G. NRC License Renewal

DCPP Units 1 and 2 currently have permission from the NRC to operate until the expiration of the current operating licenses in 2021 and 2025, respectively. The existing environmental effects of operating the nuclear power plant through the duration of the NRC licenses have been previously reviewed and accepted by the NRC and predecessor and cooperating agencies. Comments received during the Scoping Period following publication of the Notice of Preparation (October 2004) asserted that replacement of the steam generators would facilitate the continued operation of the DCPP facility beyond the current licensing period. The EIR preparers agree that it would be impossible to renew the NRC licenses without successful replacement of the steam generators.

Permission to operate Units 1 and 2 after 2021 and 2025 would need to be granted to PG&E by the NRC through approval of an application for renewal of its existing operating licenses. The licensing process would include a detailed review of the engineering and safety issues, as well as the environmental effects of extending the permitted operating life of the DCPP facility. Information presented in the No Project Alternative assessments in Section D (for each issue area, D.2 through D.14) of this EIR indicates that some beneficial impacts would occur with discontinued operation of DCPP because routine operation of the nuclear power plant affects the existing environment, especially in the areas of marine biological resources and public safety. Before renewing the licenses, these issues would need to be fully reviewed by the NRC. As described in Section D.1, this EIR does not evaluate the potential impacts associated with license renewal. Please refer to Section A and D.1 for a description of CPUC's approach to evaluating the impacts of the Proposed Project in this EIR.

This section of the EIR describes PG&E's current position on license renewal and also summarizes the NRC's license renewal process. Section G was prepared to provide the public with information on the NRC license renewal process, should PG&E file an application with the NRC in the future. This section also describes the types of environmental impacts and mitigation measures that may be associated with license renewal, if such renewal were ultimately approved by the NRC.

G.1 PG&E's Position on NRC License Renewal

In a response to a data request from the CPUC, PG&E has stated that it currently has no definite plans to apply to the NRC for renewal of the operating licenses at DCPP (PG&E, 2004). However, PG&E has taken a preliminary step towards gathering the information that would be needed to consider a NRC license renewal for DCPP. In June 2003, PG&E completed a preliminary feasibility assessment to determine the information, analysis, and regulatory procedures that would need to be fulfilled prior to filing an application for license renewal. PG&E has also indicated that it plans to conduct a two-to-three year process of gathering data and developing the factual record to support a decision as to whether or not to seek license renewal. If PG&E ~~did~~ does eventually choose to seek license renewal for DCPP, such a renewal would allow the facility to operate and generate power for an additional 20 years beyond the original 40-year operating licensing terms for each unit, which expire in 2021 and 2025. Should PG&E seek a license renewal, it would need to follow the detailed licensing process described in Section G.2 below. The environmental issues that would likely be relevant to the license renewal process are described in Section G.4, Issues Relevant to DCPP License Renewal.

G.2 NRC Licensing Process

The NRC is responsible for oversight and licensing of all commercial power, research, and test reactors, as well as the use of nuclear materials in the United States. The NRC administers the site-specific license for DCPP Units 1 and 2, according to the requirements of 10 CFR 50, Domestic Licensing of Production and Utilization Facilities. These regulations are put forth by the NRC pursuant to the Atomic Energy Act of 1954, as amended (68 Stat. 919), and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242). The NRC allows DCPP Units 1 and 2 to operate within the limitations of the operating licenses and NRC requirements for the life of each unit's license, a term not to exceed 40 years (10 CFR 50.51).

The NRC has no role in energy resource planning except for its responsibilities of safety review required by the Atomic Energy Act and environmental analysis under the National Environmental Policy Act (NEPA). State energy regulators and facility owners have the ultimate decision on whether to continue facility operations based on resource planning and economic factors under the State's jurisdiction ~~or the owner's preference~~. State regulations and energy policy influence the State's energy system needs by defining the operational and investment objectives of the plant owners. Economic factors are one of the major variables in the license renewal decision for power plant owners. In California, the State may have decision-making power in the NRC license renewal process if the license renewal process requires ratemaking modifications under CPUC's jurisdiction. If this is the case, a facility in California applying for an NRC license renewal may also be subject to a CEQA analysis in addition to the environmental impact statement (EIS) required by the NRC under NEPA. The State agencies would ~~only~~ have jurisdiction only over the ratemaking proceeding, not the license renewal process.

With regard to the NRC license renewal process, the application process would occur along two concurrent tracks for review of environmental (10 CFR 51) and safety issues (10 CFR 54). The Applicant must prepare an evaluation of the potential impacts on the environment if the plant operates for an additional 20 years. In addition, the Applicant must provide the NRC with an evaluation that addresses the technical aspects of plant aging and a description of how to manage the aging effects.

Under 10 CFR 51, the NRC developed a Generic Environmental Impact Statement (GEIS) for Renewal of Nuclear Plants, which is a programmatic approach to assess potential environmental impacts that may be associated with license renewal at any facility. The NRC has established a general approach to analyze each environmental issue for significance and severity of impacts and assigned it a significance level of small, moderate, or large. In addition to assigning the significance level in the GEIS analysis, potential environmental issues are assigned to Category 1 or Category 2 as explained below:

- **Category 1:** (1) the environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristics; (2) a single significance level has been assigned to the impacts (except for collective offsite radiological impacts from the fuel cycle and from high-level waste and spent fuel); and (3) mitigation of adverse impacts associated with the issue that has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures are likely not to be sufficiently beneficial to warrant implementation.
- **Category 2:** ~~For these issues, t~~The analysis reported in the GEIS has shown that one or more of the criteria of Category 1 cannot be met, and therefore, additional plant-specific review is required.

As listed in Table G-1, the final GEIS assessed 92 potential environmental issues. Sixty-eight of these issues are found to be Category 1 and are identified in 10 CFR Part 51 as not requiring additional plant-specific analysis. However, the Applicant would be required to evaluate the 24 Category 2 issues in a Supplemental EIS. During the evaluation, the Applicant would be required to evaluate compliance with applicable, federal, State, and local environmental standards. Should a potential impact be identified,

specific mitigation measures would be presented and codified by the NRC ~~developed, where feasible~~ to reduce the impacts to a less than significant level. An analysis of environmental impacts of alternatives to license renewal would also be included in the Supplemental EIS. Section 10 CFR 51.53(c)(2) specifically excludes from consideration in the environmental report the issues of need for power, the economic costs and the benefits of the Proposed Action, economic costs and benefits of alternatives to the Proposed Action, or other issues not related to environmental effects.

In addition to the NEPA component of the license renewal process, all facilities must go through a detailed safety review of all systems, structures and components associated with the power plant. It must be demonstrated that the effects of aging will be managed in such a way that the intended functions of the structures and components will be maintained for the period of extended operation. Another requirement for license renewal is the identification and updating of time-limited aging analyses. During the design phase for a plant, certain assumptions about the length of time the plant will be operated are made and incorporated into design calculations for several of the plant's systems structures and components. Under a renewed license, these calculations must be shown to be valid for the period of extended operation.

G.3 Status of License Renewal Applications

As described in Table G-2, a total of 22 nuclear power plants have been issued a new 20-year license, or are currently going through the licensing process at the NRC. Neither of the two operating power plants in California (DCPP or SONGS) are currently in the licensing process at the NRC or have been issued a new license. According to the NRC, the license renewal process usually takes between 22 and 30 months to complete. The application process must start five years prior to the end of the license period. Therefore, if PG&E decides to apply for a renewal of the current licenses, it would need to initiate the application process no later than 2016 for Unit 1 and 2020 for Unit 2.

Table G-1. Issues Analyzed in GEIS*

Issue	Category 1	Category 2
Surface Water Quality, Hydrology, and Use[1]		
Impacts of refurbishment on surface water quality	x	
Impacts of refurbishment on surface water use	x	
Altered current patterns at intake and discharge structures	x	
Altered salinity gradients	x	
Altered thermal stratification of lakes	x	
Temperature effects on sediment transport capacity	x	
Scouring caused by discharged cooling water	x	
Discharge of chlorine or other biocides	x	
Discharge of sanitary wastes and minor chemical spills	x	
Discharge of metals in waste water	x	
Water use conflicts (plants with once-through cooling systems)	x	
Water use conflicts (plants with cooling towers and cooling ponds using make-up water from a small river with low flow)		x
Aquatic Ecology[2]		
Refurbishment	x	
Accumulation of contaminants in sediments or biota	x	
Eutrophication	x	
Entrainment of phytoplankton and zooplankton	x	
Cold shock	x	

Table G-1. Issues Analyzed in GEIS*

Issue	Category 1	Category 2
Thermal plume barrier to migrating fish	x	
Distribution of aquatic organisms	x	
Premature emergence of aquatic insects	x	
Gas supersaturation (gas bubble disease)	x	
Low dissolved oxygen in the discharge	x	
Losses from predation, parasitism, and disease among organisms exposed to sublethal stresses	x	
Stimulation of nuisance organisms (e.g., shipworms)	x	
Aquatic Ecology		
Entrainment of fish and shellfish in early life stages		x
Impingement of fish and shellfish		x
Heat shock		x
Entrainment of fish and shellfish in early life stages	x	
Impingement of fish and shellfish	x	
Heat shock	x	
Groundwater Use and Quality		
Impacts of refurbishment on groundwater use and quality	x	
Groundwater use conflicts (potable and service water; plants that use <100 gpm)	x	
Groundwater use conflicts (potable and service water, and dewatering; plants that use >100 gpm)		x
Groundwater use conflicts (plants using cooling towers withdrawing make-up water from a small river)		x
Groundwater use conflicts (Ranney wells)		x
Groundwater quality degradation (Ranney wells)	x	
Groundwater quality degradation (saltwater intrusion)	x	
Groundwater quality degradation (cooling ponds in salt marshes)	x	
Groundwater quality degradation (cooling ponds at inland sites)		x
Terrestrial Resources		
Refurbishment impacts		x
Cooling tower impacts on crops and ornamental vegetation	x	
Cooling tower impacts on native plants	x	
Bird collisions with cooling towers	x	
Cooling pond impacts on terrestrial resources	x	
Power line right-of-way management (cutting and herbicide application)	x	
Bird collision with power lines	x	
Impacts of electromagnetic fields on flora and fauna (plants, agricultural crops, honeybees, wildlife, livestock)	x	
Floodplains and wetland on power line right-of-way	x	
Threatened or Endangered Species[1]		
Threatened or endangered species		x
Air Quality		
Air quality during refurbishment (non-attainment and maintenance areas)		x
Air quality effects of transmission lines	x	
Land Use		
Onsite land use	x	
Power line right-of-ways	x	

Table G-1. Issues Analyzed in GEIS*

Issue	Category 1	Category 2
Human Health		
Radiation exposures to the public during refurbishment	x	
Occupational radiation exposures during refurbishment	x	
Microbiological organisms (occupational health)	x	
Microbiological organisms (public health) (plants using lakes or canals, or cooling towers or cooling ponds that discharge to a small river)		x
Noise	x	
Electromagnetic fields, acute effects (electric shock)		x
Electromagnetic fields, chronic effects	NA	NA
Radiation exposures to public (license renewal term)	x	
Occupational radiation exposures (license renewal term)	x	
Socioeconomics		
Housing impacts		x
Public services: public safety, social services, and tourism and recreation	x	
Public services: public utilities		x
Public services, education (refurbishment)		x
Public services, education (license renewal term)	x	
Offsite land use (refurbishment)		x
Offsite land use (license renewal term)		x
Public services, transportation		x
Historic and archaeological resources		x
Aesthetic impacts (refurbishment)	x	
Aesthetic impacts (license renewal term)	x	
Aesthetic impacts of transmission lines (license renewal term)	x	
Postulated Accidents		
Design basis accidents	x	
Severe accidents		x
Uranium Fuel Cycle and Waste Management		
Nonradiological waste	x	
Low-level waste storage and disposal	x	
Mixed waste storage and disposal	x	
Onsite spent fuel	x	
Transportation		x
Decommissioning		
Radiation doses	x	
Waste management	x	
Air quality	x	
Water quality	x	
Ecological resources	x	
Socioeconomic impacts	x	
Environmental Justice		
Environmental justice	~~NA~~	~~NA~~x

* This table provides a summary of all the potential issues that may come up during re-licensing. Not all Category 2 issues would apply to DCPP.
[1] For all plants
[2] For plants with once-through cooling pond heat dissipation systems
Source: NRC, 1996.

Table G-2. Status of NRC License Renewal Applications

Applicant	Plant Name & Units	Date Application Rec'd by NRC	Date NRC Issued GEIS Supplement	Date NRC Issued SER	Date NRC Issued License
Completed Applications					
Baltimore Gas & Electric Co.	Calvert Cliffs, 1 & 2	April 1998	November 1999	November 1999	March 2000
Duke Energy	Oconee Nuclear Station, 1, 2 & 3	July 1998	February 2000	February 2000	May 2000
Entergy Operations	Arkansas Nuclear One, 1	February 2000	April 2001	April 2001	June 2001
Southern Nuclear Operating Co., Inc.	Edwin I. Hatch Nuclear Plant, 1 & 2	March 2000	May 2001	October 2001	January 2002
Florida Power & Light Co.	Turkey Point Nuclear Plant, 3 & 4	September 2000	January 2002	February 2002	June 2002
Virginia Electric & Power	North Anna, 1 & 2 Surry, 1 & 2	May 2001	December 2002	November 2002	March 2003
Duke Energy	McGuire, 1 & 2 Catawba, 1 & 2	June 2001	December 2002	January 2003	December 2003
Exelon	Peach Bottom, 2 & 3	July 2001	January 2003	February 2003	May 2003
Florida Power & Light Co.	St. Lucie, 1 & 2	November 2001	May 2003	July 2003	October 2003
Omaha Public Power District	Fort Calhoun Station, 1	January 2002	August 2003	September 2003	November 2003
Carolina Power & Light	H.B. Robinson Nuclear Plant, 2	June 2002	December 2003	January 2004	April 2004
Rochester Gas & Electric Corp.	R.E. Ginna Nuclear Power Plant, 1	August 2002	January 2004	March 2004	May 2004
South Carolina Electric & Gas Co.	V.C. Summer Nuclear Station, 1	August 2002	February 2004	January 2004	April 2004
Exelon	Dresden, 2 & 3 Quad Cities, 1 & 2	January 2003	June 2004	July 2004	October 2004
Applications Under Review					
Southern Nuclear Operating Co.	Farley, 1 & 2	September 2003			
Entergy Operations	Arkansas Nuclear One, 2	October 2003			
Indiana & Michigan Power Co.	D.C. Cook, 1 & 2	November 2003			
Tennessee Valley Authority	Browns Ferry, 1, 2, 3	January 2004			
Dominion Nuclear Connecticut, Inc.	Millstone, 2 & 3	January 2004			
Nuclear Management Co.	Point Beach, 1 & 2	February 2004			
Constellation Energy	Nine Mile Point, 1 & 2	May 2004			
Progress Energy	Brunswick, 1 & 2	October 2004			

G.4 Issues Relevant to DCPP License Renewal

Several environmental issues are likely to require plant-specific review if the DCPP facility enters the license renewal process in the future. These issues would be addressed in the GEIS prepared by NRC under NEPA. Areas of potential environmental impacts are discussed here to provide full disclosure of the issues that may need to be addressed during the license renewal process. This information is based on the environmental setting as it presently exists for DCPP. For purposes of evaluating some issue areas, the setting could change over time because the possible license renewal would not occur for approximately 15 years.

The GEIS for license renewal would provide a plant-specific review for Category 2 environmental issues assuming 20 additional years of plant operation. The license renewal process also has a separate track for safety issues, including how to manage the effects of plant aging. PG&E would need to conduct an integrated plant assessment as part of the safety review. This assessment would identify any structures or components that would need to be replaced or inspected more rigorously to continue operation during the 20-year extension period. The NRC would characterize the activity of component replacement as "refurbishment." If PG&E or NRC determine that refurbishment of any plant component would be necessary and the refurbishment would be outside of the bounds of normal maintenance, then the GEIS would need to evaluate the environmental impacts of the refurbishment activities. The need for any major plant refurbishment activities needed to enable license renewal at DCPP has not yet been established.

The GEIS would provide a site-specific analysis of Category 2 issues that involves a review of new information, past studies, and the operating history of DCPP at the time of license renewal. Plant operation during the 20-year extension would be considered, and the impacts to these issues would be characterized. For any operational impact other than those characterized as "small," the NRC must identify mitigation that would be imposed as conditions of the renewal. The NRC is also required to consider and impose mitigation approaches for severe accidents.

The GEIS would focus on providing a plant-specific analysis of Category 2 issues. All Category 1 issues (such as noise) and some Category 2 issues that are not relevant to DCPP (such as groundwater use conflicts) would not be addressed. For potential impacts to terrestrial resources or air quality, the GEIS would focus on refurbishment activities that could be caused by the license renewal. Of the Category 2 issues identified in Table G-1, the following would be especially relevant during the plant-specific review for DCPP:

- Aquatic Ecology: Entrainment of fish and shellfish in early life stages; impingement of fish and shellfish; heat shock
- Terrestrial Resources: Refurbishment impacts
- Threatened or Endangered Species
- Air Quality: Air quality during refurbishment (non-attainment and maintenance areas)
- Socioeconomics: Housing impacts; offsite land use (refurbishment); public services; transportation
- Postulated Accidents: Severe accidents
- Uranium Fuel Cycle and Waste Management: Transportation

G.4.1 Aquatic Ecology

DCPP uses ocean water in a once-through cooling system. By bringing ocean water into the plant, heated water is released to the ocean and marine resources are trapped on the intake screen and drawn into the intake. Entrainment of larvae from near-shore species occurs due to the cooling water intake,

and adult and juvenile fish and shellfish are impinged on the traveling screens within the DCPP cooling system. These effects of plant operation deteriorate the near-shore ecology. The discharge of cooling water also causes degradation of marine resources because of the temperature differences. The area affected, the scope of marine population and community changes, and the actual effects of the thermal discharge continue to be subjects of ongoing studies. At the time of applying for license renewal, PG&E would need to identify any new information or studies developed by resource management agencies, such as the Regional Water Quality Control Board, or other parties examining the long-term entrainment or impingement of fish and shellfish or thermal plume effects. The status and potential presence of threatened or endangered species that are protected at the time of license renewal would also need to be considered, because some designations may change over time.

These effects were considered generically by the NRC in the GEIS, but given the site-specific history of DCPP, there is already a large amount of information in previous studies (summarized in Section D.3.1.5, Existing Marine Resource Issues) and a permitting and operational history that would need to be taken into account. Because this site-specific information is beyond the information that has been considered in the non-site-specific GEIS, these issues would require plant-specific review by the NRC. The analysis would therefore depend on the results of previous studies, up-to-date operating information, ongoing monitoring efforts, and a review of compliance with permit limits that exist at the time of filing for the license renewal application. Using that information, the impacts to aquatic ecology from an additional 20 years of DCPP operation would be assessed and analyzed. The impacts would likely include a continuation of entrainment and impingement and a continuation of degraded aquatic ecology near DCPP because of the thermal plume, with the precise level of impact being determined at the time of license renewal. Options for mitigating impacts to aquatic ecology could include refurbishing DCPP to operate with an alternative cooling system or expanding marine restoration efforts in the vicinity of DCPP.

G.4.2 Terrestrial Resources

Refurbishment of DCPP, if determined to be needed as a result of the safety review, could involve short-term construction-type activities at the site that might disturb wildlife or destroy terrestrial habitat if the activities were to occur in previously undisturbed or undeveloped areas. The status and potential presence of threatened or endangered species that are protected at the time of license renewal would also need to be considered. Refurbishment activities that would have the potential to disrupt vegetation and wildlife could be adjusted with mitigation to avoid such resources, given the level of existing disturbed area at DCPP. These impacts and mitigation would likely be similar to those for terrestrial resources identified in Section D.3.3.3 for staging and preparation during the Proposed Project. If refurbishment were to cause the unavoidable loss of protected vegetation or wildlife, surveys and the need for compensatory mitigation would need to be defined with the involvement of permitting agencies (such as the U.S. Fish and Wildlife Service and California Department of Fish and Game).

G.4.3 Air Quality

Refurbishment of DCPP, if determined to be needed as a result of the safety review, could involve heavy construction activity (including short-term emissions from equipment at the site) and the offsite impacts of refurbishment workers (commuter-vehicle emissions). The emissions would likely include ozone precursors and particulate matter, including the toxic contaminants associated with diesel-fuel combustion. Emissions from refurbishment activities would occur in San Luis Obispo County, which has a history of nonattainment designations for ozone and particulate matter. As a result, refurbishment activities could

exacerbate local efforts to attain or maintain air quality standards. These impacts would depend on the air quality setting existing in the San Luis Obispo County area at the time of license renewal. The attainment status at the time of license renewal may be changed from the current conditions (described in Section D.2.2) because of employment and population growth in the region not related to DCPP operation. Mitigating such impacts could be accomplished with dust control measures and by limiting the use of diesel-fueled equipment or by requiring equipment to be powered by alternative fuel sources. These impacts and mitigation would likely be similar to the air quality impacts identified in Section D.2.3 for the Proposed Project.

G.4.4 Socioeconomics and Transportation

Employment growth at DCPP, should it be needed for continued operation, or for refurbishment projects, could adversely affect housing demand and the local demand for public services. These impacts would occur along with the impacts of future traffic growth around Port San Luis and Avila Beach, and would be associated with population and employment expansion in the region. Continued operation would not likely cause substantial socioeconomics impacts if the number of plant employees were to remain steady during continued operation. However, if any major plant refurbishment projects were found to be needed, then large numbers of employees could cause short-term impacts to housing demand.

Similarly, traffic caused by employee growth at DCPP, should it be needed for continued operation, or for refurbishment projects could adversely affect local access routes. These impacts would occur along with the impacts of future traffic growth around Port San Luis and Avila Beach during the 20-year extension period, and would be associated with overall population and employment expansion in the region. If the number of plant employees were to remain steady, then license renewal would not be expected to cause substantial new traffic impacts. If employment levels were to increase, then traffic control measures, such as road improvements, staggered shift schedules, or ride-sharing programs, would likely need to be implemented.

G.4.5 Postulated Accidents

The environmental impacts of design-based accidents would be addressed in the non-site-specific GEIS. As a Category 1 issue, the NRC would not address design-basis accidents on a plant-specific level based on the premise that all plants are designed to withstand these accidents. Severe accidents initiated by external phenomena such as beyond-design-basis earthquakes and sabotage would need to be addressed, which would encompass the improved awareness of seismic hazards and potential terrorist attacks. The potential ability of these phenomena, such as beyond-design-basis earthquakes and sabotage, to cause severe offsite consequences would be assessed. Changing equipment components or adding security features would likely be required if postulated accidents were found to result in severe consequences.

The NRC requires that license renewal applicants consider new approaches to mitigate severe accidents if the NRC has not previously evaluated Severe Accident Mitigation Alternatives (or SAMAs) in an earlier environmental assessment. SAMAs have not previously been considered for DCPP. The purpose of this consideration is to ensure identification and evaluation of plant changes (i.e., hardware, procedures, and training) or design improvements that can be made to improve severe accident safety performance. This effort would identify improvements needed to address beyond-design-basis earthquakes and sabotage. Impacts to public health and safety as a consequence of these beyond-design-basis incidents could include release of radioactivity, various health effects, or property damage. The improvements necessary to avoid such impacts would be assessed based on their costs and their risk-reduction benefits, and the ability of SAMAs

to reduce offsite consequences or avoid economic impacts would also be described. Each potential plant change or design improvement would be evaluated for risk reductions compared to DCPP's setting, such as the baseline core-damaging accident frequency. Mitigation for these impacts related to severe accidents could involve changes to equipment components, capacities, monitoring, or maintenance.

G.4.6 Uranium Fuel Cycle and Waste Management

Uranium fuel cycle and waste management, except transportation of spent fuel, is a Category 1 issue. This assumes availability of an NRC-designated repository. The environmental impacts of low-level and high-level radioactive waste and spent fuel transport to a disposal site *other* than the NRC-designated single repository at Yucca Mountain, Nevada would not be Category 1 but would require environmental review on a plant-specific level. If onsite storage of spent fuel continues, as it is currently, then the NRC's generic (non-site-specific) analysis of environmental impacts for the uranium fuel cycle and waste management would likely apply. In terms of offsite disposal at the Yucca Mountain facility, the NRC would need to review the availability of the repository at the time of the license renewal review and determine whether the conclusions of the generic environmental analysis in the GEIS remain accurate. If the single repository becomes permanently unavailable, then the NRC would address other options for disposal, for example at decentralized facilities, in a site-specific analysis for DCPP. The resulting impacts of pursuing other disposal options could include increased potential for accidental release of radioactivity and the corresponding health risks and property damage along the transport route or at the disposal site. Mitigation options could include storing and monitoring of the waste at DCPP until the radioactivity decays or encasing the waste in a structurally sound material such as concrete until the radioactivity decays.

G.4.7 No Action Alternative

The NRC is also required to review the impacts of the No Action Alternative, or denying the license renewal. This means the NRC would consider the effects of DCPP ceasing operation upon expiration of the current licenses. The GEIS would describe how the adverse impacts of likely alternatives (natural gas–fired generation or modification of DCPP to closed-cycle cooling) would compare with those associated with continued operation of DCPP for 20 additional years. The impacts associated with building replacement generation facilities, such as water use for cooling, destruction of habitat, aesthetic changes, noise production, permanent changes of land use, and air emissions from fuel combustion, would be characterized along with the impacts associated with shutdown of DCPP. The impacts of license renewal (aquatic ecology, etc.) would then be compared to the impacts of providing replacement generation. The conclusion of the No Action Alternative in the GEIS would focus on whether the impacts of replacement generation would exceed the impacts caused by license renewal.

G.5 References

PG&E. 2004. Response of Pacific Gas and Electric to CPUC Data Request No. 2. October 21.

U.S. NRC (United States Nuclear Regulatory Commission). 1996. Generic Environmental Impact Statement for License renewal of Nuclear Plants (NUREG-1437). May.