Application No.: 04-02-026
Exhibit No. :
Date: December 13, 2004
Witness: Norbert H. Dall

BEFORE THE PUBLIC UTILITIES COMMISSION OF
THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U 338-E) for Authorization: (1) to replace San Onofre Nuclear Generation Station Unit Nos. 2 & 3 (SONGS 2 & 3) steam generators; (2) establish ratemaking for cost recovery; and (3) address other steam generator replacement issues.	Application A.04-02-026 (Filed February 27, 2004)

TESTIMONY OF NORBERT H. DALL ON BEHALF OF CALIFORNIA EARTH CORPS

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For: CALIFORNIA EARTH CORPS

December 13, 2004

Q. For the record, state your name and address.

A. Norbert H. Dall. 6700 Freeport Boulevard, Suite 206, Sacramento, California 95822.

Q. What is your professional and educational background?

A. For the past 23 years, I have been a coastal, land use, and transportation consultant for the public, private, organized labor, and non-profit sectors, with primary emphasis on projects in, and strategic planning for, the coastal zone in California. In 1980-81, I served as executive director of the Alliance for Coastal Management, a voluntary association headed by former US CEQ and California State Assembly Resources, Land Use, and Energy Committee chairman Charles Warren. Between 1976 and 1980, I was the coastal/land use representative of the Sierra Club in California, including on energy, port, urban development, resource conservation and restoration, public access and recreation, transportation, and other infrastructure matters before the California Coastal Commission, Regional Coastal Commissions, the California Legislature, Congress, and other federal, state, regional, and local public agencies. Between 1973-76, I was an associate of California Research, including as managing editor of the periodical *State Coastal Report* and the daily *Coastal Legislative Monitoring Service* (1976). I was educated at the University of California, Berkeley (A.B., Political Science with high honors, 1970) and Rutgers University (National Science Foundation/Defense Education Act fellow/trainee in Political Science, 1970-1972.)

Q. What is your expertise with regard to SONGS?

A. I have monitored SONGS with regard to its impact on coastal resources since 1973, In 2002-2003, I intervened at the California Coastal Commission in SCE's application to remove the SONGS 1 Reactor Pressure Vessel from SONGS via the Beach and Road Route to Camp Pendleton, and then by ship to Barnwell, South Carolina, to require processing of a coastal development permit, rather than a waiver, as requested by SCE, and to

oppose the park-beach-maritime removal route proposed by SCE. As part of that intervention, I analyzed the removal project description and route segments proposed to be utilized at San Onofre SB, Camp Pendleton, and the I-5 corridor; the likely potential effects of the proposed transportation system on natural and infrastructure resources, and on public access and recreation, along the route; the likely potential effects of existing and projected geotechnical, hydrological, and oceanographic conditions on SCE's proposed transportation system; SCE's proposed mitigation measures, including projected costs; the likely potential length of time required for the proposed transportation system; and the feasibility of alternatives to SCE's proposal.

Q. What is the purpose of your testimony?

A. To bring to the attention of the California Public Utilities Commission ("Commission") the lack of information in SCE's application and testimony regarding the true and complete logistical hurdles and related costs associated with transportation of the Steam Generator Replacement for Units 2 & 3 ("SGR").

Q. Have you reviewed SCE's application and testimony for this matter?

A. Yes.

Q. Do you have any concerns about SCE's application and testimony?

A. I have concerns about (1) the absence of a finite SGR transportation project description, (2) the lack of site-specific environmental, geotechnical, and hydrological/oceanographic data and analysis as they relate to SCE's preferred and two alternative routes, (3) SCE's PEA, which in parts ignores or understates presently known potentially significant adverse effects of the project on the environment, or of existing geotechnical, hydrological, and oceanographic conditions on the project, and lacks substantive analysis of likely environmental conditions at the time of proposed project implementation (October, 2008-February, 2009); (4) SCE's apparent avoidance of a

rational analysis of the potential conflicts of the proposed transportation project with (4.1) national security uses of the Camp Pendleton military base during the presidentially-proclaimed long term war on terror, (4.2) the Interstate Highway 5 and mainline railroad corridors, and (4.3) the cost of required mitigation measures for potential adverse impacts on transportation, communications, and public recreational, water supply, and drainage infrastructure; (5) SCE's apparently conflicting testimony in this proceeding regarding the availability of rail transport insurance in 2008-9, when compared to its testimony before the Coastal Commission in 2003 that the railroad (BNSF) required SCE to indemnify it in the event of a mishap and that rail transport insurance for the SONGS 1 RPV was unavailable; and (6) SCE's underestimation of contingent costs, notwithstanding its own identification of the RSG land transportation segment's potential for external impacts with large cost consequences.

SCE fundamentally errs when it asserts that the proposed project can be undertaken without significant adverse effects on the environment, or potential major natural risks to the project. The quantified levels of required mitigation, other than avoidance, to reduce potential significant project impacts on the natural and built environment below a level of significance, and the efficacy of potential alternatives that could avoid adverse effects on coastal resources, remain to be determined through formal environmental impact report review.

Q. What costs associated with transportation of the SGR has SCE failed to identify and include, in whole or part, in its costs analysis of SGR?

A. SCE's conceptual SGR land transportation project cost estimates are summarized in Table III-4, Transportation Estimate, at page 7 of Exhibit SCE-3 (February, 2004), where $18.6 million is allocated to Camp Pendleton Boat Basin to SONGS segment. Page C-6 of Exhibit SCE-8, in line items 3.03.00 through 3.03.06, provides rounded estimates of the land transport ($14 million), haul route engineering ($50,000), contractor supplemental labor ($420,000), tax ($180,000), unidentified work scope adjustment ($4 million), and insurance ($1.25 million). Page B-9 of Exhibit SCE-8, nominally identifies land transport contingencies as part of these

aggregate costs and therein clarifies, e.g., the conceptual, "not fixed," and otherwise unsettled nature of this project component.

The unidentified, or substantially understated, costs associated with SCE's proposed transportation alternatives, between SONGS and the Del Mar Boat Basin at Camp Pendleton, for the steam generator replacement include the following:

1. Preparation of site-specific professional technical studies, as requisite background documents for finite project description and entitlements applications, regarding existing and projected time of project (October, 2008-February, 2009) environmentally sensitive habitat, geotechnical, hydrologic, oceanographic, infrastructure, listed species and species of concern, Camp Pendleton national security mission priority uses, public recreation, and traffic conditions along SCE's preferred and any proposed alternative routes.

2. Processing of regulatory agency entitlements, based on the finite project description, identification of the least environmentally damaging alternative, and such mitigation measures as are necessary to reduce otherwise unavoidable adverse effects to below a level of significance, or to assure parties potentially affected by the project that impacted infrastructure or other resources will be fully restored. Such mitigation costs, if loss of a part of Old Highway 101 and its proximate associated infrastructures, were involved, could well be substantial. Delays may also occur in regulatory agency processing due to a variety of factors, including the speed with which SCE completes requisite background analyses, settles on a finite project description, field investigations and office analyses identify issues not previously addressed, changes in this dynamic stretch of coastline or the US war on terror affect the condition or availability of SCE's preferred or alternative haul routes, etc. Denial of SCE's preferred alternative by a regulatory agency is possible, given the environmental sensitivities of the Beach and Road Route and the potential adverse effects from the project on natural resources and infrastructure.

3. Line Item 3.03.01, Exhibit SCE-8, page B-9, allocates $8.9 million to land transport from Camp Pendleton to the SONGS Site based on the unexecuted conceptual plan for moving the decommissioned reactor pressure vessel for SONGS Unit 1. Given the uncertainties attendant to this already substantially delayed latter proposed transport, the cost allocation lacks tangible current basis. It is noteworthy that the coast allocation also does not indicate whether, or the extent to which, it incorporates delays within or beyond the proposed narrow October, 2008-February, 2009 transportation window. SCE's assignment of a 55% contingency ($4.9 million) is at odds with the specific projection in Table III-3, Application of Contingency (Exhibit SCE-3 at page 5) that a contingent cost factor of "65% and Above" applies, for example, to "RSG transportation (land segment)." Each additional 10% contingent cost raises the cost of the land transport by $890,000, if SCE's base cost calculations – which are not provided – were to be reasonably conservatively correct, in light of the uncertainties.

4. Line Item 3.03.02, Exhibit SCE-8, page B-9, allocates a mere $26,887 to conceptual route engineering analysis, with a 100% contingent cost that brings the total slightly above $50,000. The estimated cost is unrealistic for a 14-15 mile long route analysis for repeated very heavy loads that are proposed to cross, during the rain-storm season, a significant river mouth liquefaction area, numerous other drainages, active landslide(s), and travel along some 6 miles of intertidal beach below eroding bluffs. Line Item 3.03.03, Contractor supplemental labor, augments the previous line item by $208,835, with a 100% contingency, but since no specific work plan has been produced, it is unknown whether this additional $418,000 suffices to provide for professional engineering analysis of each geotechnically-challenged component of the proposed preferred route.

5. Line Item 3.03.05, Exhibit SCE-8, page B-9, allocates $4 million for "using one of the alternate inland routes," based on vendor ROM estimate of costs. Absent the work plan details utilized by the vendor, the basis for this contingent cost estimate cannot be analyzed

or verified.

6. Line Item 5.10.08, Exhibit SCE-8, page B-21, indicates that rail transport insurance in 2008-9 is expected to be available at $186,000, with a 20% contingency, for shipment of the contaminated SGR's to their disposal site. However, in direct contrast, SCE previously testified before the California Coastal Commission that rail transport of the SONGS 1 RPV was infeasible because the railroad (BNSF) required SCE to hold it harmless in the event of mishap and because of the very high cost or unavailability of insurance. If the rail transport insurance cost estimated by SCE is based, in part, on an expectation that SCE ratepayers pay to hold the railroad transporting the SGR's harmless in the event of a mishap, SCE should so indicate in this proceeding.

7. SCE is required by Public Resources Code Section 30232 to demonstrate, including, e.g., through adequate operational capabilities and insurance, that it can provide protection and effective containment and cleanup of petroleum and other hazardous substances aboard the heavy lift ship, barge(s), rail transport, as well as the equipment proposed to be used for the beach-land or alternative interior land haul segments of the project.

SCE has also omitted specific description, analysis, and thereby estimates of cost, for (1) transporting the new SGR's from the Port of Long Beach to SONGS by rail, and (2) transporting the removed contaminated SGR's from SONGS by (2.1) rail to Hanford, Washington, or (2.2) by rail to near Fallbrook Junction at Camp Pendleton, with a short wheeled connection on existing base roads to the Del Mar Boat Basin, and by barge to Hanford, Washington.

Q. What is the basis for your opinion that these unidentified costs should be considered by SCE in their costs assessment and cost-benefit analysis?

A. The bases for the above-identified additional cost categories include (1) SCE's own acknowledged incomplete project description, (2) the lack of site-specific geotechnical, hydrological, oceanographic, aquatic and other ESHA, infrastructure, recreational, and traffic analyses in SCE's PEA, (3) the previously identified potentially significant environmental impacts from the SONGS 1 RPV transport project, and from existing geotechnical conditions on the project, and (4) the lack of specific task-related cost data, including for contingent costs, in SCE's Exhibit. In addition, Public Resources Code Section 30232 requires protection against, and effective containment and cleanup facilities and procedures for, any spillage of petroleum or other hazardous substances that are being transported through the coastal zone.

Q. What contingencies related to transportation has SCE failed to include in its analysis?

A. In addition to, or clarification of, those identified above, SCE should be required as part of its finite project description to (1) specifically address potential use conflicts of SCE's preferred and alternative inland transportation routes with priority military training and operational missions at Camp Pendleton as the presidentially-declared War on Terror continues, and (2) model the potential hydrographic, oceanographic, and seismic (especially liquefaction-inducing and slope instability) conditions for its proposed rain-storm season hauling period, including outside 3-day weather forecast parameters, to identify credible periods of delay after a haul convoy is en route along the beach or Old Highway 101.

Given the unstable high seismic zone through (over) which the proposed haul routes extend, SCE's cavalier dismissal of seismicity as a requisite area of analysis for this project constitutes a major failure in contingent analysis.

Q. What is the basis for your opinion that these costs should be included in the contingency?

A. The technical professional studies, military use conflict analysis, and alternatives analysis, referenced above, are required by the California Environmental Quality Act and the California Coastal Act. The Coastal Act

also requires SCE to demonstrate, including through insurance or other surety, its ability to protect against spillage of petroleum or other hazardous substances from the land and water transportation components, and to contain and clean them up in the event they should occur. Estimates of actual project duration should reflect the physical parameters that operate along the dynamic shoreline and in high seismic hazard zones. Regulatory agency entitlement reviews frequently, for a variety of reasons, are lengthy and complex, and may result in denial of the proponent's proposed project or its approval subject to costly mitigation measures. Factors (percentages) of contingent costs should reflect these conditions, as well as professional standards.

Q. What is your basis for your conclusion that unidentified costs should be included in SCE's cost analysis?

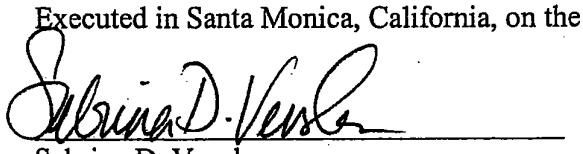
A. The above-referenced costs should be included in SCE's cost analysis to provide the Commission with a more complete picture, than that offered by SCE, of the direct and cumulative costs of various project alternatives, and who will be obligated to pay for them. Failure to identify and disclose all potential costs could lead to approval of a project based on significantly understated impediments and associated implementation cost.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of TESTIMONY OF NORBERT H. DALL ON BEHALF OF CALIFORNIA EARTH CORPS in A.04-02-026.

A copy has been mailed First Class U.S. Mail and e-mailed to all known parties of record in the proceeding who have provided addresses.

Executed in Santa Monica, California, on the 13th day of December, 2004.



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