	30	12	14	20	8	15	13	21	7	14	16	6	19	4	1
	4.7	4.1	4.4	3.8	7.3	3.6	6.1	4.3	4.9	4.4	4.9	3.9	6.1	2.7	3.3

Table 14-1
(Q13) Best way to get information

Which of the following would be the best way to get you information to read and save about what to do in case of an incident
Base: Recall information

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	643	293	319	520	109	419	213	485	144	316	325	152	309	148	30
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Pamphlet	367	166	186	303	57	240	121	279	81	178	189	81	176	93	15
	57.1	56.7	58.3	58.3	52.3	57.3	56.8	57.5	56.3	56.3	58.2	53.3	57.0	62.8	50.0
Calendar	238	115	113	199	35	162	73	181	53	121	116	58	118	54	5
	37.0	39.2	35.4	38.3	32.1	38.7	34.3	37.3	36.8	38.3	35.7	38.2 n	38.2 n	36.5 n	16.7 klm
Emergency Management Internet Website	166	63	100	128	35	96	69	112	51	99	66	35	85	36	9
	25.8	21.5 b	31.3 a	24.6	32.1	22.9 f	32.4 e	23.1 h	35.4 g	31.3 j	20.3 i	23.0	27.5	24.3	30.0
Phone book	123	58	61	100	20	72	48	85	34	58	65	37	57	24	5
	19.1	19.8	19.1	19.2	18.3	17.2	22.5	17.5	23.6	18.4	20.0	24.3	18.4	16.2	16.7
DK/REF	27	7	14	16	9	13	11	17	8	8	19	13	7	6	1
	4.2	2.4	4.4	3.1	8.3	3.1	5.2	3.5	5.6	2.5 j	5.8 i	8.6 l	2.3 k	4.1	3.3

Table 15-1
(Q14) Good ways to receive emergency info

In case a real incident should happen at the power plant and sirens are sounded, which of the following would be good ways about the incident and what you should do?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Televisio n	581	228	304	478	90	365	204	442	127	288	292	134	298	124	22
	70.8	68.3	70.5	71.9	64.3	71.2	70.3	72.2	66.1	69.2	72.6	67.3	73.8 n	71.3	55.0 l
Radio	493	213	261	403	82	304	180	364	119	258	232	121	237	112	20
	60.0	63.8	60.6	60.6	58.6	59.3	62.1	59.5	62.0	62.0	57.7	60.8	58.7	64.4	50.0
Internet	196	65	119	158	36	104	90	142	51	125	70	51	100	37	7
	23.9	19.5 b	27.6 a	23.8	25.7	20.3 f	31.0 e	23.2	26.6	30.0 j	17.4 i	25.6	24.8	21.3	17.5
DK/REF	15	2	12	8	7	6	7	6	7	6	9	7	6	-	2
	1.8	0.6 b	2.8 a	1.2 d	5.0 c	1.2	2.4	1.0	3.6	1.4	2.2	3.5 m	1.5 m	kl	5.0

Table 16-1
(Q15) Heard emergency siren

Have you ever heard an emergency siren test related to the nuclear power plant in your area?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	552	251	266	443	96	363	177	413	125	263	288	134	274	117	26
	67.2	75.1 b	61.7 a	66.6	68.6	70.8 f	61.0 e	67.5	65.1	63.2 j	71.6 i	67.3	67.8	67.2	65.0
No	239	72	149	195	41	133	101	175	61	139	99	61	118	45	12
	29.1	21.6 b	34.6 a	29.3	29.3	25.9 f	34.8 e	28.6	31.8	33.4 j	24.6 i	30.7	29.2	25.9	30.0
DK/REF	30	11	16	27	3	17	12	24	6	14	15	4	12	12	2
	3.7	3.3	3.7	4.1	2.1	3.3	4.1	3.9	3.1	3.4	3.7	2.0 m	3.0	6.9 k	5.0

Table 17-1
(Q16) Think siren is for plant

$
If you heard an emergency siren in your area, would your initial thought be that the siren was for the nuclear power plant?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	490	217	239	394	85	325	154	378	98	245	244	133	255	80	20
	59.7	65.0 b	55.5 a	59.2	60.7	63.4 f	53.1 e	61.8 h	51.0 g	58.9	60.7	66.8 m	63.1 m	46.0 kl	50.0
No	284	99	169	233	47	159	121	202	81	154	128	57	128	80	17
	34.6	29.6 b	39.2 a	35.0	33.6	31.0 f	41.7 e	33.0 h	42.2 g	37.0	31.8	28.6 m	31.7 m	46.0 kl	42.5
DK/REF	47	18	23	38	8	29	15	32	13	17	30	9	21	14	3
	5.7	5.4	5.3	5.7	5.7	5.7	5.2	5.2	6.8	4.1 j	7.5 i	4.5	5.2	8.0	7.5

Table 18-1
(Q17) Familiarity with evacuation plan

Any serious incident at a nuclear power plant is unlikely and emergency plans are in place in the event that an accident was event, you would be given instructions through the emergency alert system. Instructions may say to monitor the news for fur include instructions to evacuate or shelter in place, which means to stay where you are. If evacuation was the recommende zero to seven, where zero is not at all familiar and seven is completely familiar, how familiar are you with the evacuation plar

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	443	251	180	375	60	307	132	342	91	207	235	100	221	97	22
	54.0	75.1 b	41.8 a	56.4 d	42.9 c	59.8 f	45.5 e	55.9 h	47.4 g	49.8 j	58.5 i	50.3	54.7	55.7	55.0
7 Completely familiar	201	112	81	172	29	143	56	150	46	97	104	44	107	38	12
	24.5	33.5 b	18.8 a	25.9	20.7	27.9 f	19.3 e	24.5	24.0	23.3	25.9	22.1	26.5	21.8	30.0
6	95	64	30	86	6	68	26	77	17	40	54	23	45	22	4
	11.6	19.2 b	7.0 a	12.9 d	4.3 c	13.3	9.0	12.6	8.9	9.6	13.4	11.6	11.1	12.6	10.0
5	147	75	69	117	25	96	50	115	28	70	77	33	69	37	6
	17.9	22.5 b	16.0 a	17.6	17.9	18.7	17.2	18.8	14.6	16.8	19.2	16.6	17.1	21.3	15.0
4	73	21	48	52	20	42	28	51	20	35	37	20	31	17	5
	8.9	6.3 b	11.1 a	7.8 d	14.3 c	8.2	9.7	8.3	10.4	8.4	9.2	10.1	7.7	9.8	12.5
3	48	17	30	41	7	32	16	40	8	23	24	10	26	11	1
	5.8	5.1	7.0	6.2	5.0	6.2	5.5	6.5	4.2	5.5	6.0	5.0	6.4	6.3	2.5
2	41	10	26	31	9	22	19	26	15	25	16	13	17	9	1
	5.0	3.0 b	6.0 a	4.7	6.4	4.3	6.6	4.2	7.8	6.0	4.0	6.5	4.2	5.2	2.5
1	21	4	14	16	4	9	12	13	8	15	6	7	7	5	2
	2.6	1.2	3.2	2.4	2.9	1.8	4.1	2.1	4.2	3.6	1.5	3.5	1.7	2.9	5.0
0 Not at all familiar	179	25	127	141	35	93	80	131	46	109	70	46	90	35	8
	21.8	7.5 b	29.5 a	21.2	25.0	18.1 f	27.6 e	21.4	24.0	26.2 j	17.4 i	23.1	22.3	20.1	20.0
DK	16	6	6	9	5	8	3	9	4	2	14	3	12	-	1
	1.9	1.8	1.4	1.4	3.6	1.6	1.0	1.5	2.1	0.5 j	3.5 i	1.5	3.0 m	l	2.5
Mean (EX DK)	4.04	5.19 b	3.39 a	4.14 d	3.61 c	4.37 f	3.51 e	4.11	3.76	3.73 j	4.37 i	3.85	4.10	4.06	4.23

Table 19-1
(Q18) Confidence in evacuation plan

On a scale from zero to seven, where zero is not at all confident and seven is extremely confident, how confident are you that your area would work?

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	334	334	-	312	18	280	51	297	33	152	181	60	169	87	15
	40.7	100.0 b	a	46.9 d	12.9 c	54.6 f	17.6 e	48.5 h	17.2 g	36.5 j	45.0 i	30.2 lm	41.8 k	50.0 k	37.5
7 Extremely confident	108	108	-	104	2	101	6	103	4	51	57	17	58	26	7
	13.2	32.3 b	a	15.6 d	1.4 c	19.7 f	2.1 e	16.8 h	2.1 g	12.3	14.2	8.5 l	14.4 k	14.9	17.5
6	76	76	-	70	6	65	10	68	8	33	43	16	31	25	4
	9.3	22.8 b	a	10.5 d	4.3 c	12.7 f	3.4 e	11.1 h	4.2 g	7.9	10.7	8.0	7.7 m	14.4 l	10.0
5	150	150	-	138	10	114	35	126	21	68	81	27	80	36	4
	18.3	44.9 b	a	20.8 d	7.1 c	22.2 f	12.1 e	20.6 h	10.9 g	16.3	20.1	13.6 l	19.8 k	20.7	10.0
4	112	-	112	94	17	68	42	79	30	59	52	25	61	21	5
	13.6	b	26.0 a	14.1	12.1	13.3	14.5	12.9	15.6	14.2	12.9	12.6	15.1	12.1	12.5
3	95	-	95	77	16	50	45	60	33	52	43	24	43	24	4
	11.6	b	22.0 a	11.6	11.4	9.7 f	15.5 e	9.8 h	17.2 g	12.5	10.7	12.1	10.6	13.8	10.0
2	55	-	55	35	19	25	29	37	17	32	23	22	20	9	3
	6.7	b	12.8 a	5.3 d	13.6 c	4.9 f	10.0 e	6.0	8.9	7.7	5.7	11.1 lm	5.0 k	5.2 k	7.5
1	45	-	45	27	16	13	31	23	22	18	27	13	20	7	5
	5.5	b	10.4 a	4.1 d	11.4 c	2.5 f	10.7 e	3.8 h	11.5 g	4.3	6.7	6.5	5.0	4.0	12.5
0 Not at all confident	124	-	124	77	47	45	76	75	46	73	51	42	54	21	7
	15.1	b	28.8 a	11.6 d	33.6 c	8.8 f	26.2 e	12.3 h	24.0 g	17.5	12.7	21.1 lm	13.4 k	12.1 k	17.5
DK	56	-	-	43	7	32	16	41	11	30	25	13	37	5	1
	6.8			6.5	5.0	6.2	5.5	6.7	5.7	7.2	6.2	6.5	9.2 mn	2.9 l	2.5 l
Mean (EX DK)	3.73	5.87 b	2.06 a	4.09 d	2.03 c	4.47 f	2.44 e	4.12 h	2.52 g	3.55 j	3.90 i	3.11 lm	3.88 k	4.10 k	3.49

Table 20-1
(Q19) Work away from home

Do you work away from home?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	435	158	256	348	84	254	173	312	118	310	123	122	202	91	19
	53.0	47.3	59.4	52.3	60.0	49.5	59.7	51.0	61.5	74.5	30.6	61.3	50.0	52.3	47.5
		b	a			f	e	h	g	j	i	l	k		
No	383	175	173	314	56	258	115	298	73	106	276	75	201	83	21
	46.7	52.4	40.1	47.2	40.0	50.3	39.7	48.7	38.0	25.5	68.7	37.7	49.8	47.7	52.5
		b	a			f	e	h	g	j	i	l	k		
DK/REF	3	1	2	3	-	1	2	2	1	-	3	2	1	-	-
	0.4	0.3	0.5	0.5		0.2	0.7	0.3	0.5		0.7	1.0	0.2		

Table 21-1
(Q20) Estimated time to leave from work

If you were at work during the middle of the day, how long do you think it would take you to leave from work, travel home and then children, prepare your home, pack, get into a car and be ready to leave?
Base: work away from home

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	435	158	256	348	84	254	173	312	118	310	123	122	202	91	19
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
less than one hour	169	76	87	144	24	106	61	126	39	119	49	41	87	36	5
	38.9	48.1 b	34.0 a	41.4 d	28.6 c	41.7	35.3	40.4	33.1	38.4	39.8	33.6	43.1	39.6	26.3
1 to 2 hours	99	35	55	82	15	60	35	69	29	73	26	28	46	20	4
	22.8	22.2	21.5	23.6	17.9	23.6	20.2	22.1	24.6	23.5	21.1	23.0	22.8	22.0	21.1
2 to 4 hours	109	31	73	83	26	55	52	76	33	83	25	33	45	27	4
	25.1	19.6 b	28.5 a	23.9	31.0	21.7	30.1	24.4	28.0	26.8	20.3	27.0	22.3	29.7	21.1
More than 4 hours	35	10	24	23	12	19	16	26	9	23	12	15	12	6	2
	8.0	6.3	9.4	6.6	14.3	7.5	9.2	8.3	7.6	7.4	9.8	12.3	5.9	6.6	10.5
DK/REF	23	6	17	16	7	14	9	15	8	12	11	5	12	2	4
	5.3	3.8	6.6	4.6	8.3	5.5	5.2	4.8	6.8	3.9	8.9	4.1	5.9	2.2 n	21.1 m

Table 22-1
(Q21) Estimated time to evacuate from home

If you were at home during the middle of the day and the emergency alert system told you to evacuate, about how long would i your children, prepare your home, pack, get into a car and be ready to leave?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
less than one hour	618	261	311	513	96	387	214	461	145	322	293	150	308	124	36
	75.3	78.1	72.2	77.1 d	68.6 c	75.4	73.8	75.3	75.5	77.4	72.9	75.4 n	76.2 n	71.3 n	90.0 klm
1 to 2 hours	97	37	55	83	13	65	31	73	22	39	58	27	42	24	3
	11.8	11.1	12.8	12.5	9.3	12.7	10.7	11.9	11.5	9.4 j	14.4 i	13.6	10.4	13.8	7.5
2 to 4 hours	86	30	54	60	23	47	39	63	22	54	32	17	42	23	1
	10.5	9.0	12.5	9.0 d	16.4 c	9.2	13.4	10.3	11.5	13.0 j	8.0 i	8.5	10.4 n	13.2 n	2.5 lm
More than 4 hours	6	2	4	3	3	2	4	4	2	1	5	3	1	2	-
	0.7	0.6	0.9	0.5	2.1	0.4	1.4	0.7	1.0	0.2	1.2	1.5	0.2	1.1	
DK/REF	14	4	7	6	5	12	2	11	1	-	14	2	11	1	-
	1.7	1.2	1.6	0.9	3.6	2.3 f	0.7 e	1.8	0.5	j	3.5 i	1.0	2.7 mn	0.6 l	l

Table 23-1
(Q22) Safe if follow evacuation plan

On a scale from zero to seven, where zero is not at all confident and seven is extremely confident, how confident are you that this emergency if you follow evacuation instructions in the event of an incident at a nuclear power plant in your area?

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	410	266	127	378	25	350	58	363	43	191	217	82	203	102	20
	49.9	79.6 b	29.5 a	56.8 d	17.9 c	68.2 f	20.0 e	59.3 h	22.4 g	45.9 j	54.0 i	41.2 lm	50.2 k	58.6 k	50.0
7 Extremely confident	135	112	16	126	8	124	9	126	8	65	69	28	68	33	6
	16.4	33.5 b	3.7 a	18.9 d	5.7 c	24.2 f	3.1 e	20.6 h	4.2 g	15.6	17.2	14.1	16.8	19.0	15.0
6	94	63	27	89	3	81	13	83	11	44	50	17	50	24	3
	11.4	18.9 b	6.3 a	13.4 d	2.1 c	15.8 f	4.5 e	13.6 h	5.7 g	10.6	12.4	8.5	12.4	13.8	7.5
5	181	91	84	163	14	145	36	154	24	82	98	37	85	45	11
	22.0	27.2 b	19.5 a	24.5 d	10.0 c	28.3 f	12.4 e	25.2 h	12.5 g	19.7	24.4	18.6	21.0	25.9	27.5
4	89	24	62	72	16	50	37	60	26	54	34	22	48	17	2
	10.8	7.2 b	14.4 a	10.8	11.4	9.7	12.8	9.8	13.5	13.0 j	8.5 i	11.1	11.9	9.8	5.0
3	79	15	59	60	18	38	41	51	27	40	39	25	37	11	6
	9.6	4.5 b	13.7 a	9.0	12.9	7.4 f	14.1 e	8.3 h	14.1 g	9.6	9.7	12.6 m	9.2	6.3 k	15.0
2	51	11	37	32	19	14	36	28	21	28	23	12	29	8	1
	6.2	3.3 b	8.6 a	4.8 d	13.6 c	2.7 f	12.4 e	4.6 h	10.9 g	6.7	5.7	6.0	7.2	4.6	2.5
1	40	3	37	24	16	9	30	20	20	17	23	15	15	7	3
	4.9	0.9 b	8.6 a	3.6 d	11.4 c	1.8 f	10.3 e	3.3 h	10.4 g	4.1	5.7	7.5	3.7	4.0	7.5
0 Not at all confident	108	6	95	64	41	24	81	57	49	64	44	33	46	23	6
	13.2	1.8 b	22.0 a	9.6 d	29.3 c	4.7 f	27.9 e	9.3 h	25.5 g	15.4	10.9	16.6	11.4	13.2	15.0
DK	44	9	14	35	5	28	7	33	6	22	22	10	26	6	2
	5.4	2.7	3.2	5.3	3.6	5.5 f	2.4 e	5.4	3.1	5.3	5.5	5.0	6.4	3.4	5.0
Mean (EX DK)	4.05	5.49 b	2.95 a	4.42 d	2.34 c	5.01 f	2.45 e	4.52 h	2.63 g	3.90	4.20	3.62 lm	4.17 k	4.31 k	3.84

Table 24-1
(Q23) Likelihood to follow evacuation plan

On a scale from zero to seven, where zero is not at all likely and seven is extremely likely, how likely do you think it is that you evacuation instructions in the event of an incident at a nuclear power plant in your area?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	665	312	310	665	-	454	199	538	118	341	322	145	335	149	33
	81.0	93.4	71.9	100.0		88.5	68.6	87.9	61.5	82.0	80.1	72.9	82.9	85.6	82.5
		b	a	d	c	f	e	h	g			lm	k	k	
7 Extremely likely	417	216	170	417	-	302	107	352	59	218	197	86	230	80	21
	50.8	64.7	39.4	62.7		58.9	36.9	57.5	30.7	52.4	49.0	43.2	56.9	46.0	52.5
		b	a	d	c	f	e	h	g			l	km	l	
6	133	58	67	133	-	91	40	108	23	66	67	37	55	36	5
	16.2	17.4	15.5	20.0		17.7	13.8	17.6	12.0	15.9	16.7	18.6	13.6	20.7	12.5
				d	c			h	g				m	l	
5	115	38	73	115	-	61	52	78	36	57	58	22	50	33	7
	14.0	11.4	16.9	17.3		11.9	17.9	12.7	18.8	13.7	14.4	11.1	12.4	19.0	17.5
		b	a	d	c	f	e					m		k	
4	49	14	33	-	49	24	25	32	17	29	19	14	27	8	-
	6.0	4.2	7.7		35.0	4.7	8.6	5.2	8.9	7.0	4.7	7.0	6.7	4.6	
		b	a	d	c	f	e					n	n	n	klm
3	26	-	25	-	26	7	18	14	11	12	14	12	10	1	3
	3.2		5.8		18.6	1.4	6.2	2.3	5.7	2.9	3.5	6.0	2.5	0.6	7.5
		b	a	d	c	f	e					m	m	kl	
2	19	2	16	-	19	6	12	5	14	8	11	5	9	4	-
	2.3	0.6	3.7		13.6	1.2	4.1	0.8	7.3	1.9	2.7	2.5	2.2	2.3	
		b	a	d	c	f	e	h	g			n	n	n	klm
1	11	1	9	-	11	1	10	1	10	5	6	4	2	3	2
	1.3	0.3	2.1		7.9	0.2	3.4	0.2	5.2	1.2	1.5	2.0	0.5	1.7	5.0
		b	a	d	c	f	e	h	g						
0 Not at all likely	35	1	32	-	35	12	21	11	21	18	17	15	14	5	1
	4.3	0.3	7.4		25.0	2.3	7.2	1.8	10.9	4.3	4.2	7.5	3.5	2.9	2.5
		b	a	d	c	f	e	h	g			m		k	
DK	16	4	6	-	-	9	5	11	1	3	13	4	7	4	1
	1.9	1.2	1.4			1.8	1.7	1.8	0.5	0.7	3.2	2.0	1.7	2.3	2.5
										j	i				
Mean (EX DK)	5.73	6.40	5.19	6.45	2.31	6.14	5.04	6.13	4.55	5.76	5.70	5.33	5.91	5.81	5.72
		b	a	d	c	f	e	h	g			lm	k	k	

Table 25-1
(Q24) Time willing to monitor incident

Now I would like you to consider that people may be asked to tune in to a local radio or television station in the event of an incid power plant. If there is an incident at the nuclear power station and you are informed that you are currently 'not' in danger, how l you would be willing to monitor the situation and wait for further instructions before taking action on your own?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
less than one hour	261	98	145	202	57	120	135	164	93	154	107	67	116	59	17
	31.8	29.3	33.6	30.4 d	40.7 c	23.4 f	46.6 e	26.8 h	48.4 g	37.0 j	26.6 i	33.7	28.7	33.9	42.5
1 to 2 hours	116	48	65	94	19	75	38	87	26	54	62	27	63	21	4
	14.1	14.4	15.1	14.1	13.6	14.6	13.1	14.2	13.5	13.0	15.4	13.6	15.6	12.1	10.0
2 to 4 hours	181	69	103	148	30	121	58	140	39	91	89	37	92	43	8
	22.0	20.7	23.9	22.3	21.4	23.6	20.0	22.9	20.3	21.9	22.1	18.6	22.8	24.7	20.0
More than 4 hours	231	106	104	193	32	178	52	197	31	102	127	61	115	45	10
	28.1	31.7 b	24.1 a	29.0	22.9	34.7 f	17.9 e	32.2 h	16.1 g	24.5 j	31.6 i	30.7	28.5	25.9	25.0
DK/REF	32	13	14	28	2	19	7	24	3	15	17	7	18	6	1
	3.9	3.9	3.2	4.2 d	1.4 c	3.7	2.4	3.9 h	1.6 g	3.6	4.2	3.5	4.5	3.4	2.5

Table 26-1
(Q25) Likelihood to follow emergency instructions

If you heard a siren and then heard an emergency alert message on the radio or television that said there is no immediate dan you to stay inside where you are right now and monitor the emergency alert station for further notice, on a scale from zero to se at all likely and seven is extremely likely, how likely do you think it is that you would follow these instructions?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	625	288	295	545	69	476	138	545	71	291	331	136	322	135	29
	76.1	86.2 b	68.4 a	82.0 d	49.3 c	92.8 f	47.6 e	89.1 h	37.0 g	70.0 j	82.3 i	68.3 lm	79.7 k	77.6 k	72.5
7 Extremely likely	397	197	167	348	40	316	73	360	30	170	225	82	207	89	19
	48.4	59.0 b	38.7 a	52.3 d	28.6 c	61.6 f	25.2 e	58.8 h	15.6 g	40.9 j	56.0 i	41.2 l	51.2 k	51.1	47.5
6	112	50	57	101	9	88	22	99	12	66	46	27	56	24	5
	13.6	15.0	13.2	15.2 d	6.4 c	17.2 f	7.6 e	16.2 h	6.3 g	15.9	11.4	13.6	13.9	13.8	12.5
5	116	41	71	96	20	72	43	86	29	55	60	27	59	22	5
	14.1	12.3	16.5	14.4	14.3	14.0	14.8	14.1	15.1	13.2	14.9	13.6	14.6	12.6	12.5
4	62	18	42	35	24	24	38	28	32	33	29	17	36	8	1
	7.6	5.4 b	9.7 a	5.3 d	17.1 c	4.7 f	13.1 e	4.6 h	16.7 g	7.9	7.2	8.5	8.9 mn	4.6 l	2.5 l
3	28	8	20	17	11	3	24	12	14	22	6	7	9	10	2
	3.4	2.4	4.6	2.6 d	7.9 c	0.6 f	8.3 e	2.0 h	7.3 g	5.3 j	1.5 i	3.5	2.2	5.7	5.0
2	23	3	17	14	9	1	22	5	18	14	9	11	3	6	2
	2.8	0.9 b	3.9 a	2.1 d	6.4 c	0.2 f	7.6 e	0.8 h	9.4 g	3.4	2.2	5.5 l	0.7 k	3.4	5.0
1	15	3	11	11	4	-	15	3	12	10	5	6	5	3	1
	1.8	0.9	2.6	1.7	2.9	f	5.2 e	0.5 h	6.3 g	2.4	1.2	3.0	1.2	1.7	2.5
0 Not at all likely	56	11	40	34	22	5	50	14	42	39	17	20	24	9	3
	6.8	3.3 b	9.3 a	5.1 d	15.7 c	1.0 f	17.2 e	2.3 h	21.9 g	9.4 j	4.2 i	10.1	5.9	5.2	7.5
DK	12	3	6	9	1	4	3	5	3	7	5	2	5	3	2
	1.5	0.9	1.4	1.4	0.7	0.8	1.0	0.8	1.6	1.7	1.2	1.0	1.2	1.7	5.0
Mean (EX DK)	5.47	6.01 b	5.03 a	5.72 d	4.21 c	6.30 f	3.98 e	6.10 h	3.41 g	5.13 j	5.81 i	5.02 lm	5.67 k	5.58 k	5.34

Table 27-1
(Q26) Confidence of safety if shelter in place

On a scale from zero to seven, where zero is not at all confident and seven is extremely confident, how confident are you that this emergency if you follow directions to "shelter in place" that is stay where you are, in the event of an incident at a nuclear p area?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	513	280	201	454	50	513	-	476	32	232	279	108	272	108	22
	62.5	83.8 b	46.6 a	68.3 d	35.7 c	100.0 f	e	77.8 h	16.7 g	55.8 j	69.4 i	54.3 l	67.3 k	62.1	55.0
7 Extremely confident	210	135	60	186	19	210	-	201	6	85	125	47	99	53	11
	25.6	40.4 b	13.9 a	28.0 d	13.6 c	40.9 f	e	32.8 h	3.1 g	20.4 j	31.1 i	23.6	24.5	30.5	27.5
6	116	67	44	105	9	116	-	108	6	53	63	24	63	23	6
	14.1	20.1 b	10.2 a	15.8 d	6.4 c	22.6 f	e	17.6 h	3.1 g	12.7	15.7	12.1	15.6	13.2	15.0
5	187	78	97	163	22	187	-	167	20	94	91	37	110	32	5
	22.8	23.4	22.5	24.5 d	15.7 c	36.5 f	e	27.3 h	10.4 g	22.6	22.6	18.6 l	27.2 kmn	18.4 l	12.5 l
4	93	20	66	73	19	-	93	59	33	54	38	23	47	19	4
	11.3	6.0 b	15.3 a	11.0	13.6	f	32.1 e	9.6 h	17.2 g	13.0	9.5	11.6	11.6	10.9	10.0
3	64	13	49	45	17	-	64	31	30	44	20	20	24	19	1
	7.8	3.9 b	11.4 a	6.8	12.1	f	22.1 e	5.1 h	15.6 g	10.6 j	5.0 i	10.1 n	5.9	10.9 n	2.5 km
2	44	5	36	25	18	-	44	9	35	22	22	15	17	9	2
	5.4	1.5 b	8.4 a	3.8 d	12.9 c	f	15.2 e	1.5 h	18.2 g	5.3	5.5	7.5	4.2	5.2	5.0
1	26	2	22	16	10	-	26	10	16	15	11	9	7	5	5
	3.2	0.6 b	5.1 a	2.4 d	7.1 c	f	9.0 e	1.6 h	8.3 g	3.6	2.7	4.5	1.7 n	2.9	12.5 l
0 Not at all confident	63	11	50	40	22	-	63	18	45	42	21	20	27	13	3
	7.7	3.3 b	11.6 a	6.0 d	15.7 c	f	21.7 e	2.9 h	23.4 g	10.1 j	5.2 i	10.1	6.7	7.5	7.5
DK	18	3	7	12	4	-	-	9	1	7	11	4	10	1	3
	2.2	0.9	1.6	1.8	2.9			1.5	0.5	1.7	2.7	2.0	2.5 m	0.6 l	7.5
Mean (EX DK)	4.71	5.64 b	3.95 a	4.96 d	3.46 c	6.04 f	2.34 e	5.38 h	2.54 g	4.38 j	5.05 i	4.35 l	4.88 k	4.77	4.49

Table 28-1
(Q27) Likelihood to follow shelter in place instruction

On a scale from zero to seven, where zero is not at all likely and seven is extremely likely, how likely do you think it is that yc shelter in place instructions in the event of an incident at the nuclear power plant in your area?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/ 7	612	297	274	538	63	476	127	612	-	298	311	138	310	131	30
	74.5	88.9 b	63.6 a	80.9 d	45.0 c	92.8 f	43.8 e	100.0 h	g	71.6	77.4	69.3	76.7	75.3	75.0
7 Extremel y likely	355	190	133	323	24	286	63	355	-	168	185	74	192	72	17
	43.2	56.9 b	30.9 a	48.6 d	17.1 c	55.8 f	21.7 e	58.0 h	g	40.4	46.0	37.2 l	47.5 k	41.4	42.5
6	129	58	66	115	12	107	21	129	-	62	67	27	59	37	6
	15.7	17.4	15.3	17.3 d	8.6 c	20.9 f	7.2 e	21.1 h	g	14.9	16.7	13.6	14.6	21.3	15.0
5	128	49	75	100	27	83	43	128	-	68	59	37	59	22	7
	15.6	14.7	17.4	15.0	19.3	16.2	14.8	20.9 h	g	16.3	14.7	18.6	14.6	12.6	17.5
4	62	11	47	43	19	15	47	-	62	38	24	15	33	13	1
	7.6	3.3 b	10.9 a	6.5 d	13.6 c	2.9 f	16.2 e	h	32.3 g	9.1	6.0	7.5	8.2 n	7.5	2.5 l
3	31	4	25	18	13	5	26	-	31	21	10	13	8	9	1
	3.8	1.2 b	5.8 a	2.7 d	9.3 c	1.0 f	9.0 e	h	16.1 g	5.0	2.5	6.5 l	2.0 k	5.2	2.5
2	27	3	24	16	11	2	25	-	27	11	16	11	10	5	-
	3.3	0.9 b	5.6 a	2.4 d	7.9 c	0.4 f	8.6 e	h	14.1 g	2.6	4.0	5.5 n	2.5 n	2.9 n	klm
1	16	2	13	10	6	2	14	-	16	8	8	4	6	2	4
	1.9	0.6 b	3.0 a	1.5	4.3	0.4 f	4.8 e	h	8.3 g	1.9	2.0	2.0	1.5	1.1	10.0
0 Not at all likely	56	13	39	31	24	8	47	-	56	36	20	15	28	11	2
	6.8	3.9 b	9.0 a	4.7 d	17.1 c	1.6 f	16.2 e	h	29.2 g	8.7 j	5.0 i	7.5	6.9	6.3	5.0
DK	17	4	9	9	4	5	4	-	-	4	13	3	9	3	2
	2.1	1.2	2.1	1.4	2.9	1.0	1.4			1.0 j	3.2 i	1.5	2.2	1.7	5.0
Mean (EX DK)	5.36	6.02 b	4.80 a	5.67 d	3.81 c	6.18 f	3.89 e	6.37 h	2.14 g	5.18 j	5.55 i	5.05 l	5.51 k	5.42	5.29

Table 29-1
(Q28) Likelihood to follow shelter in place instruction for 3 to 4 hours

How likely do you think it is that you would follow shelter in place instructions if it would only be for three to four hours?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	638	287	309	554	74	460	163	550	78	318	317	143	322	136	34
	77.7	85.9 b	71.7 a	83.3 d	52.9 c	89.7 f	56.2 e	89.9 h	40.6 g	76.4	78.9	71.9 lm	79.7 k	78.2	85.0 k
7 Extremely likely	386	192	164	344	32	301	75	360	19	179	206	83	200	82	21
	47.0	57.5 b	38.1 a	51.7 d	22.9 c	58.7 f	25.9 e	58.8 h	9.9 g	43.0 j	51.2 i	41.7	49.5	47.1	52.5
6	123	47	71	110	13	89	33	101	21	63	59	29	61	26	7
	15.0	14.1	16.5	16.5 d	9.3 c	17.3 f	11.4 e	16.5 h	10.9 g	15.1	14.7	14.6	15.1	14.9	17.5
5	129	48	74	100	29	70	55	89	38	76	52	31	61	28	6
	15.7	14.4	17.2	15.0	20.7	13.6	19.0	14.5	19.8	18.3 j	12.9 i	15.6	15.1	16.1	15.0
4	43	13	28	26	17	15	27	19	21	22	21	14	18	9	2
	5.2	3.9	6.5	3.9 d	12.1 c	2.9 f	9.3 e	3.1 h	10.9 g	5.3	5.2	7.0	4.5	5.2	5.0
3	32	9	21	25	7	14	18	15	17	18	14	6	15	10	1
	3.9	2.7	4.9	3.8	5.0	2.7 f	6.2 e	2.5 h	8.9 g	4.3	3.5	3.0	3.7	5.7	2.5
2	21	2	17	10	11	3	18	5	16	11	10	10	6	4	-
	2.6	0.6 b	3.9 a	1.5 d	7.9 c	0.6 f	6.2 e	0.8 h	8.3 g	2.6	2.5	5.0 lm	1.5 kn	2.3 n	klm
1	12	6	5	9	2	3	9	4	7	5	7	5	2	4	1
	1.5	1.8	1.2	1.4	1.4	0.6 f	3.1 e	0.7 h	3.6 g	1.2	1.7	2.5	0.5	2.3	2.5
0 Not at all likely	58	12	43	30	27	8	49	9	49	39	19	16	32	8	2
	7.1	3.6 b	10.0 a	4.5 d	19.3 c	1.6 f	16.9 e	1.5 h	25.5 g	9.4 j	4.7 i	8.0	7.9	4.6	5.0
DK	17	5	8	11	2	10	6	10	4	3	14	5	9	3	-
	2.1	1.5	1.9	1.7	1.4	1.9	2.1	1.6	2.1	0.7 j	3.5 i	2.5 n	2.2 n	1.7	kl
Mean (EX DK)	5.48	5.94 b	5.10 a	5.77 d	4.06 c	6.17 f	4.24 e	6.16 h	3.31 g	5.28 j	5.69 i	5.20 l	5.57 k	5.54	5.78

Table 30-1
(Q29) Likelihood to evacuate rather than follow shelter in place instruction

How likely do you think it is that you would evacuate rather than follow the instructions to shelter in place?

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	384	168	198	311	69	213	164	255	123	208	175	90	180	89	22
	46.8	50.3	45.9	46.8	49.3	41.5 f	56.6 e	41.7 h	64.1 g	50.0	43.5	45.2	44.6	51.1	55.0
7 Extremely likely	178	79	89	147	30	86	87	110	66	96	82	46	82	41	9
	21.7	23.7	20.6	22.1	21.4	16.8 f	30.0 e	18.0 h	34.4 g	23.1	20.4	23.1	20.3	23.6	22.5
6	70	26	41	55	14	40	29	45	24	36	34	16	32	15	7
	8.5	7.8	9.5	8.3	10.0	7.8	10.0	7.4 h	12.5 g	8.7	8.5	8.0	7.9	8.6	17.5
5	136	63	68	109	25	87	48	100	33	76	59	28	66	33	6
	16.6	18.9	15.8	16.4	17.9	17.0	16.6	16.3	17.2	18.3	14.7	14.1	16.3	19.0	15.0
4	79	23	53	62	17	46	33	56	23	47	32	18	44	11	6
	9.6	6.9 b	12.3 a	9.3	12.1	9.0	11.4	9.2	12.0	11.3	8.0	9.0	10.9	6.3	15.0
3	67	24	42	55	11	40	27	50	14	41	26	18	33	13	3
	8.2	7.2	9.7	8.3	7.9	7.8	9.3	8.2	7.3	9.9	6.5	9.0	8.2	7.5	7.5
2	63	22	38	50	11	46	17	51	11	29	34	15	35	12	-
	7.7	6.6	8.8	7.5	7.9	9.0	5.9	8.3	5.7	7.0	8.5	7.5 n	8.7 n	6.9 n	klm
1	38	11	23	31	6	29	9	33	5	21	17	10	19	6	3
	4.6	3.3	5.3	4.7	4.3	5.7	3.1	5.4	2.6	5.0	4.2	5.0	4.7	3.4	7.5
0 Not at all likely	152	75	61	130	19	114	33	141	10	59	92	37	73	36	6
	18.5	22.5 b	14.2 a	19.5	13.6	22.2 f	11.4 e	23.0 h	5.2 g	14.2 j	22.9 i	18.6	18.1	20.7	15.0
DK	38	11	16	26	7	25	7	26	6	11	26	11	20	7	-
	4.6	3.3	3.7	3.9	5.0	4.9	2.4	4.2	3.1	2.6 j	6.5 i	5.5 n	5.0 n	4.0 n	klm
Mean (EX DK)	3.87	3.85	3.97	3.83	4.12	3.49 f	4.52 e	3.50 h	5.01 g	4.09 j	3.63 i	3.85	3.80	3.92	4.28

Table 31-1
(Q30) Likelihood to evacuate rather than follow staged evacuation

Now I would like you to consider that in some instances it may be necessary to evacuate certain areas before other areas due tc presented. This is called a staged evacuation where one area may be required to shelter in place while an area more immediate first. On a scale from zero to seven, where zero means not at all likely and seven means extremely likely, how likely is it that yo instructions and shelter in place until it is your turn to evacuate?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	579	276	265	511	57	437	133	497	73	277	300	128	294	128	26
	70.5	82.6 b	61.5 a	76.8 d	40.7 c	85.2 f	45.9 e	81.2 h	38.0 g	66.6 j	74.6 i	64.3 l	72.8 k	73.6	65.0
7 Extremely likely	309	156	129	275	30	247	55	278	26	130	178	57	171	66	15
	37.6	46.7 b	29.9 a	41.4 d	21.4 c	48.1 f	19.0 e	45.4 h	13.5 g	31.3 j	44.3 i	28.6 l	42.3 k	37.9	37.5
6	126	63	58	108	14	96	29	108	17	60	66	39	58	24	5
	15.3	18.9 b	13.5 a	16.2 d	10.0 c	18.7 f	10.0 e	17.6 h	8.9 g	14.4	16.4	19.6	14.4	13.8	12.5
5	144	57	78	128	13	94	49	111	30	87	56	32	65	38	6
	17.5	17.1	18.1	19.2 d	9.3 c	18.3	16.9	18.1	15.6	20.9 j	13.9 i	16.1	16.1	21.8	15.0
4	55	20	34	40	14	22	31	28	24	25	29	12	28	7	8
	6.7	6.0	7.9	6.0	10.0	4.3 f	10.7 e	4.6 h	12.5 g	6.0	7.2	6.0 n	6.9 n	4.0 n	20.0 klm
3	28	7	19	18	10	9	18	15	13	15	13	9	14	4	1
	3.4	2.1	4.4	2.7	7.1	1.8 f	6.2 e	2.5 h	6.8 g	3.6	3.2	4.5	3.5	2.3	2.5
2	41	12	27	28	13	15	26	20	21	27	14	11	14	14	1
	5.0	3.6	6.3	4.2 d	9.3 c	2.9 f	9.0 e	3.3 h	10.9 g	6.5 j	3.5 i	5.5	3.5 m	8.0 l	2.5
1	16	4	10	11	5	1	15	5	11	12	4	4	7	4	1
	1.9	1.2	2.3	1.7	3.6	0.2 f	5.2 e	0.8 h	5.7 g	2.9	1.0	2.0	1.7	2.3	2.5
0 Not at all likely	84	10	70	45	38	19	64	35	48	57	27	30	38	13	3
	10.2	3.0 b	16.2 a	6.8 d	27.1 c	3.7 f	22.1 e	5.7 h	25.0 g	13.7 j	6.7 i	15.1 m	9.4	7.5 k	7.5
DK	18	5	6	12	3	10	3	12	2	3	15	5	9	4	-
	2.2	1.5	1.4	1.8	2.1	1.9	1.0	2.0	1.0	0.7 j	3.7 i	2.5 n	2.2 n	2.3 n	klm
Mean (EX DK)	5.03	5.73 b	4.47 a	5.35 d	3.47 c	5.81 f	3.66 e	5.59 h	3.27 g	4.64 j	5.45 i	4.61 lm	5.21 k	5.11 k	5.08

Table 32-1
(Q31) Likelihood to evacuate if told there was no danger

How likely would you be to evacuate if you were told that other areas were evacuating, but people in your location should no evacuate because they are not in danger?

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	494	233	232	424	62	352	136	396	92	245	247	113	243	109	26
	60.2	69.8 b	53.8 a	63.8 d	44.3 c	68.6 f	46.9 e	64.7 h	47.9 g	58.9	61.4	56.8	60.1	62.6	65.0
7 Extremely likely	253	123	110	218	33	179	69	203	46	123	129	63	128	51	11
	30.8	36.8 b	25.5 a	32.8 d	23.6 c	34.9 f	23.8 e	33.2 h	24.0 g	29.6	32.1	31.7	31.7	29.3	27.5
6	109	59	47	93	14	76	33	91	18	55	54	24	51	26	8
	13.3	17.7 b	10.9 a	14.0	10.0	14.8	11.4	14.9 h	9.4 g	13.2	13.4	12.1	12.6	14.9	20.0
5	132	51	75	113	15	97	34	102	28	67	64	26	64	32	7
	16.1	15.3	17.4	17.0 d	10.7 c	18.9 f	11.7 e	16.7	14.6	16.1	15.9	13.1	15.8	18.4	17.5
4	71	23	47	55	16	35	36	49	22	40	30	13	38	16	4
	8.6	6.9	10.9	8.3	11.4	6.8 f	12.4 e	8.0	11.5	9.6	7.5	6.5	9.4	9.2	10.0
3	44	14	27	31	13	18	25	28	16	24	20	16	17	8	3
	5.4	4.2	6.3	4.7	9.3	3.5 f	8.6 e	4.6	8.3	5.8	5.0	8.0	4.2	4.6	7.5
2	41	14	24	29	12	19	21	28	13	25	16	10	18	11	1
	5.0	4.2	5.6	4.4	8.6	3.7 f	7.2 e	4.6	6.8	6.0	4.0	5.0	4.5	6.3	2.5
1	28	9	18	25	3	16	11	18	9	18	10	8	14	4	2
	3.4	2.7	4.2	3.8	2.1	3.1	3.8	2.9	4.7	4.3	2.5	4.0	3.5	2.3	5.0
0 Not at all likely	121	33	75	87	31	62	55	77	39	60	61	35	60	22	4
	14.7	9.9 b	17.4 a	13.1 d	22.1 c	12.1 f	19.0 e	12.6 h	20.3 g	14.4	15.2	17.6	14.9	12.6	10.0
DK	22	8	8	14	3	11	6	16	1	4	18	4	14	4	-
	2.7	2.4	1.9	2.1	2.1	2.1	2.1	2.6 h	0.5 g	1.0 j	4.5 i	2.0 n	3.5 n	2.3 n	klm
Mean (EX DK)	4.52	5.03 b	4.17 a	4.68 d	3.80 c	4.86 f	3.95 e	4.75 h	3.88 g	4.43	4.61	4.32	4.55	4.63	4.73

Table 33-1
(Q32) Likelihood to assist evacuee

How likely is it that you would stop to assist or provide a ride to an evacuee that you observed waiting at a bus stop for public t

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	594	253	298	497	87	383	200	450	134	291	301	138	291	132	30
	72.4	75.7 b	69.1 a	74.7 d	62.1 c	74.7	69.0	73.5	69.8	70.0	74.9	69.3	72.0	75.9	75.0
7 Extremely likely	377	165	181	323	48	243	125	290	80	179	197	90	183	84	20
	45.9	49.4 b	42.0 a	48.6 d	34.3 c	47.4	43.1	47.4	41.7	43.0	49.0	45.2	45.3	48.3	50.0
6	92	38	51	78	14	56	36	64	27	37	55	24	42	24	2
	11.2	11.4	11.8	11.7	10.0	10.9	12.4	10.5	14.1	8.9 j	13.7 i	12.1	10.4	13.8 n	5.0 m
5	125	50	66	96	25	84	39	96	27	75	49	24	66	24	8
	15.2	15.0	15.3	14.4	17.9	16.4	13.4	15.7	14.1	18.0 j	12.2 i	12.1	16.3	13.8	20.0
4	42	18	23	31	10	28	14	31	11	22	19	9	25	5	3
	5.1	5.4	5.3	4.7	7.1	5.5	4.8	5.1	5.7	5.3	4.7	4.5	6.2	2.9	7.5
3	35	11	23	28	6	20	15	26	9	21	14	12	17	5	1
	4.3	3.3	5.3	4.2	4.3	3.9	5.2	4.2	4.7	5.0	3.5	6.0	4.2	2.9	2.5
2	31	9	21	21	10	17	14	23	8	23	8	10	14	5	1
	3.8	2.7	4.9	3.2	7.1	3.3	4.8	3.8	4.2	5.5 j	2.0 i	5.0	3.5	2.9	2.5
1	11	1	9	7	4	4	7	6	5	5	6	5	3	2	1
	1.3	0.3 b	2.1 a	1.1	2.9	0.8	2.4	1.0	2.6	1.2	1.5	2.5	0.7	1.1	2.5
0 Not at all likely	64	19	41	50	14	32	31	42	21	39	25	19	30	13	2
	7.8	5.7 b	9.5 a	7.5	10.0	6.2 f	10.7 e	6.9	10.9	9.4	6.2	9.5	7.4	7.5	5.0
DK	44	23	16	31	9	29	9	34	4	15	29	6	24	12	2
	5.4	6.9	3.7	4.7	6.4	5.7	3.1	5.6 h	2.1 g	3.6 j	7.2 i	3.0	5.9	6.9	5.0
Mean (EX DK)	5.36	5.65 b	5.10 a	5.47 d	4.79 c	5.51 f	5.06 e	5.45 h	5.05 g	5.12 j	5.61 i	5.13	5.38	5.55	5.53

Table 34-1
(Q33) Likelihood to go to reception center

Reception centers are facilities that are established to provide a location for evacuees to go in the event of an incident. The sometimes called Congregate Care Centers or public shelters. On a scale from zero to seven, where zero is not at all likely extremely likely, how likely do you think it is that you would go to your designated reception center if asked to evacuate in th at a nuclear power plant?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	483	238	212	424	45	358	116	410	65	212	268	112	237	107	24
	58.8	71.3 b	49.2 a	63.8 d	32.1 c	69.8 f	40.0 e	67.0 h	33.9 g	51.0 j	66.7 i	56.3	58.7	61.5	60.0
7 Extremely likely	280	139	116	254	21	210	61	245	30	110	169	61	142	63	14
	34.1	41.6 b	26.9 a	38.2 d	15.0 c	40.9 f	21.0 e	40.0 h	15.6 g	26.4 j	42.0 i	30.7	35.1	36.2	35.0
6	89	46	40	82	4	72	17	78	11	41	48	26	40	21	2
	10.8	13.8	9.3	12.3 d	2.9 c	14.0 f	5.9 e	12.7 h	5.7 g	9.9	11.9	13.1	9.9	12.1	5.0
5	114	53	56	88	20	76	38	87	24	61	51	25	55	23	8
	13.9	15.9	13.0	13.2	14.3	14.8	13.1	14.2	12.5	14.7	12.7	12.6	13.6	13.2	20.0
4	61	18	41	41	20	31	28	46	15	40	21	14	31	14	2
	7.4	5.4 b	9.5 a	6.2 d	14.3 c	6.0	9.7	7.5	7.8	9.6 j	5.2 i	7.0	7.7	8.0	5.0
3	50	17	32	43	7	28	21	38	12	34	16	13	30	5	2
	6.1	5.1	7.4	6.5	5.0	5.5	7.2	6.2	6.3	8.2 j	4.0 i	6.5	7.4 m	2.9 l	5.0
2	51	18	29	38	13	27	24	31	20	35	16	10	24	15	1
	6.2	5.4	6.7	5.7	9.3	5.3	8.3	5.1 h	10.4 g	8.4 j	4.0 i	5.0	5.9	8.6	2.5
1	29	8	18	23	6	13	16	16	13	15	14	8	13	7	1
	3.5	2.4	4.2	3.5	4.3	2.5 f	5.5 e	2.6 h	6.8 g	3.6	3.5	4.0	3.2	4.0	2.5
0 Not at all likely	137	32	94	91	45	52	82	66	65	77	60	40	64	24	9
	16.7	9.6 b	21.8 a	13.7 d	32.1 c	10.1 f	28.3 e	10.8 h	33.9 g	18.5	14.9	20.1	15.8	13.8	22.5
DK	10	3	5	5	4	4	3	5	2	3	7	2	5	2	1
	1.2	0.9	1.2	0.8	2.9	0.8	1.0	0.8	1.0	0.7	1.7	1.0	1.2	1.1	2.5
Mean (EX DK)	4.43	5.08 b	3.92 a	4.70 d	2.97 c	5.02 f	3.34 e	4.93 h	2.87 g	4.04 j	4.82 i	4.22	4.47	4.59	4.28

Table 35-1
(Q34) Pets

Do you have pets?
Base

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	684	302	337	574	95	461	208	546	127	339	342	159	340	150	31
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	399	169	203	342	52	262	131	315	81	242	156	95	210	76	17
	58.3	56.0	60.2	59.6	54.7	56.8	63.0	57.7	63.8	71.4 j	45.6 i	59.7	61.8 m	50.7 l	54.8
No	284	132	134	231	43	198	77	230	46	97	185	64	130	73	14
	41.5	43.7	39.8	40.2	45.3	43.0	37.0	42.1	36.2	28.6 j	54.1 i	40.3	38.2 m	48.7 l	45.2
DK	1	1	-	1	-	1	-	1	-	-	1	-	-	1	-
	0.1	0.3		0.2		0.2		0.2			0.3			0.7	

Table 36-1
(Q35) Would go to reception center without pets

If you were informed that pets are not allowed at the reception center, would you still go to your designated reception center?
Base: Have pets - Excludes "Not at All Likely" to go to Congregate Center

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	399	169	203	342	52	262	131	315	81	242	156	95	210	76	17
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	166	75	84	143	20	121	44	134	32	93	72	38	86	32	10
	41.6	44.4	41.4	41.8	38.5	46.2 f	33.6 e	42.5	39.5	38.4	46.2	40.0	41.0	42.1	58.8
No	211	85	109	178	32	124	82	161	47	139	72	51	114	39	6
	52.9	50.3	53.7	52.0	61.5	47.3 f	62.6 e	51.1	58.0	57.4 j	46.2 i	53.7	54.3	51.3	35.3
DK	22	9	10	21	-	17	5	20	2	10	12	6	10	5	1
	5.5	5.3	4.9	6.1 d		6.5	3.8	6.3	2.5	4.1	7.7	6.3	4.8	6.6	5.9

Table 37-1
(Q36) Actions taken to prepare for evacuation

Have you taken any of the following actions to prepare for evacuation in the event of an incident at a nuclear power plant in yo

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821 100.0	334 100.0	431 100.0	665 100.0	140 100.0	513 100.0	290 100.0	612 100.0	192 100.0	416 100.0	402 100.0	199 100.0	404 100.0	174 100.0	40 100.0
Read the emergency planning information	489 59.6	243 72.8 b	233 54.1 a	407 61.2	76 54.3	332 64.7 f	150 51.7 e	379 61.9 h	100 52.1 g	235 56.5	253 62.9	118 59.3	222 55.0 m	120 69.0 l	26 65.0
Filed the emergency planning information in a safe place for future reference	361 44.0	187 56.0 b	163 37.8 a	304 45.7 d	51 36.4 c	256 49.9 f	98 33.8 e	284 46.4 h	70 36.5 g	168 40.4 j	192 47.8 i	80 40.2 m	167 41.3 m	93 53.4 kl	18 45.0
Have taken no actions	244 29.7	63 18.9 b	150 34.8 a	192 28.9	46 32.9	132 25.7 f	103 35.5 e	175 28.6	63 32.8	134 32.2	108 26.9	67 33.7 mn	135 33.4 mn	35 20.1 kl	7 17.5 kl
Packed supplies for an evacuation	162 19.7	76 22.8	80 18.6	130 19.5	31 22.1	106 20.7	56 19.3	122 19.9	38 19.8	84 20.2	78 19.4	38 19.1	78 19.3	34 19.5	11 27.5
Any Others I have not mentioned?	102 12.4	35 10.5	65 15.1	78 11.7	24 17.1	59 11.5	43 14.8	72 11.8	28 14.6	47 11.3	55 13.7	31 15.6 m	51 12.6 m	10 5.7 kln	9 22.5 m
DK/REF	13 1.6	3 0.9	5 1.2	9 1.4	3 2.1	6 1.2	6 2.1	8 1.3	4 2.1	7 1.7	6 1.5	3 1.5	6 1.5 n	4 2.3 n	- lm

Table 38-1
(Q37) Who trusted for safety decisions

Considering the issues that we have been talking about, who do you most trust to make decisions about your safety in the event nuclear power plant in your area?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Local decision makers	517	237	255	436	70	367	146	408	101	239	276	114	255	118	29
	63.0	71.0 b	59.2 a	65.6 d	50.0 c	71.5 f	50.3 e	66.7 h	52.6 g	57.5 j	68.7 i	57.3 m	63.1	67.8 k	72.5
State decision makers	88	32	52	71	17	49	37	67	19	55	33	29	41	14	2
	10.7	9.6	12.1	10.7	12.1	9.6	12.8	10.9	9.9	13.2 j	8.2 i	14.6 mn	10.1	8.0 k	5.0 k
Federal decision makers	95	37	51	78	17	57	36	69	26	60	35	26	40	23	5
	11.6	11.1	11.8	11.7	12.1	11.1	12.4	11.3	13.5	14.4 j	8.7 i	13.1	9.9	13.2	12.5
DK/REF	62	18	28	39	19	24	33	37	21	27	34	15	37	9	1
	7.6	5.4	6.5	5.9 d	13.6 c	4.7 f	11.4 e	6.0 h	10.9 g	6.5	8.5	7.5	9.2 n	5.2	2.5 l
Other	59	10	45	41	17	16	38	31	25	35	24	15	31	10	3
	7.2	3.0 b	10.4 a	6.2 d	12.1 c	3.1 f	13.1 e	5.1 h	13.0 g	8.4	6.0	7.5	7.7	5.7	7.5

Table 39-1
(Q38) Children

Now I would like to know if you have any children under the age of 18 living in your household.

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	271	91	161	215	56	143	122	188	78	254	16	71	119	62	18
	33.0	27.2 b	37.4 a	32.3	40.0	27.9 f	42.1 e	30.7 h	40.6 g	61.1 j	4.0 i	35.7	29.5	35.6	45.0
No	546	241	268	448	82	367	167	422	112	159	385	128	282	111	22
	66.5	72.2 b	62.2 a	67.4	58.6	71.5 f	57.6 e	69.0 h	58.3 g	38.2 j	95.8 i	64.3	69.8	63.8	55.0
DK/REF	4	2	2	2	2	3	1	2	2	3	1	-	3	1	-
	0.5	0.6	0.5	0.3	1.4	0.6	0.3	0.3	1.0	0.7	0.2		0.7	0.6	

Table 40-1
(Q39) Type of schooling

Do they attend a school in your area, are they home-schooled, or are they not yet in school?
Base: Have children .

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	271	91	161	215	56	143	122	188	78	254	16	71	119	62	18
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
School in your area	219	77	126	173	46	117	97	152	63	204	14	60	90	52	16
	80.8	84.6	78.3	80.5	82.1	81.8	79.5	80.9	80.8	80.3	87.5	84.5	75.6	83.9	88.9
Home-schooled	10	3	6	10	-	7	3	9	1	9	1	1	6	2	1
	3.7	3.3	3.7	4.7 d	c	4.9	2.5	4.8	1.3	3.5	6.3	1.4	5.0	3.2	5.6
Not yet in school	37	10	25	29	8	17	19	23	13	36	1	10	20	6	1
	13.7	11.0	15.5	13.5	14.3	11.9	15.6	12.2	16.7	14.2	6.3	14.1	16.8	9.7	5.6
DK/REF	5	1	4	3	2	2	3	4	1	5	-	-	3	2	-
	1.8	1.1	2.5	1.4	3.6	1.4	2.5	2.1	1.3	2.0 j	i		2.5	3.2	

Table 41-1
(Q40) Likelihood to pick up children from school

Using a scale from zero to seven, where zero is not at all likely and seven is extremely likely, how likely is it that you would tr children up from school in the event of an incident at a nuclear power plant in your area?
Base: Children in school

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	219	77	126	173	46	117	97	152	63	204	14	60	90	52	16
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	169	56	100	133	36	85	80	112	54	159	10	48	68	41	11
	77.2	72.7	79.4	76.9	78.3	72.6	82.5	73.7 h	85.7 g	77.9	71.4	80.0	75.6	78.8	68.8
7 Extremely likely	155	53	89	122	33	75	76	103	49	146	9	44	63	36	11
	70.8	68.8	70.6	70.5	71.7	64.1 f	78.4 e	67.8	77.8	71.6	64.3	73.3	70.0	69.2	68.8
6	11	3	8	9	2	9	2	8	3	10	1	3	4	4	-
	5.0	3.9	6.3	5.2	4.3	7.7 f	2.1 e	5.3	4.8	4.9	7.1	5.0	4.4 n	7.7 n	lm
5	3	-	3	2	1	1	2	1	2	3	-	1	1	1	-
	1.4		2.4	1.2	2.2	0.9	2.1	0.7	3.2	1.5		1.7	1.1	1.9	
4	6	4	2	6	-	3	3	5	1	5	1	1	3	2	-
	2.7	5.2	1.6	3.5 d	c	2.6	3.1	3.3	1.6	2.5	7.1	1.7	3.3	3.8	)
3	4	2	1	2	2	2	2	2	2	4	-	-	2	1	1
	1.8	2.6	0.8	1.2	4.3	1.7	2.1	1.3	3.2	2.0 j	i		2.2	1.9	6.3
2	4	2	2	4	-	3	1	4	-	4	-	-	3	1	-
	1.8	2.6	1.6	2.3 d	c	2.6	1.0	2.6 h	g	2.0 j	i		3.3	1.9	
1	8	3	5	6	2	6	1	8	-	7	-	2	5	1	-
	3.7	3.9	4.0	3.5	4.3	5.1	1.0	5.3 h	g	3.4 j	i	3.3	5.6 n	1.9	l
0 Not at all likely	23	8	13	18	5	17	6	17	5	20	3	8	7	5	3
	10.5	10.4	10.3	10.4	10.9	14.5 f	6.2 e	11.2	7.9	9.8	21.4	13.3	7.8	9.6	18.8
DK	5	2	3	4	1	1	4	4	1	5	-	1	2	1	1
	2.3	2.6	2.4	2.3	2.2	0.9	4.1	2.6	1.6	2.5 j	i	1.7	2.2	1.9	6.3
Mean (EX DK)	5.69	5.57	5.74	5.69	5.69	5.29 f	6.18 e	5.51	6.15	5.75	5.21	5.71	5.67	5.78	5.33

Table 42-1
(Q41) Likelihood to pick up children from school if they were being evacuated

Using the same scale from zero to seven, where zero is not at all likely and seven is extremely likely, how likely is it that you wo children up from school if you were told by local officials that your children were already being evacuated?
Base: Children in school

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	196	69	113	155	41	100	91	135	58	184	11	52	83	47	13
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(NET) 5/7	115	41	66	87	28	55	58	76	37	107	8	32	52	24	6
	58.7	59.4	58.4	56.1	68.3	55.0	63.7	56.3	63.8	58.2	72.7	61.5	62.7	51.1	46.2
7 Extremely likely	85	28	49	62	23	35	48	54	29	80	5	24	38	18	4
	43.4	40.6	43.4	40.0	56.1	35.0 f	52.7 e	40.0	50.0	43.5	45.5	46.2	45.8	38.3	30.8
6	14	5	9	11	3	10	4	8	6	12	2	4	8	2	-
	7.1	7.2	8.0	7.1	7.3	10.0	4.4	5.9	10.3	6.5	18.2	7.7 n	9.6 n	4.3	kl
5	16	8	8	14	2	10	6	14	2	15	1	4	6	4	2
	8.2	11.6	7.1	9.0	4.9	10.0	6.6	10.4	3.4	8.2	9.1	7.7	7.2	8.5	15.4
4	7	2	5	5	2	4	3	5	2	7	-	2	3	1	1
	3.6	2.9	4.4	3.2	4.9	4.0	3.3	3.7	3.4	3.8 j	i	3.8	3.6	2.1	7.7
3	10	4	6	10	-	6	4	9	1	8	2	2	4	4	-
	5.1	5.8	5.3	6.5 d	c	6.0	4.4	6.7	1.7	4.3	18.2	3.8	4.8 n	8.5 n	lm
2	14	4	8	11	3	8	6	11	3	14	-	5	2	7	-
	7.1	5.8	7.1	7.1	7.3	8.0	6.6	8.1	5.2	7.6 j	i	9.6 n	2.4 m	14.9 ln	km
1	17	6	10	15	2	12	4	15	1	16	-	3	10	2	2
	8.7	8.7	8.8	9.7	4.9	12.0	4.4	11.1 h	1.7 g	8.7 j	i	5.8	12.0	4.3	15.4
0 Not at all likely	28	11	14	22	6	14	13	16	12	27	1	6	12	8	2
	14.3	15.9	12.4	14.2	14.6	14.0	14.3	11.9	20.7	14.7	9.1	11.5	14.5	17.0	15.4
DK	5	1	4	5	-	1	3	3	2	5	-	2	-	1	2
	2.6	1.4	3.5	3.2 d	c	1.0	3.3	2.2	3.4	2.7 j	i	3.8		2.1	15.4
Mean (EX DK)	4.51	4.41	4.60	4.38	5.00	4.21	4.89	4.39	4.77	4.49	5.27	4.78	4.60	4.13	4.00

Table 43-1
(Q42) Most serious type of incident

Now I would like to ask you to consider the four categories used to describe incidents at nuclear power plants and to tell me whi following you believe refers to the most serious type of incident. Is it...

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
A site area emergency	231	91	126	185	43	144	85	166	60	124	107	48	116	52	13
	28.1	27.2	29.2	27.8	30.7	28.1	29.3	27.1	31.3	29.8	26.6	24.1	28.7	29.9	32.5
A general emergency	207	89	106	171	34	136	68	160	44	93	113	55	98	42	11
	25.2	26.6	24.6	25.7	24.3	26.5	23.4	26.1	22.9	22.4	28.1	27.6	24.3	24.1	27.5
An unusual event	176	63	101	139	31	106	65	131	43	96	79	47	87	33	9
	21.4	18.9	23.4	20.9	22.1	20.7	22.4	21.4	22.4	23.1	19.7	23.6	21.5	19.0	22.5
An alert	136	61	68	112	21	86	46	107	25	77	59	34	61	35	5
	16.6	18.3	15.8	16.8	15.0	16.8	15.9	17.5	13.0	18.5	14.7	17.1	15.1	20.1	12.5
DK	71	30	30	58	11	41	26	48	20	26	44	15	42	12	2
	8.6	9.0	7.0	8.7	7.9	8.0	9.0	7.8	10.4	6.3 i	10.9 i	7.5	10.4	6.9	5.0

Table 44-1
(Q43) Prior evacuation requested

First, have you ever been asked to evacuate due to an emergency such as a natural disaster or industrial incident in the area in w

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	114	49	58	93	18	68	44	76	36	64	50	29	64	10	9
	13.9	14.7	13.5	14.0	12.9	13.3	15.2	12.4 h	18.8 g	15.4	12.4	14.6 m	15.8 m	5.7 kln	22.5 m
No	696	279	368	562	121	438	242	528	153	348	345	169	334	161	30
	84.8	83.5	85.4	84.5	86.4	85.4	83.4	86.3 h	79.7 g	83.7	85.8	84.9 m	82.7 m	92.5 kln	75.0 m
DK/REF	11	6	5	10	1	7	4	8	3	4	7	1	6	3	1
	1.3	1.8	1.2	1.5	0.7	1.4	1.4	1.3	1.6	1.0	1.7	0.5	1.5	1.7	2.5

Table 45-1
(Q44) Number of times

How many times?
Base: Have been evacuated

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	114	49	58	93	18	68	44	76	36	64	50	29	64	10	9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(1) time	56	25	28	46	8	38	17	38	17	32	24	20	23	8	3
	49.1	51.0	48.3	49.5	44.4	55.9	38.6	50.0	47.2	50.0	48.0	69.0 l	35.9 km	80.0 lm	33.3 m
(2) times	32	15	16	27	5	17	15	22	10	18	14	7	22	2	1
	28.1	30.6	27.6	29.0	27.8	25.0	34.1	28.9	27.8	28.1	28.0	24.1	34.4	20.0	11.1
More than 2 times	25	9	13	20	4	13	12	16	9	14	11	2	18	-	5
	21.9	18.4	22.4	21.5	22.2	19.1	27.3	21.1	25.0	21.9	22.0	6.9 lm	28.1 km	lm	55.6 km
DK/REF	1	-	1	-	1	-	-	-	-	-	1	-	1	-	-
	0.9		1.7		5.6						2.0		1.6		

Table 46-1
(Q45) Did you evacuate

Did you evacuate?
Base: Have been evacuated

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	114	49	58	93	18	68	44	76	36	64	50	29	64	10	9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	85	42	37	72	11	52	32	61	23	50	35	22	43	9	9
	74.6	85.7 b	63.8 a	77.4	61.1	76.5	72.7	80.3	63.9	78.1	70.0	75.9 n	67.2 mn	90.0 l	100.0 kl
No	23	7	16	17	5	14	8	12	10	12	11	6	16	1	-
	20.2	14.3	27.6	18.3	27.8	20.6	18.2	15.8	27.8	18.8	22.0	20.7 n	25.0 n	10.0	kl
DK/REF	6	-	5	4	2	2	4	3	3	2	4	1	5	-	-
	5.3	b	8.6 a	4.3	11.1	2.9	9.1	3.9	8.3	3.1	8.0	3.4	7.8 mn	l	l

Table 47-1
(Q46) Evacuated without request

Have you ever evacuated from the area due to concern about a potential hazard such as natural disaster or industrial inciden told not to do so?
Base: Have been evacuated

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	114	49	58	93	18	68	44	76	36	64	50	29	64	10	9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	26	9	16	19	7	13	13	15	11	17	9	6	16	2	-
	22.8	18.4	27.6	20.4	38.9	19.1	29.5	19.7	30.6	26.6	18.0	20.7 n	25.0 n	20.0	kl
No	86	39	42	72	11	54	30	59	25	46	40	22	47	8	9
	75.4	79.6	72.4	77.4	61.1	79.4	68.2	77.6	69.4	71.9	80.0	75.9 n	73.4 n	80.0	100.0 kl
DK/REF	2	1	-	2	-	1	1	2	-	1	1	1	1	-	-
	1.8	2.0		2.2		1.5	2.3	2.6		1.6	2.0	3.4	1.6		

Table 48-1
(Q47) Shelter in place requested

Have you ever been asked to shelter in place due to an emergency in the area in which you live?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	82	24	55	67	13	43	36	49	30	57	25	15	43	18	4
	10.0	7.2	12.8	10.1	9.3	8.4	12.4	8.0	15.6	13.7	6.2	7.5	10.6	10.3	10.0
		b	a					h	g	j	i				
No	726	302	371	586	126	463	248	555	157	353	370	182	353	154	35
	88.4	90.4	86.1	88.1	90.0	90.3	85.5	90.7	81.8	84.9	92.0	91.5	87.4	88.5	87.5
								h	g	j	i				
DK/REF	13	8	5	12	1	7	6	8	5	6	7	2	8	2	1
	1.6	2.4	1.2	1.8	0.7	1.4	2.1	1.3	2.6	1.4	1.7	1.0	2.0	1.1	2.5

Table 49-1
(Q48) Number of times sheltered

How many times?
Base: Have been sheltered

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	82	24	55	67	13	43	36	49	30	57	25	15	43	18	4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(1) time	35	10	24	27	7	17	16	19	14	24	11	7	18	8	-
	42.7	41.7	43.6	40.3	53.8	39.5	44.4	38.8	46.7	42.1	44.0	46.7	41.9	44.4	
												n	n	n	klm
(2) times	24	9	14	19	5	11	12	13	10	21	3	7	12	5	-
	29.3	37.5	25.5	28.4	38.5	25.6	33.3	26.5	33.3	36.8	12.0	46.7	27.9	27.8	
										j	i	n	n	n	klm
More than 2 times	22	5	16	21	1	14	8	16	6	12	10	1	13	4	4
	26.8	20.8	29.1	31.3	7.7	32.6	22.2	32.7	20.0	21.1	40.0	6.7	30.2	22.2	100.0
				d	c							ln	kn	n	klm
DK/REF	1	-	1	-	-	1	-	1	-	-	1	-	-	1	-
	1.2		1.8			2.3		2.0			4.0			5.6	

Table 50-1
(Q49) Did you shelter in place

Did you shelter in place?
Base: Have been sheltered

	Total	Q18 Confidence In Evacuation Plan: 5/7 (a)	Q18: 0/4 (b)	Q23 Likely to Follow Evacuation Instructions: 5/7 (c)	Q23: 0/4 (d)	Q26 Safe with Shelter in Place: 5/7 (e)	Q26: 0/4 (f)	Q27 Likely to Follow Shelter Instructions: 5/7 (g)	Q27: 0/4 (h)	Age: Under 55 (i)	Age: 55 or older (j)	NRC Region: 1 (k)	NRC Region: 2 (l)	NRC Region: 3 (m)	NRC Region: 4 (n)
Total	82	24	55	67	13	43	36	49	30	57	25	15	43	18	4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	65	19	43	54	11	36	26	41	21	44	21	10	34	15	4
	79.3	79.2	78.2	80.6	84.6	83.7	72.2	83.7	70.0	77.2	84.0	66.7 n	79.1 n	83.3	100.0 kl
No	13	4	9	10	2	3	10	5	8	11	2	4	8	1	-
	15.9	16.7	16.4	14.9	15.4	7.0 f	27.8 e	10.2	26.7	19.3	8.0	26.7 n	18.6 n	5.6	kl
DK/REF	3	1	2	3	-	3	-	2	1	2	1	1	1	1	-
	3.7	4.2	3.6	4.5		7.0		4.1	3.3	3.5	4.0	6.7	2.3	5.6	

Table 51-1
(Q50) Access to radio and TV at home

Do you have access to a radio or television at home?

	Total	Q18 Confidence In Evacuation Plan: 5/7 (a)	Q18: 0/4 (b)	Q23 Likely to Follow Evacuation Instructions: 5/7 (c)	Q23: 0/4 (d)	Q26 Safe with Shelter in Place: 5/7 (e)	Q26: 0/4 (f)	Q27 Likely to Follow Shelter Instructions: 5/7 (g)	Q27: 0/4 (h)	Age: Under 55 (i)	Age: 55 or older (j)	NRC Region: 1 (k)	NRC Region: 2 (l)	NRC Region: 3 (m)	NRC Region: 4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	807	327	424	655	137	506	283	604	187	409	395	197	396	172	39
	98.3	97.9	98.4	98.5	97.9	98.6	97.6	98.7	97.4	98.3	98.3	99.0	98.0	98.9	97.5
No	1	-	1	-	1	-	1	-	1	1	-	-	-	-	-
	0.1		0.2		0.7		0.3		0.5	0.2					
DK/REF	13	7	6	10	2	7	6	8	4	6	7	2	8	2	1
	1.6	2.1	1.4	1.5	1.4	1.4	2.1	1.3	2.1	1.4	1.7	1.0	2.0	1.1	2.5

Table 52-1
(Q51) Access to radio and TV at work

Do you have access to a radio or television at work?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	482	189	269	395	83	292	182	353	124	324	157	124	230	102	23
	58.7	56.6	62.4	59.4	59.3	56.9	62.8	57.7	64.6	77.9 j	39.1 i	62.3	56.9	58.6	57.5
No	214	93	101	170	36	140	69	162	45	71	142	45	117	42	9
	26.1	27.8	23.4	25.6	25.7	27.3	23.8	26.5	23.4	17.1 j	35.3 i	22.6	29.0	24.1	22.5
DK/REF	125	52	61	100	21	81	39	97	23	21	103	30	57	30	8
	15.2	15.6	14.2	15.0	15.0	15.8	13.4	15.8	12.0	5.0 j	25.6 i	15.1	14.1	17.2	20.0

Table 53-1
(Q52) Heard unexpected sirens

Have you ever heard the sirens in your area go off unexpectedly?

		Q18 Confidence In Evacuation Plan		Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	291	124	150	231	54	170	114	210	74	140	150	70	144	59	16
	35.4	37.1	34.8	34.7	38.6	33.1	39.3	34.3	38.5	33.7	37.3	35.2	35.6	33.9	40.0
No	498	197	266	410	80	324	165	380	109	263	233	123	240	111	22
	60.7	59.0	61.7	61.7	57.1	63.2	56.9	62.1	56.8	63.2	58.0	61.8	59.4	63.8	55.0
DK/REF	32	13	15	24	6	19	11	22	9	13	19	6	20	4	2
	3.9	3.9	3.5	3.6	4.3	3.7	3.8	3.6	4.7	3.1	4.7	3.0	5.0	2.3	5.0

Table 54-1
(Q53) Require assistance

Would you or a family member require assistance from outside your home to help you evacuate?

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	69	27	35	51	11	41	21	47	15	26	42	17	31	16	3
	8.4	8.1	8.1	7.7	7.9	8.0	7.2	7.7	7.8	6.3 j	10.4 i	8.5	7.7	9.2	7.5
No	735	298	390	600	127	463	261	555	171	384	349	177	365	156	35
	89.5	89.2	90.5	90.2	90.7	90.3	90.0	90.7	89.1	92.3 j	86.8 i	88.9	90.3	89.7	87.5
DK/REF	17	9	6	14	2	9	8	10	6	6	11	5	8	2	2
	2.1	2.7	1.4	2.1	1.4	1.8	2.8	1.6	3.1	1.4	2.7	2.5	2.0	1.1	5.0

Table 55-1
(Q54) Registered for assistance

Have you registered with your county or parish to inform them of your need for assistance?
Base: Require assistance

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	69	27	35	51	11	41	21	47	15	26	42	17	31	16	3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	20	9	10	14	4	14	6	14	4	9	11	8	7	2	1
	29.0	33.3	28.6	27.5	36.4	34.1	28.6	29.8	26.7	34.6	26.2	47.1 m	22.6	12.5 k	33.3
No	48	17	25	36	7	26	15	32	11	16	31	9	23	14	2
	69.6	63.0	71.4	70.6	63.6	63.4	71.4	68.1	73.3	61.5	73.8	52.9 m	74.2	87.5 k	66.7
DK/REF	1	1	-	1	-	1	-	1	-	1	-	-	1	-	-
	1.4	3.7		2.0		2.4		2.1		3.8			3.2		

Table 56-1
(Q55) Why have you not registered for assistance?

Briefly, why have you not registered for assistance?
Base: Have not registered for assistance

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	48 100.0	17 100.0	25 100.0	36 100.0	7 100.0	26 100.0	15 100.0	32 100.0	11 100.0	16 100.0	31 100.0	9 100.0	23 100.0	14 100.0	2 100.0
I did not know that I could register	20 41.7	5 29.4	10 40.0	14 38.9	3 42.9	10 38.5	5 33.3	13 40.6	3 27.3	5 31.3	15 48.4	3 33.3 n	7 30.4 n	8 57.1 n	2 100.0 klm
I did not know assistance was available	15 31.3	8 47.1	5 20.0	12 33.3	1 14.3	8 30.8	6 40.0	12 37.5	2 18.2	4 25.0	10 32.3	3 33.3	4 17.4 mn	8 57.1 lm	- lm
I do not know how to register	14 29.2	6 35.3	6 24.0	9 25.0	2 28.6	8 30.8	4 26.7	10 31.3	2 18.2	5 31.3	9 29.0	- lmn	6 26.1 kn	6 42.9 kn	2 100.0 klm
I have not taken the time to register	14 29.2	5 29.4	7 28.0	9 25.0	2 28.6	9 34.6	3 20.0	9 28.1	4 36.4	1 6.3 j	13 41.9 i	1 11.1 m	4 17.4 mn	9 64.3 kln	- lm
I believe I can evacuate my family without assistance if I had to	12 25.0	7 41.2	4 16.0	9 25.0	1 14.3	8 30.8	2 13.3	8 25.0	2 18.2	3 18.8	9 29.0	2 22.2	4 17.4	5 35.7	1 50.0
I do not think that an evacuation due to the nuclear power plant is ever likely to occur	5 10.4	1 5.9	3 12.0	2 5.6	1 14.3	2 7.7	2 13.3	4 12.5	1 9.1	1 6.3	4 12.9	1 11.1	1 4.3	3 21.4	-
I do not want to provide personal information about my need to others	4 8.3	1 5.9	2 8.0	2 5.6	-	2 7.7	1 6.7	2 6.3	1 9.1	- j	4 12.9 i	-	2 8.7	2 14.3	-

Table 57-1
Age

	Q18 Confidence In Evacuation Plan			Q23 Likely to Follow Evacuation Instructions		Q26 Safe with Shelter in Place		Q27 Likely to Follow Shelter Instructions		Age		NRC Region			
	Total	5/7 (a)	0/4 (b)	5/7 (c)	0/4 (d)	5/7 (e)	0/4 (f)	5/7 (g)	0/4 (h)	Under 55 (i)	55 or older (j)	1 (k)	2 (l)	3 (m)	4 (n)
Total	821	334	431	665	140	513	290	612	192	416	402	199	404	174	40
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
18-24 years	18	11	7	15	3	11	7	13	5	18	-	4	7	2	1
	2.2	3.3	1.6	2.3	2.1	2.1	2.4	2.1	2.6	4.3 j	i	2.0	1.7	1.1	2.5
25-34 years	67	24	39	53	14	44	23	56	11	67	-	18	33	12	4
	8.2	7.2	9.0	8.0	10.0	8.6	7.9	9.2	5.7	16.1 j	i	9.0	8.2	6.9	10.0
35-44 years	156	53	90	126	29	77	74	106	48	156	-	44	65	40	7
	19.0	15.9	20.9	18.9	20.7	15.0 f	25.5 e	17.3 h	25.0 g	37.5 j	i	22.1	16.1	23.0	17.5
45-54 years	175	64	98	147	26	100	73	123	50	175	-	48	84	35	8
	21.3	19.2	22.7	22.1	18.6	19.5	25.2	20.1	26.0	42.1 j	i	24.1	20.8	20.1	20.0
55 to 64 years	181	66	109	145	34	114	65	135	44	-	181	34	102	36	9
	22.0	19.8	25.3	21.8	24.3	22.2	22.4	22.1	22.9	j	45.0 i	17.1 l	25.2 k	20.7	22.5
65 or older	221	115	87	177	33	165	47	176	34	-	221	51	110	49	11
	26.9	34.4 b	20.2 a	26.6	23.6	32.2 f	16.2 e	28.8 h	17.7 g	j	55.0 i	25.6	27.2	28.2	27.5
DK/REF	3	1	1	2	1	2	1	3	-	-	-	-	3	-	-
	0.4	0.3	0.2	0.3	0.7	0.4	0.3	0.5					0.7		
Mean	52.94	54.41 b	51.71 a	52.88	51.98	54.35 f	50.16 e	53.31 h	50.95 g	41.30 j	65.00 i	51.74	53.77	53.20	52.79
Median	53.64	56.98	52.26	53.42	53.13	56.86	49.99	55.43	50.76	42.10	65.90	51.28	56.01	53.49	54.50

APPENDIX E

Final Federal Register Notice

fax 202–693–3015 (this is not a toll-free number).

FOR FURTHER INFORMATION CONTACT: Anthony D. Dais, at telephone number (202) 693–2784 (this is not a toll-free number).

SUPPLEMENTARY INFORMATION: Section 188 of the Consolidated Farm and Rural Development Act of 1972, as established under 29 CFR part 75, authorizes the United States Department of Agriculture to make or guarantee loans or grants to finance industrial and business activities in rural areas. The Secretary of Labor must review the application for financial assistance for the purpose of certifying to the Secretary of Agriculture that the assistance is not calculated, or likely, to result in: (a) A transfer of any employment or business activity from one area to another by the loan applicant's business operation; or, (b) An increase in the production of goods, materials, services, or facilities in an area where there is not sufficient demand to employ the efficient capacity of existing competitive enterprises unless the financial assistance will not have an adverse impact on existing competitive enterprises in the area. The Employment and Training Administration within the Department of Labor is responsible for the review and certification process. Comments should address the two bases for certification and, if possible, provide data to assist in the analysis of these issues.

Signed at Washington, DC November 8, 2007.

Gay M. Gilbert,

Administrator, Office of Workforce Investment, Employment and Training Administration.

[FR Doc. E7–22325 Filed 11–14–07; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

[Docket No. OSHA–2007–0011]

Federal Advisory Council on Occupational Safety and Health (FACOSH)

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Appointment of new members.

SUMMARY: On September 28, 2007, the Secretary of Labor appointed six new members to the Federal Advisory Council on Occupational Safety and Health (FACOSH).

FOR FURTHER INFORMATION CONTACT: Ms. Diane Brayden, Director, OSHA, Office of Federal Agency Programs, U.S. Department of Labor, 200 Constitution Avenue, NW., Room 3622, Washington, DC 20210; telephone (202) 693–2122; fax (202) 693–1685; e-mail *ofap@dol.gov.*

SUPPLEMENTARY INFORMATION: FACOSH is authorized to advise the Secretary of Labor on all matters relating to the occupational safety and health of Federal employees (Occupational Safety and Health Act of 1970 (29 U.S.C. 668), 5 U.S.C. 7902, Executive Order 13446). This includes providing advice on how to reduce and keep to a minimum the number of injuries and illnesses in the Federal workforce and how to encourage the establishment and maintenance of effective occupational safety and health programs in each Federal department and agency.

FACOSH consists of 16 members, divided equally between representatives of Federal agencies and labor organizations representing Federal employees. FACOSH members serve three-year terms.

FACOSH Member Appointments: OSHA published a request for FACOSH nominations in the **Federal Register** (72 FR 7467–7468 (3/2/2007)), and received nominations for seventeen individuals. On September 28, 2007, the Secretary of Labor appointed the following five individuals to serve three-year terms ending in June 2010:

- Mr. Ralph E. Dudley, Tennessee Valley Authority,
- Ms. Kathleen J.H. Wheeler, U.S. Department of the Interior,
- Ms. Colleen M. Kelley, National Treasury Employees Union,
- Mr. William D. "Chico" McGill, International Brotherhood of Electrical Workers, and
- Mr. Chester G. Wheeler, Jr., Seafarers International Union.

In addition, the Secretary of Labor appointed Mr. Paul Hutter, U.S. Department of Veterans Affairs, to fill the remainder of a term that expires in June 2009.

Authority and Signature: Edwin G. Foulke, Jr., Assistant Secretary of Labor for Occupational Safety and Health, directed the preparation of this notice under the authority granted by section 19 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 668), 5 U.S.C. 7902, section 1(c) of Executive Order 13446, the Federal Advisory Committee Act (5 U.S.C. App. 2), and Secretary of Labor's Order No. 5–2007 (72 FR 31160).

Signed at Washington, DC, this 9th day of November, 2007.

Edwin G. Foulke, Jr.,

Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. E7–22310 Filed 11–14–07; 8:45 am]

BILLING CODE 4510–26–P

NUCLEAR REGULATORY COMMISSION

Agency Information Collection Activities: Submission for the Office of Management and Budget (OMB) Review; Comment Request

AGENCY: U.S. Nuclear Regulatory Commission (NRC).

ACTION: Notice of the OMB review of information collection and solicitation of public comment.

SUMMARY: The NRC has recently submitted to OMB for review the following proposal for the collection of information under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35). The NRC hereby informs potential respondents that an agency may not conduct or sponsor, and that a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

1. *Type of submission, new, revision, or extension:* New collection.

2. *The title of the information collection:* NRC Survey of Public Response to Emergencies.

3. *The form number if applicable:* N/A.

4. *How often the collection is required:* This is a one-time collection.

5. *Who will be required or asked to report:* Members of the public that reside within the 10-mile Emergency Planning Zones (EPZs) of nuclear power plants.

6. *An estimate of the number of annual responses:* 920 (each respondent will answer one survey).

7. *The estimated number of annual respondents:* This is a one-time collection of 800 completed surveys.

8. *An estimate of the total number of hours needed annually to complete the requirement or request:* 210 hours ((800 completed surveys × .25 hours per response = 200 hours) + (120 uncompleted surveys × .083 hours per response = 10 hours)).

9. *An indication of whether Section 3507(d), Public Law 104–13 applies:* N/A.

10. *Abstract:* As part of the NRC's effort to review and improve emergency response program areas, the NRC intends to conduct a telephone survey

to assess public reaction to existing protective action strategies, new protective action strategies, and the effectiveness in which these strategies are conveyed to the public. The survey will produce statistical descriptions of likely public reaction to and acceptance of various protective action strategies. The targets for the telephone survey are randomly selected members of the public that reside within the 10-mile EPZs around nuclear power plants. This is a nationwide survey of the public residing within EPZs. The response to the surveys will be used by the NRC in the development of enhancements to its guidance for nuclear power plant protective action recommendations and the means by which this information is disseminated. The survey will also improve the understanding of other areas related to protective action implementation, such as the extent of shadow evacuations and the expected usage of congregate care facilities.

A copy of the final supporting statement may be viewed free of charge at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Room O–1F21, Rockville, MD 20852. OMB clearance requests are available at the NRC worldwide Web site: *http://www.nrc.gov/public-involve/doc-comment/omb/index.html*. The document will be available on the NRC home page site for 60 days after the signature date of this notice.

Comments and questions should be directed to the OMB reviewer listed below by December 17, 2007. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date. Nathan J. Frey, Office of Information and Regulatory Affairs (3150–XXXX), NEOB–10202, Office of Management and Budget, Washington, DC 20503.

Comments can also be e-mailed to *Nathan J. Frey@omb.eop.gov* or submitted by telephone at (202) 395–7345.

The NRC Clearance Officer is Margaret A. Janney, 301–415–7245.

Dated at Rockville, Maryland, this 8th day of November, 2007.

For the Nuclear Regulatory Commission.

Margaret A. Janney,

NRC Clearance Officer, Office of Information Services.

[FR Doc. E7–22334 Filed 11–14–07; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 150–00043 General License Pursuant to 10 CFR 150.20 EA–06–259; EA–07–230]

In the Matter of Universal Testing, LLC, Clearfield, UT; Confirmatory Order (Effective Immediately)

Universal Testing, LLC (Universal Testing) is the holder of a general license pursuant to 10 CFR 150.20 issued by the Nuclear Regulatory Commission (NRC or Commission). This general license was granted to Universal Testing at various times during calendar years 2005, 2006, and 2007.

II

An NRC inspection was conducted at your Clearfield, Utah, facility on April 4, 2006. Following that inspection, an investigation was initiated on May 8, 2006, by the NRC Office of Investigations (OI) in order to determine whether a radiographer employed by Universal Testing willfully violated NRC regulations.

Based on the results of the NRC inspection and OI investigation, the NRC determined that a violation of NRC requirements occurred. The violation involved a failure to secure an industrial radiography exposure device containing licensed material as required by 10 CFR 20.1801 and 10 CFR 20.1802. The NRC also determined that the violation resulted from willful actions on the part of the radiographer involved.

III

In a letter dated February 23, 2007, the NRC issued a Notice of Violation and Proposed Imposition of Civil Penalty—$6,500 for the violation. In the February 23, 2007, letter, the NRC offered Universal Testing the opportunity to request Alternative Dispute Resolution (ADR) with the NRC in an attempt to resolve issues associated with these violations. In response to the February 23, 2007, letter, Universal Testing requested ADR to resolve the matter with the NRC. ADR is a process in which a neutral mediator, with no decision-making authority, assists the NRC and Universal Testing to resolve any differences regarding the matter.

An ADR session was conducted between Universal Testing and the NRC in Arlington, Texas, on July 25, 2007. During that ADR session, an Agreement in Principle was reached. The elements of the agreement consisted of the following:

1. Universal Testing will add one additional qualified person to conduct additional field audits of its radiographers. Universal Testing will conduct at least one unannounced field audit in NRC jurisdiction on each job where that job lasts more than 3 consecutive weeks.

2. For a period of 1-year from the date of this Confirmatory Order, Universal Testing will notify the NRC the same day that it accepts any contract to perform a job in NRC jurisdiction.

3. Within 30 days from the date of this Confirmatory Order, Universal Testing will develop and implement a disciplinary program with a graded approach for infractions. This disciplinary program will consider minor infractions up to willful failures to follow the rules. The disciplinary program will emphasize individual responsibility for radiation safety and radioactive material security, and will encourage reporting safety and security concerns. The disciplinary program will include a requirement that at least one individual who is in possession of a radiography camera be capable of responding to a security alarm.

4. Universal Testing will develop, maintain, and implement a procedure for employees who are in possession of licensed material and who are away from the office, to notify company owners or managers of their location every evening. The intent of the notification is for the company to actively maintain knowledge of where licensed material is located every evening. Universal Testing will develop this procedure within 60 days of the date of this order. This procedure will include a requirement for reporting of safety and security concerns. The procedure will also include actions the company will take to find licensed material when it has not arrived at its expected location.

5. Within 1-year from the date of this Confirmatory Order, Universal Testing will discuss with the Non-Destructive Testing Manager's Association (NDTMA) the possibility of an industry-based program to share information about radiography employees. The concept would be for this industry-based program to assist radiography companies to determine the trustworthiness and reliability of individuals applying for employment.

6. Not later than 1-year from the date of this Confirmatory Order, Universal Testing will discuss with NDTMA the possibility of submitting an article or making a presentation to the membership. The article or presentation will address the conditions of this Confirmatory Order and the value it adds to overall safe and effective operations. Alternatively, Universal

APPENDIX F

Draft Supporting Statement for NRC Survey of Public Response to Emergencies

DRAFT SUPPORTING STATEMENT
FOR
NRC SURVEY OF PUBLIC RESPONSE TO EMERGENCIES

(3150-XXXX)

NEW COLLECTION

Description of the Information Collection

The U.S. Nuclear Regulatory Commission (NRC) is empowered by the Atomic Energy Act of 1954, as amended (the Act), to provide for the licensing and regulation of utilization facilities, i.e., nuclear power plants as used in this application. The regulations in 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," are promulgated by the NRC to provide for the licensing and regulation of production facilities. 10 CFR 50.47 contains 16 emergency planning standards that must be met in the onsite and offsite emergency plans for a nuclear power reactor. These standards include the establishment of notification procedures, and periodic information for the public on how they will be notified and what their initial actions should be in an accident. NRC regulations for nuclear power plants are designed to ensure protection of public health and safety through conservative design, construction and operation. Nuclear power plants are required to implement extensive emergency plans to ameliorate consequences to public health and safety in the unlikely event of an accident. NRC regulations require that nuclear plant operators immediately recommend public protective actions to State/local officials in the event of a serious accident. These protective actions are required to be in accordance with NRC guidance. NRC has conducted a study of its protective action recommendation guidance (the PAR Study NUREG/CR-6953 Vol. 1) that has identified enhancements that could increase the level of public protection during accidents. However, there is no current data available regarding likely public reaction to such protective action direction ordered by State/local officials within nuclear power plant Emergency Planning Zones (EPZs).

In an effort to improve understanding of likely public reaction to protective action direction, the NRC intends to conduct a telephone survey to assess public reaction to existing protective action strategies, new protective action strategies and the effectiveness in which these strategies are conveyed to the public. The survey will be conducted by a telephone survey contractor under contract to Sandia National Laboratories and will produce statistical descriptions of likely public reaction to and acceptance of various protective action strategies. The targets for the telephone survey are randomly selected members of the public that reside within the 10 mile EPZs around nuclear power plants. This is a nationwide survey of the public residing within EPZs. The response to the surveys will be used by the NRC in the development of enhancements to its guidance for nuclear power plant protective action recommendations and the means by which this information is disseminated. The survey will also improve the understanding of other areas related to protective action implementation, such as the extent of shadow evacuations and the expected usage of congregate care facilities.

Sandia is a government-owned/contractor operated facility. Sandia Corporation, a Lockheed Martin company, manages Sandia for the U.S. Department of Energy's National Nuclear Security Administration. The telephone survey contractor regularly conducts telephone interviews with residents from randomly selected households for research purposes. When conducting a survey of residents, the approach is designed to provide samples that are representative of households in the study area to permit reliable statistical inference from the sample to the population. To assure the quality of these samples and the ability to make reliable statistical inference to the population, the contractor implements extensive quality control procedures that begin prior to studies going into the field and continue until the completion of the data collection process. The confidentiality and anonymity of individuals are strictly observed. Although respondents' first names and telephone numbers are recorded, they are erased once all of the data are collected for a particular survey and the data are checked for inconsistencies. Since both the first name and telephone number are erased there is no way of linking a set of answers with an individual.

Because existing information on this topic is not available, NRC is requesting Office of Management and Budget (OMB) approval to conduct the survey to obtain this information. The survey will sample residents who live within the 10 mile EPZ of nuclear power plants. The results of the full survey are expected to be published as an NRC NUREG/CR for use by Federal agencies, States, and other interested parties.

A. JUSTIFICATION

1. Need for and Practical Utility of the Collection of Information

The NRC is considering enhancements to its guidance on public protective action recommendations for nuclear power plant operators for use in an unlikely event of a serious accident. The benefit of such alternative protective actions is directly related to the level of compliance of the public to such actions. In conducting the research on these alternative protective actions, the NRC involved stakeholders and emergency response agencies to assure that the protective actions are practical to implement. An understanding of likely public response is also necessary to determine the practical merits of these enhanced protective actions. The objectives of this NRC survey are to (1) obtain quantitative results of the public's likely reaction to enhanced protective action direction, (2) establish measures of central tendency of the public's potential response to various protective action strategies and, (3) support updating of existing assumptions used in the development of nuclear power plant emergency response requirements.

The information received will be used to support a decision on enhancements of protective actions. Although the primary focus of this survey is the determination of whether enhancements in protective actions would be practical, the questions used to support this decision have additional utility. The NRC will maximize the use of this data to develop an understanding of the public perception of the emergency planning items addressed in the

survey. The data received may be useful in determining whether improvements would be beneficial in the education of the public on nuclear power plant emergency response and preparedness. Results of the survey should provide an indication of whether residents within EPZs are satisfied with the level of information that they receive on emergency response planning and whether they understand the terminology that would be used during an emergency.

2. Agency Use of Information

This is a new collection of information.

The information gained from the telephone survey will inform the decision process on whether to enhance NRC guidance for nuclear power plant operators for protective action recommendations during accidents. The information will be evaluated along with research information compiled through the PAR study (NUREG/CR-6953 Vol. 1). A final report is expected to be published as NUREG/CR-6953 Vol. II which will integrate the telephone survey information with the existing research and establish a basis for a decision on whether to pursue protective action enhancements. The basis for such a decision would be incomplete without input from a representative group of public stakeholders.

3. Reduction of Burden through Information Technology

There are no legal obstacles to reducing the burden associated with this information collection. The NRC encourages respondents to use information technology when it would be beneficial to them. NRC issued a regulation on October 10, 2003 (68 FR 58791), consistent with the Government Paperwork Elimination Act, which allows its licensees, vendors, applicants, and members of the public the option to make submissions electronically via CD-ROM, e-mail, special Web-based interface, or other means. It is estimated that approximately 100% of the potential responses are filed electronically.

The survey will be conducted via a computerized template that is coded to minimize the burden. This system facilitates skipping questions that are not relevant to the individual interview based on answers to earlier questions in the survey. The questionnaire is attached.

4. Effort to Identify Duplication and Use Similar Information

   No sources of similar information are available. There is no duplication of requirements. NRC has in place an ongoing program to examine all information collections with the goal of eliminating all duplication and unnecessary information collections.

   There is no similar information available from residents of nuclear power plant EPZs.

5. Effort to Reduce Small Business Burden

   This survey does not directly involve small entities.

6. Consequences to Federal Program or Policy Activities if the Collection is Not Conducted or is Conducted Less Frequently

   If the collection is not conducted, NRC cannot fully assess the potential benefits of enhanced protective actions. This is a one-time collection.

   There are no technical or legal obstacles to conducting this data collection.

7. Circumstances Which Justify Variation from OMB Guidelines

   There is no variation from OMB guidelines.

8. Consultations Outside the NRC

   The opportunity for public comment has been published in the Federal Register.

   NRC has contracted the U.S. Department of Energy's Sandia National Laboratories, in Albuquerque, New Mexico to analyze the results of the survey which will be conducted by a telephone survey contractor under contract to Sandia National Laboratories. Sandia has also provided input on the survey design.

9. Payment or Gift to Respondents

   The members of the public responding to the telephone survey will not receive payments or gifts.

10. Confidentiality of the Information

    Confidential and proprietary information is protected in accordance with NRC regulations at 10 CFR 9.17(a) and 10 CFR 2.390(b).

Each telephone survey instrument will be assigned a code number to ensure confidentiality. Only the survey contractor will have access to the identity of the participants. All identifiable information will be destroyed by the survey contractor at the end of the project.

11. Justification for Sensitive Questions

There will be no survey questions of a sensitive nature.

12. Estimated Burden and Burden Hour Cost

About 800 completed surveys will be acquired, and a commercial market research firm will conduct the survey. We expect to use a geographical location method to identify the population base within the 10 mile EPZ. Using this approach reduces the potential for non-response and optimizes the market research resources. To complete 800 surveys, a sample group of 15:1 is initially planned. Normally this would be a higher value if the population base were selected using a broader boundary definition such as zip codes. The 15:1 ratio yields a telephone sample of 15,000 phone numbers. Some of this set of 15,000 will be non-working numbers and many from this set will screen calls either through caller ID or registration with the Federal 'Do Not Call' program. Through experience with similar size surveys, it is expected that 2500 numbers will be ultimately be dialed. The contract with the market research firm specifies that the completed surveys will be conducted in 2 to 3 weeks.

Pre-testing of the survey among respondents of the same population set will be conducted and will include no more than 10 pre-testing surveys. Therefore the total number of completed telephone surveys will be 810. The survey data from the pre-testing will not be included in the overall statistical analysis. In developing the survey instrument, the introduction has been structured in a concise and informative manner to minimize hang ups. Use of such an introduction has been demonstrated to minimize hang ups. Using the telephone instrument that has been developed, it is estimated that of the 2,500 numbers called, approximately 37%, or 920, will begin to answer the survey. It is then estimated that of the 920 members numbers called, approximately 15% of respondents will not complete the full survey. This rate is based on commercial experience with surveys of similar length. The estimated time to complete the telephone survey is 15 minutes which is based on pre-testing of the survey in a closed setting with the contractor. The 800 completed surveys will take approximately 200 hours. The remaining 120 uncompleted surveys, resulting from the hang-ups or drop outs are estimated to average 5 minutes for a subtotal of 10 hours. Pre-testing activities are expected to take more time than the final survey. During pre-testing, the interviewer may clarify questions and ask the respondent to elaborate on items that may not be well understood. This interaction will cause the length of pre-tested surveys to be approximately 30 minutes.

These additional 10 surveys at 30 minutes each increases the burden by 5 hours. Therefore, the total estimated burden is 215 hours.

The results of the survey will be published in a report by the contractor and potentially in an NRC document such as a NUREG/CR. No record of the survey data other than the data contained in these reports are expected to be kept by the contractors. No record of the survey information is expected to be kept by the members of the public contacted during the survey.

13. Estimate of Other Additional Costs

There will be no additional cost burdens.

14. Estimated Cost to the Federal and State Governments

The cost to the Federal Government for this one-time-only survey includes costs for contractor support and analysis for the survey and analysis and NRC Headquarters staff management and review.

Cost for Survey Support

The survey will be conducted by the NRC contractor, Sandia National Laboratories and a qualified subcontractor with experience in telephone surveys. The subcontractor will conduct the survey and Sandia will analyze the data. No purchase of computers, software, or monitoring or testing equipment is needed. The NRC contract with Sandia includes approximately $70,000 for these activities. This includes both the conduct of the survey, analysis of data and documentation of the results in a formal report.

Federal Government Cost

NRC Headquarters staff will manage the development of the survey and perform a technical review of the survey results. There will also be costs incurred by NRC for contract management and general oversight of the work scope.

0.05 FTE x 2,080 hours x $217/hour = $22,568

Total estimated survey cost for the Federal government

Lab costs/statistical consultant + Federal costs =

$70,000 + $22,568 = $92,568

15. Reasons for Changes in Burden or Cost

This is a new collection.

16. Publication for Statistical Use

NRC plans on publishing a report summarizing the survey results.

The project is to be completed within one year of approval by OMB. The survey will be conducted within three months of OMB approval and will take place over a six week period. The final report is expected to be published within one year after OMB approval.

17. Reason for Not Displaying the Expiration Date

Not applicable. The expiration date will be displayed.

18. Exceptions to the Certification Statement

There are no exceptions.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Respondent Description

The primary objective of this project is to gain a broader and deeper understanding of people's views and reactions to protective action strategies within the 10 mile EPZ of nuclear power plants, and to assess the degree of public acceptance of those strategies. Among the most important factors affecting the viability of sheltering and evacuation strategies are the views and reactions of the public. Do people fully understand the various strategies or are the strategies seen as confusing? Does the public view protective action instructions as credible and practicable and do people have confidence that undertaking the prescribed actions will make them safer? Does the public see the adoption of multiple strategies as ineffective? Do people intend to undertake protective actions, or will they ignore them? All of these questions are crucial to determining whether evacuation and sheltering strategies will be effective. Thus, any consideration of sheltering and evacuation strategies needs to be grounded in a detailed understanding of public views and reactions.

Once the data is obtained, it will be used to inform a decision process which will determine whether enhancements to protective actions should be implemented. The extent of the use of the data is fully dependent upon the results. The decision on enhancements in the protective action regime should be substantiated through public input and stakeholder involvement. Information from the survey may also support decisions on an approach to management of shadow evacuations which includes evacuees that leave, but are not within the evacuation area. The information is also expected to provide insights on where evacuees intend to go if ordered to evacuate. Current plans include establishing congregate care centers to accommodate

evacuees. The survey may provide a basis that supports estimating the population that these centers would be designed to accommodate.

The potential respondent universe is approximately 5 million members of the public who reside within the boundaries of 62 EPZs around nuclear power plants. The number of respondents to be contacted includes approximately 2,500. Approximately 1,580 will answer the phone and not agree to take the survey. Approximately 920 are expected to agree to complete the survey and approximately 120 of these are expected to drop out of the survey during the course of questioning. The remaining 800 are expected to be completed surveys. These values are based on the experience of professionals who conduct telephone surveys of this length. No similar collection has been previously conducted.

2. Describe Procedures for Collecting the Information

The telephone survey contractor conducts surveys using a computer-assisted telephone interviewing (CATI) system and multi-station survey laboratory. Each working phone number is called 5 times. These calls will be at different times of day and days of the week. This process is controlled by the CATI phone room software developed by the contractor. Trained interviewers will conduct the survey under supervision using an industry standard survey protocol. The intent of this protocol is to maximize both the survey response and cooperation rates, and the consistency of implementation to assure maximum data validity and reliability. The telephone survey samples the non-institutionalized adult (over age 18) residential population. To identify the sample area, radii are calculated by determining the zip+4's that lie within the desired radius distance. Any zip+4 having its centroid located within the radius is included. The centroid is the discrete weighted population point within the zip+4. For RDD to be produced, all area code / exchanges (e.g. 480-812-XXXX) within a qualifying zip+4 are used to generate RDD numbers according to the contractor's standard RDD methodology. Because area code / exchange geography in some areas may be larger than zip+4 geography, RDD numbers will spill in/out of the defined radius with that amount varying depending on the phone company wiring of local numbers. As part of the initial screening process in the interview, the contractor verifies that each respondent lives within the EPZ.

The contractor uses a computerized sampling program to draw a sample of randomly generated phone numbers from a frame that includes the numbers of all households with working telephones. To accomplish this, a computerized sampling program randomly selects numbers from the working blocks of numbers within each active telephone prefix in a given region. Because the selection covers the full range of each working block, unlisted phone numbers are included in the sample. The ranges of working numbers are updated regularly by telephone sample providers to assure continued accuracy of the sample phone lists.

The standard sample frames are developed by sample providers using a random phone number generation program that relies on a specially designed telephone number database. This database allows for the random production of the numbers attached to valid prefixes in any given region designated for potential inclusion in a given study. Databases generally contain all working prefixes in a given region and, within prefixes, all "blocks" of 100 telephone "suffixes" that contain working residential numbers. As specified in the sampling frame, each prefix has 100 blocks, beginning with the block containing numbers 0000-0099 and ending with the block containing numbers 9900-9999. The random phone number generator draws non-repeating random telephone numbers from within the blocks and prefixes with working residential numbers in designated regions to produce a working frame for implementation based on a predetermined sample size.

Because the list is in random order, any contiguous segment of the list itself constitutes a random sample of phone numbers. Lists contain percentages of numbers within each of the working prefixes that are proportionate to the number of working blocks within that prefix. Thus, a full prefix (in which all 100 blocks have working numbers) will be represented in the list twice as frequently as would a prefix in which only half of the blocks have working residential numbers.

Blocks with no working residential numbers are screened out to increase the efficiency of the lists. Nevertheless, the effective "density" - or percentage of working residential numbers - will vary across blocks. Typically, new prefixes or those that serve rural areas have blocks with lower densities than do those that have been in service longer or that serve urban areas. To compensate for the variance in density, the frequency of numbers drawn by block is kept constant. Thus, due to the random generation of numbers within blocks, low-density blocks will produce a higher frequency of invalid numbers. The invalid numbers are screened out in the interviewing process. In this way, the proportion of valid numbers within each prefix is retained, thereby preserving the equality of probability of inclusion within the list for any household with a (single) residential phone line.

For statistical purposes, it is necessary that (a) each household with a telephone and (b) each individual interviewed have an identifiable probability of inclusion in the sample. The frame assures that each working residential telephone number has an equal probability of being contacted. The number of working residential phone lines at each residence contacted is recorded in the interview in order to obtain weights to correct for multiple-phone households. In addition, the respondent is selected at random from among those eligible within the household. Thus, the sampling procedure assures that the household and the respondent within the household are selected at random. The interview protocol assures that the data needed to develop weights to correct for differences in the probability that a household would be contacted (the number of working residential phone lines) and that a respondent would be selected for the interview (the number of eligible

respondents within the household) are collected. The weights can be readily applied to obtain household population frequencies from the results of the samples.

The selection of the approximate 800 completed surveys will be collected, providing a margin of error of +/- 4% at the 97% confidence level. There are no potential problems in conducting this survey.

3. Describe Methods to Maximize Response Rates and to Deal with Statistical Issues of Non-response

To assure that the samples used during the data collection process permit reliable statistical inference, the contractor implement's quality control procedures. This involves extensive review of the survey instrument where the survey is checked for biased or misleading questions, or questions that may be culturally insensitive or threatening to different socio-demographic groups. This process assures that the survey itself does not inadvertently induce respondents from different groups or classes to dropout before completing the survey. The survey process is designed to maximize response rate by using a contact design that minimizes refusals, employs up to 10 call backs. This includes the concise and informative introduction, employing a short 15 minute survey and respondent tracking. Respondent tracking is employed and a conversion protocol is in place for individuals who are initially categorized as soft refusals. This approach has been demonstrated in market analysis to maximize response rates and yield reliable data that can be generalized to the universe studied.

The response rate will be in the range of 10-15% according to the AAPOR formula. The actual rate can be calculated once the total number of participants selected for the survey is identified. It is anticipated that a typical 15:1 RDD phone sample will be purchased to begin the research process. To assess non-response bias, the contractor will compare our respondents' demographics to comparable census data. To support the non-response bias assessment, one question has been added to obtain the age range of the respondents. Discussion and assessment of non-response will be included in the final reporting.

4. Describe Test or Procedures

Early testing of the survey instrument was conducted in-house. Results of the in-house testing concluded that the open ended questions caused the survey to require more time than desired and required additional burden in the analysis of the data. Through review and editing of the survey instrument, the open ended questions were removed. Where practical, some of these questions were rewritten with items from which the respondent can select one or more. This approach reduced the time to conduct the survey to 15 minutes and significantly reduced the burden in coding and analyzing the data from the open ended questions.

The procedure requires that the survey instrument be first programmed into the computer assisted telephone interviewing (CATI) system. This includes all tracking, skip and randomization protocols. Then a verbal protocol of the survey instrument is conducted to test the efficacy of the questions and skip patterns. Once the survey is programmed and the verbal protocol complete, the next step involves training the interviewers to properly execute the survey. This process entails oral reading of the survey in several group training sessions to make sure that proper and consistent emphasis is given to the various words and phrases specified in the survey, to assure that respondents are interviewed using consistent phrasing, emphasis and protocols during the data collection process. Data collection does not begin until the interviewers have demonstrated thorough competence with the survey instructions and the reading of the survey. Internal testing of the telephone survey was conducted to determine the length of the survey and assure the automated prompts were correct. The survey length is approximately 15 minutes.

The data will be captured in Excel and SPSS format. All personal information identifying respondents is removed by the market research firm prior to submittal of data to Sandia. There are no open ended questions in the survey which simplifies the statistical analysis. Once the data is received, Sandia will perform statistical analysis to determine the appropriate use of the information to the decision making process. This will include frequency distributions and measures of central tendency for questions asked in the survey.

5. Name and Telephone Number of Individual Consulted on Statistics

Statistician consulted for the statistical aspects of the survey design:

Carl Axness
Sandia National Laboratories

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U.S. NUCLEAR REGULATORY COMMISSION

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10. SUPPLEMENTARY NOTES

R. Sullivan, Technical Lead

11. ABSTRACT *(200 words or less)*

In the assessment of alternative protective actions for use in response to nuclear power plant (NPP) emergencies, consideration is given to the likelihood of the public implementing these actions. Understanding the public's knowledge and confidence in protective actions informs the decision process on development of protective actions. Focus groups were conducted to research the views of the public and emergency response personnel on emergency planning and response. A national telephone survey of residents living within NPP Emergency Planning Zones (EPZs) was conducted to obtain data for use in developing an understanding of public tendencies towards emergency planning. The conclusions of this research support the decision to update Supplement 3 to NUREG-0654 / FEMA-REP-1, Rev. 1. Additional observations and insights were gained from this research that may benefit the NRC emergency preparedness program.

12. KEY WORDS/DESCRIPTORS *(List words or phrases that will assist researchers in locating the report.)*

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