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License Amendment Request for Proposed Revision to Humboldt Bay Site Emergency Plan

Edward Halpin

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June 30, 2014

PG&E Letter HBL-14-016
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U.S. Nuclear Regulatory Commission	10 CFR 50 Appendix E, 10 CFR 50.54
ATTN: Document Control Desk	10 CFR 50.4, 10 CFR 50.90
Washington, DC 20555-0001	10 CFR 50.47, 10 CFR 72.32
	10 CFR 72.44

Docket No. 50-133, License No. DPR-7
Humboldt Bay Power Plant Unit 3
Docket No. 72-27, License No. SNM-2514
Humboldt Bay Independent Spent Fuel Storage Installation

License Amendment Request for Proposed Revision to Humboldt Bay Site
Emergency Plan

Pursuant to 10 CFR 50.54(q) and 10 CFR 50.4(b)(5), Pacific Gas and Electric (PG&E) hereby submits a proposed change to the Humboldt Bay (HB) Site Emergency Plan (E-Plan). As required by 10 CFR 50.54(q)(ii)(4), PG&E requests an amendment to the facility operating license listed above in accordance with 10 CFR 50.90.

The proposed changes are a reduction in the emergency planning function commensurate with the ongoing and anticipated reduction in radiological source term at the HB site. These changes are a revised E-Plan organization, the replacement of a dedicated on-call emergency response team with advisory personnel on an as-needed basis, the elimination of the initiating events and emergency action levels for Humboldt Bay Power Plant (HBPP) Unit 3, and a revision to the emergency action level information for the HB Independent Spent Fuel Storage Installation (ISFSI).

The proposed change has been reviewed considering the requirements of 10 CFR 50.54(q), the planning standards of 10 CFR 50.47(b), 10 CFR 50 Appendix E, and the E-Plan. These changes have been determined to reduce the effectiveness of the E-Plan in accordance with requirements of 10 CFR 50.54(q) and require prior NRC approval. The reduction in effectiveness was determined due to a scheme change for the Emergency Action Levels (EALS), decrease in radiological response staff required, and a decrease in the functional capabilities of the emergency response organization. The change is commensurate with the reduced remaining radiological source term at the HB Site. Based on preliminary discussion with the NRC Staff, it is expected that the review of this submittal may require one year.



PG&E will modify administrative and implementing procedures concurrent with the NRC approval of the E-Plan. PG&E requests that the NRC complete their review for approval on or before June 1, 2015.

Based on the current schedule for decommissioning HBPP, radioactive systems and components will be removed by June 2015 to facilitate building and structural demolition with minimal radiological controls. The following is a list of significant radiological source terms removed.

- Spent fuel transfer to the ISFSI – (Complete 2008).

- Greater Than Class C (GTCC) waste transfer to the ISFSI – (Complete 2013).

- Class B and C wastes transfer to a licensed disposal facility– (Complete 2014).

- Waste removal from high level storage vault – (Complete 2014)

- Reactor vessel removal – (Scheduled 2014)

- Liquid radioactive waste systems removal – (Scheduled 2014)

- Spent fuel pool liner removal – (Scheduled 2015)

- Refuel building exhaust ventilation monitor and high efficiency particulate airborne (HEPA) removal – (Scheduled 2015)

The following is an overview of scheduled activities remaining after June 2015:

- Refuel building exhaust ventilation demolition

- Refuel building demolition

- Spent fuel pool demolition

- Slab and subgrade structures/piping removal

- Caisson removal and selected remaining piping systems

- Intake canal demolition and remediation

- Circulating water and south yard piping removal

- Excavation and backfill

In the interim, HBPP and HB ISFSI continue to maintain an emergency response organization and an E-Plan to satisfy the applicable portions of 10 CFR 50.47(b) and 10 CFR 50 Appendix E.

The E-Plan changes are submitted based upon the NRC approval of exemption from certain 10 CFR 50 requirements as requested by PG&E Letter HBL-12-012, dated August 14, 2012. PG&E expects to receive NRC approval of these exemption requests in 2014. Similarly, the proposed changes are based upon NRC approval of



a revision to the Humboldt Bay Quality Assurance Plan submitted under PG&E Letter HBL-14-017/HIL-14-007, dated June 10, 2014, which is currently under the 60-day review period pursuant to 10 CFR 50.54(a)(4)(iv).

The entire E-Plan has been revised and will be reissued as Revision 7. An evaluation with the description of each change is included in an enclosure to this letter.

Enclosure 1 provides the summary of proposed changes to the E-Plan. The proposed changes reflect a limited scope E-Plan that is consistent with classifiable events for an ISFSI in NEI 99-01, Revision 6.

As an overview, the change eliminates the radiological based EALs associated with HBPP, Unit 3, and enables the onsite shift personnel to solicit advice and/or support from designated on-call management staff, as needed, to assist with unanticipated emergency conditions.

Enclosure 2 is a summary of the technical evaluation supporting the proposed E-Plan EAL changes. The previously evaluated accident scenarios are limited by a combination of radiological source term controls and administrative controls. The proposed controls limit the accident scenarios to less than the thresholds for a Notice of Unusual Event (NUE). In the current HB Site Emergency Plan, the radiological threshold for an NUE declaration is based on two times the Offsite Dose Calculation Manual (ODCM) limit sustained for one hour. The administrative controls and source term limitations discussed later were based on this threshold, so radiological based event classifications are being eliminated from the HB Site E-Plan. Code of Federal Regulations 10 Part 72.32(a)(3) calls for a classification system at facilities with only an ISFSI to classify accidents as "alerts." The potential offsite effects of an event at an ISFSI are consistent with events that would be Unusual Events (UEs) at an operating plant. There is an inconsistency between terms in 10 CFR 72 and the endorsed EALs for an ISFSI outlined in NEI 99-01, Revision 6, which calls for only classifications of UE. Classifying ISFSI related events at a site with an operating plant at a UE is appropriate; however, for facilities with only an ISFSI, these events would be classified as "alerts."

The HB Site Defueled Safety Analysis Report (DSAR) provides the licensing basis for activities during the final decommissioning and dismantlement (D&D) to license termination (post June 2015). The DSAR is being revised to reflect the anticipated status of the decommissioning as of June 2015. The limited radiological source term expected at that time is insufficient to require the E-Plan radiological support function currently provided. Implementing procedures are being changed to reflect the



limitations on radiological source terms to preclude a radiological source term (e.g., HEPA filter and waste container controls) that could require an event declaration. The revised DSAR will be complete and become effective following approval of the proposed license amendment request (LAR).

The ODCM will be revised as warranted to reflect changes to the facility. HB Site no longer has a liquid radioactive effluent discharge pathway to Humboldt Bay (releases ceased in 2013). Use of the installed HBPP ventilation system will end in early 2015 and is scheduled for demolition in conjunction with the Refuel Building in the summer of 2015. Airborne radioactivity monitoring will be retained as a part of the ongoing Radiation Protection Program and radiological effluent controls as described in the ODCM. The ODCM preserves the calculation methodology to assess offsite dose in the event of an unanticipated release. However, instrument calibration frequencies, set point calculations, and sampling criteria associated with the plant stack will be removed once the Refueling Building ventilation system ceases operation.

Enclosure 3 is the revised HB Site E-Plan.

Enclosure 4 contains the detailed descriptions and evaluations of the proposed changes to the E-Plan that were evaluated as a reduction in effectiveness. The changes are commensurate with the planned status of the decommissioning and are adequate to provide protection of public health and safety.

PG&E requests approval of the proposed changes to the E-Plan by June 1, 2015. PG&E will implement within 60 days of NRC approval and reduce site source term by completing the remaining four demolition activities listed below.

Reactor vessel removal – (Scheduled 2014).

Liquid radioactive waste systems removal – (Scheduled 2014).

Spent fuel pool liner removal – (Scheduled 2015)

Refuel building exhaust ventilation monitor & HEPA removal – (Scheduled 2015)

PG&E makes no new or revised regulatory commitments (as defined by NEI 99-04) in this submittal.



PG&E Letter HBL-14-016

PG&E Letter HIL-14-006

June 30, 2014

Page 5

If you have any questions concerning this submittal, please contact Mr. Doug Evans at (707) 444-0707.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 30, 2014.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. D. Halpin', with a long horizontal flourish extending to the right.

Edward D. Halpin

Senior Vice President and Chief Nuclear Officer

Enclosures

cc: HBPP Humboldt Distribution

cc/enc: William C. Allen, NRC

Marc L. Dapas, NRC Region IV

John B. Hickman, NRC

Gonzalo L. Perez, California Department of Public Health

Enclosure 1
PG&E Letter HBL-14-016
PG&E Letter HIL-14-006

Summary of Proposed Changes to the Emergency Plan

Summary of Proposed Changes to the Emergency Plan

The following is an overview of the proposed changes to the Emergency Plan.

Proposed Changes for NRC Review and Approval

The Emergency Plan (E-Plan) changes requiring NRC prior approval are discussed below (additional detailed discussion of each specific change is provided in Enclosure 4):

Section 1.0 Introduction:

The changes in this section update the status of decommissioning activities. The facility is changed from one that is "in-process" of transferring fuel to storage to an interim fuel storage location. The facility scope of activities is reduced from the previous revision of the Humboldt Bay (HB) Site E-Plan.

Section 2.0 Site, Area, and Facility Description:

The changes to this section revise the physical description of the facility including elimination of the Refueling Building plant ventilation system, and elimination of processing liquid wastes in the radwaste building. These changes also discuss administrative controls to limit source term and mitigation of radiological consequences of accidents. The facility description is changed and the potential accident classifications for the Independent Spent Fuel Storage Installation (ISFSI) facility changed based on the updated guidance.

Section 3.0 Emergency Conditions:

These changes discuss a revised method of detection and further limitations that would represent an unplanned release of airborne radioactivity to the environment, offsite radioactive liquid release and unexpected increase in plant radiation levels. These changes update the description of events based upon the advanced state of decommissioning and physical changes to the site such as demolition and removal of buildings and systems. Emergency action levels (EALs) associated with HBPP were removed and ISFSI EALs were changed using the guidance of NEI 99-01, Revision 6. This simplification of the EALs is based on regulatory correspondence associated with the LaCrosse boiling water reactor license amendment request for change to its E-Plan.

See Enclosure 2 and 3 for additional information concerning EALs.

Section 4.0 Emergency Response Organization:

The revision changes the interim Emergency Response Organization (ERO),

the Emergency Coordinator and Security Coordinator, to the required complement of the final ERO. During off-hour periods, the management staff is changed from a drive-in, augmentation position to an on-call position contacted by phone to provide counsel and guidance.

The ERO functions of additional personnel augmentation will remain as in the previous HB Site Emergency and will be called-in as determined by the type of event. These personnel will provide the radiological and support as needed by the ERO.

The revision of the ERO provides support consistent with the reduction in onsite and offsite consequences of postulated accidents for this stage of decommissioning.

Section 5.0 Emergency Assessment and Protective Actions:

Changes that require prior NRC approval are described elsewhere. Changes made within this section are made for consistency with the rest of the E-Plan.

Section 6.0 Emergency Response Facilities and Equipment:

The revision to this section removes equipment from the plan.

One of the changes is elimination of the vehicles for field monitoring since analysis indicates that EPA-400 Protective Action Guidelines will not be exceeded such that offsite general public would be affected by the postulated accidents associated with Humboldt Bay Power Plant (HBPP) or the ISFSI.

The Refueling Building evacuation signal is removed to facilitate Refueling Building structural demolition in 2015.

The process monitoring for the plant ventilation exhaust stack is disabled once the refuel building ventilation system is shut down in 2015.

Vehicles for offsite medical transportation are being removed. The current capability for transportation using a local ambulance company is maintained and sufficient for medical emergencies.

Personnel decontamination facilities are maintained, but no longer specified for the Unit 3 access location. Rather, the decontamination facilities will be placed in the most effective location to provide capability for decontamination of personnel when needed.

Section 7.0 Recovery and Re-entry:

No changes that require NRC prior approval.

Section 8.0 Maintaining Emergency Preparedness:

The revision provides for management review of changes to the HB Site E-Plan, E-Plan Implementing Procedures and management review of exercise critiques. The Plant Staff Review Committee (PSRC) may provide this function for the near term and an alternate management team may be selected to perform this duty long term, as appropriate.

The proposed changes regarding the use of a management review as an alternate to the PSRC function are based upon NRC approval of a revision to the HB Quality Assurance Plan submitted under PG&E Letter HBL-14-017/ HIL-14-007, dated June 10, 2014, which is currently under the 60-day review period pursuant to 10 CFR 50.54(a)(4)(iv).

The other change in this section is the frequency of exercises from annual to biennial. A biennial exercise is still required for a simulated security event.

The change of the one annual frequency to a biennial is consistent with regulation and may result in two exercises within a biennial period. One exercise may focus on radiological, medical and fire aspects and one on a security event, unless all aspects are evaluated in one exercise of larger scope. This schedule satisfies the requirements for E-Plan exercises for 10 CFR 50 licensed plants and is sufficient to demonstrate provisions of the E-Plan.

Section 9.0 Responsible Organization:

No changes that require NRC prior approval.

Appendix A – Definitions, Abbreviations, and Acronyms:

Editorial changes, which do not require NRC prior approval, made to list of terminology for consistency with other sections of the document.

Enclosure 2
PG&E Letter HBL-14-016
PG&E Letter HIL-14-006

Technical Evaluation for Emergency Plan, Revision 7

Technical Evaluation for Emergency Plan, Revision 7

The June 2015 radiological status of the Humboldt Bay (HB) Site required for implementing this proposed revision to the HB Site Emergency Plan (E-Plan) is summarized as follows:

Spent Fuel and Greater Than Class C (GTCC) components have been removed from HB Facility and relocated to the ISFSI.

Modular HEPA ventilation systems remain available for localized ventilation control and worker protection, but there is insufficient radiological source term to generate airborne effluents exceeding offsite dose calculation manual (ODCM) Specification limits.

Liquids are evaluated for low levels of radioactivity and based on the concentration and the source of water (groundwater/storm water) may be transported for disposal at an approved disposal site or processed as ground water/storm water and discharged to Humboldt Bay via a state approved ground water processing system.

The remaining radiological source terms at the HB Site are not likely to create an unplanned/unanticipated increase in radiation or airborne radioactivity levels within the Restricted Area or outside of the Restricted Area that would be mitigated or controlled by the presence or absence of an on-call radiological emergency support organization. Necessary radiological support personnel are onsite during active dismantlement of radioactive systems, structures and components.

Event scenarios involving decommissioning activities described in the DSAR are controlled by procedure at a level that would preclude the declaration of a Notice of Unusual Event (NUE). HB Site will revise procedures to limit radioactive source terms consistent with the accident assessment.

Pacific Gas and Electric Company (PG&E) is holder of Possession-Only License DPR-7 for the Humboldt Bay Power Plant (HBPP). The license, pursuant to the Atomic Energy Act of 1954 and 10 CFR 50, allows PG&E to possess spent nuclear fuel at the permanently shutdown and defueled HB Facility. The reactor pressure vessel is currently undergoing segmentation for removal and disposal. All spent fuel and GTCC waste has been transferred to an onsite ISFSI under the 10 CFR 72 specific License SNM-2514. Dismantlement and decommissioning of the HBPP plant continues with immediate efforts focused on metal removal.

The current HB Site E-Plan continues to meet the emergency planning requirements contained in 10 CFR 50 that are applicable to the permanently shutdown and defueled condition of the plant. PG&E has previously requested exemptions from emergency planning requirements in 10 CFR 50.47 and 10 CFR 50 Appendix E that are not applicable to a plant in an advanced stage of decommissioning with all spent fuel stored at the ISFSI. PG&E is currently awaiting NRC approval of the exemption request.

REGULATORY ANALYSIS

1.1 Applicable Regulatory Requirements and Criteria

10 CFR 50.54(q) – *Conditions of Licenses – Emergency Plans* – Requires that a license amendment request be submitted to the NRC for approval prior to implementation of changes to the E-Plan, which are considered to constitute a "reduction in effectiveness."

10 CFR 50.47 – *Emergency Plans* – All Sections as exempted.

10 CFR 50 Appendix E – *Emergency Planning and Preparedness for Production and Utilization Facilities* – All Sections as exempted.

10 CFR 72.32 – *Emergency Plan* – All sections.

10 CFR 72.44(f) – *License Conditions* - Requires that a submittal be made to the NRC for approval prior to implementation of changes to the E-Plan, which are considered to constitute a "reduction in effectiveness."

The proposed change to the E-Plan continues to implement the applicable requirements of the regulations. It should be noted that these changes are submitted based upon the NRC approval of exemption from certain 10 CFR 50 requirements as requested by PG&E Letter HBL-12-012, dated August 14, 2012. PG&E expects to receive NRC approval of these exemption requests in 2014. Similarly, the proposed changes are based upon NRC approval of a revision to the HB Quality Assurance Plan submitted under PG&E Letter HBL-14-017 / HIL-14-007, dated June 10, 2014, which is currently under the 60-day review period pursuant to 10 CFR 50.54(a)(4)(iv). Therefore, the revised E-Plan provides reasonable assurance that public health and safety is not endangered by the HB facility decommissioning or the HB ISFSI, and continues to satisfy the planning standards set forth in 10 CFR 50.47(b), 10 CFR 50 Appendix E, and 10 CFR 72.32.

1.2 No Significant Hazards Consideration

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," PG&E requests NRC approval of a reduction in effectiveness of the Site E-Plan. The proposed Site E-Plan revision is commensurate with the ongoing and anticipated reduction in radiological source term at the HB site and reflects that all spent fuel and Greater Than Class C (GTCC) waste has been transferred to the ISFSI. PG&E has evaluated whether a significant

hazards consideration is involved with the proposed amendment by focusing on the three conditions set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

5.2.1 Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed changes are a reduction in the emergency planning function commensurate with the ongoing and anticipated reduction in radiological source term at the HB site. These changes are a revised E-Plan organization, the replacement of a dedicated on-call emergency response team with advisory personnel on an as-needed basis, the elimination of the initiating events and emergency action levels for Humboldt Bay Power Plant (HBPP) Unit 3, and a revision to the emergency action level information for the HB ISFSI. There are no longer credible events that would result in doses to the public beyond the owner controlled area boundary that would exceed the Environmental Protection Agency (EPA) Protective Action Guidelines (PAGs). HBPP was shutdown in 1976 and was not restarted. All spent fuel and Greater Than Class C (GTCC) waste has been transferred to the ISFSI. Emergency Planning Zones beyond the owner controlled area and the associated protective actions are no longer required. No headquarters personnel, personnel involved in off-site dose projections, or personnel with special qualifications are required to augment the HB Emergency Response Organization. The credible events for the ISFSI remain unchanged. The indications of damage to a loaded cask confinement boundary have been revised to be twice the design basis dose rate as described in Section 7.3.2.1 of the ISFSI Final Safety Analysis Report (FSAR) (0.3 mrem/hr). This change is consistent with industry practices previously approved by the NRC for other ISFSIs to be able to distinguish that a degraded condition exists.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

5.2.2 Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed changes are a reduction in the emergency planning function commensurate with the ongoing and anticipated reduction in radiological source

term at the HB site. These changes are a revised E-Plan organization, the replacement of a dedicated on-call emergency response team with advisory personnel on an as-needed basis, the elimination of the initiating events and EALs for HBPP, Unit 3, and a revision to the EAL information for the HB ISFSI. There are no longer credible events that would result in doses to the public beyond the owner controlled area boundary that would exceed the EPA PAGs. HBPP was shutdown in 1976 and was not restarted. All spent fuel and GTCC waste has been transferred to the ISFSI. Emergency Planning Zones beyond the owner controlled area and the associated protective actions are no longer required. No headquarters personnel, personnel involved in off-site dose projections, or personnel with special qualifications are required to augment the HB Site Emergency Response Organization. The proposed changes involve a revision to the HP Site E-Plan only, and do not involve any physical changes to the HB Site that would create the possibility of a new or different accident.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

5.2.3 Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed changes are a reduction in the emergency planning function commensurate with the ongoing and anticipated reduction in radiological source term at the HB site. These changes are a revised E-Plan organization, the replacement of a dedicated on-call emergency response team with advisory personnel on an as-needed basis, the elimination of the initiating events and EALs for HBPP Unit 3, and a revision to the EAL information for the HB ISFSI. There are no longer credible events that would result in doses to the public beyond the owner controlled area boundary that would exceed the EPA PAGs. HBPP was shutdown in 1976 and was not restarted. All spent fuel and GTCC waste has been transferred to the ISFSI. Margin of safety is related to the ability of the fission product barriers (fuel cladding, reactor coolant system, and primary containment) to perform their design functions during and following postulated accidents. There are no longer credible events that would result in doses to the public beyond the owner controlled area boundary that would exceed the EPA PAGs. Emergency Planning Zones beyond the owner controlled area and the associated protective actions are no longer required. No headquarters personnel, personnel involved in offsite dose projections, or personnel with special qualifications are required to augment the HB Site

Emergency Response Organization. The proposed changes involve a revision to the HB Site E-Plan only and do not affect the fission product barrier design or capability of the ISFSI.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, PG&E concludes that the proposed amendment does not involve significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of no significant hazards consideration is justified.

1.3 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change the HB Site E-Plan with respect to the ongoing and anticipated reduction in radiological source term at the Humboldt Bay site and reflects that all spent fuel and GTCC waste has been transferred to the ISFSI. However, the proposed amendment does not involve, (i) a significant hazards consideration, (ii) a significant change in the types or a significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

TECHNICAL ANALYSIS FOR EMERGENCY ACTION LEVELS

The radiological based Initiating Conditions (ICs) and EALs associated with the Decommissioning of HBPP, Unit 3, are being deleted (formerly Table 3.2-1).

It is acknowledged that a scenario could exist where a security event, earthquake, tornado or tsunami may serve as the motive force to create a radiological event and prohibit implementation of administrative controls. In that case, the radiological issues become secondary. No radiological emergency response actions would be implemented without extreme danger to the emergency response teams. Corrective actions could be implemented by personnel assigned to recovery actions. The accident analyses in the ISFSI FSAR evaluated these scenarios with no significant dose consequence. Initiating conditions and emergency action levels involving damage to ISFSI structures, systems, or components containing significant radiological source terms and the latitude for the Emergency Coordinator to use his or her judgment to declare an emergency, not otherwise described, is preserved in the Table titled "HB Emergency Action Levels."

The changes to the HB Site E-Plan are based on source term reductions and administrative controls implemented as a part of ongoing decommissioning activities.

A concise summary of the proposed EAL changes are as follows:

Table 3.2-1, HBPP Unit 3 Emergency Action Levels (note entire table eliminated in proposed plan change)			
Initiating Condition (IC)	Emergency Action Level (EAL)	Current Emergency Classification	Proposed Change
Unplanned Release of Airborne Radioactivity to the Environment	Unplanned airborne release greater than two times SAFSTOR ODCM specifications limits for a period of 60 minutes or longer. Any fire involving radioactive materials not extinguished within 15 minutes.	Notification of Unusual Event	Delete the IC and EALs based on administrative controls of potential airborne radioactivity source terms. Reporting fires included in administrative procedure for NRC notification and reporting.
	Unplanned airborne release greater than 200 times the SAFSTOR ODCM specifications limits for a	Alert	

Table 3.2-1, HBPP Unit 3 Emergency Action Levels (note entire table eliminated in proposed plan change)

	period of 15 minutes or longer.		
Unplanned Release of Liquid Radioactive Material to Humboldt Bay	Unplanned release greater than two times the SAFSTOR ODCM specifications limits for a period of 60 minutes or more.	Notification of Unusual Event	Delete the IC and EALs based on sources of unprocessed liquid radioactive material are within the Refueling Building, or are limited to minor spills, groundwater processing and storm water run-off.
	Unplanned release of radioactive liquid effluent exceeding 200 times the SAFSTOR ODCM specification limits for a period of 15 minutes or longer.	Alert	
Unexpected Increase In Plant Radiation Levels	<p>An unplanned/unanticipated increase in radiation levels to 500 mR/hr (general area) or 200 DAC in any area within the restricted area.</p> <p style="text-align: center;">OR</p> <p>An unplanned/unanticipated increase in radiation levels to 50 mR/hr (general area) or 100 DAC in any area outside of the restricted area.</p>	Alert	Delete the IC and EAL based on relocation of spent fuel and GTCC to the ISFSI. No remaining motive force to produce an unplanned or unanticipated radiological condition at this threshold.
Fires	Any fire inside the Unit 3 Restricted Area involving radioactive materials which is not extinguished within 15 minutes of detection.	Notification of Unusual Event	Delete the IC and EAL based on administrative controls to mitigate fires in areas or containers of radioactive material. ISFSI fire EAL is

Table 3.2-1, HBPP Unit 3 Emergency Action Levels (note entire table eliminated in proposed plan change)

			retained.
On-Site Hazards	Any hazard that causes significant damage or substantially affects the structures, systems or components required to comply with HBPP Unit 3 licensing basis.	Notification of Unusual Event	Delete the IC and EAL based on diminished radiological source term at HBPP Unit 3, no structures systems or components important to containing the HBPP Unit 3 source term. The ISFSI Hazard IC / EAL is retained.
Emergency Coordinator Judgment	Any Emergency not specifically identified elsewhere in this table, based on Emergency Coordinator judgment.	Notification of Unusual Event or Alert	Delete the IC and EAL based on retaining the ISFSI Emergency Coordinator Judgment IC / EAL .

OLD Table 3.2-2 HB ISFSI Emergency Action Levels		
Initiating Conditions/ NEI 99-01 Designation	Emergency Action Level	Emergency Classification
Spent Fuel Cask Drop E-HU1	Cask drop during transport or cask handling activities.	NOTIFICATION OF UNUSUAL EVENT
Fires E-HU1	A fire affecting equipment in the Independent Spent Fuel Storage Installation (ISFSI) controlled area and not extinguished within 15 minutes of detection.	NOTIFICATION OF UNUSUAL EVENT
On-Site Hazards E-HU1	Any hazard (e.g., earthquakes, tsunamis, flooding, tornados, high winds on-site explosions, aircraft crashes) that causes significant damage or substantially affects ISFSI structures, systems, or components.	NOTIFICATION OF UNUSUAL EVENT
Security Events E-HU2	<p>Civil disturbance with accompanying attack threat.</p> <p style="text-align: center;">OR</p> <p>An internal disturbance that poses a threat to stored fuel.</p> <p style="text-align: center;">OR</p> <p>Security Officer is unaccounted for or disabled AND sabotage-related event is suspected.</p> <p style="text-align: center;">OR</p> <p>Any event that includes an attempt at forcible entry, sabotage, bomb, or the receipt of a credible threat against the ISFSI Protected Area.</p>	NOTIFICATION OF UNUSUAL EVENT

OLD Table 3.2-2 HB ISFSI Emergency Action Levels		
Initiating Conditions/ NEI 99-01 Designation	Emergency Action Level	Emergency Classification
	<p>Actual penetration of the ISFSI Protected Area boundary.</p> <p style="text-align: center;">OR</p> <p>Sabotage device has been detected that threatens ISFSI systems or equipment within the ISFSI Security Area.</p> <p style="text-align: center;">OR</p> <p>An in-progress attack.</p> <p style="text-align: center;">OR</p> <p>Sabotage-related loss of security equipment.</p> <p style="text-align: center;">OR</p> <p>Sabotage-related fire, explosion, or other catastrophe.</p>	ALERT
Emergency Coordinator Judgment	Any emergency not specifically identified elsewhere in this table, based on Emergency Coordinator judgment	NOTIFICATION OF UNUSUAL EVENT OR ALERT

New Table 3.2-1, HB ISFSI Emergency Action Levels (based upon discussion below)			
Initiating Condition (IC) NEI 99-01 Rev 6	Emergency Action Level (EAL)	Emergency Classification	Proposed Change
Damage to a loaded cask CONFINEMENT BOUNDARY E-HU1	<p>Damage to a loaded cask CONFINEMENT BOUNDARY as indicated by an on-contact radiation reading greater than 0.30 mrem/hr* on the lid of the ISFSI Vault.</p> <p>(NOTE: Contact reading not needed if any reading greater than 0.30 mrem/hr near the vaults is found.)</p>	ALERT (A)	<p><u>Change EAL to:</u> Damage to a loaded cask CONFINEMENT BOUNDARY as indicated by an on-contact radiation reading greater than 0.3 mrem/hr (NEI 99-01, Revision 6, states a value of 2 times the site-specific cask specific technical specification allowable radiation level. Alternative value selected based upon 2 times the single storage cell in the ISFSI vault with the lid installed – reference Section 7.3.2.1 of Living FSAR, Chapter 7). <u>Changed Classification Level to:</u> Alert <i>These changes are consistent with endorsed guidance in NEI 99-01 Revision 6 and 10 CFR 72 requirements for classifying events at ISFSI only as “Alerts”</i></p>

New Table 3.2-1, HB ISFSI Emergency Action Levels (based upon discussion below)			
Initiating Condition (IC) NEI 99-01 Rev 6	Emergency Action Level (EAL)	Emergency Classification	Proposed Change
Confirmed SECURITY CONDITION or threat HU-1	A SECURITY CONDITION** as reported by Security. OR Notification of a credible security threat directed at the site.	ALERT (A)	<u>Changed Classification Level to:</u> Alert <i>These changes are consistent with endorsed guidance in NEI 99.01, Revision 6, and 10 CFR 72 requirements for classifying events at ISFSI only as "Alerts"</i>
Conditions exist which in the EMERGENCY COORDINATOR JUDGMENT warrant declaration of an Alert. HU2	Other conditions exist which in the judgment of the Emergency Coordinator indicate that events are in progress or have occurred that indicate a potential degradation of the level of safety of the ISFSI or indicate a security threat to ISFSI protection has been initiated.	ALERT (A)	<u>Changed Classification Level to:</u> Alert <i>These changes are consistent with endorsed guidance in NEI 99.01, Revision 6, and 10 CFR 72 requirements for classifying events at ISFSI only as "Alerts"</i>
<p>* Section 7.3.2.1 of the FSAR states "The dose rate at all locations adjacent to a single storage cell in the ISFSI vault with the lid installed is less than 0.15 mrem/hr" 0.30 mrem/hr represents two times this value.</p> <p>** SECURITY CONDITIONS that would require declaration of an Alert are defined in the HB Site Emergency Plan implementing procedures.</p>			

The most challenging source term limitation and event precursor control associated with the NUE thresholds in the old Table 3.2-1 is: "Unplanned or unanticipated release greater than 2 times SAFSTOR ODCM (airborne or liquid) release for 60 min." Regulatory guidance provides that compliance may be a calculated value based on the point of release and a monitored release path, assuming this threshold is an indicator of degradation of radiological barriers and controls. As the

decommissioning progresses, monitored release paths may not exist. The compensatory measure is to control the source term available for release and the decommissioning activities that may cause a release of radioactive materials. PG&E prepared a calculation (NX-433) that evaluates each of the accident scenarios in the DSAR, Appendix A, for administrative controls that would limit the source term to a threshold that would make exceeding the "Unplanned or unanticipated release >2 times SAFSTOR ODCM (airborne or liquid release for 60 min." unlikely.

ODCM Specification 2.13 (Liquid Radioactive Waste in Outdoor Tanks) controls dose from liquid effluents. NX-433, Section 3, provides a dose estimate from a spill of 20,000 gallons of untreated water to HB and a corresponding dose consequence of less than 1 E-8 mrem from liquid effluent.

The ODCM Specification 2.6.1 limit of 1500 mrem/yr to any organ corresponds to an airborne radioactivity concentration of 1.06 E-13 uCi/ml for an Am/Pu source term at the site boundary (NX-433 Section 4.1). Control of airborne radioactivity at the point of origin during active decommissioning activity for the control of worker dose also limits the concentration at the site boundary. The revised ODCM, Part II, Section 1.2.9, reflects the control of the source term. Real time effluent monitoring at a predetermined set-point is no longer practical given the state of decommissioning. Compliance is demonstrated via calculation and routine sampling of effluent pathways. While this may not demonstrate instantaneous compliance, an adverse condition is detectable based on the sampling frequency and the action statement implemented as required by ODCM Specification 2.6.1.

Enclosure 3
PG&E Letter HBL-14-016
PG&E Letter HIL-14-006

Proposed Revision of the HB Site Emergency Plan submitted for approval.



**Nuclear Power Generation
Humboldt Bay
Power Plant**

NUMBER SITE EM PLN
VOLUME 3
REVISION 7
EFFEC DATE
PAGE 1 of 45

TITLE
**HUMBOLDT BAY
SITE EMERGENCY PLAN**

APPROVED BY

DIRECTOR/PLANT MANAGER / DATE
HB NUCLEAR

(Procedure Classification – Quality Related)

**Humboldt Bay
Site
Emergency Plan**

Table of Contents

1.0	INTRODUCTION.....	6
2.0	SITE, AREA, AND FACILITY DESCRIPTION.....	7
2.1	Site Description.....	7
2.2	Area Description.....	8
2.3	Licensed Facility Description.....	9
2.3.1	HBPP Unit 3.....	9
2.3.2	HB ISFSI.....	9
3.0	EMERGENCY CONDITIONS.....	14
3.1	Emergency Class.....	14
3.1.1	Definitions.....	14
3.1.2	Emergency Classification System.....	14
3.1.3	Emergency Action Levels.....	14
3.2	Postulated Emergency Conditions.....	15
3.2.1	Spectrum of Postulated Emergencies.....	16
3.3	Hazardous Chemicals.....	17
4.0	EMERGENCY RESPONSE ORGANIZATION.....	19
4.1	Site Emergency Response Organization.....	19
4.1.1	Emergency Coordinator.....	20
4.1.2	Security Coordinator.....	21
4.1.3	Additional support functions.....	21
4.2	State and Local Government Agency Support.....	22
4.2.1	Local Law Enforcement Agencies.....	22
4.2.2	County Office of Emergency Services.....	23
4.2.3	Basis of Coordination between PG&E and County.....	23
4.2.4	State of California.....	24
4.3	Federal Government.....	24
4.4	External Support for Emergency Response Activities.....	24
4.4.1	PG&E Support.....	24
4.4.2	Support from Other Non-Company Organizations.....	25
4.4.3	Local Services Support.....	25

4.4.4	Non-Company Industrial Support Organizations	26
5.0	EMERGENCY ASSESSMENT AND PROTECTIVE ACTIONS	28
5.1	Activation of the Emergency Response Organization	28
5.1.1.	Notification and Activation of Onsite Emergency Response Organization	28
5.1.2	Notification of Public Authorities.....	29
5.1.3	Notification of Site Staff Personnel Offsite	29
5.1.4	Activation of Company Emergency Response Organization	29
5.2	General Assessment And Protective Actions.....	29
5.3	Specific Actions	30
5.3.1	Alerting, Accountability, Shelter-in-place and Evacuation of Onsite Personnel.....	30
5.3.2	Offsite Protective Actions.....	31
5.3.3	Actions for Specific Incidents.....	31
6.0	EMERGENCY RESPONSE FACILITIES AND EQUIPMENT	34
6.1	Emergency Response Facilities.....	34
6.2	Communications Equipment And Warning Systems.....	34
6.2.1	Onsite Communication Systems	34
6.2.2	Warning Signals.....	35
6.3	Emergency Monitoring And Assessment Equipment	36
6.3.1	Radiological Equipment	36
6.4	Miscellaneous Protective Facilities And Equipment	36
6.4.1	Fire Protection	36
6.4.2	Transportation.....	36
6.5	First Aid And Medical Facilities.....	36
6.5.1	Onsite Facilities	36
6.5.2	Offsite Facilities.....	36
7.0	RECOVERY AND RE-ENTRY	37
7.1	Guidelines For Recovery And Re-entry.....	37
7.2	Event Report	37
8.0	MAINTAINING EMERGENCY PREPAREDNESS.....	38
8.1	Emergency Plan and Implementing Procedures.....	38
8.1.1	Emergency Plan and Implementing Procedure Review and Update	38
8.1.2	Changes to the Emergency Plan	39
8.1.3	Letters of Agreement	39

8.2	Emergency Preparedness Training Program	40
8.2.1	Site Staff Training.....	40
8.2.2	Offsite Agency Training	40
8.3	Drills And Exercises	41
8.3.1	Drills:	41
8.3.2	Exercises:.....	41
8.3.3	Events Meeting Exercise Requirements	42
8.4	Audits	42
8.5	Maintenance And Inventory Of Emergency Equipment And Supplies	42
8.6	Emergency Planning Records	42
9.0	RESPONSIBLE ORGANIZATION	44
	Appendix A – DEFINITIONS, ABBREVIATIONS, AND ACRONYMS	1

List of Figures

Figure 2.1-1 Humboldt Bay Site Layout.....11

Figure 2.1-2 Humboldt Bay Site Location and Regional Topography12

Figure 4.2-1 Emergency Response Organization26

List of Tables

Table 3.2-1 HB ISFSI Emergency Action Levels17

1.0 INTRODUCTION

This Humboldt Bay Site Emergency Plan (also referred to as the “Emergency Plan” or the “Plan”) addresses emergency preparedness / response requirements for the Humboldt Bay Power Plant Unit 3 (HBPP Unit 3) and the Humboldt Bay Independent Spent Fuel Storage Installation (HB ISFSI). HBPP Unit 3 is undergoing Decontamination and Decommissioning (D&D) activities. Although HBPP Unit 3 is no longer operational and no longer stores spent fuel, it remains licensed under the requirements of Title 10 of the Code of Federal Regulation (CFR), Part 50 (10 CFR 50) during execution of D&D activities. The HB ISFSI is licensed under the requirements of 10 CFR Part 72.

At HBPP Unit 3, Pacific Gas and Electric Company (PG&E) conducts D&D activities, monitoring and surveillance of the unit undergoing decommissioning, and operations and maintenance to support the above-mentioned activities. As a result of D&D activities, certain structures, facilities, and systems described in this plan may be modified, deactivated, or removed. Execution of these activities will ultimately reduce radiological hazards arising from HBPP Unit 3 activities and the related emergency preparedness and response requirements.

At the HB ISFSI, PG&E stores spent fuel and “Greater Than Class C” (GTCC) radioactive waste generated during operation of HBPP Unit 3. PG&E does not expect completion of HBPP Unit 3 D&D activities to impact current operations at the HB ISFSI.

This Emergency Plan addresses adverse events that may potentially arise from the licensed activities at the HB ISFSI.

2.0 SITE, AREA, AND FACILITY DESCRIPTION

2.1 Site Description

The Humboldt Bay Power Plant site includes a single, non-operational nuclear unit (Unit 3) undergoing D&D and the HB ISFSI. Necessary support structures, equipment, and tanks are also located on the site.

Humboldt Bay Generating Station (HBGS), a fossil generation unit, is co-located on the site. The scope of this Emergency Plan does not include HBGS, except as site activities may affect HBGS.

An interface procedure is in place to describe how HBPP and HBGS coordinate responses to emergency situations.

Figure 2.1-1 shows a general illustration of HBPP & HBGS.

HBPP is located approximately three miles southwest of the city of Eureka in Humboldt County, California. PG&E owns the property that consists of approximately 143 acres on the northeastern part of Buhne Point Peninsula located on the mainland shore of Humboldt Bay, 2.4 km (1.5 miles) opposite the bay entrance. PG&E also owns the water areas extending approximately 500 ft. into Humboldt Bay from the land area.

10 CFR 72.106 requires a minimum distance from the spent fuel handling and storage facilities to the nearest boundary of the ISFSI Controlled Area (the 100 meter area around the ISFSI) to be at least 100 meters. 10 CFR 72.106 allows the ISFSI Controlled Area to be traversed by a highway, railroad, or waterway, as long as appropriate and effective arrangements are made to control traffic and to protect public health and safety. A public trail to access a breakwater for fishing transects the PG&E property and transverses the 100-meter ISFSI Controlled Area as shown on Figure 2.1-1. The public trail crossing the PG&E property to the north of the ISFSI is controlled by fencing and gates. The gates will normally be open to allow public access to the trail during ISFSI operation. The U.S. Coast Guard maintains control of the water areas and will prevent public access within the ISFSI Controlled Area when requested by PG&E.

There is no need for routine spent fuel cask handling activities. However, in the event that spent fuel cask handling activities are undertaken, the gates will be locked to prevent public access within the ISFSI Controlled Area until the cask transfer activities are completed. If necessary, the U.S. Coast Guard would be contacted to maintain control of the water areas.

The Owner Controlled Area (OCA) varies between sea level and 60 ft. Mean Lower Low Water (MLLW) and is approximately 900 ft. in width. The owner controlled area is not traversed by public highway or railroad.

Access to HBPP and the HB ISFSI is from King Salmon Avenue. King Salmon Avenue also serves the community of King Salmon situated on the western part of the peninsula. A public trail runs along the shoreline to the west of the owner-controlled area.

A set of Northwestern Pacific railroad tracks runs generally north-south along the southeastern PG&E property line. This rail system has been out-of-service since 1997. Presently, there are no existing plans to repair and reuse the tracks.

There is an underground pipeline that supplies natural gas to HBGS. The gas regulation facility on the east edge of the owner controlled area is approximately 1,100 feet from the HB ISFSI (The above ground feed to the HBGS is in the area near the regulation facility).

A limited quantity of compressed gas cylinders are onsite and stored more than 400 ft. from the HB ISFSI. Administrative controls are used to control refueling vehicles on site (e.g. tanker trucks) coming to fill portable lights and the ISFSI diesel storage tank.

2.2 Area Description

HBPP is located near the coastal community of King Salmon on the eastern shore of Humboldt Bay in Humboldt County, in northwestern California. Figure 2.1-2 shows the site location and regional topography. Based on the 2010 census, Eureka, the largest city in Humboldt County, has a population of approximately 27,000; approximately 50,000 residents reside within 10 miles of the ISFSI site; there are approximately 36,000 residents within 5 miles of HBPP and HB ISFSI; and the nearest residence is approximately 811 ft. southwest of the HBPP and HB ISFSI.

The HB ISFSI Final Safety Analysis Report (FSAR) Sections 2.1 and 2.2 provide additional details regarding significant locations surrounding the ISFSI.

2.3 Licensed Site Description

2.3.1 HBPP Unit 3

Note: The following description of HBPP Unit 3 is subject to change as D&D activities progress.

HBPP Unit 3 has been shutdown since July 1976. Although the remaining radioactive source term for an accidental release at the defueled Unit 3 reactor site has been greatly reduced by radioactive decay and spent fuel removal, there still exists radioactively contaminated structures requiring demolition. Due to the internal hazard risk to workers of transuranic contamination, administrative and engineering controls will be used during D&D activities to limit hazards to the workers. These controls will also limit potential off-site doses to considerably less than the EPA 400 protective action guide limit of 1 rem.

The reactor primary containment is located entirely below grade and is comprised of a drywell vessel housing the reactor and a suppression chamber located concentrically around the drywell. The drywell and suppression chamber are located within a reinforced concrete caisson that, in the vicinity of the reactor, is approximately 18 m (60 feet) in diameter with an inside depth of 24 m (78 feet) below grade. A caisson access shaft extends from the top of the caisson to the space beneath the drywell.

2.3.2 HB ISFSI

The HB ISFSI is designed and constructed for interim dry storage of spent nuclear fuel and other radioactive materials from HBPP Unit 3. The HB ISFSI consists of an in-ground concrete structure with storage capacity for six shielded casks, five containing spent nuclear fuel and one containing GTCC waste. The storage structure is a vault arrangement designed to accommodate the effects of postulated cask accidents and site hazards including explosions, tsunamis, and earthquakes. The ISFSI is designed to keep the dose to the general public as a result of the expected radiation from the casks within the limits set forth in 10 CFR 72. The HB ISFSI is a stand-alone facility and does not depend on existing HBPP facilities except for sewer, water, and electrical support for the Security Building, security lighting, and surveillance monitoring systems.

The major features of the HB ISFSI are the six-unit reinforced concrete vault structure and storage containers, chain link security fencing surrounding the storage site, security lighting, surveillance/monitoring systems, and a single story security building. A Security Area and a Restricted Area fence, with a locked gate, surrounds the vault structure.

NUCLEAR POWER GENERATION DEPARTMENT

NUMBER **SITE EM PLN**

TITLE **SITE EMERGENCY PLAN**

VOLUME **3**

REVISION **7**

PAGE **10 of 45**

A detailed description of the storage site and the HI-STAR HB dry cask storage system is provided in Chapter 4 of the HB ISFSI FSAR. Section 3.1 of the HB ISFSI FSAR provides a description of the physical characteristics of the spent fuel assemblies stored in the ISFSI.

Figure 2.1-1 – Humboldt Bay Site Layout

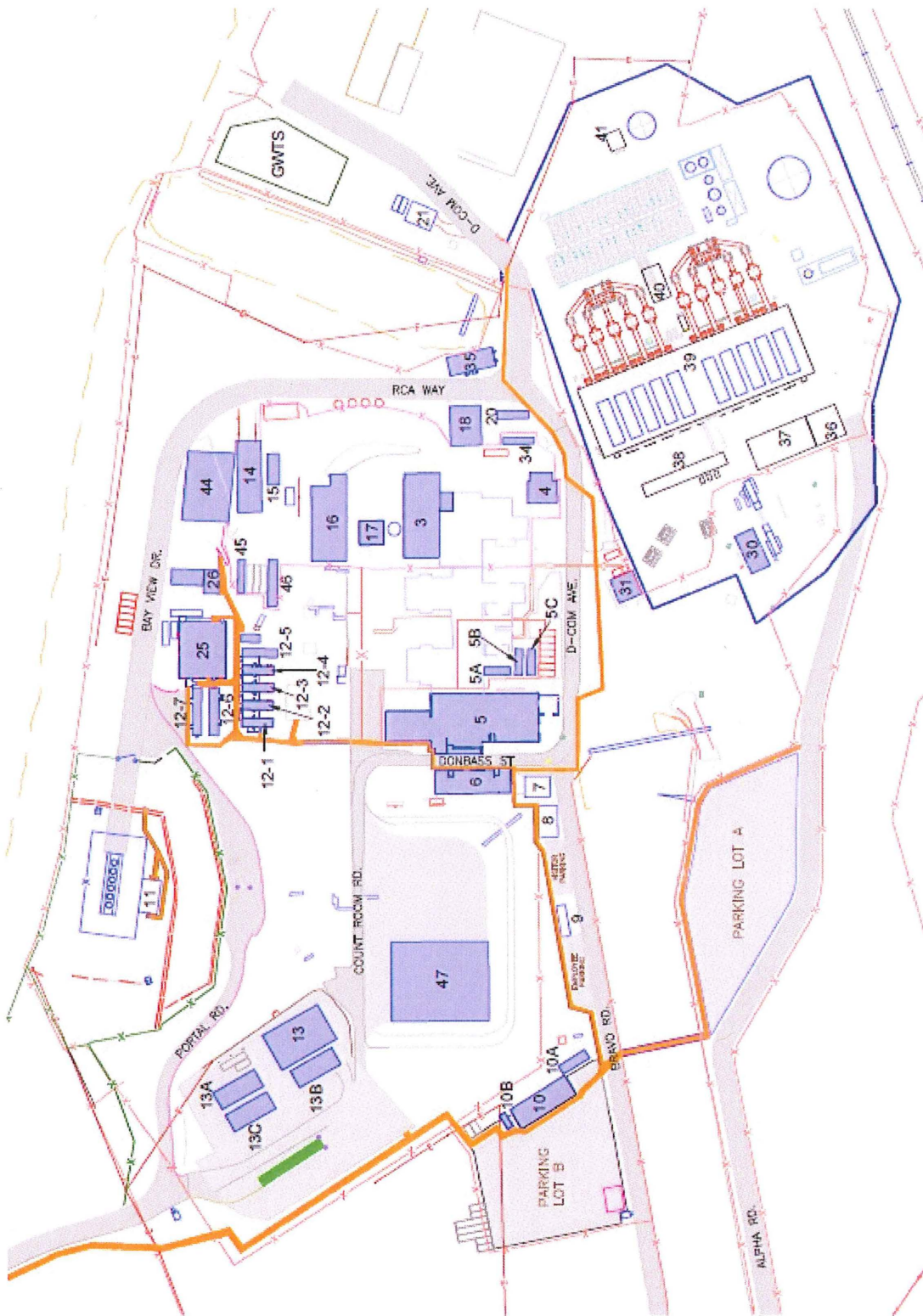
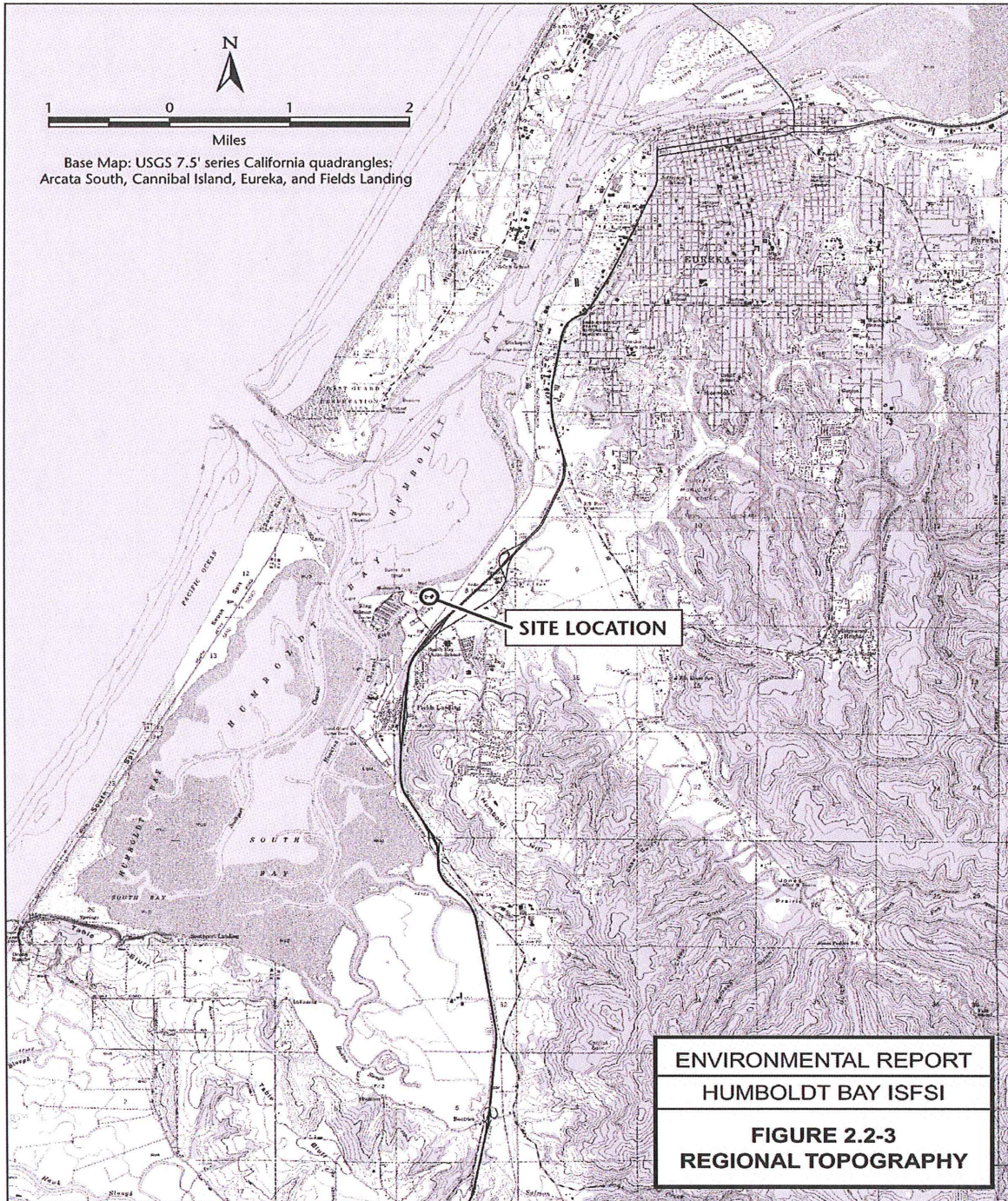


Figure 2.1-1 – Humboldt Bay Site Layout -
Building List

<u>Bldg #</u>	<u>Bldg. Name</u>	<u>Bldg #</u>	<u>Bldg. Name</u>
3	Unit 3 - Refueling Building	26	New Hot Shop
4	Old Hot Shop	30	HBGS Maintenance Shop
5	Offices, Shop & Warehouse	31	Relay Bldg.
6	Administration Annex	34	Shepherds Source
7	Network Bldg.	35	Unit 3 Work Crew Bldg.
8	Security Bldg.	36	HBGS Work shop
9	Fitness for Duty Trailer	37	HBGS Control Room
10	Assembly Bldg.10A Warehouse Office10B Office Trailer	38	HBGS MB-Bldg./Control
11	SFSI Office	39	HBGS Engine Hall
12-1	Environmental Office Trailer	40	HBGS LV-Room
12-2	Environmental Office Trailer	41	HBGS Firepump House
12-3	Environmental Office Trailer	44	Rubb Tent
12-4	Civil/Structural Eng. Trailer	45	Hepa Filter Testing
12-5	Care on Site	46	Respirator Cleaning
12-6	Safety Office Trailer	47	Waste Management Facility
12-7	Waste Support Office Trailer		
13	Count Room		
13	FSS Office Trailer – Bartlett		
13B	Office Trailer – Newex		
13C	Office Trailer – NCF		
14	Solid Radwaste Bldg.		
15	Low Level Radwaste		
16	Liquid Radwaste		
17	RP Instrumentation		
18	Unit 3 Access Control		
20	Operations Trailer		
21	Hazardous Waste Storage		
25	Decom/Civil Works Office Trailer		

Note: Building Descriptions are provided for information only and are subject to change as decommissioning activities progress.

Figure 2.1-2 – Humboldt Bay Site Location and Regional Topography



3.0 EMERGENCY CONDITIONS

This Emergency Plan is based on addressing the applicable accidents and off-normal events evaluated in the HBPP Unit 3 DSAR and the HB ISFSI FSAR. In addition to these scenarios, other hypothetical scenarios are considered as the basis for developing the Emergency Plan.

Emergency conditions impacting the Humboldt Bay Generating Station are addressed in a HBPP/HBGS site interface procedure and appropriate Emergency Plan Implementing Procedures.

3.1 Emergency Class

3.1.1 Definitions

Consistent with NRC guidance for an away-from-reactor ISFSI, accidents and off-normal events that rise to the level of an emergency at the facility are given the emergency classification of an ALERT.

An Alert is defined as:

Events are in process or have occurred which indicate a potential degradation of the level of safety at the facility or indicate a security threat to site protection. No releases of radioactive material requiring offsite response or monitoring are expected.

3.1.2 Emergency Classification System

The emergency classification system employed at the Humboldt Bay site is designed to:

- Provide for the protection of site personnel, equipment, and facilities.
- Assure timely notification of responsible parties of events that may require emergency actions.
- Provide an assessment of the implications of the event, which can be communicated to various affected parties during the early stages of the event.
- Initiate appropriate recovery actions by all affected parties.

3.1.3 Emergency Action Levels

The conditions or types of accidents which define the threshold at which an Alert must be declared are called Emergency Action Levels (EALs) and are defined in Table 3.2-1. When an off-normal event occurs at the Humboldt Bay site, the Emergency Coordinator determines whether or not the event is a classifiable emergency.

3.2 Postulated Emergency Conditions

Radioactive material at HBPP Unit 3 is limited primarily to surface contamination from previous plant operations. Due to the internal hazard risk to workers from transuranic contamination, administrative and engineering controls are used during D&D activities to protect workers and the public from airborne releases.

The robust nature and high integrity of the spent fuel storage system selected for use at the HB ISFSI is designed to prevent the release of radioactivity in the event of accidents, including environmental phenomena (e.g., earthquake, flooding, and tsunami). As a result of the high integrity design of the canisters and the substantial protection afforded the canisters by the storage casks, leakage of fission products from a canister is not considered to be a credible event.

The emergency classification system and methodology for the development of the EALs for the HB ISFSI are consistent with the Nuclear Regulatory Commission (NRC) Spent Fuel Project Office Interim Staff Guidance (ISG)-16, "Emergency Planning," and Nuclear Energy Institute (NEI) 99-01, Revision 6, "Methodology for Development of Emergency Action Levels."

Under bounding conditions and without the implementation of controls described previously, there are no postulated accidents in Unit 3 that could result in the release of radioactive materials to the environment in quantities that could require the implementation of protective actions for the general public. As stated earlier, due to the necessary worker controls to limit internal doses, these accidents are not considered credible. There are no postulated accidents for the HB ISFSI that could result in the release of radioactive materials to the environment in quantities that would require the implementation of protective actions for the general public. Therefore, no response by federal, state, or local agencies is required for radiological releases.

3.2.1 Spectrum of Postulated Emergencies

As described in HB ISFSI FSAR Section 8.2, there are no credible accidents that would cause the leakage of fission products from the storage system. Nevertheless, an emergency locker containing portable radiation monitoring equipment, portable fire extinguishers and a first aid kit are maintained onsite.

The potential for credible classifiable emergency events is enveloped by the following categories.

3.2.1.1 Damage to a Loaded Cask

Description

Currently, spent fuel is stored in spent fuel storage casks located in the in-ground HB ISFSI vault. There is no need for routine spent fuel cask handling activities. However, in the event that spent fuel cask handling activities are undertaken, the potential would exist for incidents that could result in dropping of a loaded spent fuel cask. As a result of the design and construction of the spent fuel casks, damage to the spent fuel in this configuration is not considered credible. Casks may also be damaged by severe natural or man-made events.

Detection

Damage to a spent fuel storage cask will be visually observed by personnel involved in the handling of the spent fuel storage cask. Damage may also be detected by indications of elevated radiation levels on or near the cask.

3.2.1.2 Security Conditions

Description

Security Conditions are postulated only for the HB ISFSI and not the facility. The Emergency Plan would be activated for Security Conditions that meet the threshold for an Alert. Discussions and details pertaining to ISFSI security are provided in the HB ISFSI Physical Security Plan.

Detection

An attempt at forcible entry, actual penetration, sabotage, or the receipt of a credible threat against the HB ISFSI would be detected by security personnel stationed at the HB ISFSI.

3.2.1.3 Emergency Coordinator's Judgment

In the event of an emergency not specifically identified elsewhere in Section 3.2, the Emergency Coordinator may declare an emergency based on an assessment of ISFSI conditions.

3.3 Hazardous Chemicals

10 CFR 72.32(a)(13) refers to the Emergency Planning and Community Right-to-Act of 1986, Title III. Pub. L. 99-499 (EPCRA), with respect to hazardous materials at the ISFSI. EPCRA stipulates that, if a facility has an extremely hazardous substance in an amount greater than the appropriate threshold planning quantity, then the facility must designate a facility Emergency Coordinator to participate in the local planning process. The ISFSI does not have extremely hazardous substances present in amounts equal to or greater than the threshold planning quantities of 40 CFR 355 Appendix A within the EPA's Code of Federal Regulations. Therefore, the Emergency Coordinator is not required to participate in the local planning process.

40 CFR 302.4, Appendix B, lists radioactive material as a hazardous substance. California State law (Health and Safety Code 25500) requires that this material be listed in the facility Hazardous Materials Business Plan filed with the local agency (Humboldt County Environmental Health). Because limited quantities of other hazardous materials are stored and used at the ISFSI and Unit 3, spills or other accidents involving other hazardous materials do not have the potential for posing a threat to onsite or offsite personnel and would not constitute an emergency condition.

Table 3.2-1 – HB ISFSI Emergency Action Levels

Initiating Conditions/ NEI 99-01, Rev 6	Emergency Action Level	Emergency Classification
Damage to a loaded cask CONFINEMENT BOUNDARY E-HU1	Damage to a loaded cask CONFINEMENT BOUNDARY as indicated by an on-contact radiation reading greater than 0.30 mrem/hr* on the lid of the ISFSI Vault. (NOTE: Contact reading not needed if any reading greater than 0.30 mrem/hr near the vaults is found.)	ALERT (A)
Confirmed SECURITY CONDITION or threat HU1	A SECURITY CONDITION** as reported by Security. OR Notification of a credible security threat directed at the site.	ALERT (A)
Conditions exist which in the EMERGENCY COORDINATOR JUDGMENT warrant declaration of an Alert. HU2	Other conditions exist which in the judgment of the Emergency Coordinator indicate that events are in progress or have occurred which indicate a potential degradation of the level of safety of the ISFSI or indicate a security threat to ISFSI protection has been initiated.	ALERT (A)

* Section 7.3.2.1 of the FSAR states “The dose rate at all locations adjacent to a single storage cell in the ISFSI vault with the lid installed is less than 0.15 mrem/hr.” 0.30 mrem/hr represents two times this value.

** SECURITY CONDITIONS that would require declaration of an Alert are defined within the Emergency Plan implementing procedures.

4.0 EMERGENCY RESPONSE ORGANIZATION

This section describes the Emergency Response Organization (ERO) and associated responsibilities that will be in place. Section 9.1 of the ISFSI FSAR provides a description of the normal operating organization. The HB emergency response organizations and associated responsibilities will consist of an Emergency Coordinator and a Security Coordinator. The ERO personnel will be supported by on-shift personnel or other PG&E staff, as required, by the specific emergency situation.

4.1 Site Emergency Response Organization

In the event of an emergency, the on-shift organization (24/7) is the ERO, followed by augmentation of this organization, if necessary, with other members of the site staff as they become available. The Emergency Coordinator is qualified and responsible for making an initial evaluation of the incident, performing any immediate actions which are necessary, making required notifications, and placing appropriate portions of the Emergency Plan into effect. The Emergency Coordinator has the authority to realign/reorganize the ERO as deemed appropriate.

In the event of an emergency, a designated member of the shift organization staff assumes the position of Emergency Coordinator. Management staff will be available by phone for advice and guidance for the on-site Emergency Coordinator, if needed.

The Emergency Coordinator is responsible for directing execution of the required immediate actions under emergency conditions. The required immediate actions include:

- Classification of the emergency in accordance with Section 3 of this plan.
- Notification of the site staff.
- Notification of affected federal, state, and local authorities.
- Notification of personnel for the augmented ERO (if required).
- Implementation of required assessment and any site protective measures.

The Security Coordinator is responsible for providing security-related support to the Emergency Coordinator and directing the activities of the Security Force consistent with the requirements of the HB ISFSI Physical Security Plan.

The Emergency Coordinator may assign other personnel to undertake required assessment and protective actions as needed. If the Emergency Coordinator determines that additional resources are needed to implement required assessment and protective actions, additional personnel are notified.

A description of the Emergency Coordinator and Security Coordinator positions and their responsibilities are provided in sections 4.1.1 and 4.1.2, respectively.

4.1.1 Emergency Coordinator

Based on the event, a designated member of the staff may be called in to relieve the Emergency Coordinator.

The responsibilities of the Emergency Coordinator include:

- Direct continuing evaluations of the situation.
- Perform or direct any required supplemental notifications of affected individuals and organizations as discussed in Section 4.4 of this Plan.
- Assign plant staff personnel to support functions.
- Authorize partial or complete evacuation of the site and specify the appropriate evacuation route.
- Coordinate and direct emergency operations performed by company personnel in the vicinity of the site.
- Perform or direct liaison with local non-company emergency support groups.
- When requested, the Emergency Coordinator provides advice to the County Incident Command Center, (ICS) if the ICS is established in response to ongoing security events.
- If time permits, obtain Director and Nuclear Plant Manager or designee, approval prior to authorizing use of company emergency personnel exposure limits.

4.1.2 Security Coordinator

Based on the event, a designated member of the staff may be called in to relieve the Security Coordinator.

The responsibilities of the Security Coordinator include:

- Advise Emergency Coordinator on security matters relating to the emergency.
- Provide overall coordination of security aspects of the emergency incident.
- Assess the emergency incident and determine if it is a security-related event (possibly a diversion tactic) that is being attempted.
- If necessary, implement the appropriate Safeguards Contingency Plan (SCP) and/or the site Local Law Enforcement Integrated Response Plan.

4.1.3 Additional support functions

Additional PG&E or contact support personnel may be called to provide support in the following areas:

Radiological Support Functions:

- Provide overall coordination of radiological aspects of the emergency.
- Advise the Emergency Coordinator on matters relating to radiological safety.
- Coordinate and supervise radiological surveys and investigations, both onsite and offsite.
- Manage the onsite radiation protection program.
- At direction of Emergency Coordinator, notify staff and other affected individuals and organizations of the emergency.

Other Support functions:

- Coordinate and supervise company support teams operating in the vicinity of the site and the ISFSI.
- Advise the Emergency Coordinator of actions and findings of company support groups.
- Assist Emergency Coordinator in determining personnel deployment to emergency support assignments.
- Review and evaluate data.
- Handle communications to and from the site and between site emergency response groups.
- Maintain contact with offsite support groups and transmit instructions and information to and from Emergency Coordinator.
- Provide general assistance to Emergency Coordinator.
- Maintain records of incoming and outgoing messages.
- Maintain proper records and logs.
- Act as a scribe for the Emergency Coordinator.
- Maintain a record of significant conditions, activities, events, etc., relating to the emergency at hand.
- Perform first aid treatment.
- Perform incipient fire fighting.
- Administrative Functions.

4.2 State and Local Government Agency Support

4.2.1 Local Law Enforcement Agencies

The Humboldt County Sheriff's Department is the local alerting agency, which is notified by the Emergency Coordinator in the event that emergency recovery actions may involve County agencies. The Sheriff's Department dispatch center is manned on a 24-hour basis.

The Humboldt County Sheriff's Department is also notified in the event of a security-related incident. A security procedure describes site Local Law Enforcement Integrated Response Plan for a security related event.

Upon notification from the Emergency Coordinator, the Sheriff's Department, if appropriate, passes this information to the County Office of Emergency Services (OES), California Highway Patrol, City of Eureka Police Department, and Humboldt Bay Fire, as needed. The Sheriff's Department coordinates with the California Highway Patrol, City of Eureka Police Department and Humboldt Bay Fire to follow prearranged procedures and checklists (these are part of the Humboldt County Emergency Plan) under supervision of the County OES, to carry out the following actions, as needed:

- Assist company personnel as required in the evacuation of onsite personnel over public roads.
- Provide traffic control. This includes roadblocks on the perimeter of the affected area to ensure that no unauthorized personnel enter the area.
- Maintain law and order.

4.2.2 County Office of Emergency Services

The Humboldt County OES is responsible for coordinating and supervising the implementation of the Humboldt County Emergency Plan.

Upon notification from the Sheriff's Department, the County OES (if appropriate) alerts the County Board of Supervisors, the County Administrative Officer, and all County, City of Eureka, and private agencies involved in the implementation of the Humboldt County Emergency Plan. If appropriate, they activate the Emergency Operations Center, which becomes the coordinating center for the execution of the Humboldt County Emergency Plan.

The County OES is responsible for release of public information regarding offsite response and protective measures to be taken. PG&E is responsible for news releases to the media concerning onsite events and protective measures. News releases pertaining to onsite conditions are coordinated with County public information personnel.

4.2.3 Basis of Coordination between PG&E and County

Because the Sheriff's Department Operations Center is staffed on a 24-hour basis, the Emergency Coordinator makes or directs the initial notification of any emergency to the Sheriff's Office. The Sheriff's Office then notifies members of the County Emergency Organization.

4.2.4 State of California

The State Office of Emergency Services Warning Center in Sacramento is manned on a 24-hours basis. The Emergency Coordinator makes or directs the initial notification to the State Warning Center.

The State Office of Emergency Services has executive authority and responsibility for coordinating State assistance.

4.3 Federal Government

The NRC Operations Center is manned on a 24-hours basis. The Emergency Coordinator makes or directs the initial notification of a declared emergency to the NRC immediately after notifications of the appropriate county and state emergency response organizations and not later than one hour after the emergency has been declared.

4.4 External Support for Emergency Response Activities

4.4.1 PG&E Support

Diablo Canyon Power Plant (DCPP) has an extensive staff of technical specialists who are familiar with the HB ISFSI as well as radiological safety, communications, meteorology, and other necessary support functions. Humboldt Bay site management may call upon individuals from the DCPP staff, as necessary, to assist in an emergency situation.

A Company Emergency Plan outlines the Company ERO and the responsibilities and capabilities of company departments. Access to the Company ERO is through the Corporate Security/Business Continuity and Emergency Planning Organization. This organization will direct all company emergency response activities and will work with the Humboldt Bay site Emergency Coordinator to develop a comprehensive response for the specific emergency situation.

The Corporate Emergency Planning Organization will interface with the other key members of the Company ERO to arrange for the necessary company resources to support the short-and/or long-term recovery effort.

4.4.2 Support from Other Non-Company Organizations

Other organizations having an emergency response role include government agencies at the federal, state, and local levels as well as non-company commercial enterprises. Where information exchange, response functions, and concept of operations are covered by laws, regulations, or executive orders, agreements are documented either by use of signature pages in the planning documents or by written agreements. These written agreements can vary from those with industrial organizations which may require contractual arrangement to those with local, commercial, and support services which may simply consist of a written commitment that they will respond in an emergency.

4.4.3 Local Services Support

As an extension of the onsite organizational capability for handling all types of emergencies, written agreements have been made with Local Law Enforcement Agencies and other local and regional service organizations to provide medical, hospital, ambulance, fire-fighting and other support. Support from local services provides for immediate, 24 hour-per-day, on-call response. Selected agreements are summarized below.

4.4.3.1 Hospitals

Arrangements have been made with St. Joseph Hospital, located in Eureka, California, and Redwood Memorial Hospital, located in Fortuna, California, to handle cases of both radiological and non-radiological personnel injuries occurring at the Humboldt Bay site. These hospitals have agreed to accept and treat any person who is injured as a result of site operations. Their medical procedures are geared to handle routine industrial injuries as well as situations involving radiation or contamination.

4.4.3.2 Ambulance Service

Arrangements have been made with an ambulance service in Eureka to handle cases of personal injury at the Humboldt Bay site, including those involving radioactive contamination.

4.4.3.3 Fire-Fighting Support

Humboldt Bay Fire can be called upon to respond to a fire, either onsite or in the surrounding grasslands, which cannot be controlled by personnel onsite, and for fire involving radioactive material.

4.4.3.4 Local Law Enforcement Support

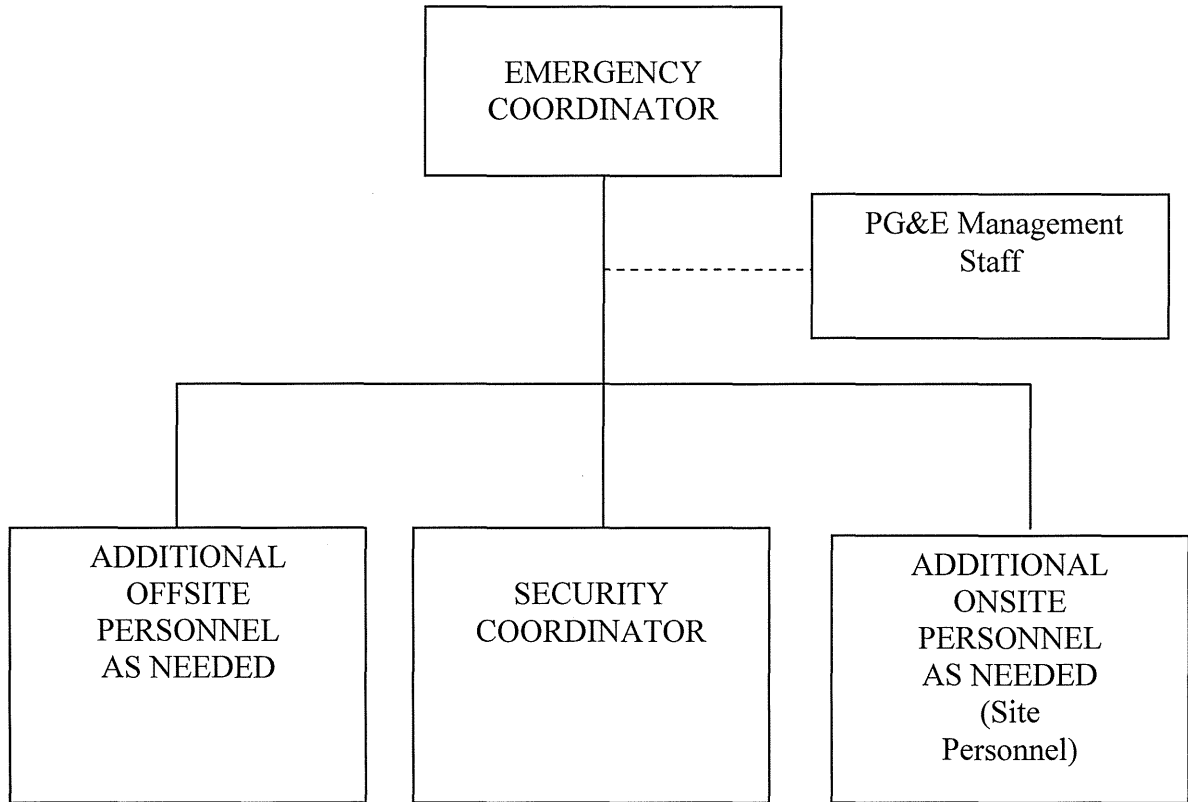
See Section 4.2.1.

PG&E will make arrangements to provide health physics support to ambulance and hospitals if needed.

4.4.4 Non-Company Industrial Support Organizations

Humboldt Bay site emergency implementing procedures make provisions for early notification and information transfer to various support organizations. A list of designated persons and emergency phone numbers is used to make early contact to place these organizations on alert status.

Figure 4.2-1 –Emergency Response Organization



5.0 EMERGENCY ASSESSMENT AND PROTECTIVE ACTIONS

5.1 Activation of the Emergency Response Organization

5.1.1 Notification and Activation of Onsite Emergency Response Organization

The Emergency Coordinator activates the ERO for events requiring declaration of an Alert. The ERO may be activated for any other event as determined appropriate by the Emergency Coordinator.

5.1.1.1 Notification of Emergency Coordinator

The first step in the event of an emergency is to notify the Emergency Coordinator. To accomplish this, the individual discovering the emergency immediately reports it directly to the Primary Alarm Station (PAS) Operator who will notify the Emergency Coordinator.

5.1.1.2 Notification of Onsite Personnel

The Emergency Coordinator makes an initial evaluation of the situation and, if warranted, classifies the emergency and directs the sounding of the emergency siren, or alternate notification method.

Alternate means of communication include radios, telephones, cellular phones, satellite phones, bull horns, and verbal communications.

5.1.1.3 Initial Deployment of Onsite Personnel

The initial deployment of onsite personnel is dependent on the extent of the emergency and the time at which it occurs. The Emergency Coordinator directs initial personnel deployments based on an assessment of the conditions and protective actions deemed necessary. The Emergency Coordinator also directs the Security Coordinator as needed.

5.1.1.4 Notification of personnel assigned to the Humboldt Bay Generating Station.

Interface procedures (HBPP and HBGS) are in place to address the notification process for events impacting HBGS.

5.1.2 Notification of Public Authorities

The Emergency Coordinator makes or directs the necessary notifications to required agencies, including:

- Humboldt County Sheriff's Department
- State Office of Emergency Services
- Nuclear Regulatory Commission

Information to be communicated to offsite response organizations includes, as applicable: the status of the site and ISFSI including important structures, systems, and components; information regarding potential impacts for offsite personnel; and required responses from the offsite responders. Provisions are included for message authentication.

5.1.3 Notification of Site Staff Personnel Offsite

To facilitate notification of site staff in the event they are offsite during an emergency, an "on-call" system is established. A member of PG&E management staff is designated as being "on-call", and that individual remains available by phone for consultation and guidance during the emergency, if needed.

When an emergency occurs outside of normal working hours, one of the early actions of the Emergency Coordinator is to notify the designated PG&E management staff member, if necessary.

The Emergency Coordinator decides what additional staffing above the minimum required by the classification of the emergency is necessary for each emergency situation. If needed, additional personnel from the PG&E or site staff may be called in. After arriving onsite, personnel report to the Emergency Response Facility (unless otherwise instructed) to receive assignments.

5.1.4 Activation of Company Emergency Response Organization

The Company Emergency Response Organization can be activated by the Emergency Coordinator by notifying Corporate Security Department / Business Continuity and Emergency Planning. This organization would then notify appropriate members of the Company Emergency Organization. The extent to which corporate resources are activated is based on staged mobilization depending on the nature of the occurrence.

5.2 General Assessment and Protective Actions

Personnel on shift at the time of an event perform the initial event assessment. The actions to be taken depend on the nature of the incident. General response actions include:

- Reporting of the incident to the Emergency Coordinator.
- Evacuation of affected personnel from any areas having undue hazards.
- Personnel accountability or evacuation, as determined necessary by the Emergency Coordinator.
- Event assessment via direct observation and use of installed or portable instrumentation.
- Event classification based on available information.
- Notifications of applicable onsite and offsite emergency organizations.
- Recommendation of protective actions for onsite personnel.
- Requests for any needed offsite assistance, such as medical or fire-fighting support.
- Mitigation of the consequences of the event.
- Reevaluation of the items above, as information and analyses become available.

5.3 Specific Actions

5.3.1 Alerting, Accountability, Shelter-in-place and Evacuation of Onsite Personnel

5.3.1.1 Alerting Onsite Personnel

Onsite personnel are alerted that an emergency condition exists by the sounding of the emergency siren or via alternate means. Upon entry to the Humboldt Bay site, visitors are briefed on the meaning of the emergency siren tones, alternate means of notification, and the required response. This applies to visitors, contractors and construction personnel.

5.3.1.2 Onsite Personnel Accountability/Assembly

Accountability procedures for site personnel are intended to provide accountability for all personnel in the Restricted Areas and assembly for other site personnel. Site procedures describe the process of accountability/assembly of site personnel.

If the site siren is sounded to indicate the accountability (assembly), signal each person is instructed to immediately go to a specific assembly area. A designated individual is assigned to each assembly area and is responsible to confirm personnel accountability, if required.

5.3.1.3 Evacuation of Onsite Personnel

The Emergency Coordinator is responsible for the decision to evacuate personnel from the site. Events that could prompt a site evacuation include: hazardous or flammable gas release; major fire; severe natural phenomenon; or security event.

5.3.1.4 Shelter-in-Place

Sheltering-in-place, or seek shelter/lock-down, may be a preferred protective action in a security-related event, or an onsite or near site event including the release of hazardous material. The Emergency Coordinator is responsible for the decision to move personnel or have them shelter-in-place based on the situation.

5.3.1.5 Assembly/Evacuation of Humboldt Bay Generating Station

Interface procedures (HBPP and HBGS) are in place to address the assembly and evacuation of HBGS personnel.

5.3.2 Offsite Protective Actions

There are no postulated accidents in which protective actions would be required by the general public.

5.3.3 Actions for Specific Incidents

5.3.3.1 Fires

Fires that occur onsite require special considerations depending on the proximity to radioactive materials.

Any individual discovering any size fire is to report the fire directly to the PAS Operator. The PAS Operator or designated individual initiates the 911 emergency call and then activates the appropriate local emergency siren and relays all information to the Emergency Coordinator. Only after notifying the PAS Operator should the individual discovering the fire attempt to extinguish it.

The Emergency Coordinator is responsible to ensure the following actions are performed as required:

- Call 911
- Initiating the Fire Signal if necessary.
- Dispatching additional people to the scene of the fire and designating Assigned Responders.

- Securing ventilation in the area.
- De-energizing affected equipment.
- Requesting assistance from offsite fire response agencies.

5.3.3.2 Medical Emergencies

Medical emergencies could consist of a serious injury, illness, or overexposure. Site and ISFSI personnel who receive first-aid training are authorized to take action to the extent justified. In all cases, individuals inform the Emergency Coordinator of the situation and render first aid to the patient in accordance with company-approved techniques. If the patient is inside the Unit 3 Restricted Area, the patient should be moved, as early as practical, to a designated area for decontamination (if possible or as necessary) and transported to the hospital, if required.

The Emergency Coordinator is responsible for directing the following actions as appropriate:

- Dispatching additional personnel to aid the patient.
- Reporting a medical emergency to 911 and notifying St. Joseph Hospital or Redwood Memorial Hospital when the patient is ready for transport. Information provided to the hospital includes the patient's name, the estimated extent of injuries, and whether the patient is contaminated with radioactive materials.
- Notifying the appropriate company offices in accordance with standard practices. The Safety, Health and Claims Department is notified in all cases of serious injury.
- When radioactively contaminated or potentially-radioactively contaminated patients are transported, assigning a qualified monitor with appropriate portable survey instrumentation to accompany the patient to the hospital.

5.3.3.3 Security Emergencies

Anyone suspecting or discovering a possible abnormal or emergency security condition reports the condition to the Primary Alarm Station (PAS) at 0809 or 6545. The PAS Operator dispatches one or more Security Officer(s) to assess the possible abnormal or emergency condition and follow the appropriate security procedure(s).

NUCLEAR POWER GENERATION DEPARTMENT

NUMBER **SITE EM PLN**

TITLE **SITE EMERGENCY PLAN**

VOLUME **3**

REVISION **7**

PAGE **33 of 45**

The PAS operator also notifies or assumes the role of the Emergency Coordinator if an abnormal or emergency condition exists. Based upon the assessment of the incident, security notifies on site personnel and requests assistance from Local Law Enforcement through the Sheriff's office.

6.0 EMERGENCY RESPONSE FACILITIES AND EQUIPMENT

6.1 Emergency Response Facilities

There are a number of facilities that may be used as accident management centers and personnel staging and planning areas. These facilities include:

- Office Annex Conference Room (Primary location)
- ISFSI PAS (Alternate location)
- Security Building (Alternate location)
- Offsite Emergency Response Center (Myrtle Avenue Service Center)

Communication capabilities exist in these facilities from PG&E and the local, commercial telephone provider. The choice of area(s) to be used during an emergency is at the discretion of the Emergency Coordinator.

A Security Event may require an extended effort to regain control of the ISFSI. If required, the Humboldt County Sheriff's Department may establish an Incident Command Center and a local Incident Command Post. The location of the Incident Command Post will vary based on the event but will be as close as practical to the security event. The location will be selected by an Officer from the Humboldt County Sheriff's Department. A member of the PG&E management staff, who is familiar with ISFSI design, operations and radiological concerns, will serve as technical advisor in the Incident Command Center or Incident Command Post, if requested.

6.2 Communications Equipment And Warning Systems

6.2.1 Onsite Communication Systems

NOTE: If the Communication Room suffers a catastrophic failure such as from a fire or explosion, back-up capability is provided through radios, cell phones, satellite phones, and word of mouth.

6.2.1.1 Pacific Bell Telephone System

The local, commercial telephone provider provides numerous Direct Inward Dial (DID) and Direct Outward Dial (DOD) telephone lines that are connected to the site's private branch exchange (PBX). The PBX provides normal site telephone service to telephones located throughout the site, including the areas within the site and ISFSI which are designated as assembly areas for site personnel in the event of an emergency. The PBX system utilizes individual telephone numbers for direct inward dialing to each phone location. These are not listed in the public telephone directories, but are listed in company directories.

A separate unlisted line serves the site for emergency use only. This line does not go through the PBX.

6.2.1.2 Site Telephone System

The site telephone system is used both for intra-site communications and to communicate with company facilities throughout the PG&E system and is designed to remain operable in the event of loss of normal power supply. A site telephone is available at the ISFSI to report emergencies.

6.2.1.3 VHF Radio Systems

The site security department maintains a radio system with a base station and several hand-held portable units. This radio system is used primarily for internal security purposes but may be utilized in emergency situations to establish and maintain point-to-point communications between the site and the Humboldt County Sheriff's Operation Center. These radios can also be used to communicate directly with mobile units in the field.

There is also a site radio frequency available with several hand-held units located on-site for this channel and may be used by the security department to coordinate communications on-site during times of emergency.

Additional portable radios are available for communications between HBPP and HBGS.

6.2.2 Warning Signals

The emergency signal is manually activated and may include audible or electronic notification methods. The emergency signal alerts personnel that an emergency exists and may be coded to indicate the specific emergency response action expected.

6.3 Emergency Monitoring And Assessment Equipment

6.3.1 Radiological Equipment

A variety of portable survey and dose rate instruments are available at the site for routine radiological monitoring, and also for use in emergencies, if necessary.

A radiological emergency kit is provided onsite to supplement the radiation protection equipment, which is provided for routine use at the site.

6.4 Miscellaneous Protective Facilities And Equipment

6.4.1 Fire Protection

6.4.1.1 Site Equipment

The site is equipped with fire protection equipment, and it is expected that most small non-structural, non-radiological fires would be handled by site personnel with portable extinguishers.

6.4.1.2 Offsite Fire Response Agency

Humboldt Bay Fire will respond to a fire when their assistance is requested.

6.4.2 Transportation

PG&E has a fleet of radio-equipped automobiles and trucks in the Eureka area, which can be mobilized in an emergency. Additionally, PG&E has made prior arrangements with a local ambulance company to provide ambulance service at the site for injured personnel, including radioactively contaminated patients.

6.5 First Aid And Medical Facilities

6.5.1 Onsite Facilities

6.5.1.1 Personnel Facilities

Shower cubicles and sink cubicles are provided for the purpose of decontamination of personnel. Various decontamination aids are provided, such as brushes, skin decontamination soaps, rubber gloves, creams, wiping tissues, towels, etc. Monitoring instrumentation is readily available.

6.5.1.2 First Aid Facilities and Supplies

First aid kits, blankets, and basket stretchers are placed at various locations throughout the site.

6.5.2 Offsite Facilities

Refer to Section 4.4.3.1.

7.0 RECOVERY AND RE-ENTRY

Following control and termination of emergency conditions, the ERO transitions to recovery and re-entry operations. Recovery and re-entry operations are designed to allow for complete assessment of site conditions and to restore the facility or ISFSI to normal conditions or other status that provides an acceptable level of safety to both site personnel and the members of the public.

7.1 Guidelines For Recovery and Re-entry

PG&E conducts both immediate and long-term recovery actions in accordance with the following guidelines:

- a. PG&E undertakes reasonable efforts, consistent with the urgency of the situation, to minimize personnel radiation exposure or exposure to other potential hazards.
- b. The Emergency Coordinator approves all initial re-entries into evacuated areas if still in the emergency event. Otherwise the Director and Nuclear Plant Manager or designee may provide approval.
- c. Radiation Protection procedures guidance will be used to re-enter evacuated areas.
- d. PG&E will take necessary actions to return site safety levels to pre-event condition.

7.2 Event Report

It is the responsibility of all personnel involved in the ERO to maintain accurate and complete records in their respective areas of responsibility throughout the emergency situation.

PG&E investigates and documents any incidents requiring classification as an Alert. The event report includes the following information, as applicable:

- Cause of event,
- Personnel and equipment involved,
- Extent of injury and damage as a result of the event,
- Onsite and offsite assistance requested and received,
- Locations of contamination with the final decontamination survey results,
- Mitigating actions taken to terminate the emergency,
- Corrective actions taken for planned to prevent recurrence of the event,
- Any program changes resulting from a critique of emergency response activities.

PG&E provides the NRC a written follow-up report for events at the ISFSI in accordance with 10 CFR 72.75(g).

8.0 MAINTAINING EMERGENCY PREPAREDNESS

8.1 Emergency Plan and Implementing Procedures

8.1.1 Emergency Plan and Implementing Procedure Review and Update

- a. PG&E prepares and maintains Emergency Plan Implementing Procedures (EPIPs) and distributes these procedures to affected parties. PG&E reviews the EPIPs to ensure that the duties, responsibilities, action levels, and actions to be taken by each group or individual in response to an emergency condition are clearly stated.
- b. Revisions to the Site Emergency Plan and Emergency Plan Implementing procedures are reviewed by a designated management review process.
- c. Biennial internal review of the plan and implementing procedures are conducted and any revisions resulting from that review are processed in accordance with 8.1.1(b).
- d. PG&E coordinates procedures that implement this Emergency Plan with related operating, health and safety, and security procedures. PG&E distributes procedures to identified individuals and/or organizations to ensure document control and the availability of a sufficient number of copies for conduct of normal and emergency operations and training activities.

PG&E prepares, reviews, and approves procedure revisions in accordance with approved procedures which establish requirements for review, approval, and distribution of documents.

- e. A designated individual of the organization conducts a quarterly review and update of contact and notification lists to ensure correct listing of telephone numbers and responsible individuals. Liaison with state and local agencies assures uniform updating of lists and transmittal of relevant site information.
- f. PG&E provides for an outside review of the Emergency Plan by an independent and technically competent organization on a biennial basis. This review shall be performed by persons who have no direct responsibility for the implementation of the emergency preparedness program. The intent of the review is to update and improve the plan and the associated implementing procedures, incorporate results of drills and exercises, and to account for any changes in onsite capabilities.

Following any revisions to the Emergency Plan, all participating agencies in the emergency organization that are affected by the revisions are apprised of the changes through the distribution provided by the document control system.

8.1.2 Changes to the Emergency Plan

- a. In accordance with 10 CFR 50.54(q) and 10 CFR 72.44(f), PG&E may make changes to the Humboldt Bay Site Emergency Plan without NRC approval only if the changes do not decrease the effectiveness of the Plan, and the Plan, as changed, continues to meet the applicable standards 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50 and 10 CFR 72.32. At HBPP, the specific requirements for making and evaluating changes to the Plan to determine if those changes decrease the effectiveness of the Plan are set forth in procedures HBAP C-19, "Licensing Bases Impact Evaluation (LBIE)" and EPIP R-10, "Emergency Plan Management," specifically the section on 10CFR50.54(q) Screening and Effectiveness Evaluations. If a change is made without approval, PG&E shall submit, as specified in 50.54(q), a report of each change within thirty days after the change is made (effective date of revision). After termination of the 10 CFR Part 50 license, the remaining emergency preparedness provisions for the ISFSI are subject only to the requirements of 10 CFR Part 72. PG&E shall retain a record of each change made to the Emergency Plan without prior NRC approval for a period of three years.
- b. PG&E will not implement proposed changes that reduce the effectiveness of the approved Emergency Plan, including EALs, without application to, and approval by, the NRC. PG&E shall submit, in accordance with Regulatory Issue Summary 2005-02, Rev. 1, Emergency Plan changes that require prior NRC approval, in accordance with 10 CFR 50.54(q), as license amendment requests in accordance with 10 CFR 50.90.
- c. NRC Regulatory Guide 1.219, "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors," dated May, 2009.
- d. The NRC endorsed NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 6, dated November 2012, and any supplements as may be appropriate, provides guidance as to changes to the EALs that may require prior NRC approval.

8.1.3 Letters of Agreement

On an annual basis, PG&E contacts local participating emergency organizations with which a letter of agreement has been signed to review and certify the agreement is current.

In general, letters of agreements are appropriate for organizations that are expected to respond during an emergency. If the Humboldt Bay Site Emergency Plan identifies an organization from which a particular service or response is required, documentation is maintained which defines the expected response.

The ISFSI Shift Manager maintains current copies of Letters of Agreement.

8.2 Emergency Preparedness Training Program

8.2.1 Site Staff Training

Site personnel assigned responsibilities in the Emergency Plan and site procedures are required to participate in a training program designed to familiarize them with their actions in the event of an ISFSI or facility emergency. The extent of the training an individual receives is dependent on their responsibilities. The training programs available to site staff are prescribed in procedures and include the following:

- Fire Protection
- First-Aid
- General Radiation Protection
- Emergency Radiological Monitoring
- Emergency Procedures

Site personnel receive basic instruction on the fundamentals of the Emergency Plan as soon as practical after they begin work onsite. This includes such topics as identification of emergency siren, personnel assembly locations, and any other topics appropriate to the individual's duties in the event of an emergency. Additionally, annual refresher training is provided for the Emergency Plan and Emergency Plan Implementing Procedures as part of the overall retraining program.

8.2.2 Offsite Agency Training

Training programs for individuals from offsite agencies is primarily the responsibility of the agency involved. However, PG&E personnel maintain contact with the Sheriff's Department, Humboldt Bay Fire, City Ambulance, St. Joseph Hospital and Redwood Memorial Hospital on a routine basis to reaffirm the arrangements of the plan. PG&E personnel provide biennial training on radiation protection and other topics related to the plan for the benefit of individuals in these groups.

PG&E invites selected members of the local law enforcement agencies to attend a periodic familiarization program related to ISFSI security.

8.3 Drills And Exercises

8.3.1 Drills:

A drill is a supervised instruction period aimed at testing, developing and maintaining skills in a particular operation. Specifically, drills are intended to test the capability to respond and perform assigned emergency functions.

8.3.2 Exercises:

An exercise is an event testing the integrated capability, and a major portion of the basic elements, existing within emergency preparedness plans and organizations.

PG&E conducts periodic drills on various aspects of the Plan to assure that personnel retain familiarity with the Plan and to improve response actions when applicable. Drills and required exercises affect both Unit 3 and the ISFSI.

During drills and exercises observers may be placed in appropriate site areas to check and report on the progress of the drill/exercises and to monitor personnel performance as well as that of alarms, safety devices, and communications systems. PG&E arranges for an independent technically competent individual or organization to monitor or evaluate an emergency exercise every two calendar years.

PG&E conducts a biennial emergency exercise for a simulated emergency that includes radiological, medical and fire aspects. This exercise includes sounding of the emergency siren or other alternative means to notify personnel and gathering all onsite personnel at designated assembly areas, e.g., emergency assembly point, evacuation areas or shelter lockdown location. PG&E also conducts a biennial emergency exercise of a simulated security event affecting the ISFSI.

Offsite emergency response organizations will be invited to participate in these exercises biennially. Communication checks with offsite emergency response organizations will be conducted semiannually.

Following an exercise, observers and principal participants critique the event and the results are presented for review and approval under a designated management review process. Any weaknesses or deficiencies that are identified in a critique of an exercise, a drill or for training must be corrected.

8.3.3 Events Meeting Exercise Requirements

Actual events may occur for which Emergency Plan exercise credit may be warranted. The following elements should be documented in order to credit an event as a required exercise:

- The event includes sounding the emergency siren, or other alternative means for notification of site personnel, and requires site personnel to gather at designated locations.
- The event is documented as described in EPIPs.

8.4 Audits

Humboldt Bay establishes requirements for audits of the Emergency Plan and implementing procedures by individuals independent of the HBPP emergency planning organization.

8.5 Maintenance and Inventory Of Emergency Equipment and Supplies

To ensure the availability and operational readiness of equipment and supplies that may be required in an emergency situation, PG&E conducts periodic maintenance, calibration, surveillance testing, and inventory checks of the supplies and equipment. PG&E inspects equipment designated for use only in the event of an emergency, such as survey instruments and emergency kits, on a semiannual basis or after each use, to verify both availability and functionality. PG&E performs routine calibrations on all emergency-use instruments. When emergency equipment is removed for calibration or repair, PG&E replaces that equipment with calibrated operational equipment. Other equipment that is used during normal site operations and may be required for use in an emergency, such as radiation detection instruments and the communications network, is included in the site surveillance testing and preventative maintenance programs. Additionally, PG&E maintains supplemental inventories of expendable supplies, such as protective clothing, particulate filters for radiation detection instruments, etc., and replenishes these inventories when minimum levels are reached.

8.6 Emergency Planning Records

PG&E creates and maintains records associated with emergency planning and actual emergencies in accordance with site procedures. These records may include:

- training and retraining (including lesson plans and test questions).
- drills, exercises, and related critiques.
- inventory and locations of emergency equipment and supplies.
- maintenance, surveillance, calibration, and testing of emergency equipment and supplies.

NUCLEAR POWER GENERATION DEPARTMENT

NUMBER **SITE EM PLN**

TITLE **SITE EMERGENCY PLAN**

VOLUME **3**

REVISION **7**

PAGE **43 of 45**

- letters of agreement with offsite support organizations.
- reviews and updates of the emergency plan notification of onsite personnel and offsite response organizations affected by an update of the plan or its implementing procedures.

NUCLEAR POWER GENERATION DEPARTMENT

NUMBER **SITE EM PLN**

TITLE **SITE EMERGENCY PLAN**

VOLUME **3**

REVISION **7**

PAGE **44 of 45**

9.0 RESPONSIBLE ORGANIZATION

ISFSI

APPENDIX A – DEFINITIONS, ABBREVIATIONS, AND ACRONYMS

Definitions

Assessment Actions - Actions taken during or after an accident to obtain and process information needed to implement specific emergency measures.

ISFSI Controlled Area – The 100-meter area around the ISFSI.

Confinement Boundary - means the outline formed by the sealed, cylindrical enclosure of the multi-purpose canister (MPC) shell welded to a solid baseplate, a lid welded around the top circumference of the shell wall, the port cover plates welded to the lid, and the closure ring welded to the lid and MPC shell providing the redundant sealing. (ISFSI FSAR)

Corrective Actions - Emergency measures taken to correct or terminate an emergency situation, e.g., firefighting, repair, and damage control.

Derived Air Concentration – As defined by 10 CFR 20.1003.

Drills - A drill is a supervised instruction period aimed at testing, developing and maintaining skills in a particular operation. Specifically, drills are intended to test the capability to respond and perform assigned emergency functions.

Exercises - An exercise is an event testing the integrated capability, and a major portion of the basic elements, existing within emergency preparedness plans and organizations.

Emergency Action Levels (EALs) - Specific radiation levels; airborne, waterborne, or surface-deposited concentrations of radioactive materials; or specific instrument indications (including their rates of change) that may be used as thresholds for initiating such specific emergency measures as designating a particular class of emergency, initiating a notification procedure, or initiating a particular protective action. EALs may also be event-based such as a fire, natural phenomena, or security events.

Facility – Refers to HBPP Unit 3 plant being decommissioned.

Greater Than Class C Waste - Low-level waste that exceeds the concentration limits of radionuclides established for Class C waste (see 10 CFR 61.55(a)(2)).

Independent Spent Fuel Storage Installation (ISFSI) - A facility designed, constructed, and licensed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage in accordance with 10 CFR 72.

Mean Lower Low Water (MLLW) – the average of the two daily low tide levels.

Owner Controlled Area - means the area, outside the restricted area but inside the site boundary, for which access to can be limited by PG&E. (ISFSI FSAR)

Protective Actions - Those emergency measures taken for the purpose of preventing or minimizing radiological exposures to persons that would be likely to occur if the actions were not taken.

Recovery Actions - Those actions taken after the emergency to restore Unit 3 and /or the ISFSI as nearly as possible to its pre-emergency condition.

Definitions (cont.)

Restricted Area - An area to which access is limited for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials.

Site - Refers to HBPP Unit 3 plant being decommissioned and the ISFSI.

Security Area consists of the vault structure and an isolation zone (a minimum 20 ft. distance between the vault and the security area fence). (ISFSI FSAR)

Security Condition - Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION. (NEI 99-01 Revision 6)

Security Event - Any incident representing an attempted, threatened, or actual breach of the security system or reduction of the operational effectiveness of that system.

Abbreviations and Acronyms

ALARA	As Low As Reasonably Achievable
CFR	Code of Federal Regulations
Ci	Curie
D&D	Decontamination and Decommissioning
DAC	Derived Air Concentration
DCPP	Diablo Canyon Power Plant
DSAR	Defueled Safety Analysis Report
EAL	Emergency Action Level
EPIP	Emergency Plan Implementing Procedure
ERO	Emergency Response Organization
FSAR	Final Safety Analysis Report
GM	Geiger-Mueller Radiation Monitor
GTCC	Greater Than Class "C" (Waste)
HBGS	Humboldt Bay Generating Station
HBPP	Humboldt Bay Power Plant
ISFSI	Independent Spent Fuel Storage Installation
m	meter
MPC	Multi-Purpose Canister

Abbreviations and Acronyms (cont.)

MSL	Mean Sea Level
NRC	U.S. Nuclear Regulatory Commission
OCA	Owner Controlled Area
ODCM	Offsite Dose Calculation Manual
OES	Office of Emergency Services (County or State)
PA	Protected Area
PBX	Plant Branch Exchange
PAS	Primary Alarm Station
PSRC	Plant Staff Review Committee
R (or r)	Roentgen
REM (or Rem)	Roentgen Equivalent Man
RFB	Refueling Building
RMS	Records Management System
SAFSTOR	Custodial Storage of Unit 3 Prior to Dismantlement
TEDE	Total Effective Dose Equivalent
TLD	Thermoluminescent Dosimeter
$\mu\text{Ci/cc}$	Microcuries per Cubic Centimeter
VHF	Very High Frequency

Enclosure 4
PG&E Letter HBL-14-016
PG&E Letter HIL-14-006

Proposed Revision 7 to HB Site Emergency Plan

Proposed Revision 7 to HB Site Emergency Plan

DESCRIPTION AND EVALUATION OF SPECIFIC CHANGES

INTRODUCTION

This license amendment request proposes changes to HB Site Emergency Plan (E-Plan) in accordance with 10 CFR 50.54(q). PG&E proposes removal of the various emergency actions related to Humboldt Bay Power Plant (HBPP), the transfer of responsibility for implementing the HB Site E-Plan to the Independent Spent Fuel Storage Installation (ISFSI) Shift Manager (ISM) and a revised emergency response organization consistent with the current state of decommissioning.

BACKGROUND

The emergencies addressed in this proposed plan are related to the dry storage of spent nuclear fuel at the ISFSI and include off-normal, accident, natural phenomena, and hypothetical events and consequences as presented in the Final Safety Analysis Report (FSAR) for the HI-STAR 100 System, Holtec International Report No. HI-210610, Revision 1, December 2002. With all spent fuel and Greater Than Class C waste transferred to the ISFSI, there are no longer any SAFSTOR accidents previously described in the HBPP Decommissioning Plan that increase risk to the health and safety of the public.

The emergency planning zone for the ISFSI is the area within the ISFSI controlled area; the boundary that is established to limit dose to the public during normal operations and design basis accidents in accordance with the requirements of 10 CFR 72.104 and 10 CFR 72.106 (see Figure 2.1-1 in the HBPP E-Plan). The analyses of the radiological impact of potential accidents at the ISFSI site conclude that any releases beyond the ISFSI controlled area are expected to be less than the U.S. Environmental Protection Agency (EPA) Protective Action Guide (PAG) exposure levels, as detailed in EPA-400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents." The controlled area, as defined in 10 CFR 72.3, means the area immediately surrounding an ISFSI for which the licensee exercises authority over its use and within which ISFSI operations are performed.

The postulated worst-case accidents related to the ISFSI have insignificant consequences to the public health and safety. However, under regulatory guidance, all emergencies are classified as Alert. If an emergency condition develops, the ISM is responsible for classifying the event and assuming the role of the Emergency

Coordinator (EC). The on-shift organization is responsible for performing emergency response activities and may be augmented with additional emergency response personnel at the discretion of the EC. The EC makes notification of an emergency to the Humboldt County Sheriff's Department, State Office of Emergency Services (OES) and the Nuclear Regulatory Commission. In addition, if required, the Sheriff's Department contacts the County OES, California Highway Patrol (CHP), City of Eureka Police Department, and HB Fire. Conditions are assessed and corrective actions are implemented to restore the facility to a normal safe condition.

The HB Site E-Plan is based on applicable regulations, industry guidelines and ISFSI Living FSAR, Chapter 8, accident analyses for the dry cask storage system. Regulations include 10 CFR 50.47(b) with pending exemptions, 10 CFR 50.54(q), 10 CFR 50 Appendix E with pending exemptions, 10 CFR 72.32(c), 10 CFR 72.104, 10 CFR 72.106, and 10 CFR 72.44(f).

EMERGENCY PLAN CHANGES

Summary of changes:

The proposed revision to the Emergency Plan includes:

- 1) Eliminating all Emergency Action Levels (EALs) for Unit 3 of the Humboldt Bay Power Plant.
- 2) Change the Emergency Action Levels (EALs) for the Humboldt Bay Independent Spent Fuel Storage Installation (ISFSI) to align with NEI 99-01, Revision 6.
- 3) Per 10 CFR 72 HB ISFSI events will be classified as Alerts, however the definition of an Alert now more closely aligns with events that were previously classified as Unusual Events.
- 4) Eliminating the requirement for the Humboldt Bay Power Plant On-Call Emergency Advisor (EA) to respond to the site in the event of an emergency. Management staff will instead be available via phone to provide support to the Emergency Coordinator.
- 5) Consistent wordage was added to describe the Site Emergency Siren
- 6) Changes to the plan on required plant exercises to be consistent with regulations
- 7) Various clarifying, formatting, and editorial changes.
- 8) Changed references for "plant" and "Site." "Facility" refers to Unit 3, "Site" refers to both Unit 3 and ISFSI.
- 9) References to the Safeguards Contingency Plan (SCP) vs. just Contingency Plan.

10) Various grammatical, editorial, and formatting changes throughout the document not captured in this record.

Table of Contents:

All	Section titles changed as needed to reflect titles in body of the plan
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List of Tables:

Table 3.2-1	All the Unit 3 Emergency Action Levels are being eliminated. With that, Table 3.2-1 HBPP Unit 3 Emergency Action Levels is being deleted.
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Section 1.0 INTRODUCTION

Section	Change
Section 1.0 Paragraph One, Sentence Three	<p>Revised to read:</p> <p>This Humboldt Bay Site Emergency Plan (also referred to as the “Emergency Plan” or the “Plan”) addresses emergency preparedness/response requirements for the Humboldt Bay Power Plant Unit 3 (HBPP Unit 3) and the Humboldt Bay Independent Spent Fuel Storage Installation (HB ISFSI). HBPP Unit 3 is undergoing Decontamination and Decommissioning (D&D) activities. Although HBPP Unit 3 is no longer operational and no longer stores spent fuel, it remains licensed under the requirements of Title 10 of the Code of Federal Regulation (CFR), Part 50 (10 CFR 50) during execution of D&D activities. The HB ISFSI is licensed under the requirements of 10 CFR Part 72.</p> <p>Justification for change: The proposed change reflects that Humboldt Bay Power Plant is currently undergoing decommissioning.</p>
Section 1.0 Paragraph Two, Sentence Three	<p>Revised to read:</p> <p>Execution of these activities will ultimately reduce radiological hazards arising from HBPP Unit 3 activities and the related emergency preparedness and response requirements.</p> <p>Justification for change: The word “elimination” is not correct technically. The objective of the decommissioning effort is to reduce the radioactivity to levels acceptable for release of the license.</p>
Section 1.0 Paragraph Three, Sentence One	<p>Revised to read:</p> <p>At the HB ISFSI, PG&E stores spent fuel and “Greater Than Class C” (GTCC) radioactive waste generated during operation of HBPP Unit 3. PG&E does not expect completion of HBPP Unit 3 D&D activities to impact current operations at the HB ISFSI.</p> <p>Reason for change: Activities to transfer Spent fuel and GTCC Wastes to permanent storage are complete. No anticipated handling of the casks will occur until an offsite storage/repository is available for use.</p>

Section 2.0 SITE, AREA, AND FACILITY DESCRIPTION

Section	Change
Section 2.1 Paragraph Two	<p>Revised to read: Humboldt Bay Generating Station (HBGS), a fossil generation unit, is co-located on the site. The scope of this Emergency Plan does not include HBGS, except as site activities may affect HBGS.</p> <p>Reason for Change: Reworded for clarity and simplification.</p>
Section 2.1 Paragraph Five	<p>Revised to read: HBPP is located approximately three miles southwest of the city of Eureka in Humboldt County, California. PG&E owns the property that consists of approximately 143 acres on the northeastern part of Buhne Point Peninsula located on the mainland shore of Humboldt Bay, 2.4 km (1.5 miles) opposite the bay entrance. PG&E also owns the water areas extending approximately 500 ft. into Humboldt Bay from the land area.</p> <p>Reason for Change: Reworded to eliminate redundancy.</p>
Section 2.1 Paragraph Six	<p>Revised to read: 10 CFR 72.106 requires a minimum distance from the spent fuel handling and storage facilities to the nearest boundary of the ISFSI Controlled Area (the 100 meter area around the ISFSI) to be at least 100 meters. 10 CFR 72.106 allows the ISFSI Controlled Area to be traversed by a highway, railroad, or waterway, as long as appropriate and effective arrangements are made to control traffic and to protect public health and safety. A public trail to access a breakwater for fishing transects the PG&E property and transverses the 100-meter ISFSI Controlled Area as shown on Figure 2.1-1. The public trail crossing the PG&E property to the north of the ISFSI is controlled by fencing and gates. The gates will normally be open to allow public access to the trail during ISFSI operation. The U.S. Coast Guard maintains control of the water areas and will prevent public access within the ISFSI Controlled Area when requested by PG&E.</p> <p>Reason for Change: Clarified ISFSI Controlled Area to avoid confusion with Owner Controlled Area. Eliminated references to radiological condition assessment. ISFSI FSAR accident analysis indicates no radiological effluent assessment for ISFSI postulated accidents. Security will have</p>

Section	Change
	<p>access to radiation survey instruments to assess a change in direct radiation hazards, but not the ability to assess airborne radioactivity or plume dispersion because it is outside the design basis. The next paragraph indicates that the gates will be locked during cask handling operations.</p>

<p>Section 2.1 Paragraph Seven</p>	<p>Revised to read:</p> <p>There is no need for routine spent fuel cask handling activities. However, in the event that spent fuel cask handling activities are undertaken, the gates will be locked to prevent public access within the ISFSI Controlled Area until the cask transfer activities are completed. If necessary, the U.S. Coast Guard would be contacted to maintain control of the water areas.</p> <p>Reason for Change: Clarified ISFSI Controlled Area to avoid confusion with Owner Controlled Area.</p>
<p>Section 2.1 Paragraph Eleven</p>	<p>Revised to read:</p> <p>There is an underground pipeline that supplies natural gas to HBGS. The gas regulation facility on the east edge of the owner controlled area is approximately 1,100 feet from the HB ISFSI (The above ground feed to the HBGS is in the area near the regulation facility).</p> <p>Reason for Change: Eliminated historical information regarding a natural gas header that has been disconnected and purged as no longer relevant.</p>
<p>Section 2.1 Paragraph Twelve</p>	<p>Revised to read:</p> <p>A limited quantity of compressed gas cylinders are onsite and stored more than 400 feet from the HB ISFSI. Administrative controls are used to control refueling vehicles on site (e.g., tanker trucks) coming to fill portable lights and the ISFSI diesel storage tank.</p> <p>Reason for Change: Eliminated specific reference to a storage location for compressed gas and generically addressed the separation of, and administrative controls regarding, combustible hazards.</p>

<p>Section 2.3.1 Paragraph One</p>	<p>Revised to read: HBPP Unit 3 has been shutdown since July 1976. Although the remaining radioactive source term for an accidental release at the defueled Unit 3 reactor site has been greatly reduced by radioactive decay and spent fuel removal, there still exists radioactively contaminated structures requiring demolition. Due to the internal hazard risk to workers of transuranic contamination, administrative and engineering controls will be used during D&D activities to limit hazards to the workers. These controls will also limit potential off-site doses to considerably less than the EPA 400 Protective Action Guide Limit of 1 rem.</p> <p>Reason for Change: The current status of decommissioning is that the major source terms have been removed and disposed. The remaining source term at the time of E-Plan approval will be contaminated structures and requiring demolition. Radiological controls keep any event involving HBPP, Unit 3, below a threshold that would invoke the Site E-Plan. Deleted a reference to the accident analysis in the Defueled Safety Analysis Report to change the focus of the Site E-Plan to the ISFSI.</p>
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<p>Section 2.3.1 Paragraph Three, Four and Five</p>	<p>Paragraphs deleted: Reason for Change: No longer relevant or an accurate depiction of the status of decommissioning. At the time of the anticipated approval of the E-Plan, the ventilation system is scheduled to be turned off, the demolition of the Refueling Building will likely start in a few months and Radwaste Building no longer is used for liquid waste treatment.</p>
<p>Figure 2.1-1</p>	<p>Updated Figure New figure easier to read, better reflects current site layout.</p>

Section 3.0 EMERGENCY CONDITIONS

Section	Change
Section 3.0 Paragraph One	<p>Revised to read:</p> <p>This Emergency Plan is based on addressing the applicable accidents and off-normal events evaluated in the HBPP, Unit 3, DSAR and the HB ISFSI FSAR. In addition to these scenarios, other hypothetical scenarios are considered as the basis for developing the E-Plan.</p> <p>Reason for Change:</p> <p>The HBPP Unit 3 DSAR and HB ISFSI FSAR are the appropriate references to reference the accident analyses and the basis. Briefly summarizing the results of the analysis in the Site Emergency Plan provides little value. The analysis results are summarized as a separate enclosure and extend to a level well below the EPA 400 Protective Action Guide Limit of 1 rem.</p>
Section 3.1.1	<p>Added:</p> <p>Consistent with NRC guidance for an away-from-reactor ISFSI, accidents and off-normal events that rise to the level of an emergency at the facility are given the emergency classification of an ALERT.</p> <p>An Alert is defined as:</p> <p>Events are in process or have occurred which indicate a potential degradation of the level of safety at the facility or indicate a security threat to facility protection. No releases of radioactive material requiring offsite response or monitoring are expected.</p> <p>Reason for Change:</p> <p>To align event definitions with 10 CFR 72 classifications.</p>

Section	Change
Section 3.1.1b	<p>The following section was deleted as no longer applicable.</p> <p>b. Alert is defined as: Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of a hostile act. Any releases are expected to be limited to small fractions of the EPA Protection Action Guideline exposure levels.</p> <p>Reason For Change: Based on reduction of radiological source term and with administrative controls, no radiological source term would exist to create a radiological condition.</p>
Section 3.1.3	<p>Deleted Table 3.2-2.</p> <p>Revised to read: 3.1.3 Emergency Action Levels The conditions or types of accidents which define the threshold at which an Alert must be declared are called Emergency Action Levels (EALs) and are defined in Table 3.2-1. When an off-normal event occurs at the Humboldt Bay site, the Emergency Coordinator determines whether or not the event is a classifiable emergency.</p> <p>Reason For Change: Previous Table 3.2-1 containing HBPP Unit 3 EALs was deleted. Previous Table 3.2-2 containing HB ISFSI EALs became Table 3.2-1. The acceptability of deleting Table 3.2-1 is discussed elsewhere. This is an editorial correction associated with the revision. Also, Notice of Unusual Event (NUE) was deleted as a classification.</p>

Section	Change
Section 3.2 Paragraph One	<p>3.2 Postulated Emergency Conditions</p> <p>Revised to read:</p> <p>Radioactive material at HBPP Unit 3 is limited primarily to surface contamination from previous plant operations. Due to the internal hazard risk to workers from transuranic contamination, administrative and engineering controls are used during D&D activities to protect workers and the public from airborne releases.</p> <p>Reason for Change:</p> <p>More accurately reflects the status of decommissioning and the remaining source term. Deleted a sentence about radioactive contamination, D&D activities and packaging for disposal since it is no longer relevant to the Site E-Plan and is administratively controlled by procedures.</p>
Section 3.2 Paragraph Three	<p>Added "Revision 6" after (NEI) 99-01</p> <p>Reason for Change:</p> <p>Reflect revision used to develop EALs.</p>

Section	Change
Section 3.2.1.1	Revised to read: 3.2.1.1 Damage to a Loaded Cask <u>Description</u> Currently spent fuel is stored in spent fuel storage casks located in the in-ground HB ISFSI vault. There is no need for routine spent fuel cask handling activities. However, in the event that spent fuel cask handling activities are undertaken, the potential would exist for incidents that could result in dropping of a loaded spent fuel cask. As a result of the design and construction of the spent fuel casks, damage to the spent fuel in this configuration is not considered credible. Casks may also be damaged by severe natural or man-made events. <u>Detection</u> Damage to a spent fuel storage cask will be visually observed by personnel involved in the handling of the spent fuel storage cask. Damage may also be detected by indications of elevated radiation levels on or near the cask. Reason for Change: New NEI 99-01, Revision 6, EAL based on actual damage to cask as indicated by increase radiation readings.
Section 3.2.1.2	Deleted previous Section 3.2.1.2 Fires Reason for Change: Fires are no longer classified events unless they result in damage to loaded cask, which is addressed in Section 3.2.1.1.
Section 3.2.1.3	Deleted previous Section 3.2.1.3 Other Hazards Reason for Change: Other Hazards are no longer classified events unless they result in damage to loaded cask, which is addressed in Section 3.2.1.1.

Section	Change
Section 3.2.1.5	<p>Deleted previous Section 3.2.1.5 Unplanned Release of Airborne Radioactivity to the Environment</p> <p>Reason for Change: There are no longer any sources that can result in airborne releases that would be classified events Any release of radioactive materials would be from damage to loaded cask, which is addressed in Section 3.2.1.1</p>
<p>Old Section 3.2.1.4 New Section 3.2.1.2</p>	<p>Revised to read: 3.2.1.2 Security Conditions</p> <p><u>Description</u></p> <p>Security Conditions are postulated only for the HB ISFSI and not the facility. The Emergency Plan would be activated for Security Conditions that meet the threshold for an Alert. Discussions and details pertaining to ISFSI security are provided in the HB ISFSI Physical Security Plan.</p> <p><u>Detection</u></p> <p>An attempt at forcible entry, actual penetration, sabotage, or the receipt of a credible threat against the HB ISFSI would be detected by security personnel stationed at the HB ISFSI.</p> <p>Reason for Change: Aligns with new NEI 99-1, Revision 6, EALs based on Security Conditions at the facility. The lighting at the ISFSI is not relevant in this discussion.</p>
Section 3.2.1.7	<p>Deleted previous Section 3.2.1.7 Unexpected Increase in Plant Radiation Levels.</p> <p>Reason for Change: There are no longer any sources that can result in significant increases in plant radiation levels. Any increase in radiation levels would be from damage to loaded cask, which is addressed in Section 3.2.1.1</p>

Section	Change
Section 3.3 Paragraph Two	<p>Hazardous Chemicals: Changed regulatory reference from 40 CFR 3002 to 40 CFR 302.4, Appendix B.</p> <p>Reason For Change: Editorial correction.</p>
Table 3.2-1	<p>Removed Table 3.2-1, all Emergency Action Levels (EALs) for Unit 3 Unplanned Release of Airborne Radioactivity to the Environment Unplanned release of Liquid Radioactive Material to Humboldt Bay Unexpected Increase In Plant Radiation Levels Fires On-Site Hazards Emergency Coordinator Judgment</p> <p>Reason for Change: Accident scenarios were reassessed based on the status of decommissioning. Source terms have diminished to a point that declaration of a NUE or Alert based on radiological conditions is unlikely. Administrative controls were included in the HBPP DSAR, Appendix A, to limit the source term and implement event precursor controls to control potential radiological effluents below the thresholds associated with a NUE or Alert. The EALs associated with On Site Hazards and Emergency Coordinator Judgment exists in the table for ISFSI EALs. The EALs existing in a single table is sufficient.</p>
Table 3.2-2	Changed: Table 3.2-2 (ISFSI EALs) renumbered to become Table 3.2-1.
Table 3.2-1	The ISFSI EAL table using NEI 99-01, Revision 4, was deleted.

OLD Table 3.2-2 – HB ISFSI Emergency Action Levels

Initiating Conditions/ NEI 99-01 Designation	Emergency Action Level	Emergency Classification
Spent Fuel Cask Drop E-HU1	Cask drop during transport or cask handling activities.	NOTIFICATION OF UNUSUAL EVENT
Fires E-HU1	A fire affecting equipment in the ISFSI controlled area and not extinguished within 15 minutes of detection.	NOTIFICATION OF UNUSUAL EVENT
On-Site Hazards E-HU1	Any hazard (e.g., earthquakes, tsunamis, flooding, tornados, high winds on-site, explosions, aircraft crashes) that causes significant damage or substantially affects ISFSI structures, systems, or components.	NOTIFICATION OF UNUSUAL EVENT
Security Events E-HU2	<p>Civil disturbance with accompanying attack threat.</p> <p style="text-align: center;">OR</p> <p>An internal disturbance that poses a threat to stored fuel.</p> <p style="text-align: center;">OR</p> <p>Security Officer is unaccounted for or disabled AND sabotage-related event is suspected.</p> <p style="text-align: center;">OR</p> <p>Any event that includes an attempt at forcible entry, sabotage, bomb, or the receipt of a credible threat against the ISFSI Protected Area.</p>	NOTIFICATION OF UNUSUAL EVENT

Initiating Conditions/ NEI 99-01 Designation	Emergency Action Level	Emergency Classification
	<p>Actual penetration of the ISFSI Protected Area boundary.</p> <p style="text-align: center;">OR</p> <p>Sabotage device has been detected that threatens ISFSI systems or equipment within the ISFSI Security Area.</p> <p style="text-align: center;">OR</p> <p>An in-progress attack.</p> <p style="text-align: center;">OR</p> <p>Sabotage-related loss of security equipment.</p> <p style="text-align: center;">OR</p> <p>Sabotage-related fire, explosion, or other catastrophe.</p>	<p style="text-align: center;">ALERT</p>
Emergency Coordinator Judgment	<p>Any emergency not specifically identified elsewhere in this table, based on Emergency Coordinator judgment.</p>	<p style="text-align: center;">NOTIFICATION OF UNUSUAL EVENT OR ALERT</p>

Table 3:2- The ISFSI EAL table was revised using NEI 99-01 Revision 6 guidance.
 1

NEW - Table 3.2-1 – HB ISFSI Emergency Action Levels

Initiating Conditions/ NEI 99-01, Revision 6	Emergency Action Level	Emergency Classification
Damage to a loaded cask CONFINEMENT BOUNDARY E-HU1	Damage to a loaded cask CONFINEMENT BOUNDARY as indicated by an on-contact radiation reading greater than 0.30 mrem/hr* on the lid of the ISFSI Vault. (NOTE: Contact reading not needed if any reading greater than 0.30 mrem/hr near the vaults is found.)	ALERT (A)
Confirmed SECURITY CONDITION or Threat HU1	A SECURITY CONDITION** as reported by Security. OR Notification of a credible security threat directed at the site.	ALERT (A)
Conditions exist which in the EMERGENCY COORDINATOR JUDGMENT warrant declaration of an Alert. HU2	Other conditions exist which in the judgment of the Emergency Coordinator indicate that events are in progress or have occurred that indicate a potential degradation of the level of safety of the ISFSI or indicate a security threat to ISFSI protection has been initiated.	ALERT (A)

Initiating Conditions/ NEI 99-01, Revision 6	Emergency Action Level	Emergency Classification
* Section 7.3.2.1 of the FSAR states “The dose rate at all locations adjacent to a single storage cell in the ISFSI vault with the lid installed is less than 0.15 mrem/hr.” The dose rate 0.30 mrem/hr represents two times this value.		** SECURITY CONDITIONS that would require declaration of an Alert are defined within the E-Plan implementing procedures.

Section	Change
<p>Sections 4.0, 4.1, and 4.1.1</p>	<p>Revised to read:</p> <p>4.0 <u>EMERGENCY RESPONSE ORGANIZATION</u></p> <p>This section describes the Emergency Response Organization (ERO) and associated responsibilities that will be in place. Section 9.1 of the ISFSI FSAR provides a description of the normal operating organization. The HB emergency response organizations and associated responsibilities will consist of an Emergency Coordinator and a Security Coordinator. The ERO personnel will be supported by on-shift personnel or other PG&E staff, as required, by the specific emergency situation.</p>
<p>Section 4.1.1 Paragraph One</p>	<p>4.1 Site Emergency Response Organization</p> <p>In the event of an emergency, the on-shift organization (24/7) is the ERO, followed by augmentation of this organization, if necessary, with other members of the site staff as they become available. The Emergency Coordinator is qualified and responsible for making an initial evaluation of the incident, performing any immediate actions which are necessary, making required notifications, and placing appropriate portions of the Emergency Plan into effect. The Emergency Coordinator has the authority to realign/reorganize the ERO as deemed appropriate.</p>
<p>Paragraph Two</p>	<p>In the event of an emergency, a designated member of the shift organization staff assumes the position of Emergency Coordinator. Management staff will be available by phone for advice and guidance for the on-site Emergency Coordinator, if needed.</p> <p>Reason for Change: Management staff support consistent with other changes in the organization detailed in the discussion of Augmented ERO.</p>

Section	Change
Section 4.1.1 Bullet Seven	<p>Revised to: When requested, the Emergency Coordinator provides advice to the County Incident Command Center (ICS) if the ICS is established in response to ongoing security events.</p> <p>Reason for Change: Based on the scope of the remaining EALs, the County Incident Command Center should no longer require a technical support individual. The Emergency Coordinator can advise or send support, if requested and available.</p>
Section 4.1.1 Bullet Eight	<p>Revised to: If time permits, obtain Director and Nuclear Plant Manager or designee, approval prior to authorizing use of company emergency personnel exposure limits</p> <p>Reason for Change: The Director and Nuclear Plant Manager may delegate his/her responsibilities.</p>

Section	Change
<p>Old Section 4.1.2</p>	<p>Previously read: 4.1.2 Augmented ERO If the event meets the criteria for classification as an Alert, or the Emergency Coordinator determines that additional resources are needed to implement required assessment and protective actions, additional personnel are notified and the Augmented ERO is activated, to the extent necessary, as determined by the Emergency Coordinator. The Augmented ERO consists of a minimum of three individuals as shown on Figure 4.2-2.</p> <p>A description of the Emergency Coordinator and Security Coordinator positions in the Augmented ERO and their responsibilities are provided in Sections 4.1.2.1 and 4.1.2.2, respectively. Section 4.1.2.3 describes the activities that could be performed by the additional Augmented ERO members, to the extent necessary, as determined by the Emergency Coordinator.</p> <p>Now Deleted</p> <p>Reason for Change: The level of classifiable events no longer requires a pre-determined augmented ERO.</p> <p>If the Emergency Coordinator determines that additional resources are needed to implement required assessment and protective actions, additional personnel are notified.</p> <p>A description of the Emergency Coordinator and Security Coordinator positions and their responsibilities are provided in Sections 4.1.1 and 4.1.2, respectively. Section 4.1.3 describes the activities that could be performed by the support personnel.</p>

Section	Change
Section 4.1.2.1	<p>Previously read:</p> <p>4.1.2.1 Emergency Coordinator</p> <p>When the Augmented ERO is activated, a designated member of the management staff (Emergency Advisor) assumes the Emergency Coordinator responsibilities. The responsibilities of the Emergency Coordinator include:</p> <p>(third bullet) Assign plant staff personnel to positions in the ERO.</p> <p>(fifth bullet) ...direct all emergency operations...</p> <p>Now reads:</p> <p>4.1.1 Emergency Coordinator</p> <p>Based on the event, a designated member of the staff may be called in to relieve the Emergency Coordinator.</p> <p>The responsibilities of the Emergency Coordinator include:</p> <p>(third bullet) Assign plant staff personnel to support functions.</p> <p>(fifth bullet) ...direct emergency operations...</p>
Section 4.1.2.2	<p>4.1.2.2 Security Coordinator</p> <p>Added:</p> <p>Based on the event, a designated member of the staff may be called in to relieve the Shift Security Coordinator.</p> <p>Deleted fifth bullet point:</p> <ul style="list-style-type: none"> • Help coordinate site evacuation if necessary. <p>Reason For Change:</p> <p>The Security Coordinator is responsible for providing security-related support to the Emergency Coordinator and directing the activities of the Security Force consistent with the requirements of the HB ISFSI Security Plan. Being involved with site evacuation would detract from the primary role of protecting the ISFSI.</p>

<p>Section 4.1.2.3 Bullet Points</p>	<p>Previously read:</p> <p>4.1.2.3 Additional Augmented ERO Members</p> <p>The responsibilities of the additional Augmented ERO members, include the following, to the extent necessary, as determined by the Emergency Coordinator:</p> <p>Advise Emergency Coordinator on technical matters relating to nuclear and radiological safety and assist with:</p> <p>Advise Emergency Coordinator on matter relating to operations, security, safety, administration and corporate support and assist with:</p> <p>Now reads:</p> <p>4.1.3 Additional Support Functions</p> <p>Additional PG&E or contact support personnel may be called to provide support in the following areas:</p> <p>Radiological Support Functions:</p> <ul style="list-style-type: none">• Provide overall coordination of radiological aspects of the emergency.• Advise the Emergency Coordinator on matters relating to radiological safety.• Coordinate and supervise radiological surveys and investigations, both onsite and offsite.• Manage the onsite radiation protection program.• At direction of Emergency Coordinator, notify staff and other affected individuals and organizations of the emergency.
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<p>Section 4.2.4</p>	<p>The State of California Emergency Management Agency has changed its name back to the State of California Office of Emergency Services.</p> <p>Previously read:</p> <p style="padding-left: 40px;">4.2.4 State of California</p> <p>The State Emergency Management Agency Warning Center in Sacramento is manned on a 24-hours basis. The Emergency Coordinator makes or directs the initial notification to the State Warning Center.</p> <p>The State Emergency Management Agency has executive authority and responsibility for coordinating State assistance.</p> <p>Revised to read:</p> <p style="padding-left: 40px;">4.2.4 State of California</p> <p>The State Office of Emergency Services Warning Center in Sacramento is manned on a 24-hours basis. The Emergency Coordinator makes or directs the initial notification to the State Warning Center.</p> <p>The State Office of Emergency Services has executive authority and responsibility for coordinating State assistance.</p>
<p>Figure 4.2-1</p>	<p>Interim Emergency Response Organization – Deleted</p> <p>Reason for Change: Redundant (see below)</p>
<p>Figure 4.2-2</p>	<p>Changed Name from Figure 4.2-2 Augmented Emergency Response Organization to Figure 4.2-1 Emergency Response Organization</p> <p>Added “PG&E Management Staff” as an advisory resource.</p> <p>Reason for Change: Simplification. One organization consisting of two functional Emergency Response Organization positions with specific authorities and responsibilities. Additional offsite personnel solicited and assigned support functions, as needed. Site Management will be available to provide support to EC.</p>

5.0 EMERGENCY ASSESSMENT AND PROTECTIVE ACTIONS

Section	Change
Section 5.1.1 Paragraph One	<p>5.1.1. Notification and Activation of Onsite Emergency Response Organization</p> <p>Revised to read:</p> <p>The Emergency Coordinator activates the ERO for events requiring declaration of an Alert. The ERO may be activated for any other event as determined appropriate by the Emergency Coordinator.</p> <p>Reason for Change:</p> <p>NUEs were deleted. Accident scenarios were reassessed based on the status of decommissioning. Source terms have diminished to a point that declaration of a NUE or Alert based on radiological conditions is unlikely. Administrative controls limit the source term and implement event precursor controls to control potential radiological effluents below the thresholds associated with a NUE or Alert. The EALs associated with On Site Hazards affecting radiological safety and Emergency Coordinator Judgment exists in the table for ISFSI EALs.</p>
Section 5.1.1 Paragraph Two	<p>5.1.1. Notification and Activation of Onsite Emergency Response Organization</p> <p>Previously read:</p> <p>The Emergency Coordinator is responsible for immediately initiating actions to limit the consequences of the event and to return the plant or ISFSI to a safe and stable condition. If, in the opinion of the Emergency Coordinator, the event warrants additional manpower or other resources, or is a declared alert the Augmented ERO shown in Figure 4.2-2 is activated.</p> <p>Revised to read:</p> <p>Deleted.</p> <p>Reason for Change:</p> <p>Redundant.</p>

Section	Change
Section 5.1.1.2	<p>Revised to read: 5.1.1.2 Notification of Onsite Personnel</p> <p>The Emergency Coordinator makes an initial evaluation of the situation and, if warranted, classifies the emergency and directs the sounding of the emergency siren, or alternate notification method.</p> <p>Reason for Change: The Site Emergency Siren was described as a signal, a code, and a siren throughout the plan. The description was changed to siren or alternate notification method for consistency.</p>
Section 5.1.2 Second Bullet Point	<p>Previously read: State Emergency Management Agency</p> <p>Revised to read: State Office of Emergency Services</p> <p>Reason for Change: The State of California Emergency Management Agency has changed its name to the State of California Office of Emergency Services.</p>
Section 5.1.2 Paragraph Two	<p>Revised to read:</p> <p>Information to be communicated to offsite response organizations includes, as applicable: the status of the site and ISFSI including important structures, systems, and components; information regarding potential impacts for offsite personnel; and required responses from the offsite responders. Provisions are included for message authentication.</p> <p>Reason for Change: Radiological releases were eliminated in this discussion since no EALs are based on radiological release from an ISFSI.</p>

Section	Change
<p>Section 5.1.3 Paragraph One & Two</p>	<p>5.1.3 Notification of Site Staff Personnel Offsite</p> <p>Revised to read:</p> <p>To facilitate notification of site staff in the event they are offsite during an emergency, an “on-call” system is established. A member of PG&E management staff is designated as being “on-call,” and that individual remains available by phone for consultation and guidance during the emergency, if needed.</p> <p>When an emergency occurs outside of normal working hours, one of the early actions of the Emergency Coordinator is to notify the designated PG&E management staff member, if necessary.</p> <p>Reason for Change:</p> <p>Support from offsite personnel remains available to the Emergency Coordinator; however, no response to the site is required. It is believed that better support may be available via phone than may be available in a specified response time.</p>
<p>Section 5.3.1.1</p>	<p>5.3.1.1 Alerting Onsite Personnel</p> <p>Revised to read:</p> <p>Onsite personnel are alerted that an emergency condition exists by the sounding of the emergency siren or via alternate means. Upon entry to the Humboldt Bay site, visitors are briefed on the meaning of the emergency siren tones, alternate means of notification, and the required response. This applies to visitors, contractors and construction personnel.</p> <p>Reason for Change:</p> <p>The Site Emergency Siren was described as a signal, a code, and a siren throughout the plan. The description was changed to siren or alternate means for consistency.</p>

Section	Change
Section 5.3.1.2 Paragraph Two	<p>Deleted:</p> <p>If site personnel wearing dosimeters are required to leave the site as part of an emergency evacuation, they should take their dosimeters with them so that an accurate record of their exposure can be maintained. The names of the evacuees are reported to the Emergency Coordinator so that dosimeter accountability can be maintained.</p> <p>Reason for Change:</p> <p>At the time of Emergency Plan approval, site personnel wearing dosimeters should be minimal and there are no radiological based EALs, so this discussion is no longer relevant.</p>

Section	Change
<p>Section 5.3.3.1</p>	<p>Deleted as no longer relevant: 5.3.3.1 Radioactivity Releases</p> <p>For an unplanned liquid or airborne radioactivity release, the following actions should be performed:</p> <ul style="list-style-type: none"> • Personnel in the Unit 3 Restricted Area leave the area and proceed directly to a designated assembly location. Remain at the designated assembly location until given permission to leave by the Emergency Coordinator. • Designated personnel determine if anyone else is in, or has access to, affected areas and notify these people to leave or stay away from the area. Notification can be by normal phones, portable radios, intercoms, or by sounding an alarm signal. Designated personnel also check process monitor to verify that offsite airborne releases are within limits and to determine areas of above normal dose rate. <p>The Emergency Coordinator performs a preliminary assessment of the situation with emphasis on:</p> <ul style="list-style-type: none"> • Measures that do not require entry into the area but which would reduce the release and/or spread of airborne radioactive materials. • Assuring proper care for personnel who are in need of immediate medical attention. <p>The Emergency Coordinator also performs or directs the following as deemed appropriate:</p> <ul style="list-style-type: none"> • Activation of the Interim ERO and/or Augmented ERO • Sounding the Emergency Siren to signal site Accountability (Assembly) if necessary to account for all personnel onsite or to mobilize persons on the site for the purposes of assisting in recovery actions or as a preliminary measure for other emergency measures, such as evacuation to offsite locations. <p>Following activation of the Augmented ERO, if necessary:</p> <ul style="list-style-type: none"> • An Augmented ERO member, designated by the Emergency Coordinator assumes responsibility for offsite communications. • An Augmented ERO member, designated by the Emergency Coordinator determines whether any individuals are likely to have received internal contamination that exceeds regulatory limits. A program of whole body counting and/or bioassay would check persons who may have internal contamination until the extent of the deposition is known. The designated Augmented ERO member also determines airborne activity concentrations in affected areas. <p>Reason for Change:</p> <p>There is no longer a source term for liquid or airborne releases. Under the revised organization, the Emergency Coordinator solicits assistance as required to perform support functions as assigned based on event. Subsequent sections renumbered.</p>

Section	Change
<p>Old Section 5.3.3.4 Paragraph Two</p>	<p>5.3.3.3 Security Emergencies</p> <p>Previously read: The PAS operator also notifies the Security Coordinator who, in turn, notifies the Emergency Coordinator if an abnormal on emergency condition exists. Based upon the assessment of the incident, the security emergency code may be sounded. The Emergency Coordinator may request assistance from Local Law Enforcement through the Sheriff's office.</p> <p>Revised to read: The PAS operator also notifies or assumes the role of the Emergency Coordinator if an abnormal or emergency condition exists. Based upon the assessment of the incident, security notifies on site personnel and requests assistance from Local Law Enforcement through the Sheriff's office.</p> <p>Reason for Security Coordinator Change: The Security Coordinator is responsible for providing security-related support to the Emergency Coordinator and directing the activities of the Security Force consistent with the requirements of the HB ISFSI Security Plan. The PAS Operator is in the best position to accomplish this mission. In some cases, the PAS Operator could be either the Emergency Coordinator or the Security Coordinator.</p> <p>Reason for Notification Change: The Site Emergency Siren is one method of notification and was described as a signal, a code, and a siren throughout the plan. The description was changed to security notifies on site personnel to allow for the most appropriate method to be used.</p>

6.0 EMERGENCY RESPONSE FACILITIES AND EQUIPMENT

Section	Change
Section 6.2.1.3	<p data-bbox="423 443 711 474">VHF Radio Systems</p> <p data-bbox="423 527 651 558">Revised to read:</p> <p data-bbox="444 579 1370 831">The site security department maintains a radio system with a base station and several hand-held portable units. This radio system is used primarily for internal security purposes but may be utilized in emergency situations to establish and maintain point-to-point communications between the site and the Humboldt County Sheriff's Operation Center. These radios can also be used to communicate directly with mobile units in the field.</p> <p data-bbox="444 852 1365 989">There is also a site radio frequency available with several hand-held units located on-site for this channel and may be used by the security department to coordinate communications on-site during times of emergency.</p> <p data-bbox="444 1010 1273 1083">Additional portable radios are available for communications between HBPP and HBGS.</p> <p data-bbox="423 1146 708 1178">Reason for Change:</p> <p data-bbox="444 1188 1403 1352">Off-site monitoring is no longer needed. Portions of the paragraph that refer to site vehicles and the vehicles being equipped with VHF radios for the purposes of off-site monitoring were deleted. Portions of the discussion were reworded to focus on radios available for use, if needed.</p>

Section	Change
<p>Section 6.2.2</p>	<p>Warning Signals Previously distinguished between Emergency Signal and the RFB Evacuation Signal.</p> <p>Revised to read:</p> <p>The emergency signal is manually activated and may include audible or electronic notification methods. The emergency signal alerts personnel that an emergency exists and may be coded to indicate the specific emergency response action expected.</p> <p>Reason for Change:</p> <p>RFB Evacuation Signal is no longer available upon demolition of the RFB or necessary and the remaining emergency signal is the Emergency Siren. Currently, alternate notification methods are permitted and may be preferred in the future.</p>
<p>Old Section 6.3.1</p>	<p>The following section was deleted as no longer applicable.</p> <p>6.3.1 Process Radiological Monitoring Equipment</p> <p>Previously read:</p> <p>The ventilation exhaust stack is continuously monitored for radioactivity to provide an indication of equipment performance and/or provide a record of radioactivity releases.</p> <p>The following section was re-numbered.</p> <p>Reason for Change:</p> <p>Based on the schedule of activities the ventilation exhaust stack will no longer be operational. Monitoring of radioactivity releases will be a function of the RP Program and Environmental Monitoring Programs.</p>

Section	Change
<p>New Section 6.3.1</p>	<p>Revised to read:</p> <p>6.3.1 Radiological Equipment</p> <p>A variety of portable survey and dose rate instruments are available at the site for routine radiological monitoring, and also for use in emergencies, if necessary.</p> <p>A radiological emergency kit is provided onsite to supplement the radiation protection equipment, which is provided for routine use at the site.</p> <p>Reason for Change: At the time of E-Plan approval, some RP related facilities and equipment may remain onsite to support the decommissioning and be available. However, there are no radiological based EALs, so the discussion is limited to the equipment available long term.</p>
<p>Section 6.4.1.1</p>	<p>Revised to read:</p> <p>6.4.1.1 Site Equipment</p> <p>The site is equipped with fire protection equipment, and it is expected that most small non-structural, non-radiological fires would be handled by site personnel with portable extinguishers.</p> <p>Reason for Change: The discussion is limited to the fire protection equipment available to support the ISFSI long term.</p>
<p>Section 6.4.2</p>	<p>6.4.2 Transportation</p> <p>Revised to read:</p> <p>PG&E has a fleet of radio-equipped automobiles and trucks in the Eureka area, which can be mobilized in an emergency. Additionally, PG&E has made prior arrangements with a local ambulance company to provide ambulance service at the site for injured personnel, including radioactively contaminated patients.</p> <p>Reason for Change: Off-site monitoring is no longer needed. Portions of the paragraph that refer to the organization having vehicles were deleted.</p>

Section	Change
Section 6.5.1.1	<p data-bbox="418 348 829 380">6.5.1.1 Personnel Facilities</p> <p data-bbox="418 432 651 464">Revised to read:</p> <p data-bbox="443 474 1365 653">Shower cubicles and sink cubicles are provided for the purpose of decontamination of personnel. Various decontamination aids are provided, such as brushes, skin decontamination soaps, rubber gloves, creams, wiping tissues, towels, etc. Monitoring instrumentation is readily available.</p> <p data-bbox="418 705 704 737">Reason for Change:</p> <p data-bbox="443 747 1419 821">Decontamination capabilities are available; however, the location may be subject to change based on the decommissioning needs.</p>

7.0 RECOVERY AND RE-ENTRY

Section	Change
Section 7.1 b, c & d	<p>7.1 Guidelines For Recovery And Re-entry</p> <p>Previously read:</p> <ul style="list-style-type: none"> b. The Emergency Coordinator approves all initial re-entries into evacuated areas if still in the emergency event. Otherwise the Director and Nuclear Plant Manager may provide approval c. PG&E implements the following controls for entry or re-entry into an area where airborne radioactivity levels may be in excess of Derived Air Concentrations (DACs) provided in the HBPP Unit 3 routine internal exposure control program: <ul style="list-style-type: none"> • If practicable, PG&E determines the airborne radioactivity levels prior to entry and implements normal protective measures, including wearing of respiratory protection equipment and/or limiting of exposure time, based upon the results of these determinations. • If it is not practicable to determine the airborne radioactivity level prior to entry, the individual(s) entering the area obtains an air sample during entry so that the airborne radioactivity concentration can be determined post-entry. • If continuous air monitors are in the area, the entering individual notes the readings, or makes a notation on the charts so that the readings at the time of entry can be determined. d. PG&E may authorize personnel who are essential to recovery action to receive exposure beyond normal guidelines and/or limits in accordance with the provisions of a site procedure or Radiation Control Standard. If time permits, the Emergency Coordinator obtains Director and Plant Manager (nuclear) concurrence prior to authorizing exposures beyond normal limits in 10 CFR Part 20 occupational dose limits. <p>Revised to read:</p> <ul style="list-style-type: none"> b. The Emergency Coordinator approves all initial re-entries into evacuated areas if still in the emergency event. Otherwise the Director and Nuclear Plant Manager, or designee may provide approval. c. Radiation Protection procedures guidance will be used to re-entered evacuated areas. d. PG&E will take necessary actions to return site safety levels to pre-event condition. <p>Reason for Change:</p> <p>Director and Nuclear Plant Manager may delegate authority. Level of detail not needed in the E-Plan. The Radiation Protection Program is the appropriate level of control, if not in a declared emergency condition. Since this section is directed at Recovery and Re-Entry, the condition should be sufficiently stable to not require special radiological provisions. PG&E committed to return site to pre-event condition.</p>

8.0 MAINTAINING EMERGENCY PREPAREDNESS

Section	Change
Section 8.1.1 a	<p>8.1.1 Emergency Plan and Implementing Procedure Review And Update</p> <p>Revised to read:</p> <ul style="list-style-type: none"> b. Revisions to the Site Emergency Plan and Emergency Plan Implementing procedures are reviewed by a designated management review process. <p>Reason for Change:</p> <p>The change provides for E-Plan revision and approval under the management or licensing review process that replaces the PSRC at some point in the future.</p>
Section 8.1.2 b	<p>8.1.2 Changes to the Emergency Plan</p> <p>Revised to read:</p> <ul style="list-style-type: none"> b. PG&E will not implement proposed changes that reduce the effectiveness of the approved Emergency Plan, including EALs, without application to, and approval by, the NRC. PG&E shall submit, in accordance with Regulatory Issue Summary 2005-02, Rev. 1, Emergency Plan changes that require prior NRC approval, in accordance with 10 CFR 50.54(q), as license amendment requests in accordance with 10 CFR 50.90. <p>Reason for Change:</p> <p>“reduce” rather than “decrease” for consistency with regulatory guidance.</p>
Section 8.1.2 c	<p>Revised to read:</p> <ul style="list-style-type: none"> c. NRC Regulatory Guide 1.219, “Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors,” dated May, 2009. <p>Reason for Change:</p> <p>Update guidance consistent with current regulatory guidance.</p>

Section	Change
Section 8.1.2 d	<p>Revised to read:</p> <p>d. The NRC endorsed NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 6, dated November 2012, and any supplements as may be appropriate, provides guidance as to changes to the EALs that may require prior NRC approval.</p> <p>Reason for Change: Update guidance consistent with current regulatory guidance for EAL used in plan.</p>
Section 8.1.3	<p>Title change in: Letters of Agreement: Changed title from Site Services Manager to ISFSI Shift Manager.</p>
Section 8.3.2 Paragraph Four	<p>8.3.2 Exercises:</p> <p>Revised to read:</p> <p>PG&E conducts a biennial emergency exercise for a simulated emergency that includes radiological, medical and fire aspects. This exercise includes sounding of the emergency siren or other alternative means to notify personnel and gathering all onsite personnel at designated assembly areas, e.g., emergency assembly point, evacuation areas or shelter lockdown location. PG&E also conducts a biennial emergency exercise of a simulated security event affecting the ISFSI.</p> <p>Reason for Change: Although a reduction in the frequency of emergency exercises, the biennial frequency is consistent with regulatory guidance and a facility with a limited source term.</p>

Section	Change
Section 8.3.2 Paragraph Six	<p>Revised to read:</p> <p>Following an exercise, observers and principal participants critique the event and the results are presented for review and approval under a designated management review process. Any weaknesses or deficiencies that are identified in a critique of an exercise, a drill or for training must be corrected.</p> <p>Reason for Change:</p> <p>The change provides for E-Plan revision and approval under the management or licensing review process that replaces the Plant Staff Review Committee (PSRC) at some point in the future and provides for a provision to ensure that the emergency plan, its implementing procedures, are maintained.</p>
Section 8.4	<p>Audits</p> <p>Revised to read:</p> <p>Humboldt Bay establishes requirements for audits of the E-Plan and implementing procedures by individuals independent of the HBPP emergency planning organization.</p> <p>Reason for Change:</p> <p>This change in the HB Site E-Plan provides for an audit frequency consistent with regulatory guidance rather than referring to the HBPP Quality Assurance Procedure (QAP).</p>
Section 8.6	<p>Added bulleted list of types of records maintained:</p> <ul style="list-style-type: none"> • training and retraining (including lesson plans and test questions) • drills, exercises, and related critiques • inventory and locations of emergency equipment and supplies • maintenance, surveillance, calibration, and testing of emergency equipment and supplies • letters of agreement with offsite support organizations • reviews and updates of the E-Plan notification of onsite personnel and offsite response organizations affected by an update of the plan or its implementing procedures <p>Reason for change:</p> <p>Better describes requirements for record keeping.</p>

Section	Change
Section 9.0	RESPONSIBLE ORGANIZATION Changed responsible organization from Site Services to ISFSI.
Appendix A	Added definitions for: <ul style="list-style-type: none">• ISFSI Controlled Area• Confinement Boundary• Owner Controlled Area• Security Area• Security Condition• Security Event Added OCA to list of Acronyms