



TEXAS DEPARTMENT OF STATE HEALTH SERVICES

EDUARDO J. SANCHEZ, M.D., M.P.H.
COMMISSIONER

1100 W. 49th Street • Austin, Texas 78756
1-888-963-7111 • <http://www.dshs.state.tx.us>

September 21, 2006

Mr. Paul Serra
STP Nuclear Operating Company
Manager, Emergency Response, Access and Communication
P.O. Box 289
Wadsworth, Texas 77483

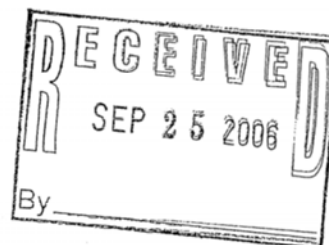
Ref: Letter of Agreement with STP Nuclear Operating Company (STPNOC)

Dear Mr. Serra:

This letter is submitted as affirmation of Texas Department of State Health Services commitment to support off-site emergency preparedness and response activities with respect to the South Texas Project (STP).

To repeat our commitment as stated in previous letters of agreement, the DSHS Radiation Control Program, is required by Government Code Chapter 418, Emergency Management, and by the Texas Emergency Management Plan to perform advance planning and respond appropriately to accidents within the state. Tab 1 of Annex D, Radiological Emergency Response, of the Texas Emergency Management Plan provides necessary guidelines, procedures and instructions for emergency situations involving fixed nuclear facility accidents. Contained within the tab, both in the introduction, which is generic to fixed nuclear facilities, and in Chapter Two, which is site-specific to STP, are specific duties, assignments and responsibilities. Among these are:

- Radiological monitoring within the plume exposure and ingestion exposure pathways
- Accident classification system
- Radiation Program response levels
- Accident assessment methods and procedures
- Contamination survey techniques
- Communications
- Environmental sample analysis
- Personnel monitoring and decontamination
- Recovery from an accident



United States Nuclear Regulatory Commission Official Hearing Exhibit In the Matter of: NUCLEAR INNOVATION NORTH AMERICA LLC (South Texas Project Units 3 and 4)	
Commission Mandatory Hearing Docket #: 05200012 & 05200013 Exhibit #: NRC-006Q-MA-CM01 Admitted: 11/19/2015 Rejected: Other:	Identified: 11/19/2015 Withdrawn: Stricken:

Area decontamination
Training
Exercises and drills

The DSHS Radiation Control Program will respond to emergencies at STP with sufficient qualified personnel and equipment to fully support local government in its mitigation and recovery effort. The Agency will maintain in close liaison with STP, utilizing facilities provided at the Near-site Emergency Operations Facility. Notification of our organization can be made 24 hours a day by calling (512) 458-7460.

We acknowledge the intent of the STP Nuclear Operating Company to construct two additional units at the existing STP site. The proposed Emergency Plans for STP Units 3 and 4 are based upon the existing Emergency Plans for STP Units 1 and 2 and are practicable. Our agency is committed to participate in any further development of the current Emergency Plans, including any field demonstrations, and to execute our responsibilities under these Plans in the event of an emergency.

The DSHS Radiation Control Program has estimated the onsite response time to emergencies at the station to be approximately 4 hours, and the full Emergency Response Team response time to field locations around the station to be approximately 8 hours.

This agreement shall remain in force until the DSHS Radiation Program Officer modifies it in writing. It shall be reviewed annually and updated as appropriate.

Sincerely,



Richard A. Ratliff, P.E., L.M.P.,
Radiation Program Officer
Division for Regulatory Services
Department of State Health Services



TIDEHAVEN INDEPENDENT SCHOOL DISTRICT

P. O. BOX 129
EL MATON, TEXAS 77440
(361) 588-6321
Fax (361) 588-7109

Asst. Supt. - Transportation
(361) 588-6839

Business Office
(361) 588-6685

High School
(361) 588-6810

Intermediate School
(361) 588-6600

Blessing Elementary
(361) 588-6622

Markham Elementary
(979) 843-5015

September 13, 2006

Mr. Paul Serra
STP Nuclear Operating Company
Manager, Emergency Response, Access and Communication
P.O. Box 289
Wadsworth, Texas 77483



Dear Mr. Serra:

This letter affirms our agreement and intent for Tidehaven Independent School District, during an emergency event at the South Texas Project (STP), to perform "early dismissal" of students at the Alert and Site Area Emergency level. At the General Emergency level, we will evacuate students to the appropriate Reception Center if it is necessary to perform monitoring and decontamination. We will then proceed to the respective elementary schools where students will be released to their families. A school district representative will remain with the students until such time as all students have been picked up.

We acknowledge the intent of the STP Nuclear Operating Company to construct two additional units at the existing STP site. The proposed Emergency Plans for STP Units 3 and 4 are based upon the existing Emergency Plans for STP Units 1 and 2 and are practicable. Our agency is committed to participate in any further development of the current Emergency Plans, including any field demonstrations, and to execute our responsibilities under these Plans in the event of an emergency.

This letter of agreement shall remain in effect unless modified or revoked by the Tidehaven Independent School District or the management of the STP Nuclear Operating Company. Modification or revocation requires an advance written thirty (30) day notice.

Sincerely,

Tom Jones
Superintendent

TJ/ds

cc: Bill Silliman - Adm. Assistant

TOSHIBA CORPORATION

1-1, SHIBAURA 1-CHOME, MINATO-KU TOKYO 105-8001, JAPAN
PHONE: (03) 3457-3660
FACSIMILE: (03) 5444-9192

September 5, 2008
XEAD-STP-1176

Mr. Kevin Richards
Group Vice President, Unit 3 & 4
4000 Avenue F
Suite A
Bay City, Texas 77414

Reference: STP Nuclear Operating Company, South Texas Projects Unit 3 and 4

Subject: Toshiba Emergency Response Plan Support

Dear Mr. Richards:

Toshiba Corporation agrees to provide general services related to nuclear steam supply operation during and following an accident situation. Toshiba Corporation provides the capabilities to respond on a 24 hour basis. The contract that enacts this agreement is the Engineering Procurement and Construction agreement.

We acknowledge the intent of STP Nuclear Operating Company to construct two additional units at the existing site. The proposed Emergency Plan for STP Units 3 and 4 are based upon the existing Emergency Plans for Units 1 and 2 and are practicable. Our company is committed to participate in any further development of the current Emergency Plans, including field demonstrations, and to execute our responsibilities under these Plans in the event of an emergency.

Toshiba Corporation appreciates the opportunity to be of service to the STP Nuclear Operating Company. If there are any questions regarding this matter, please do not hesitate to contact me.

Very truly yours,

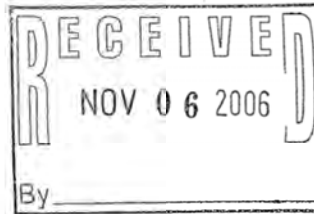


K. Okamura
Vice President, Power Systems Company
Toshiba Corporation

Cc: J.J. Shepperd
M.A. McBurnett

XU Power
Comanche Peak Steam
Electric Station
P.O. Box 1002 E08
Wrentham, TX 76043
tel: 254 897 5590
fax: 254 897 6652
rafael.flores@txu.com

Rafael Flores
Site Vice President



CPSES-2006002213
October 27, 2006

Mr. Paul Serra
STP Nuclear Operating Company
Manager, Emergency Response, Access and Communication
P. O. Box 289
Wadsworth, Texas 77483

Ref: Letter of Agreement with STP Nuclear Operating Company, Post
Accident Analysis, NUREG-0730

Dear Mr. Serra:

In exchange for a similar agreement from STP Nuclear Operating Company, project manager for the South Texas Project (STP), Comanche Peak Steam Electric Station (CPSES) will in the event of an emergency at (STP) and loss of onsite analysis capabilities, support STP by performing selected post accident analysis in accordance with NUREG-0737.

CPSES will permit 24-hour per day notification for emergency sample shipment. The Chemistry Manager is the point of contact for notification that STP is shipping post accident samples to CPSES. The manager can be reached by calling the hot chemistry lab which is staffed 24-hours per day at (254) 897-5139.

CPSES will endeavor to complete, within time and dose restraints, the following analysis within 24-hours of receipt and, throughout the accident, analyze two of each sample daily for seven days and weekly thereafter.

1. Liquid gamma isotopic
2. Gaseous gamma isotopic
3. Particulate/Iodine gamma isotopic
4. RCS Chloride
5. RCS Boron

Sample containers and instructions for volume and dilutions will be provided to STP by CPSES to ensure sample geometry compatibility. Geometrics and dilutions will

CPSES-2006002213
October 27, 2006

be in the appropriate ranges to meet TXU Power instrument capabilities and to minimize radiation doses to CPSES personnel.

Samples requiring gamma isotopic analysis and unused portions of liquid samples of Boron and Chloride analysis will be retained at CPSES for retrieval by STP.

We acknowledge the intent of the STP Nuclear Operating Company to construct two additional units at the existing STP site. The proposed Emergency Plans for STP Units 3 and 4 are based upon the existing Emergency Plans for STP Units 1 and 2 and are practicable. Our agency is committed to participate in any further development of the current Emergency Plans, including any field demonstrations, and to execute our responsibilities under these Plans in the event of an emergency.

Any costs incurred by TXU Power relative to providing this service will be indemnified by STP Nuclear Operating Company. Additionally, STP Nuclear Operating Company agrees to protect, defend, indemnify and hold harmless TXU Power, CPSES participants, and their parent corporations, subsidiaries, affiliates and their respective officers, directors, employees, and agents or any of them free and harmless from and against any and all claims, demands, causes of action, suits or other litigation (including all costs thereof and attorneys' fees) of every kind and character arising as a result of, incident to, arising out of, or in connection with the work performed or to be performed by TXU Power hereunder, all regardless of whether or not TXU Power CPSES participants, or their parent corporations, subsidiaries, affiliates, respective officers, directors, employees or agents are negligent in whole or in part and even when caused by the sole fault of TXU Power, CPSES participants or their parent corporations, subsidiaries or affiliates or their respective officers, directors, employees or agents.

Sample shipment will be the responsibility of STP.

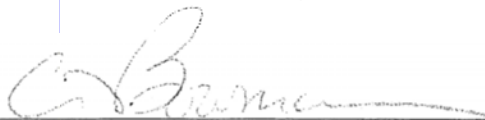
Sincerely,



Rafael Flores

RF:DMB/scg

Accepted by:



11/27/06 John W. Crenshaw C.T. Brennan
General Manager, Oversight
South Texas Project Electric Generating Station

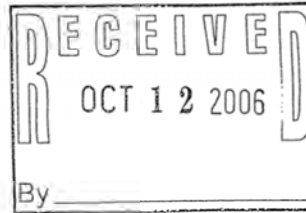
U.S. Department of
Homeland Security

United States
Coast Guard



Commander
United States Coast Guard
Sector Corpus Christi

8930 Ocean Drive HGR 41
Corpus Christi, TX 78419
Phone: (361) 939-6201
Fax: (361) 888-3195



3000
October 3, 2006

Mr. Paul Serra
South Texas Project Nuclear Operating Company
Manager, Emergency Response, Access, and Communication
P.O. Box 289
Wadsworth, TX 77483

Subj: LETTER OF AGREEMENT

Dear Mr. Serra:

This is in regards to the emergency plan for your South Texas Project in Matagorda County, Texas. In the event of an emergency, the U. S. Coast Guard Sector Corpus Christi, Texas is prepared to implement response and vessel traffic control measures as deemed appropriate to the emergency situation.

In the event of an emergency, the following information will aid us in determining a proper course of action:

- A brief description of the emergency or incident;
- Date/Time of the incident;
- On-Scene weather condition;
- Down wind extent to the hazard;
- Extent of pollution in the water, if any, and,
- Any other information that could impede our response.

This information will be used to determine Coast Guard actions under my authority as Captain of the Port, under the Ports and Waterways Safety Act, to impose vessel traffic control measures such as Safety and Security Zones or waterway closures. Vessel traffic control measures may be implemented along the Colorado River, Gulf Intra-coastal Waterway and other navigable waters west of the Colorado River affected by the emergency. Also under this authority, the Captain of the Port may implement "access control" measures. Vessel traffic control or access control measures will be imposed immediately.

The Coast Guard will also coordinate the enforcement of these vessel traffic or access control measures established by the Captain of the Port. Response times for on-site enforcement or for Coast Guard assets to arrive on-scene could be as long as 4 hours, depending on resource availability.

Subj: LETTER OF AGREEMENT

3000

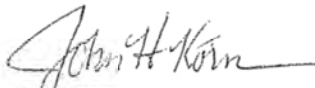
October 3, 2006

We understand that the Emergency Operations Center will be in the Matagorda County Emergency Response Operations Center in Bay City, Texas and that notifications to our office would come through the Matagorda County Sheriffs Office or Emergency Operations Center.

We acknowledge that intent of the South Texas Project (STP) Nuclear Operating Company to construct two additional units at the existing STP site and that the new units will have the same emergency plan that is currently in place with the existing units. Our agency is committed to participate in any further development of the current Emergency Plans and to execute our responsibilities under these Plans in the event of an emergency.

A Coast Guard Liaison from the Sector will travel to the Emergency Operations Center to coordinate Coast Guard activities. Response times for Coast Guard personnel to reach the Emergency Operations Center could be as long as 4 hours. The 24 hour notification number for this office is (361) 939-6393.

Sincerely,



JOHN H. KORN

Captain, U. S. Coast Guard

Captain of the Port

Copy: Matagorda County Sheriff's Office
Matagorda County Emergency Management Coordinator

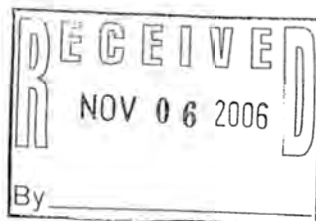


VAN VLECK INDEPENDENT SCHOOL DISTRICT

Dr. Juan Antonio Jasso

Superintendent

Phone number 979-323-5006



October 31, 2006

Mr. Paul Serra
STP Nuclear Operating Company
Manager, Emergency Response, Access and Communication
P.O. Box 289
Wadsworth, Texas 77483

Ref: Letter of Agreement with STP Nuclear Operating Company (STPNOC)

Dear Mr. Serra:

This letter is written to assist with the emergency preparedness program at the South Texas Project (STP). Van Vleck Independent School District is prepared to provide evacuation services to Matagorda County or STP in the event of an accident at the Station. These services will be provided by bus drivers and requisite buses. Bus services will be provided, as requested, by Matagorda County or STP officials.

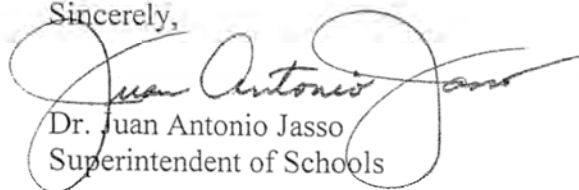
It is anticipated that STP Nuclear Operating Company will provide any training and education necessary to acquaint our emergency response personnel with the plan and potential emergency conditions.

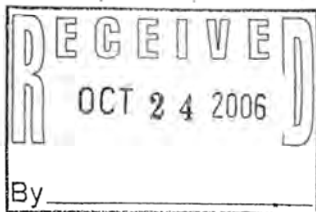
We acknowledge the intent of the STP Nuclear Operating Company to construct two additional units at the existing STP site. The proposed Emergency Plans for STP Units 3 and 4 are based upon the existing Emergency Plans for STP Units 1 and 2 and are practicable. Our agency is committed to participate in any further development of the current Emergency Plans, including any field demonstrations, and to execute our responsibilities under these Plans in the event of an emergency.

This letter of agreement is in response to the responsibilities identified in the Emergency Management Plan for Matagorda County, Bay City, and Palacios.

This letter of agreement shall remain in effect unless modified or revoked by the Van Vleck Independent School District or the management of the STP Nuclear Operating Company. Modification or revocation requires an advance written thirty (30) day notice.

Sincerely,


Dr. Juan Antonio Jasso
Superintendent of Schools



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE HOUSTON/GALVESTON
1353 FM 646, Suite 202
Dickinson, TX 77539

October 13, 2006

Mr. Paul Serra
STP Nuclear Operating Company
Manager, Emergency Response, Access and Communication
P.O. Box 289
Wadsworth, Texas 77483

Ref: Letter of Agreement with STP Nuclear Operating Company (STPNOC)

Dear Mr. Serra:

This letter of agreement is to affirm that the National Weather Service (NWS) plans to participate in the Emergency Alert System (EAS) for Matagorda County as its primary volunteer EAS station for declared emergencies.

National Weather Service will make a reasonable effort to assist in the event of a declared emergency in Matagorda County, including emergencies at South Texas Project. The National Weather Service will activate the National Weather Service radios by transmitting the appropriate code from its Weather Center or by allowing Matagorda County Emergency Officials to activate directly from the Emergency Operations Center during declared emergencies.

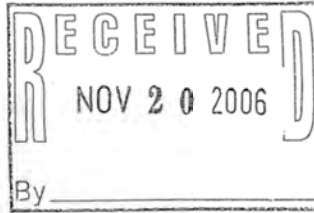
We acknowledge the intent of the STP Nuclear Operating Company to construct two additional units at the existing STP site. The proposed Emergency Plans for STP Units 3 and 4 are based upon the existing Emergency Plans for STP Units 1 and 2 and are practicable. Our agency is committed to participate in any further development of the current Emergency Plans, including any field demonstrations, and to execute our responsibilities under these Plans in the event of an emergency.

This letter of agreement is in response to the responsibilities identified in the Emergency Management Plan for Matagorda County, Bay City, and Palacios and the STP Emergency Plan. This letter shall remain in effect until canceled or modified. A cancellation shall be preceded by a thirty (30) day written notice.

Sincerely,

William L. Read
Meteorologist in Charge





November 14, 2006
EL 133/06

Mr. Paul Serra
STP Nuclear Operating Company
Manager, Emergency Response, Access and Communication
P.O. Box 289
Wadsworth, Texas 77483

Ref: Letter of Agreement with STP Nuclear Operating Company (STPNOC)

Dear Mr. Serra:

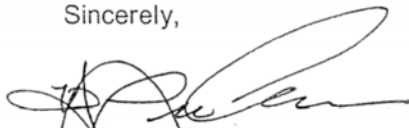
AREVA NP Inc. agrees to provide STP Nuclear Operating Company with emergency response sample analysis services and/or materials associated with laboratory services. AREVA NP Inc. can provide the capability to respond on a 24-hour-a-day, 7-day-a-week basis.

We acknowledge the intent of the STP Nuclear Operating Company to construct two additional units at the existing STP site. The proposed Emergency Plans for STP Units 3 and 4 are based upon the existing Emergency Plans for STP Units 1 and 2. AREVA NP is committed to participate in any further development of the current Emergency Plans, including any field demonstrations, and to execute our responsibilities under these Plans in the event of an emergency. The costs for participating in Emergency Plan drills and exercises will be determined upon request of laboratory participation.

Please note that STP Nuclear Operating Company would be responsible for the sample analysis costs as well as the radwaste disposal costs of accident sample materials. Sample analysis prices will be established at the time services are requested. The standard laboratory Terms and Conditions provided in Attachment A will apply to this work scope. All emergency response sample analysis services will be performed in accordance with AREVA NP Environmental Laboratory Procedure 521, "General Procedure for Processing Emergency Response Samples." A copy of this procedure is provided as Attachment B.

AREVA NP Inc. appreciates the opportunity to be of service to the STP Nuclear Operating Company. Please do not hesitate to contact the Laboratory Manager, Jeffrey Raimondi, at (508) 573-6651 if you have any questions regarding these services.

Sincerely,



H. Lee Williams
Vice President
Engineering Services

JMR/mrt
ATTACHMENTS (2)

AREVA NP INC.

An AREVA and Siemens company

Environmental Laboratory - 29 Research Drive, Westborough, MA 01581-3913
Tel: 508 573 6650 - Fax: 508 573 6680

ATTACHMENT A
TERMS AND CONDITIONS

WARRANTY

AREVA NP Inc. (AREVA NP) warrants that the services to be provided under this Agreement will be performed by qualified personnel in a workmanlike manner consistent with generally accepted standards and practices. AREVA NP shall reperform any service that fails to meet this warranty within ninety (90) days after performance of such service, provided that written notice of any claimed defect is given to AREVA NP within thirty (30) calendar days from the date the nonconformance is detected by Purchaser. If reperformance is impractical or impossible, then AREVA NP shall refund the price paid for the nonconforming services.

THE WARRANTIES AND REMEDIES SET FORTH IN THIS ARTICLE ARE EXCLUSIVE AND NO OTHER WARRANTY OR REMEDY OF ANY KIND, WHETHER STATUTORY, WRITTEN, ORAL, EXPRESS, OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES ARISING FROM COURSE OF DEALINGS OR USAGE OF TRADE, SHALL APPLY.

AREVA NP ASSUMES NO LIABILITY WITH RESPECT TO THE USE OF, OR FOR DAMAGES RESULTING FROM THE USE OF, ANY INFORMATION, METHOD OR PROCESS DISCLOSED UNDER THIS CONTRACT.

LIMITATION OF LIABILITY

AREVA NP shall not be liable whether arising under contract, tort (including negligence), strict liability, or otherwise, for loss of anticipated profits, claims of Purchaser's customers, subcontractors, vendors or suppliers, governmental fines or penalties against Purchaser, loss of use of capital or revenue, cost of money, or for any special, indirect, incidental, or consequential loss or damage of any nature arising at any time from any cause whatsoever.

The total liability of AREVA NP, whether in contract, tort (including negligence), strict liability, or otherwise, shall not exceed the price of this Contract.

The provisions of this Article shall apply notwithstanding any other provision of this Contract.

RIGHTS IN DATA

Performance of the Work contracted for, shall in no way invest the Purchaser with any rights in the developments or inventions made by AREVA NP or background data and patent rights of AREVA NP. AREVA NP shall retain the right to use the information developed hereunder in its business but shall only use proprietary information of Purchaser for purposes of this contract and shall not disclose any such information in violation of its proprietary agreement with Purchaser.

TERMS OF PAYMENT

Pricing shall be in accordance with the pricing schedules included herein. Purchaser shall make payments within thirty (30) days from the date of receipt of AREVA NP's invoice. Any amount remaining unpaid after thirty (30) days shall bear interest from the due date of the invoice at a rate of one percent (1%) per month or the maximum allowed by law, whichever is the lesser. All taxes shall be to Purchaser's account other than those levied on wages/salaries of AREVA NP's employees or taxes on AREVA NP's net income.

DELAY IN PERFORMANCE

AREVA NP shall not be liable for any expense, loss or damage resulting from delay or prevention of performance caused by fires, floods, Acts of God, strikes, labor disputes, labor shortages, inability to secure materials or equipment, fuel or other energy shortages, riots, thefts, accidents, transportation delays, acts or failure to act of Government or Purchaser, delay in obtaining licenses, or major equipment breakdown, or any other cause whatsoever, whether similar or dissimilar to those enumerated above, beyond the reasonable control of AREVA NP. In the event of any delay arising by reason of any of the foregoing, the time for performance shall be equitably adjusted.

NUCLEAR APPLICATIONS

For any Agreement entered into by Purchaser that transfers to a third party any output of the Work hereunder, Purchaser shall endeavor to include the following for the protection of Purchaser, AREVA NP and their suppliers and subcontractors:

The output of the Work hereunder shall not be furnished, installed in, or used or operated in connection with, or in any manner associated with a nuclear or atomic energy activity or facility unless (a) the facility owner has agreed to enter into an agreement of indemnification with the United States Nuclear Regulatory Commission, or its successor government organization, if required under Section 170 of the Atomic Energy Act of 1954 as amended, and (b) the facility owner has agreed to obtain such policy or policies of insurance or has provided financial protection of such type and in such amounts as the United States Nuclear Regulatory Commission, or its successor government organization, shall require as a condition the facility owner's entering into the indemnity agreement referred to in (a) above. AREVA NP, its suppliers and subcontractors, shall be included among the persons protected under (b) above. Further, with respect to the insurance secured from the nuclear energy insurance pools, the facility owner shall secure and maintain any and all of the amendatory endorsements available at any time which extend the insurance in terms of the ultimate user's coverage and/or its limits of liability. The facility owner shall agree to maintain such indemnification agreement, and insurance or other financial protection in full force and effect, so long as the output from the work to be furnished hereunder shall be used.

In addition, Purchaser will endeavor to obtain, under such agreement with the nuclear power plant owner, a waiver of liability for any damage to property resulting from a defect in the licensed technology.

INTEGRATION

The AREVA NP's proposal and any resulting Contract are based solely on the Purchaser's acceptance of the terms and conditions set forth herein and the Purchaser is hereby notified that the AREVA NP expressly objects to any additional or different terms and conditions which may be contained in any purchase order issued pursuant hereto. The Purchaser agrees that this proposal and these terms and conditions constitute the entirety of the Contract between the AREVA NP and the Purchaser and all previous communications, whether verbal or written, are hereby abrogated and withdrawn. Any purchase order issued by the Purchaser shall be for record and billing purposes only and any report or products received by the Purchaser in connection herewith shall be deemed to be delivered on the basis of the terms and conditions set forth herein.

TERMINATION

AREVA NP shall have the right to terminate this Contract upon ninety (90) days advance written notice to Purchaser. AREVA NP shall be entitled to compensation for all work performed through the date of termination. At the request of Purchaser, AREVA NP will provide Purchaser a list of qualified replacement laboratories.

Mr. Paul Serra
STP Nuclear Operating Company
Page 4 – EL 133/06
November 14, 2006

ATTACHMENT B

Environmental Laboratory Procedure 521,
“General Procedure for Processing Emergency Response Samples.”

Prepared By
LIMS Coordinator
Reviewed By
QA Officer
E-LAB Director

COD
N/A
JMZ/ADH
OS
AMU

Procedure No. 521
Revision No. 4
Approval Date *11-03-03*
Effective Date *11-03-03*
Next Review Date *11-03-08*

GENERAL PROCEDURE FOR PROCESSING EMERGENCY RESPONSE SAMPLES

All of the materials contained in this procedure shall be considered proprietary, business confidential, and/or competition sensitive information. All requests to release part or all of this procedure to organizations or persons outside of Framatome ANP must have the prior approval by the Laboratory Director.

PRINCIPLE OF METHOD

The Framatome ANP Environmental Laboratory (E-LAB) will analyze environmental samples as part of the ingestion pathway evaluation following an emergency situation at a client facility that results in the release of radioactivity to the environment. Samples will be received and handled as radioactive samples by the Radiation Safety Officer (RSO). Preliminary screening will be performed by the RSO. The samples will be prepared for immediate gamma analysis by the sample preparation staff. As a guide for determining sample count times, unless otherwise specified, ingestion pathway Minimum Detectable Concentrations (MDCs) for a dose to the general population of 30 mrem whole body and 100 mrem to the critical organ based on a two-week ingestion/inhalation period will be used. Disposal of any emergency response samples remains the responsibility of the client facility.

All result reports will be forwarded to the appropriate radiological data coordinator at the client facility after review by the cognizant Environmental Laboratory staff.

REFERENCES

1. E-LAB Procedure 850, "Receipt and Storage of Radioactive Samples"
2. E-LAB Procedure 200, "Sample Receipt and General Chain-of-Custody"
3. E-LAB Procedure 201, "Sample Receipt and General Chain-of-Custody Using LIMS"
4. E-LAB Procedure 110, "Suggested Sample Collection Procedures for Environmental Media"
5. E-LAB Procedure 305, "Preparation of Environmental and Bioassay Media for Analysis of Gamma Ray Emitters"
6. E-LAB Procedure 368, "The Determination of Sr-89,90 in Environmental Media Via Cerenkov Counting"
7. E-LAB Procedure 450, "The Determination of Gamma-Ray Emitting Radionuclides in Environmental Media"
8. E-LAB Procedure 400, "Operation of the EG&G Ortec Maestro Multichannel Analyzer (MCA) Emulation Software System"

9. E-LAB Procedure 405, " Operation of the SEEKER Gamma Spectroscopy Software for Gamma and X-Ray Isotopic Analysis "
10. YAEL Memorandum EL 677/86 from S.A. Farber to C. L. Harrington, "Reporting Levels for Gamma Spectroscopy of Environmental Media in Emergency Applications", dated October 21, 1986
11. E-LAB Procedure 1210, "Operation and Calibration of the LKB Model 1219 SM Liquid Scintillation Counter"
12. E-LAB Procedure 490, "Operation and Calibration of the LKB Model 1415 Liquid Scintillation Counter"

APPARATUS

1. Absorbent paper
2. Proper Personal Protective Equipment (PPE), safety glass, lab coat or apron, and disposable gloves

PROCEDURE

As used in this procedure, the RSO is the Radiation Safety Officer or his/her designated alternate.

A. Receipt

1. All samples will be received by the RSO at the shipping/receiving area of the Environmental Laboratory. All emergency response samples will be treated as radioactive samples.
2. Radiation surveys will be performed by the RSO in accordance with Reference 1.
3. The RSO will forward the sample paperwork to the cognizant record keeping staff so that the Laboratory Sample Number (LSN) and appropriate analysis worksheets can be issued immediately for the sample in accordance with Reference 2 or 3.
4. The radiation survey is performed for two primary reasons:

NOTE: The survey will be used to prioritize sample analysis. The highest activity samples will be analyzed first.

All samples with >500 cpm should be processed in the Part 50/61 Area. All other samples with a count rate >MDCR but <500 cpm can be process in the Environmental Area only with approval of the RSO or Laboratory Director.

- a. The RSO shall indicate the priority status and clearly indicate on the sample worksheet(s) if the sample will be analyzed in the Environmental or Part 50/61Area.

- b. Priority samples receive green dots. In the center of the green dot indicate the analysis laboratory as Environmental (E) or Part 50/61 (P).

NOTE: To determine the corrected counts per minute, ccpm, the survey instrument background count rate is subtracted from the survey measurement gross count rate.

B. Sample Preparation

1. Under normal circumstances, sample preparation should only be performed in the Part 50/61 laboratories. The Laboratory Director or the RSO may approve sample preparation and analysis in the low level analysis facilities of the Laboratory.
2. Proper PPE must be worn while preparing samples for gamma isotopic analysis.
3. Ensure that absorbent paper covers the work area.
4. If chemical preservatives have not been added to the sample, add the appropriate reagents to the sample in accordance with Reference 4.
5. Prepare samples for gamma spectrometry analyses according to Reference 5 with the following exceptions:
 - a. Milk: Do not delay for eight days.
 - b. Water: Do not delay for eight days.
 - c. Forage: For gamma isotopic analyses, do not ash the sample. Place the sample, in its "wet" form, in the largest calibrated counting geometry. For radiostrontium analyses, take an aliquot and analyze according to Reference 6.
 - d. If applicable, use geometries for gamma isotopic analyses that allow for the use of the gamma sample changers.
6. In order to prevent cross contamination of samples, change gloves between preparation of samples. Absorbent paper should also be changed between samples if deemed necessary by the RSO.
7. Place the samples in plastic bags and seal the bag prior to transporting the sample to the appropriate counting area.

C. Sample Counting

1. Gamma Spectrometry Analysis
 - a. Analyze samples according to References 7, 8, and 9.
 - b. Using Table 1 as a guide (Reference 10), analyze the sample to meet the listed MDCs.

Proprietary Information

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this procedure.

- c. If a sample requires a strontium analysis, return the sample to the chemistry area and notify the cognizant chemist that the sample is available.
 - d. Results will be reported to the appropriate individual at the client facility after cognizant senior Environmental Laboratory staff has reviewed the results.
- 2. Strontium Analysis
 - a. Analyze the sample according to References 11 or 12.
 - b. Using Table 1 as a guide, analyze the sample to meet the listed MDCs.
 - c. Results will be reported to the appropriate individual at the client facility after cognizant senior Environmental Laboratory staff has reviewed the results.

FINAL CONDITIONS

Samples are processed in accordance with this procedure and results are transmitted to the appropriate radiological data coordinator at the client facility.

TABLE 1

EMERGENCY RESPONSE SENSITIVITY LEVELS*

	Airborne (pCi/m ³)	Milk (pCi/L)	Water (pCi/L)	Fish (pCi/Kg)	Vegetable (pCi/Kg)
Np-239	4E4	2E5	1E5	5E6	3E5
Co-57	9E3	1E6	8E5	3E7	2E6
Ce-144	4E2	4E4	2E4	7E5	4E4
Ce-141	9E3	3E5	1E5	5E6	3E5
Mo-TC99	2E4	2E5	2E5	1E7	3E5
Se-75	5E4	2E5	1E5	5E6	3E5
Cr-51	2E5	1E7	5E6	2E8	1E7
I-131	3E2	6E2	6E2	6E4	2E3
Ru-103	7E3	3E5	2E5	6E6	4E5
I-133	1E3	2E3	2E3	3E5	7E3
Ba-140	3E3	5E4	5E4	3E6	1E5
Cs-134	2E3	1E4	9E3	8E5	2E4
Ru-106	3E2	3E4	2E4	7E5	4E4
Cs-137	4E3	2E4	1E4	1E6	3E4
Ag-110M	8E2	1E5	6E4	2E6	1E5
Zr-95	2E3	2E5	1E5	4E6	3E5
Co-58	4E3	3E5	2E5	8E6	5E5
Mn-54	3E3	4E5	3E5	9E6	6E5
Tel-132	1E4	9E4	5E4	2E6	1E5
Fe-59	3E3	1E5	1E5	4E6	2E5
Zn-65	4E3	8E4	7E4	8E6	1E5
Co-60	9E2	9E4	9E4	3E6	2E5
Sb-124	1E3	8E4	4E4	2E6	1E5
Sr-90		3E3	3E3		
Sr-89		4E4	4E4		

*Values derived for two-week ingestion/inhalation period and a dose commitment of 100 mrem to a critical organ or 30 mrem total body.

Proprietary Information

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this procedure.

STP Nuclear Operating Company

Office Memorandum

To: L. S. Barton

From: K. M. Dudley *KMD*

Subject: **2007 Emergency Response Agreement**
American Nuclear Insurers

February 1, 2007
File No.: D35.08/D43

STP Nuclear Operating Company purchases Nuclear Energy Liability Insurance to alleviate the immediate financial burden that may be incurred by members of the public due to evacuation and relocation associated with any nuclear energy related incident here at the station. The station currently procures this coverage from American Nuclear Insurers (ANI).

Through this policy, ANI has agreed to assume responsibility, except where excluded by the policy, for promptly assisting members of the public who may be adversely affected by a nuclear energy related incident here at the station. ANI has committed to have their representatives on the scene, prepared to commence the distribution of emergency funding at the earliest possible time.

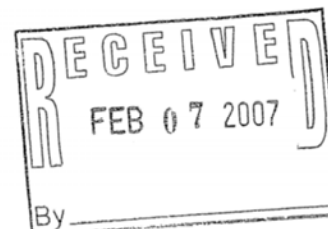
The attached endorsements shall serve as proof of evidence of the agreements and transfer of risk through December 2007 as follows:

1. Primary Financial Protection
 - Nuclear Energy Liability Insurance Association's Policy Number NF-307
2. Secondary Financial Protection
 - Nuclear Energy Liability Insurance Association's Policy Number N-0113
 - Nuclear Energy Liability Insurance Association's Policy Number N-0116
3. Suppliers & Transporters
 - Nuclear Energy Liability Insurance Association's Policy Number NS-0504

If you require additional information please contact me at extension 8698 or Ron Hyde at extension 7992.

Attachment

cc: P. L. Serra Electronic
R. G. Hyde w/o Electronic
R. D. Jones w/o Electronic
File



**NUCLEAR ENERGY LIABILITY INSURANCE
NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION**

ADVANCE PREMIUM AND STANDARD PREMIUM ENDORSEMENT

CALENDAR YEAR 2007

1. **ADVANCE PREMIUM:** It is agreed that the Advance Premium due the companies for the period designated above is: **\$937,459.00**
2. **STANDARD PREMIUM AND RESERVE PREMIUM:** In the absence of a change in the Advance Premium indicated above, it is agreed that, subject to the provisions of the Industry Credit Rating Plan, the Standard Premium is said Advance Premium and the Reserve Premium is: **\$719,265.00**

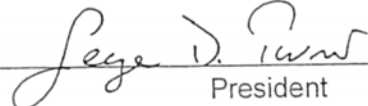
Effective Date of
this Endorsement: **January 1, 2007**
(12:01 A.M. Standard Time)

To form a part of Policy No. **NF -0307**

Issued To: **STP Nuclear Operating Company, Texas Genco, LP, City Public Service Board of San Antonio, City of Austin**

Date of Issue: **October 13, 2006**

For the subscribing companies

By 
President

Endorsement No: **100**

Countersigned by 

**NUCLEAR ENERGY LIABILITY INSURANCE
NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION**

ANNUAL PREMIUM ENDORSEMENT

CALENDAR YEAR 2007

1. **ANNUAL PREMIUM:** It is agreed that the Annual Premium due the companies for the period designated above is: **\$9,492.00**

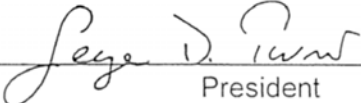
Effective Date of
this Endorsement: **January 1, 2007**
(12:01 A.M. Standard Time)

To form a part of Certificate No. N -0113

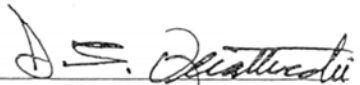
Issued To: **STP Nuclear Operating Company, Texas Genco, LP, City Public Service Board of San Antonio, City of Austin**

Date of Issue: **September 28, 2006**

For the subscribing companies

By 
President

Endorsement No: **42**

Countersigned by 

**NUCLEAR ENERGY LIABILITY INSURANCE
NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION**

ANNUAL PREMIUM ENDORSEMENT

CALENDAR YEAR 2007

1. **ANNUAL PREMIUM:** It is agreed that the Annual Premium due the companies for the period designated above is: **\$9,492.00**

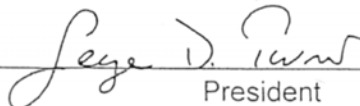
Effective Date of
this Endorsement: **January 1, 2007**
(12:01 A.M. Standard Time)

To form a part of Certificate No. N -0116

Issued To: **STP Nuclear Operating Company, Texas Genco, LP, City Public Service Board of San Antonio, City of Austin**

Date of Issue: **September 28, 2006**

For the subscribing companies

By 
President

Endorsement No: **40**

Countersigned by 

**NUCLEAR ENERGY LIABILITY INSURANCE
NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION**

ADVANCE PREMIUM AND STANDARD PREMIUM ENDORSEMENT

CALENDAR YEAR 2007

1. **ADVANCE PREMIUM:** It is agreed that the Advance Premium due the companies for the period designated above is: **\$37,499.00**
2. **STANDARD PREMIUM AND RESERVE PREMIUM:** In the absence of a change in the Advance Premium indicated above, it is agreed that, subject to the provisions of the Industry Credit Rating Plan, the Standard Premium is said Advance Premium and the Reserve Premium is: **\$28,422.00**

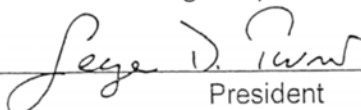
Effective Date of
this Endorsement: **January 1, 2007**
(12:01 A.M. Standard Time)

To form a part of Policy No. **NS -0504**

Issued To: **STP Nuclear Operating Company**

Date of Issue: **October 11, 2006**

For the subscribing companies

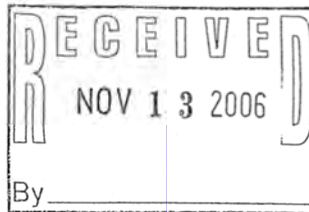
By 
President

Endorsement No: **62**

Countersigned by 



Westinghouse



P.O. Box 565
Wadsworth, Texas 77483
USA

Mr. Paul Serra, Manager
Emergency Response, Access & Communication
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

Direct tel: 361-972-7785
Direct fax: 361-972-8360
e-mail: meyerj@westinghouse.com
e-mail: gimeyer@stpegs.com
Our ref: ST-WN-NOC-06-68

October 18, 2006

STP NUCLEAR OPERATING COMPANY
SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION UNITS 1 AND 2
Westinghouse Emergency Response Plan Site Contacts

Reference: Letter of Agreement with STP Nuclear Operating Company (STPNOC)

Dear Mr. Serra:

Westinghouse Electric Company, LLC will provide general services related to nuclear steam supply operation during and following an accident situation. Westinghouse provides a capability to respond on a 24 hour a day basis. The contract that enacts this agreement is the General Service Agreement No. GSA 0023Q (latest Addendum). Attached is the latest contact list for STPNOC should such an event occur.

We acknowledge the intent of the STP Nuclear Operating Company to construct two additional units at the existing STP site. The proposed Emergency Plans for STP Units 3 and 4 are based upon the existing Emergency Plans for STP Units 1 and 2 and are practicable. Our agency is committed to participate in any further development of the current Emergency Plans, including any field demonstrations, and to execute our responsibilities under these Plans in the event of an emergency.

Westinghouse appreciates the opportunity to be of service to the STP Nuclear Operating Company. If there are any questions, or if further information is required regarding this matter, please do not hesitate to contact me.

Very truly yours,

WESTINGHOUSE ELECTRIC COMPANY

George J. Meyer
Resident Site Manager
South Texas Project

/am

Attachment

cc: J. J. Sheppard, STP
T. J. Jordan, STP

TABLE G-1
WESTINGHOUSE EMERGENCY RESPONSE ROSTER

Title	Name	Office	Home	Cell Phone
WESTINGHOUSE EMERGENCY RESPONSE DIRECTOR				
Director	Jim Gresham	412-374-4643		
1st Alternate	Bob McFetridge	412-374-5557		
Deputy Director	Rick Lee	724-722-5979		
1st Alternate	John Duryea	412-374-5320		
WESTINGHOUSE WINDSOR RESPONSE COORDINATOR				
1st Contact	Virgil Paggen	860-731-6287		
1st Alternate	Ian Richard	860-731-6289		
2nd Alternate	A. Kasparian	860-731-6386		
WESTINGHOUSE SERVICE RESPONSE				
Service Response Mgr.	Wally Trynock	724-722-5064		
1st Alternate	John Meskanik	724-722-5948		
2nd Alternate	N/A	N/A		
WESTINGHOUSE EMERGENCY NEWS COMMUNICATIONS				
ENC Manager	Vaughn Gilbert	412-374-3896		
1st Alternate	N/A	N/A		
WESTINGHOUSE EMERGENCY RESPONSE TECHNICAL SUPPORT MANAGER				
Technical Support Mgr.	Mitch Nissley	412-374-4303		
1st Alternate	Rich Prokopovich	412-374-5427		
WESTINGHOUSE EMERGENCY RESPONSE LOGISTIC MANAGER				
Logistics Manager	Lou Tylman	724-722-5256		
1st Alternate	Chuck Baker	724-722-6225		
SRT Leader	Gregg Auld	724-722-5145		
1st Alternate	Frank Garofalo	724-722-5533		
Operations Support	Don Scheef	724-722-5318		
1st Alternate	John Fischer	724-722-5661		
Health Physics Support	Wayne Vogel	724-722-5924		
1st Alternate	Cary Blotzer	724-722-5944		
2nd Alternate	Craig Wilson	724-722-5734		

TABLE G-2
EMERGENCY RESPONSE CONTACTS

Plant	Title	Name	Office	Home	Cell Phone
SOUTH TEXAS 1 & 2 TGX/THX	First Contact	George Meyer	361-972-7785		
	1st Alternate	James Gasperini	412-374-3392		
	2nd Alternate	Karen Chesko	412-374-3674		



TEXAS DEPARTMENT OF STATE HEALTH SERVICES

DAVID L. LAKEY, M.D.
COMMISSIONER

1100 West 49th Street • Austin, Texas 78756
P.O. Box 149347 • Austin, Texas 78714-9347
1-888-963-7111 • www.dshs.state.tx.us
TDD: 1-800-735-2989

September 4, 2007

Greg Gibson
Manager, Regulatory Affairs, Units 3 & 4
4000 Avenue F – Suite A
Bay City, Texas 77414

Subject: South Texas Project Units 3 & 4 Emergency Action Levels

The Texas Department of State Health Services has discussed and agreed with the proposed South Texas Project 3 & 4 Emergency Action Levels (EALs). The review and discussion occurred during a meeting with STP personnel, the Matagorda County Emergency Management Coordinator, the Governors Division of Emergency Management, and members of Texas Department of State Health Services on August 16, 2007 in Austin, Texas.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Ratliff", written over a horizontal line.

Richard Ratliff, P.E., L.M.P.,
Radiation Program Officer
Division for Regulatory Services
Department of State Health Services

Cc: Jim Ogden, Governors Division of Emergency Management
Lurinda Barton, South Texas Project Offsite Emergency Preparedness



MATAGORDA COUNTY

NATE McDONALD
COUNTY JUDGE

August 27, 2007

Greg Gibson
Manager, Regulatory Affairs, Units 3 & 4
4000 Avenue F – Suite A
Bay City, Texas 77414

Re: South Texas Project Units 3 & 4 Emergency Action Levels

Dear Mr. Gibson

The Matagorda County Office of Emergency Management has discussed and agrees with the proposed South Texas Project 3 & 4 Emergency Action Levels (EALs). The review and discussion occurred during a meeting with STP personnel, the Matagorda County Emergency Management Coordinator, and members of Texas Department of State Services on August 16, 2007 in Austin, Texas.

Sincerely,

Nate McDonald
Matagorda County Judge

Bob Watts
Matagorda County Emergency
Management Coordinator

Attachment 1 Cross Reference

Attachment 1.1 Assignment of Responsibility (Organization Control)

Planning Standard- 50.47(b)(1)

Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organization within the Emergency planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1a	Each plan shall identify the State, local, Federal and private sector organizations (including utilities), that are intended to be part of the overall response organization for Emergency Planning Zones.	B.1, B.2, B.3, B.4, B.5	A.8		
b.	Each organization and sub-organization having an operational role shall specify its concept of operations, and its relationship to the total effort.	B.2, B.3, B.4, B.5, B.6	A.7		
c.	Each plant shall illustrate these interrelationships in a block diagram.	Fig. B-1, C-1, C- 5			
d.	Each organization shall identify a specific individual by title who shall be in charge of the emergency response.	B.6, C.1, C.3	A.2.c		
e.	Each organization shall provide for 24-hour per day emergency response, including 24 hour per day manning of communications links.	B.2, B.3, B.4, B.5, C.3	A.2	GGNS 13.3-16	LOAs

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
2a	<i>Each organization shall specify the functions and responsibilities for major elements and key individuals by title, of emergency response, including the following: Command and Control, Alerting and Notification, Communications, Public Information, Accident Assessment, Public Health and Sanitation, Social Services, Fire and Rescue, Traffic Control, Emergency Medical Services, Law Enforcement, Transportation, Protective Response (including authority to request Federal assistance and to initiate other protective actions), and Radiological Exposure Control. The description of these functions shall include a clear and concise summary such as a table of primary and support responsibilities using the agency as one axis, and the function as the other. (See Section B for licensee).</i>	<i>B.1, B.2, B.3, B.4, C.2, C.3, E, G, H, K Table B-1 Figure B-1</i>	A.4	GGNS 13.3-13 GGNS 13.3-14	
b.	<i>Each plan shall contain (by reference to specific acts, codes or statutes) the legal basis for such authorities.</i>	State Plan			
3.	<i>Each plan shall include written agreements referring to the concept of operations developed between Federal, State, and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones. The agreements shall identify the emergency measures to be provided and the mutually acceptable criteria for their implementation, and specify the arrangements for exchange of information. These agreements may be provided in an appendix to the plan or the plan itself may contain descriptions of these matters and a signature page in the plan may serve to verify the agreements. The signature page format is appropriate for organizations where response functions are covered by laws, regulations or executive orders where separate written agreements are not necessary.</i>	A, B		GGNS 13.3-7	LOAs
4.	<i>Each principal organization shall be capable of continuous (24-hour) operations for a protracted period. The individual in the principal organization who will be responsible for assuring continuity of resources (technical, administrative, and material) shall be specified by title.</i>	B.4, C.1, C.3, C.4			

Attachment 1.2 Onsite Emergency Organization

Planning Standard-50.47(b)(2)

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each licensee shall specify the onsite emergency organization of plant staff personnel for all shifts and its relation to the responsibilities and duties of the normal staff complement.</i>	C.3 1.1, 2.1	A.2.a A.2.b	VEGP 13.3-8	GL 82-33
2.	<i>Each licensee shall designate an individual as emergency coordinator who shall be on shift at all times and who shall be the authority and responsibility to immediately and unilaterally initiate any emergency actions, including providing protective action recommendations to authorities responsible for implementing offsite emergency measures.</i>	C.1, C.2, C.3, C.4.1, C.4.9	A.2.c		
3.	<i>Each licensee shall identify a line of succession for the emergency coordinator position and identify the specific conditions for higher level utility officials assuming this function.</i>	C, C.3, C.3.1, C.4, C.4.1, C.4.9			
4.	<i>Each licensee shall establish the functional responsibilities assigned to the emergency coordinator and shall clearly specify which responsibilities may not be delegated to other elements of the emergency organization. Among the responsibilities which may not be delegated shall be the decision to notify and to recommend protective actions to authorities responsible for offsite emergency measures.</i>	C.2			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
5.	<i>Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity. For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both onsite and away from the site. These assignments shall cover the emergency functions in Table B-1 entitled, Minimum Staffing Requirements for Nuclear Power Plant Emergencies. The minimum on-shift staffing levels shall be as indicated in Table B-1. The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.</i>	<i>C.3, C.4, Table C-1</i>	<i>A.2 A.3 B.4</i>		<i>GL 82-33</i>
6.	<i>Each licensee shall specify the interfaces between and among the onsite functional areas of emergency activity, licensee headquarters support, local services support, and State and local government response organization. This shall be illustrated in a block diagram and shall include the onsite technical support center and the operational support (assembly) center and the licensee's near-site Emergency Operations Facility (EOF).</i>	<i>Figure F-1</i>	<i>A.3</i>		
7.	<i>Each licensee shall specify the management, administrative, and technical support personnel who will augment the plant staff as specified in the table entitled Minimum Staffing Requirements for Nuclear Power Plant Emergencies, (Table B-1) and in the following areas:</i>	<i>C.4 Table C-1</i>	<i>A.5</i>		
a.	<i>logistics support for emergency personnel, e.g., transportation, communications, temporary quarters, food and water, sanitary facilities in the field, and special equipment and supplies procurement;</i>	<i>F.8.3</i>	<i>A.5</i>		
b.	<i>technical support for planning and reentry/recovery operations;</i>	<i>L.6</i>	<i>H</i>		
c.	<i>management level interface with governmental authorities, and</i>	<i>C.4.9, C.4.13</i>	<i>E.9</i>		

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
d.	<i>release of information to news media during an emergency (coordinated with governmental authorities).</i>	<i>K.5, K.7, K.8</i>			
8.	<i>Each licensee shall specify the contractor and private organizations who may be requested to provide technical assistance to and augmentation of the emergency organization.</i>	<i>B.5</i>	<i>A.5</i>		
9.	<i>Each licensee shall identify the services to be provided by local agencies for handling emergencies, e.g., police, ambulance, medical, hospital, and fire-fighting organizations shall be specified. The licensee shall provide for transportation and treatment of injured personnel who may also be contaminated. Copies of the arrangements and agreements reached with contractor, private, and local support agencies shall be appended to the plan. The agreements shall delineate the authorities, responsibilities, and limits on the actions of the contractor, private organization, and local services support groups.</i>	<i>B.4, B.5, B.5.7, J.5</i>	<i>A.6</i>		

Attachment 1.3 Emergency Response Support and Resources

Planning Standard- 50.47(b)(3)

Arrangement for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>The Federal government maintains in-depth capability to assist licensees, States and local government through the Federal Radiological Monitoring and Assessment Plan (formerly Radiological Assistance Plan (RAP) and Interagency Radiological Assistance Plan (IRAP)). Each State and licensee shall make provisions for incorporating the Federal response capability into its operation plan, including the following:</i>				
a.	<i>specific persons by title authorized to request Federal assistance; see A.1.d., A.2.a.</i>	B.4.10	A.8	VEGP 13.3-39	
b.	<i>specific Federal resources expected, including expected times of arrival at specific nuclear facility sites; and</i>	B.4.10, B.4.11, B.4.12		GGNS 13.3-10	
c.	<i>specific licensee, State and local resources available to support the Federal response, e.g., air fields, command posts, telephone lines, radio frequencies and telecommunications centers.</i>	G.4, G.6, G.13, G.14 Addendum E-1			
2a.	<i>Each principal offsite organization may dispatch representatives to the licensee's near-site Emergency Operations Facility. (State technical analysis representative at the near site EOF are preferred.)</i>	B.2.1, G.8			
b.	<i>The licensee shall prepare for the dispatch of a representative to principal offsite governmental emergency operations centers.</i>	G.7			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
3.	<i>Each organization shall identify radiological laboratories and their general capabilities and expected availability to provide radiological monitoring and analyses services which can be used in an emergency.</i>	<i>G.9, J.12 Table H-1</i>		<i>GGNS 13.3-7</i>	
4.	<i>Each organization shall identify nuclear and other facilities, organizations or individuals which can be relied upon in an emergency to provide assistance. Such assistance shall be identified and supported by appropriate letters of agreement.</i>	<i>B.2, B.3, B.4, B.5, B.6, G.9</i>		<i>VEGP 13.3-1 VEGP 13.3-2 GGNS 13.3-9</i>	

Attachment 1.4 Emergency Classification System

Planning Standard-50.47(b)(4)

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use of the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	An emergency classification and emergency action level scheme as set forth in Appendix 1 must be established by the licensee. The specific instruments, parameters or equipment status shall be shown for establishing each emergency class, in the in-plant emergency procedures. The plan shall identify the parameter values and equipment status for each emergency class.	Table D-1 Table D-2 (Generalized Description)	B.1	VEGP 13.3-3 GGNS 13.3-18 GGNS 13.3-19 GGNS 13.3-21	BL 05-02
2.	The initiating conditions shall include the example conditions found in Appendix 1 and all postulated accidents in the Final Safety Analysis Report (FSARS) for the nuclear facility.	Table D-1 Table D-2 (Generalized Description)		VEGP 13.3-3	BL 05-02
3.	Each State and local organization shall establish an emergency classification and emergency action level scheme consistent with that established by the facility licensee.	O.2	B		
4.	Each State and local organization should have procedures in place that provide for emergency actions to be taken which are consistent with the emergency actions recommended by the nuclear facility licensee, taking into account local offsite conditions that exist at the time of the emergency.	State Plan County Plan I.6, I.6.1, I.6.2			

Attachment 1.5 Notification Methods and Procedure

Planning Standard-50.47(b)(5)

Procedures have been established for notification, by the licensee of State and local response organizations and for notification of emergency personnel by all response organizations; the content of initial and follow-up message to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each organization shall establish procedures which describe mutually agreeable bases for notification of response organizations consistent with the emergency classification and action level scheme set forth in Appendix 1. These procedures shall include means for verification of messages. The specific details of verification need not be included in the plan.</i>	<i>E.1</i>		VEGP 13.3-44	
2.	<i>Each organization shall establish procedures for alerting, notifying, and mobilizing emergency response personnel.</i>	<i>E.1, E.2, E.3, E.4</i>	<i>C</i>		
3.	<i>The licensee in conjunction with State and local organizations shall establish the contents of the initial emergency messages to be sent from the plant. These measures shall contain information about the class of emergency, whether a release is taking place, potentially affected population and areas, and whether protective measures may be necessary.</i>	<i>E.1</i>	<i>D</i>		
4.	<i>Each licensee shall make provisions for follow-up messages from the facility to offsite authorities which shall contain the following information if it is known and appropriate:</i>	<i>E.1, E.2</i>	<i>D</i>		
a.	<i>location of incident and name and telephone number (or communications channel identification) of caller;</i>	<i>E.1</i>			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
b.	date/time of incident;	E.1			
c.	class of emergency;	E.1			
d.	type of actual or projected release (airborne, waterborne, surface spill), and estimated duration/impact times;	E.1			
e.	estimate of quantity of radioactive material released or being released and the points and heights of releases;	E.1			
f.	chemical and physical form of released material, including estimates of the relative quantities and concentration of noble gases, iodines and particulates;	E.1			
g.	meteorological conditions at appropriate levels (wind speed, direction (to and from), indicator of stability, precipitation, if any);	E.1			
h.	actual or projected dose rates at site boundary; projected integrated dose at site boundary;	E.1			
i.	projected dose rates and integrated dose at the projected peak and at 2, 5 and 10 miles, including section(s) affected;	E.1			
j.	estimate of any surface radioactive contamination inplant, onsite or offsite;	E.1, E.2			
k.	licensee emergency response actions underway;	E.1			
l.	recommended emergency actions, including protective measures;	E.1			
m.	request for any needed onsite support by offsite organizations; and	E.1			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
n.	prognosis for worsening or termination of event based on plant information.	E.1			
5.	State and local government organizations shall establish a system for disseminating to the public appropriate information contained in initial and follow-up messages received from the licensee including the appropriate notification to appropriate broadcast media, e.g., the Emergency Alert System (EAS).	E.3, E.4	D.1		
6.	Each organization shall establish administrative and physical means, and the time required for notifying and providing prompt instructions to the public within the plume exposure pathway Emergency Planning Zone. (See Appendix 3). It shall be the licensee's responsibility to demonstrate that such means exist, regardless of who implements this requirement. It shall be the responsibility of the State and local governments to activate such a system.	E.1, E.2, E.3, E.4	D.1		
7.	Each organization shall provide written messages intended for the public, consistent with the licensee's classification scheme. In particular, draft messages to the public giving instructions with regard to specific protective actions to be taken by occupants of affected areas shall be prepared and included as part of the State and local plans. The role of the licensee is to provide supporting information for the messages. For ad hoc respiratory protection see Respiratory Protective Devices Manual American Industrial Hygiene Association, 1963 pp. 123-126.	E.1, E.4	D.1		

Attachment 1.6 Emergency Communications

Planning Standard-Other Documents.47(b)(6)

Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>The communication plans for emergencies shall include organizational titles and alternates for both ends of the communication links. Each organization shall establish reliable primary and backup means of communication for licensees, local, and State response organizations. Such systems should be selected to be compatible with one another. Each plan shall include:</i>				
a.	<i>provision for 24-hour per day notification to and activation of the State/local emergency response network; and at a minimum, a telephone link and alternate, including 24-hour per day manning of communications links that initiate emergency response actions.</i>	<i>E.1, E.3</i>	<i>D.3</i>		
b.	<i>provision for communication with contiguous State/local governments within the Emergency Planning Zones;</i>	<i>E.1</i>			
c.	<i>provision for communications as needed with Federal emergency response organizations;</i>	<i>E.1, E.2, E.3</i>			<i>10 CFR 73.71</i>
d.	<i>provision for communications between the nuclear facility and the licensee's near-site Emergency Operations Facility, State and local emergency operations centers, and radiological monitoring teams;</i>	<i>Addendum E-1</i>			<i>BL 80-15</i>
e.	<i>provision for alerting or activating emergency personnel in each response organization; and</i>	<i>E.2 Addendum E-1</i>	<i>C</i>		<i>BL 05-02</i>

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
f.	<i>provision for communication by the licensee with NRC headquarters and NRC Regional Office Emergency Operations Centers and the licensee's near-site Emergency Operations Facility and radiological monitoring team assembly area.</i>	<i>B.4.12, E.2</i>		<i>GGNS 13.3-28</i>	<i>BL 80-15 GL 91-14 50.72(a)(3) 50.72(a)(4) 50.72(c)(3)</i>
2.	<i>Each organization shall ensure that a coordinated communication link for fixed and mobile medical support facilities exists.</i>	<i>E.2</i>	<i>E.7</i>		
3.	<i>Each organization shall conduct periodic testing of the entire emergency communications system (see evaluation criteria H.10, N.2.a and Appendix 3).</i>	<i>Addendum E-1, N-1, E.3 E.3</i>		<i>VEGP 13.3-41</i>	<i>IN 85-44</i>

Attachment 1.7 Public Education and Information

Planning Standard-50.47(b)(7)

Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each organization shall provide a coordinated periodic (at least annually) dissemination of information to the public regarding how they will be notified and what their actions should be in an emergency. This information shall include, but not necessarily be limited to:</i>				
a.	<i>educational information on radiation;</i>	<i>K.1</i>	<i>D.2</i>		
b.	<i>contact for additional information;</i>	<i>K.1</i>	<i>D.2</i>		
c.	<i>protective measures, e.g., evacuation routes and relocation centers, sheltering, respiratory protection, radioprotective drugs; and</i>	<i>K.1</i>	<i>D.2</i>		
d.	<i>special needs of the handicapped.</i>	<i>K.1</i>			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
2.	<i>The public information program shall provide the permanent and transient adult population within the plume exposure EPZ an adequate opportunity to become aware of the information annually. The programs should include provision for written material that is likely to be available in a residence during an emergency. Updated information shall be disseminated at least annually. Signs or other measures (e.g., decals, posted notices or other means, placed in hotels, motels, gasoline stations and phone booths) shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an emergency or accident occurs. Such notices should refer the transient to the telephone directory or other source of local emergency information and guide the visitor to appropriate radio and television frequencies.</i>	<i>K.1, K.1.3, K.2, K.3, K.4</i>	<i>D.2</i>	<i>VEGP 13.3-4 GGNS 13.3-31 GGNS 13.3-32</i>	<i>Public Information Brochure</i>
3a.	<i>Each principal organization shall designate the points of contact and physical location for use by news media during an emergency.</i>	<i>K.5, K.9, G.6</i>			
b.	<i>Each licensee shall provide space which may be used for a limited number of the news media at the near site Emergency Operations Facility.</i>	<i>G.6</i>			
4a.	<i>Each principal organization shall designate a spokesperson who should have access to all necessary information.</i>	<i>K.5.5</i>			
b.	<i>Each organization shall establish arrangements for timely exchange of information among designated spokesperson.</i>	<i>K.8</i>			
c.	<i>Each organization shall establish coordinated arrangements for dealing with rumors.</i>	<i>K.10</i>			
5.	<i>Each organization shall conduct coordinated programs at least annually to acquaint news media with the emergency plans, information concerning radiation, and points of contact for release of public information in an emergency.</i>	<i>K.4.1</i>		<i>GGNS 13.3-33</i>	

Attachment 1.8 Emergency Facilities and Equipment

Planning Standard- 50.47(b)(8)

Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	Each licensee shall establish a Technical Support Center and an onsite operations support center (assembly area) in accordance with NUREG-0696, Revision 1.	G.2, G.3	E.8		GL 82-33
2.	Each licensee shall establish an Emergency Operations Facility from which evaluation and coordination of all licensee activities related to an emergency is to be carried out and from which the licensee shall provide information to Federal, State and local authorities responding to radiological emergencies in accordance with NUREG-0696, Revision 1.	G.4	E.8		GL 82-33
3.	Each organization shall establish an emergency operations center for use in directing and controlling response functions.	State Plan County Plan			
4.	Each organization shall provide for timely activation and staffing of the facilities and centers described in the plan.	C.4, E.2			
5.	Each licensee shall identify and establish onsite monitoring systems that are to be used to initiate emergency measures in accordance with Appendix 1, as well as those to be used for conducting assessment. The equipment shall include:			VEGP 13.3-45	
a.	geophysical phenomena monitors, (e.g., meteorological, hydrologic, seismic);	H.1.2, H.1.6, Table H-1			
b.	radiological monitors, (e.g., process, area, emergency, effluent, wound and portable monitors and sampling equipment);	H.1.4, H.1.5, Table H-1	E.2		

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
c.	process monitors, (e.g., reactor coolant system pressure and temperature, containment pressure and temperature, liquid levels, flow rates, status or lineup of equipment components), and	H.1.3, Table G-3			
d.	fire and combustion products detectors.	H.1.1, Table H-1			
6.	Each licensee shall make provision to acquire data from or for emergency access to offsite monitoring and analysis equipment including:				
a.	geophysical phenomena monitors, (e.g., meteorological, hydrologic, seismic);	Table H-1			
b.	radiological monitors including ratemeters and sampling devices. Dosimetry shall be provided and shall meet, as a minimum, the NRC Radiological Assessment Branch Technical Position for the Environment Radiological Monitoring Program; and	H.1.4, H.1.5, H.1.7, H.1.8, H.1.9, J.10, Table G-3	E.2		
c.	laboratory facilities, fixed or mobile.	G.9			
7.	Each organization, where appropriate, shall provide for offsite radiological monitoring equipment in the vicinity of the nuclear facility.	G.9, Table H-1	E.2		
8.	Each licensee shall provide meteorological instrumentation and procedures which satisfy the criteria in Appendix 2, and provisions to obtain representative current meteorological information from other sources.	H.1.6			
9.	Each licensee shall provide for an onsite operations support center (assembly area) which shall have adequate capacity, and supplies, including, for example, respiratory protection, protective clothing, portable lighting, portable radiation monitoring equipment, cameras and communications equipment for personnel present in the assembly area.	G.2	E.1		GL 82-33

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
10.	<i>Each organization shall make provisions to inspect, inventory and operationally check emergency equipment/instruments at least once each calendar quarter and after each use. There shall be sufficient reserves of instruments/equipment to replace those which are removed from emergency kits for calibration or repair. Calibration of equipment shall be at intervals recommended by the supplier of the equipment.</i>	<i>Table G-1</i>			
11.	<i>Each plan shall, in an appendix include identification of emergency kits by general category (protective equipment, communications equipment, radiological monitoring equipment and emergency supplies).</i>	<i>Table G-1</i>	<i>E.1</i>		
12.	<i>Each organization shall establish a central point (preferably associated with the licensee's near-site Emergency Operations Facility), for the receipt and analysis of all field monitoring data and coordination of sample media.</i>	<i>H.2</i>	<i>E.2</i>		

Attachment 1.9 Accident Assessment

Planning Standard- 50.47(b)(9)

Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each licensee shall identify plant system and effluent parameter values characteristic of a spectrum of off-normal conditions and accidents, and shall identify the plant parameter values or other information which correspond to the example initiating conditions of Appendix 1. Such parameter values and the corresponding emergency class shall be included in the appropriate facility emergency procedures. Facility emergency procedures shall specify the kinds of instruments being used and their capabilities.</i>	<i>Table D-1, Table D-2 (Generalized Description)</i>			
2.	<i>Onsite capability and resources to provide initial values and continuing assessment throughout the course of an accident shall include post-accident sampling capability, radiation and effluent monitors, in-plant iodine instrumentation, and containment radiation monitoring in accordance with NUREG-0578, as elaborated in the NRC letter to all power reactor licensees dated October 30, 1979.</i>	<i>H.1, J.10, Table H-1</i>	<i>E.2</i>		
3.	<i>Each licensee shall establish methods and techniques to be used for determining:</i>				
a.	<i>the source term of releases of radioactive material within plant systems. An example is the relationship between the containment radiation monitor(s) reading(s) and radioactive material available for release from containment.</i>	<i>J.10.1</i>	<i>E.2</i>		

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
b.	<i>the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors.</i>	J.10.1			
4.	<i>Each licensee shall establish the relationship between effluent monitor readings and onsite and offsite exposures and contamination for various meteorological conditions.</i>	J.10.1			
5.	<i>Each licensee shall have the capability of acquiring and evaluating meteorological information sufficient to meet the criteria of Appendix 2. There shall be provisions for access to meteorological information by at least the near site Emergency Operations Facility, the Technical Support Center, the Control Room and an offsite NRC center. The licensee shall make available to the State suitable meteorological data processing interconnections which will permit independent analysis by the State, of facility generated data in those States with the resources to effectively use this information.</i>	H.1.6	E.1	VEGP 13.3-12	
6.	<i>Each licensee shall establish the methodology for determining the release rate/projected doses if the instrumentation used for assessment are offscale or inoperable.</i>	H.2			
7.	<i>Each organization shall describe the capability and resources for field monitoring within the plume exposure Emergency Planning Zone which are an intrinsic part of the concept of operations for the facility.</i>	H.2			
8.	<i>Each organization, where appropriate, shall provide methods, equipment and expertise to make rapid assessments of the actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways. This shall include activation, notification means, field team composition, transportation, communication, monitoring equipment and estimated deployment times.</i>	H.2			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
9.	<i>Each organization shall have a capability to detect and measure radioiodine concentrations in air in the plume exposure EPZ as low as 10⁻⁷ uCi/cc (microcuries per cubic centimeter) under field conditions. Interference from the presence of noble gas and background radiation shall not decrease the stated minimum detectable activity.</i>	J.11			
10.	<i>Each organization shall establish means for relating the various measured parameters (e.g., contamination levels, water and air activity levels) to dose rates for key isotopes (i.e., those given in Table 3, page 18) and gross radioactivity measurements. Provision shall be made for estimating integrated dose from the projected and actual dose rates and for comparing these estimates with the protective action guides. The detailed provisions shall be described in separate procedures.</i>	H.2			
11.	<i>Arrangements to locate and track the airborne radioactive plume shall be made, using either or both Federal and State resources.</i>	H.2			

Attachment 1.10 Protective Response

Planning Standard-50.47(b)(10)

A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each licensee shall establish the means and time required to warn or advise onsite individuals and individuals who may be in areas controlled by the operator, including:</i>				
a.	<i>Employees not having emergency assignments;</i>	<i>F.3, I.1, I.2, I.3</i>			
b.	<i>Visitors;</i>	<i>F.3, I.1, I.2, I.3</i>			
c.	<i>Contractor and construction personnel; and</i>	<i>F.3, I.1, I.2, I.3</i>			
d.	<i>Other persons who may be in the public access areas on or passing through the site or within the owner controlled area.</i>	<i>I.1, I.2, I.3</i>			
2	<i>Each licensee shall make provisions for evacuation routes and transportation for onsite individuals to some suitable offsite location, including alternatives for inclement weather, high traffic density and specific radiological conditions.</i>	<i>F.5, I.3</i>		<i>GGNS 13.3-37 GGNS 13.3-38</i>	
3.	<i>Each licensee shall provide for radiological monitoring of people evacuated from the site.</i>	<i>F.5, I.3, J.6</i>			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
4.	<i>Each licensee shall provide for the evacuation of onsite non-essential personnel in the event of a Site or General Emergency and shall provide a decontamination capability at or near the monitoring point specified in J.3.</i>	<i>F.5, I.3, J.6</i>			<i>BL 05-02</i>
5.	<i>Each licensee shall provide for a capability to account for all individuals onsite at the time of the emergency and ascertain the names of missing individuals within 30 minutes of the start of an emergency and account for all onsite individuals continuously thereafter.</i>	<i>F.3, I.2, I.3</i>			
6.	<i>Each licensee shall, for individuals remaining or arriving onsite during the emergency, make provisions for:</i>				
a.	<i>Individual respiratory protection;</i>	<i>J.9</i>			
b.	<i>Use of protective clothing; and</i>	<i>J.3</i>			
c.	<i>Use of radioprotective drugs, (e.g. individual thyroid protection).</i>	<i>J.9</i>			
7.	<i>Each licensee shall establish a mechanism for recommending protective actions to the appropriate State and local authorities. These shall include Emergency Action Levels corresponding to projected dose to the population-at-risk, in accordance with Appendix 1 and with the recommendations set forth in Tables 2.1 and 2.2 of the Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA-400-R-92-001). As specified in Appendix 1, prompt notification shall be made directly to the offsite authorities responsible for implementing protective measures within the plume exposure pathway Emergency Planning Zone.</i>	<i>I.4, I.5</i>	<i>B</i>	<i>GGNS 13.3-40</i>	<i>BL 05-02 RIS 2004-13</i>
8.	<i>Each licensee's plan shall contain time estimates for evacuation within the plume exposure EPZ. These shall be in accordance with Appendix 4.</i>	<i>I.6.1</i>			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
9.	<i>Each State and local organization shall establish a capability for implementing protective measures based upon protective action guides and other criteria. This shall be consistent with the recommendations for EPA regarding exposure resulting from passage of radioactive airborne plumes, (EPA-400-R-92-001) and with those of DHEW (DHHS)/FDA regarding radioactive contamination of human food and animal feeds as published in the Federal Register of December 15, 1978 (43 FR 58790).</i>	<i>State Plan</i>			
10.	<i>The organization's plans to implement protective measures for the plume exposure pathway shall include:</i>				
a.	<i>Maps showing evacuation routes, evacuation areas, preselected radiological sampling and monitoring points, relocation centers in host areas, and shelter areas; (identification of radiological sampling and monitoring points shall include the designators in Table J-1 or an equivalent uniform system described in the plan);</i>	<i>Figures I-1, I-2, H.2</i>			
b.	<i>Maps showing population distribution around the nuclear facility. This shall be by evacuation areas (licensees shall also present the information in a sector format):</i>	<i>Figure I-1</i>			
c.	<i>Means for notifying all segments of the transient and resident population;</i>	<i>E.3 Figure E-1</i>		<i>VEGP 13.3-13</i>	
d.	<i>Means for protecting those persons whose mobility may be impaired due to such factors as institutional or other confinement;</i>	<i>State Plan County Plan</i>			
e.	<i>Provisions for the use of radioprotective drugs, particularly for emergency workers and institutionalized persons within the plume exposure EPZ whose immediate evaluation may be infeasible or very difficult, including quantities, storage, and means of distribution.</i>	<i>State Plan County Plan</i>			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
f.	<i>State and local organizations' plans should include the method by which decisions by the State Health Department for administering radioprotective drugs to the general population are made during an emergency and the pre-determined conditions under which such drugs may be used by offsite emergency workers;</i>	<i>State Plan County Plan</i>			
g.	<i>Means of relocation;</i>	<i>State Plan County Plan</i>			
h.	<i>Relocation centers in host areas which are at least 5 miles, and preferably 10 miles, beyond the boundaries of the plume exposure emergency planning zone; (See J.12).</i>	<i>State Plan County Plan</i>			
i.	<i>Projected traffic capacities of evacuation routes under emergency conditions;</i>	<i>State Plan County Plan</i>			
j.	<i>Control of access to evacuated areas and organization responsibilities for such control;</i>	<i>State Plan County Plan</i>			
k.	<i>Identification of and means for dealing with potential impediments (e.g., seasonal impassability of roads) to use of evacuation routes, and contingency measures;</i>	<i>State Plan County Plan</i>			
l.	<i>Time estimates for evacuation of various sectors and distances based on a dynamic analysis (time-motion study under various conditions) for the plume exposure pathway emergency planning zone (See Appendix 4); and</i>	<i>County Plan</i>			
m.	<i>The bases for the choice of recommended protective actions from the plume exposure pathway during emergency conditions. This shall include expected local protection afforded in residential units or other shelter for direct and inhalation exposure, as well as evacuation time estimates.</i>	<i>Addendum I-1</i>	<i>B</i>		

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
11.	<i>Each State shall specify the protective measures to be used for the ingestion pathway, including the methods for protecting the public from consumption of contaminated food-stuffs. This shall include criteria for deciding whether dairy animals should be put on stored feed. The plan shall identify procedures for detecting contamination, for estimating the dose commitment consequences of uncontrolled ingestion, and for imposing protection procedures such as impoundment, decontamination, processing, decay, product diversion, and preservation. Maps for recording survey and monitoring data, key land use data (e.g., farming), dairies, food processing plants, water sheds, water supply intake and treatment plants and reservoirs shall be maintained. Provisions for maps showing detailed crop information may be by including reference to their availability and location and a plan for their use. The maps shall start at the facility and include all of the 50-mile ingestion pathway EPZ. Up-to-date lists of the name and location of all facilities which regularly process milk products and other large amounts of food or agricultural products originating in the ingestion pathway Emergency Planning Zone, but located elsewhere, shall be maintained.</i>	<i>State Plan</i>			
12.	<i>Each organization shall describe the means for registering and monitoring of evacuees at relocation centers in host areas. The personnel and equipment available should be capable of monitoring within about a 12 hour period all residents and transients in the plume exposure EPZ arriving at relocation centers.</i>	<i>State Plan County Plan</i>			

Attachment 1.11 Radiological Exposure Control

Planning Standard-50.47(b)(11)

Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each licensee shall establish onsite exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Actions Guides (EPA-400-R-92-001) for;</i>				
a.	<i>removal of injured persons;</i>	<i>J.1.1</i>		<i>GGNS 13.3-30</i>	
b.	<i>undertaking corrective actions;</i>	<i>J.1.1</i>		<i>GGNS 13.3-39</i>	
c.	<i>performing assessment actions;</i>	<i>J.1</i>			
d.	<i>providing first aid;</i>	<i>J.1</i>			
e.	<i>performing personnel decontamination;</i>	<i>J.1</i>	<i>E.3</i>		
f.	<i>providing ambulance service; and</i>	<i>J.1</i>	<i>E.6</i>		
g.	<i>providing medical treatment services.</i>	<i>J.1</i>	<i>E.7</i>		

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
2.	<i>Each licensee shall provide an onsite radiation protection program to be implemented during emergencies, including methods to implement exposure guidelines. The plan shall identify individual(s), by position or title, who can authorize emergency workers to receive doses in excess of 10 CFR Part 20 limits. Procedures shall be worked out in advance for permitting onsite volunteers to receive radiation exposures in the course of caring out lifesaving and other emergency activities. These procedures shall include expeditious decision making and a reasonable consideration of relative risks.</i>	J.1		GGNS 13.3-49	
3.a	<i>Each organization shall make provision for 24-hour-per-day capability to determine the doses received by emergency personnel involved in any nuclear accident, including volunteers. Each organization shall make provisions for distribution of dosimeters, both self-reading and permanent record devices.</i>	J.2			
b.	<i>Each organization shall ensure that dosimeters are read at appropriate frequencies and provide for maintaining dose records for emergency workers involved in any nuclear accident.</i>	J.2			
4.	<i>Each State and local organization shall establish the decision chain for authorizing emergency workers to incur exposures in excess of the EPA General Public Protective Action Guides (i.e., EPA PAGs for emergency workers and lifesaving activities).</i>	N/A			
5a.	<i>Each organization as appropriate, shall specify action levels for determining the need for decontamination.</i>	J.3	E.3		
b.	<i>Each organization, as appropriate, shall establish the means for radiological decontamination of emergency personnel wounds, supplies, instruments and equipment, and for waste disposal.</i>	J.5	E.3		
6	<i>Each licensee shall provide onsite contamination control measures including:</i>				

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
a.	area access control;	J.3			
b.	drinking water and food supplies;	J.4			
c.	criteria for permitting return of areas and items to normal use, see Draft ANSI 13.12.	J.3			
7.	Each licensee shall provide the capability for decontaminating relocated onsite personnel, including provisions for extra clothing and decontaminants suitable for the type of contamination expected, with particular attention given to radioiodine contamination of the skin.	J.6			

Attachment 1.12 Medical and Public Health Support

Planning Standard-50.47(b)(12)

Arrangements are made for medical services for contaminated injured individuals.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each organization shall arrange for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals.</i>	<i>B.4.5, J.5</i>	<i>E.5</i>		
2.	<i>Each licensee shall provide for onsite first aid capability.</i>	<i>F.6, G.11, J.5</i>	<i>E.4</i>		
3.	<i>Each State shall develop lists indicating the location of public, private and military hospitals and other emergency medical services facilities within the State or contiguous States considered capable of providing medical support for any contaminated injured individual. The listing shall include the name, location, type of facility and capacity and any special radiological capabilities. These emergency medical services should be able to radiologically monitor contamination personnel, and have facilities and trained personnel able to care for contaminated injured persons.</i>	<i>State Plan</i>			
4.	<i>Each organization shall arrange for transporting victims of radiological accidents to medical support facilities.</i>	<i>B.4, B.5.7, F.7, J.5</i>	<i>E.6</i>		

Attachment 1.13 Recovery and Reentry Planning and Post-Accident Operations

Planning Standard-50.47(b)(13)

General plans for recovery and reentry are developed.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each organization, as appropriate, shall develop general plans and procedures for reentry and recovery and describe the means by which decisions to relax protective measures (e.g., allow reentry into an evacuated area) are reached. This process should consider both existing and potential conditions.</i>	<i>L.1, L.2, L.3, L.4, L.5, L.6</i>	<i>H</i>		
2.	<i>Each licensee plan shall contain the position/title, authority and responsibilities of individuals who will fill key positions in the facility recovery organization. This organization shall include technical personnel with responsibilities to develop, evaluate and direct recovery and reentry operations. The recovery organization recommended by the Atomic Industrial Forum's Nuclear Power Plant Emergency Response Plan dated October 11, 1979, is an acceptable framework.</i>	<i>L.6</i>	<i>H</i>		
3.	<i>Each licensee and State plan shall specify means for informing members of the response organizations that a recovery operation is to be initiated, and of any changes in the organizational structure that may occur.</i>	<i>L.7</i>			
4.	<i>Each plan shall establish a method for periodically estimating total population exposure.</i>	<i>L.4</i>		VEGP 13.3-11	

Attachment 1.14 Exercises and Drills

Planning Standard-50.47(b)(14)

Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1a.	<i>An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. The emergency preparedness exercise shall simulate an emergency that results in offsite radiological releases which would require response by offsite authorities. Exercises shall be conducted as set forth in NRC and FEMA rules.</i>	N.1	F.1		
b.	<i>An exercise shall include mobilization of State and local personnel and resources adequate to verify the capability to respond to an accident scenario requiring response. The organization shall provide for a critique of the annual exercise by Federal and State observers/evaluators. The scenario should be varied from year to year such that all major elements of the plans and preparedness organizations are tested within a five-year period. Each organization should make provisions to start an exercise between 6:00 p.m. and midnight, and another between midnight and 6:00 a.m. once every six years. Exercises should be conducted under various weather conditions. Some exercises should be unannounced.</i>	N.1	F.1		
2.	<i>A drill is a supervised instruction period aimed at testing, developing and maintaining skills in a particular operation. A drill is often a component of an exercise. A drill shall be supervised and evaluated by a qualified drill instructor. Each organization shall conduct drills, in addition to the annual exercise at the frequencies indicated below:</i>				

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
a.	<i>Communication Drills- Communications with State and local governments within the plume exposure pathway Emergency Planning Zone shall be tested monthly. Communications with Federal emergency response organizations and States within the ingestion pathway shall be tested quarterly. Communications between the nuclear facility, State and local emergency operations centers, and field assessment teams shall be tested annually. Communication drills shall also include the aspect of understanding the content of messages.</i>	<i>N.1, Addendum N-1</i>			
b.	<i>Fire Drills- Fire drills shall be conducted in accordance with the plant (nuclear facility) technical specifications.</i>	<i>Addendum N-1</i>	<i>F.1.iv</i>		
c.	<i>Medical Emergency Drills-A medical emergency drill involving a simulated contaminated individual which contains provisions for participation by the local support services agencies (i.e., ambulance and offsite medical treatment facility) shall be conducted annually. The offsite portions of the medical drill may be performed at part of the required annual exercise</i>	<i>Addendum N-1</i>	<i>F.1.vii F.1.vi</i>		
d.	<i>Radiological Monitoring Drills-Plant environs and radiological monitoring drills (onsite and offsite) shall be conducted annually. These drills shall include collection and analysis of all sample media (e.g., water, vegetation, soil and air), and provisions for communications and record keeping. The State drills need not be at each site. Where appropriate, local organization shall participate</i>	<i>Addendum N-1</i>	<i>F.1.iii</i>		
e.	<i>Health Physics Drills</i>		<i>F.1.iii</i>		
	<i>(1) Health Physics drills shall be conducted semi-annually which involve response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment. The State drills need not be at each site.</i>	<i>Addendum N-1</i>			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
	<i>(2) Analysis of inplant liquid samples with simulated elevated radiation levels shall be included in Health Physics drills annually. These drills will include appropriate radiation protection and contamination controls.</i>	Addendum N-1			
3.	<i>Each organization shall describe how exercises and drills are to be carried out to allow free play for decision making and to meet the following objectives. Pending the development of exercise scenarios and exercise evaluation guidance by NRC and FEMA the scenarios for use in exercises and drills shall include but not be limited to, the following:</i>		F.1		
a.	<i>The basic objective(s) of each drill and exercise and appropriate evaluation criteria:</i>	N.1.1, N.2			
b.	<i>The date(s), time period, place(s) and participating organization</i>	Addendum N-1, N.2.2,			
c.	<i>The simulated events;</i>	N.2			
d.	<i>A time schedule of real and simulated initiating events</i>	N.2			
e.	<i>A narrative summary describing the conduct of the exercises or drills to include such things as simulated casualties, offsite fire department assistance, rescue of personnel, use of protective clothing, deployment of radiological monitoring teams, and public information activities; and</i>	N.2			BL 05-02
f.	<i>A description of the arrangements for and advance materials to be provided to official observers.</i>	N.2.2			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
4.	<i>Official observers from Federal, State or local governments will observe, evaluate, and critique the required exercises. A critique shall be scheduled at the conclusion of the exercise to evaluate the ability of organizations to respond as called for in the plan. The critique shall be conducted as soon as practicable after the exercise, and formal evaluation should result from the critique.</i>	N.1, N.2.2			
5.	<i>Each organization shall establish means for evaluating observer and participant comments on areas needing improvement, including emergency plan procedural changes, and for assigning responsibility for implementing corrective actions. Each organization shall establish management control used to ensure that corrective actions are implemented.</i>	N.1	F.2	VEGP 13.3-10	

Attachment 1.15 Radiological Emergency Response Training

Planning Standard-50.47(b)(15)

Radiological emergency response training is provided to those who may be called on to assist in an emergency.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	<i>Each organization shall assure the training of appropriate individuals.</i>				
a.	<i>Each facility to which the plant applies shall provide site specific emergency response training for those offsite emergency organizations who may be called upon to provide assistance in the event of an emergency.</i>	M.8		GGNS 13.3-55	
b.	<i>Each offsite response organization shall participate in and receive training. Where mutual aid agreements exist between local agencies such as fire, police and ambulance/rescue, the training shall also be offered to the other departments who are members of the mutual aid district.</i>	N/A			
2.	<i>The training program for members of the onsite emergency organization shall, besides classroom training, include practical drills in which each individual demonstrates ability to perform his assigned emergency function. During the practical drills, on-the-spot correction of erroneous performance shall be made and a demonstration of the proper performance offered by the instructor.</i>	M.6	F.2		
3.	<i>Training for individuals assigned to licensee first aid teams shall include courses equivalent to Red Cross Multi-Media.</i>	M.7			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
4.	<i>Each organization shall establish a training program for instructing and qualifying personnel who will implement radiological emergency response plans. The specialized initial training and periodic retraining programs (including the scope, nature and frequency) shall be provided in the following categories:</i>				
a.	<i>Directors or coordinators of the response organizations;</i>	<i>M.3</i>	<i>F.1.i</i>		
b.	<i>Personnel responsible for accident assessment;</i>	<i>M.4</i>	<i>F.1.ii</i>		
c.	<i>Radiological monitoring teams and radiological analysis personnel;</i>	<i>M.4</i>	<i>F.1.iii</i>		
d.	<i>Police, security and fire fighting personnel;</i>	<i>M.3, M.8</i>	<i>F.1.iv</i>		
e.	<i>Repair and damage control/correctional action teams (onsite);</i>	<i>M.3</i>	<i>F.1.v</i>		
f.	<i>First aid and rescue personnel;</i>	<i>M.1, M.4</i>	<i>F.1.vi</i>		
g.	<i>Local support services personnel including Civil Defense/Emergency Service personnel;</i>	<i>M.8</i>			
h.	<i>Medical support personnel;</i>	<i>M.4</i>			
i.	<i>Licensee's headquarters support personnel;</i>	<i>M.3</i>	<i>F.1.viii</i>		
j.	<i>Personnel responsible for transmission of emergency information and instructions.</i>	<i>M.4</i>			
5.	<i>Each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities.</i>	<i>M.2.3</i>			

Attachment 1.16 Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans.

Planning Standard-50.47(b)(16)

Responsibilities for the plan development and review and for distribution of emergency plans are established, and planners are properly trained.

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
1.	Each organization shall provide for the training of individuals responsible for the planning effort.	M.2	G		
2.	Each organization shall identify by title the individual with the overall authority and responsibility for radiological emergency response planning.	O.1	G		
3.	Each organization shall designate an Emergency Planning Coordinator with responsibility for the development and updating of emergency plans and coordination of these plans with other response organizations.	O.1	G		
4.	Each organization shall update its plan and agreements as needed, review and certify it to be current on an annual basis. The update shall take into account changes identified by drills and exercises.	O.2, O.3			
5.	The emergency response plans and approved changes to the plans shall be forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. Revised pages shall be dated and marked to show where changes have made.	O.1		GGNS 13.3-56	
6.	Each plan shall contain a detailed listing of supporting plans and their source.	Attachment 2, A.2, B.2, B.2.1, B.2.2, B.3			
7.	Each plan shall contain as an appendix listing, by title, procedures required to implement the plan. The listing shall include the section(s) of the plan to be implemented by each procedure.	Attachment 2		VEGP 13.3-5	
8.	Each plan shall contain a specific table of contents. Plans submitted for review should be cross-referenced to these criteria.	Table-of- Contents			

	NUREG-0654-Evaluation Criteria	Plan Section	Appendix E IV	RAIs	Other Documents
9.	<i>Each licensee shall arrange for and conduct independent reviews of the emergency preparedness program at least every 12 months. (An independent review is one conducted by any competent organization either internal or external to the licensee's organization, but who are not immediately responsible for the emergency preparedness program). The review shall include the emergency plan, its implementing procedures and practices, training, readiness testing, equipment, and interfaces with State and local governments. Management controls shall be implemented for evaluation and correction of review findings. The results of the review, along with recommendations for improvements, shall be documented, reported to appropriate licensee corporate and plant management, and involved Federal, State and local organizations, and retained for a period of five years.</i>	O.3, O.4		VEGP 13.3-5(d)	10CFR50.54(t)
10.	<i>Each organization shall provide for updating telephone numbers in emergency procedures at least quarterly.</i>	Addendum E-1			

Attachment 2 Implementing Procedures

<u>Procedure</u>	<u>Plan Section</u>
0ERP01-ZV-EF01 EOF Director	C
0ERP01-ZV-EF02 Deputy EOF Director	N/A
0ERP01-ZV-EF03 Radiological Director	C
0ERP01-ZV-EF04 Technical Director	C
0ERP01-ZV-EF07 Support Organization Director	C
0ERP01-ZV-EF08 Licensing Director	C
0ERP01-ZV-EF09 Procurement/Resources Supervisor	F
0ERP01-ZV-EF10 Offsite Field Team Supervisor	J
0ERP01-ZV-EF11 Records Supervisor	N/A
0ERP01-ZV-EF12 Communications Systems Supervisor	N/A
0ERP01-ZV-EF15 Dose Assessment Specialist	H, I, J
0ERP01-ZV-EF17 System Status Evaluator	N/A
0ERP01-ZV-EF18 Offsite Agency Communicator	N/A
0ERP01-ZV-EF19 Matagorda County EOC Liaison	N/A
0ERP01-ZV-EF20 State of Texas Liaison	N/A
0ERP01-ZV-EF21 Federal Response Agency Liaison	N/A
0ERP01-ZV-EF22 Emergency Operations Facility Liaison	N/A
0ERP01-ZV-EF24 Support Orientation Coordinator	N/A
0ERP01-ZV-EF25 Site Public Affairs Coordinator	K
0ERP01-ZV-EF26 Materials Engineer	N/A
0ERP01-ZV-EF27 Engineering Assistant	N/A
0ERP01-ZV-EF28 Assistant Support Organization Director	F
0ERP01-ZV-IN01 Emergency Classification	D, H
0ERP01-ZV-IN02 Notifications to Offsite Agencies	D, E, F, H, I
0ERP01-ZV-IN03 Emergency Response Organization Notification	E, F
0ERP01-ZV-IN04 Assembly and Accountability	F, I
0ERP01-ZV-IN05 Site Evacuation	F, I, J
0ERP01-ZV-IN06 Radiological Exposure Guideline	F, H, I, J
0ERP01-ZV-IN07 Offsite Protective Action Recommendations	H, I
0ERP01-ZV-OF01 Alternate Emergency Operations Facility Activation, Operation, and Deactivation	G
0ERP01-ZV-OF02 Joint Information Center Activation, Operations, and Deactivation	C, G, K
0ERP01-ZV-OS01 OSC Coordinator	C
0ERP01-ZV-OS02 Assistant OSC Coordinator	C
0ERP01-ZV-OS03 Radiological Coordinator	C
0ERP01-ZV-OS04 Security Coordinator	C

STP 3 & 4**Emergency Plan**

<u>Procedure</u>	<u>Plan Section</u>
0ERP01-ZV-OS05 Materials Handler	N/A
0ERP01-ZV-OS06 Emergency Teams	C
0ERP01-ZV-RE01 Recovery Operations	F, L
0ERP01-ZV-RE02 Documentation	L
0ERP01-ZV-SH01 Shift Supervisor	C, H
0ERP01-ZV-SH02 Acting Radiological Manager	C
0ERP01-ZV-SH03 Acting Security Manager	C
0ERP01-ZV-SH04 Acting OSC Coordinator	C
0ERP01-ZV-TP01 Offsite Dose Calculations	F, H, I, J
0ERP01-ZV-TP02 Offsite Field Teams	H, I, J
0ERP01-ZV-TP03 Severe Accident Management Guidelines	C
0ERP01-ZV-TS01 TSC Manager	C
0ERP01-ZV-TS02 Assistant TSC Manager	N/A
0ERP01-ZV-TS03 Operations Manager	C
0ERP01-ZV-TS04 Radiological Manager	C, H, I, J
0ERP01-ZV-TS05 Chemical/Radiochemical Manager	N/A
0ERP01-ZV-TS06 Maintenance Manager	C
0ERP01-ZV-TS07 Technical Manager	C
0ERP01-ZV-TS08 Security Manager	C
0ERP01-ZV-TS09 Administrative Manager	C
0ERP01-ZV-TS11 Engineering Supervisor	N/A
0POP04-ZO-0004 Personnel Emergencies	E, F, J
0PGP03-ZA-0106 Emergency Medical Response Plan	F, J
0PGP03-ZT-0139 Emergency Preparedness Training Program	M
0PGP05-ZV-0001 Emergency Response Exercises and Drills	M, N
0PGP05-ZV-0002 Emergency Response Activities Schedule	E, N
0PGP05-ZV-0003 Emergency Response Organization	C, F
0PGP05-ZV-0005 Emergency Response Program	A, O
0PGP05-ZV-0006 Emergency Notification and Response System	C
0PGP05-ZV-0007 Prompt Notification System	E, G
0PGP05-ZV-0009 Emergency Facilities Inventories and Inspections	G, O
0PGP05-ZV-0010 Emergency Plan Revision	A, O
0PGP07-ZA-0011 Communications System	E
0PGP05-ZV-0011 Emergency Communications	E, G
0PGP05-ZV-0017 Severe Accident Management Guidelines	C

Attachment 3 Glossary

- (1) *ALARA (As Low As Reasonably Achievable): A radiation protection philosophy requiring that personnel exposure to radiation and radioactive material be kept not only within regulatory limits but be maintained As Low As Reasonably Achievable in the light of current technology with appropriate consideration for economic and social factors and for the benefits to be expected. ALARA applies not only to minimizing occupational exposure to radiation workers, but also to limiting the radioactivity of plant effluent and minimizing the potential for exposure to the public.*
- (2) *ANNUAL: Based on a calendar year unless otherwise designated.*
- (3) *COMMITTED DOSE EQUIVALENT (CDE): Total Dose from internally deposited radionuclide over subsequent 50 year period to a specific organ.*
- (4) *COMMITTED EFFECTIVE DOSE EQUIVALENT (CEDE): Sum of risk-weighted Committed Dose Equivalents to organs.*
- (5) *CODE OF FEDERAL REGULATIONS: The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The Code is divided into 50 titles that represent broad areas subject to Federal regulation. Each title is divided into chapters that usually bear the name of the issuing agency. Each chapter further subdivided into parts covering specific regulatory areas.*
- (6) *COLD SHUTDOWN: A reactor condition in which the coolant temperature has been reduced to 200° F or below and the pressure has essentially been reduced to atmospheric pressure.*
- (7) *CONTAMINATED AREA: An area where radioactive material is deposited where it is not desired.*
- (8) *CO-OWNER - One of the four owners of the South Texas Project Electric Generating Station.*
- (9) *DEEP DOSE EQUIVALENT (DDE): Dose equivalent from external radiation at a tissue depth of 1 centimeter.*
- (10) *DERIVED AIR CONCENTRATION (DAC): The concentration of a given radionuclide in air.*
- (11) *DOSE (Radiation): The quantity of radiation absorbed per unit of mass by the body or by any portion of the body. The unit of radiation dose is the RAD.*
- (12) *DOSE EQUIVALENT: Quantity that expresses all radiations on a common scale for calculating the absorbed dose. It is defined as the product of the absorbed dose in rads and certain modifying factors. The unit is rem.*
- (13) *DOSE RATE: Dose delivered per unit time.*

- (14) *DOSIMETER: An instrument used for measuring the absorbed dose, exposure, or similar radiation quantity.*
- (15) *DOSIMETRY: A system of dosimeters for evaluating the absorbed dose, exposure, or similar radiation quantity.*
- (16) *EMERGENCY ALERT SYSTEM (EAS): A network of broadcast stations and interconnecting facilities authorized by the Federal Communications Commission to operate in a controlled manner during a war, state of public peril, disaster or other national, state and local emergencies.*
- (17) *EMERGENCY PLANNING ZONE (EPZ): A generic area defined about a nuclear facility to facilitate offsite emergency planning and develop a significant response base. It is defined for the plume and ingestion exposure pathways.*
- (18) *EVACUATION: The removal of people from an area on an emergency basis to avoid or reduce possible short term radiation exposure.*
- (19) *EXPOSURE: Being exposed to ionizing radiation or to radioactive material.*
- (20) *EXTERNAL DOSE: Dose from a source of radioactive material outside the body.*
- (21) *FILTER, HEPA: High-efficiency particulate air filter.*
- (22) *FRISKER: Radiation monitoring equipment. This is a hand-held probe that is slowly passed near the area of interest to determine the presence or absence of radioactive material.*
- (23) *GAMMA RAYS: High-energy, short-wavelength electromagnetic radiation. Gamma rays are essentially similar to x-rays, but are usually more energetic and are nuclear in origin.*
- (24) *GASEOUS EFFLUENT STREAM: Processed gaseous wastes containing radioactive materials resulting from the plant operation.*
- (25) *GUIDELINES: The Severe Accident Management Guidelines are designated guidelines rather than procedures, because the specific actions discussed in the guidelines are not requirements, but rather are subject to evaluation and may be rejected or implemented according to the circumstances.*
- (26) *HEALTH PHYSICS:*
- *A profession devoted to the protection of man and his environment from unwarranted radiation exposure.*
 - *A general term used as a modifying phrase that may refer to facilities, equipment, programs, etc. used in the discipline of health physics.*

- (27) *HIGH RADIATION AREA: Any area, accessible to personnel, in which there exists radiation originating in whole or in part within licensed material at such levels that a dose equivalent could be received in any one hour in excess of 100 millirem at 30 centimeters.*
- (28) *HOSTILE ACTION: An act toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, takes hostages, and/or intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power plant. Nonterrorism-based EALs should be used to address such activities, (e.g., violent acts between individuals in the owner controlled area.)*
- (29) *INGESTION EXPOSURE PATHWAY (IPZ): The principal exposure from this pathway would be from ingestion of contaminated water or foods such as milk or fresh vegetables. The duration of principal exposures could range in length from hours to months.*
- (30) *INSTITUTE OF NUCLEAR POWER OPERATIONS (INPO): An organization established by the utilities to set up standardized operations. By Letter of Agreement, INPO agrees to provide the service provided by their organization, coordinate the activities of the organization and provide telephone contacts of the organization during an emergency at the Station.*
- (31) *INTERNAL DOSE: Dose from a source of radioactive material within the body (as a result of deposition of radionuclides in body tissue).*
- (32) *IONIZATION CHAMBER: An instrument that detects and measures ionizing radiation by measuring the electrical current that flows when radiation ionizes gas in a chamber, making the gas a conductor of the electricity.*
- (33) *JOINT INFORMATION CENTER (JIC): A Center set up in a central location where public information officers from the involved agencies come together to ensure coordination of information to be released to the media and the public. This center becomes the central point for media access to latest developments and emergency information. All information released is coordinated among the agencies involved to ensure its consistency and accuracy.*
- (34) *LIQUID EFFLUENT STREAM: Processed liquid wastes containing radioactive materials resulting from the operation of a nuclear power reactor.*
- (35) *LOSS OF COOLANT ACCIDENT (LOCA): A loss of coolant accident can result from an opening in the primary cooling system, such as a pipe break or a stuck open relief valve.*
- (36) *MONITOR (Radiation): A radiation detector whose purpose is to measure the level of ionizing radiation (or quantity of radioactive material).*

- (37) **MONITORING (Radiation):** *The continuous or periodic collection and assessment of pertinent information:*
- *Determine the adequacy of radiation protection practices.*
 - *Ascertain potentially significant changes in conditions or protection performance.*
- (38) **NUREG-0654 (Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants):** *The purpose of this guidance and upgraded acceptance criteria is to provide a basis for NRC licensees, and State and local governments to develop radiological emergency plans and improve emergency preparedness.*
- (39) **OCCUPATIONAL DOSE:** *A dose received by a permanent or temporary employee while engaged in activities relating to the use, possession, or surveillance of licensed radioactive material or sources of ionizing radiation. Occupational dose shall not include any exposure of an individual to radiation for the purpose of medical diagnosis or therapy. Determination of occupational dose is the responsibility of the licensee.*
- (40) **PERSONNEL MONITORING EQUIPMENT:** *Devices designed to be worn or carried by an individual for the purpose of measuring occupational radiation doses, e.g. thermoluminescent dosimeters, pocket dosimeters, and finger badges.*
- (41) **PLUME EXPOSURE PATHWAY:** *The principal exposure sources from this pathway are:*
- *external exposure to gamma radiation from the plume and from deposited materials and*
 - *inhalation exposure from the passing radioactive plume.*
- (42) **POCKET DOSIMETER:** *An ionization chamber carried or worn by an individual for personnel dose monitoring.*
- (43) **PORTAL MONITOR:** *A walk-through radiation detector whose purpose is to detect beta and gamma emitting contamination on personnel exiting selected areas.*
- (44) **POSTED AREA:** *An area in which radiation and/or contamination exists or might exist at levels such that the use of warning signs or devices is required.*
- (45) **PRIMARY COOLANT or REACTOR COOLANT SYSTEM:** *The fluid circulated through the reactor to remove heat.*
- (46) **PROJECTED DOSE:** *An estimate of the radiation dose that affected individuals could potentially receive if protective actions are not taken.*
- (47) **PROTECTION FACTOR:** *A measure of the protection afforded by a respirator; the ratio of the concentration of the radionuclide in the ambient atmosphere to the concentration inside the respiratory equipment (usually inside the facepiece) under conditions of use.*

- (48) *PROTECTIVE ACTION: An action taken to avoid or reduce a projected dose.*
- (49) *PROTECTIVE CLOTHING: Used interchangeably with the term anti-contamination clothing and has the same general meaning in radiation protection procedures.*
- (50) *RAD: A measure of the dose produced by directly or indirectly ionizing radiation in terms of the energy absorbed per unit mass of any irradiated material. One rad is the dose corresponding to 100 ergs of absorbed energy per gram of irradiated material.*
- (51) *RADIATION (Ionizing): Any or all of the following: alpha, beta, gamma, X-rays, neutrons, high speed protons or electrons, and other atomic particles (sound, radio waves, visible, and infrared or ultraviolet light are non-ionizing forms of radiation).*
- (52) *RADIATION AREA: Any area, accessible to personnel, in which radiation levels could result in an individual receiving a dose equivalent in excess of 5 millirem in 1 Hour at 30 centimeters.*
- (53) *RADIATION EXPOSURE: Refers very broadly to the act or state of being exposed to ionizing radiation.*
- (54) *RADIATION PROTECTION: Used interchangeably with the term health physics.*
- (55) *RADIATION WORK PERMIT (RWP): A document providing radiological evaluation and authorization to perform specific activities involving personnel exposure to ionizing radiation or radioactive material. It describes the radiological conditions and specifies radiation protection controls to be used when performing the activities.*
- (56) *RADIOACTIVE CONTAMINATION: The presence of radioactive material in an undesired location. Contamination may be loose, fixed, or present in air.*
- (57) *RADIONUCLIDE: A radioactive nuclide is one that has the capability of spontaneously emitting radiation.*
- (58) *REACTOR TRIP (SCRAM): An automatic procedure by which control rods are rapidly inserted into the core of a reactor to stop the chain reaction.*
- (59) *RECOVERY: The process of reducing radiation exposure rates and concentrations in the environment to acceptable levels for unconditional occupancy.*
- (60) *RELOCATION: The removal or continued exclusion of people from contaminated areas to avoid chronic radiation exposure.*
- (61) *REM: Special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rems is equal to the absorbed dose in rads multiplied by the quality factor.*
- (62) *SECONDARY COOLANT: A separate stream of coolant that is converted to steam by the primary coolant in a heat exchange (steam generator) to power the turbine.*

- (63) *SELF-READING DOSIMETER: A self-reading dosimeter is a direct-reading pocket dosimeter shaped like a pen with a pocket clip. It is generally used to measure X and gamma radiation.*
- (64) *SEVERE ACCIDENT:*
- PWR- A nuclear accident involving a loss of core cooling and damage so severe that there are core geometry changes and possible relocation of core materials, e.g. a core melt. In accordance with the Severe Accident Management Guidelines, a severe accident has occurred when core exit thermocouple temperatures are greater than 1200 degrees F and actions to cool the core have been, and continue to be, unsuccessful. The plant is outside of the Design Bases for the station.*
- BWR- A nuclear accident involving a loss of core cooling and damage so severe that there are core geometry changes and possible relocation of core materials, e.g. a core melt. In accordance with the Severe Accident Management Guidelines, a severe accident has occurred when fuel cladding temperature is greater than 2200 degrees F or reactor water level drops below the top of active fuel and actions to cool the core have been, and continue to be, unsuccessful. The plant is outside of the Design Bases for the station.*
- (65) *SHELTER: The use of the closest available structure that will provide protection from exposure to an airborne plume.*
- (66) *THERMOLUMINESCENT DOSIMETER (TLD): A dosimeter based on the effect of ionizing radiation on certain thermoluminescent crystals, in which radiation excites orbital electrons of some atoms to a higher energy state orbit than normal. Stimulating the crystal by controlled heating allows the electrons to return to normal orbit, thereby emitting discrete quanta of light proportional to the amount of ionizing radiation absorbed by the crystal. Emitted light can be measured and related to personnel dose from ionizing radiation.*
- (67) *TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE): Sum of the deep dose equivalent and the committed effective dose equivalent.*
- (68) *X-RAY: Highly penetrating radiation similar to gamma rays.*
- (69) *ZIRCALOY CLADDING: The outer covering (a zirconium alloy) in which the nuclear fuel is sealed.*

Attachment 4 List Of Acronyms

<i>ALARA-</i>	<i>As Low As Reasonably Achievable</i>
<i>CDE</i>	<i>- Committed Dose Equivalent</i>
<i>ERFDADS</i>	<i>- Emergency Response Facility Data Acquisition and Display System</i>
<i>HVAC</i>	<i>- Heating Ventilation and Air Conditioning</i>
<i>ICS</i>	<i>- Integrated Computer System</i>
<i>INPO</i>	<i>- Institute of Nuclear Power Operations</i>
<i>NRC</i>	<i>- Nuclear Regulatory Commission</i>
<i>PICS</i>	<i>Plant Information & Control System (PICS)</i>
<i>QDPS</i>	<i>- Qualified Display Parameter System (same as SPDS)</i>
<i>SPDS</i>	<i>- Safety Parameter Display System</i>
<i>STPEGS</i>	<i>- South Texas Project Electric Generating Station</i>
<i>STPNOC</i>	<i>- South Texas Project Nuclear Operating Company</i>
<i>TEDE</i>	<i>- Total Effective Dose Equivalent</i>

