Attachment Detailed Comments on CPUC Draft Environmental Impact Report SONGS Steam Generator Replacement Project

May 31, 2005

1.0 INTRODUCTION

This attachment provides detailed comments on the Draft Environmental Impact Report (EIR). Section 2.0 discusses general comments on the Draft EIR, while Section 3.0 provides comments on specific sections.

2.0 GENERAL EIR COMMENTS

2.1 Comparative Analysis of Proposed Transportation Routes

The Draft EIR does not indicate probable significant adverse effects from the Proposed Project, including all three transport route options. However, the Draft EIR inappropriately treats the three transport route options as alternatives pursuant to the California Environmental Quality Act (CEQA) and designates the Marine Corps Base Camp Pendleton (MCBCP) Inland Route as an environmentally superior alternative. As stated in the cover letter, the three transport options are all included within the Proposed Project and are not independent alternatives pursuant to CEQA. Treatment of the three transport routes within the EIR should be changed to represent their treatment as options with the EIR, any of which may be used for the project.

The treatment of an environmentally superior alternative among the transport route options within the Draft EIR is based on apparent inappropriate assessments primarily relative to air quality; geology, soils, and paleontology; land use, recreation, and military operations; and visual resources. Specific issues and explanations of appropriate levels of assessment and conclusions for each of these four resource areas are provided in the subsequent subsections within Section 3.0 of this attachment. Miscalculations of cumulative, total air emissions for each transport route option within the Draft EIR are described and the proper comparison is provided. Concerns expressed within the Draft EIR regarding potential unstable geologic features along some of the transport options are unjustified. Impacts described on recreational facilities appear to be based on incorrect assumptions regarding features of the key sites and the likelihood for potential effect on recreational users. The visual assessment in the Draft EIR also appears to confuse locations of key observation points relative to vistas of concern and locations of project activities, and indicates obstructions to views that will not occur. The visual assessment also appears to indicate impacts on visual resources that are not subject to the significance criteria for visual resources. Comments are provided that indicate appropriate evaluation of effects among the three transport options and further document that no significant adverse effects result from any of the three transport options.

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The detailed discussion in Section 3.0 of this attachment demonstrates that the Beach and Road Route transport option results in incrementally less impacts than the other two transport options, and that all three transport options have very low potential for adverse environmental impact and are generally neutral in relative comparison such that there are few environmental considerations that would favor one transport option over another. Although the difference among the transport route options is minor and not significant, there is some distinction with regard to the potential adverse effect on traffic on I-5 during transport, with the Beach and Road Route transport option favored because it minimizes such potential effects to the greatest degree.

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Regardless of these considerations, the Draft EIR correctly documents that no significant impacts will result from the Proposed Project, including all three transport options. Mitigation measures are also available to further minimize and avoid even minor potential impacts from the project. Therefore, the Draft EIR demonstrates that the Proposed Project, including the three transport options, should be approved by the California Public Utilities Commission (CPUC) based on environmental considerations. This conclusion of no significant adverse effect of the Proposed Project in the Draft EIR will be supported even more with incorporation of the comments provided within this attachment. Therefore, the CPUC should approve the Proposed Project, including all three transport options.

SCE-8

2.2 NO PROJECT ALTERNATIVE – REPLACEMENT TRANSMISSION FACILITIES

SCE-9

The Draft EIR discussion regarding replacement transmission facilities summarizes the overall need for new transmission system improvements. We believe this discussion would be more representative if the following language were used to represent the general conclusion and summary discussion on this point:

Shutdown of SONGS, which provides up to 5 percent of the total power consumed in the State, would likely cause segments of the 230 kV transmission system connected to SONGS to become stressed and cause substantial changes in power flow patterns on the wider regional 230 kV - 500 kV transmission system. This would necessitate substantial reconfiguration and/or upgrade of the transmission grid in the SONGS area and wider Southern California region.

Sections of the EIR that should be modified regarding this issue are described in detail in Section 3.0 of this attachment.

SCE-10

2.3 DISCUSSION OF THE NO PROJECT ALTERNATIVE

In several resource discussion sections for the No Project Alternative, the writers appropriately address new generation but fail to mention transmission. Replacing SONGS generation requires both new generation and transmission facilities. Therefore, all resource discussions should be consistent and address both generation and

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transmission related considerations. For example, Section 3.4.2 of the Draft EIR, on page ES-26 under the No Project Alternative, identifies new generation, but not transmission. Several other sections also do not address transmission in the No Project Alternative sections. We believe all resource sections under the No Project Alternative subject should be consistent and address both the construction of generation and transmission facilities.

SCE-10

3.0 DETAILED COMMENTS ON THE DRAFT EIR

3.1 EXECUTIVE SUMMARY

Table ES-1, Environmentally Superior Alternative and Transport Options, Page ES-5

Southern California Edison's (SCE's) application indicated that three options were identified for transport of the Replacement Steam Generators (RSGs) from the Camp Del Mar boat basin on MCBCP to the SONGS project site, and described that it was requesting approval of all three of these options as part of the Proposed Project. These three transport options are not, therefore, alternatives pursuant to CEQA, and SCE anticipates that it may be necessary to use any one of these three options, or perhaps one of the options at one time and another option at another time. The transport will occur in 2009 and 2010, and it is not possible to guarantee conditions or availability of any of the transport options at those times. Furthermore, each of the three transport options involves transport on MCBCP. Activities on MCBCP are subject to MCBCP's environmental review and authorization. MCBCP may require use of a specific transport option at the times of transport. As stated in the cover letter and this document, all three transport options avoid significant adverse environmental impacts and there are no reasonable environmental discriminators among them that would suggest preference of one over another in the sense of an environmentally superior alternative. Therefore, SCE requests approval of all three transport options. Reference to these options as alternatives, including an environmentally superior alternative, should be removed from the EIR.

SCE-11

Discussion of I-5/Old Highway 101 and MCBCP Inland Routes, Page ES-14

The Executive Summary states that both of these transport options reduce potential impacts on sensitive biological resources along the shoreline. The detailed analysis within the Draft EIR appropriately describes that the Proposed Project for the Beach and Road Route will not result in adverse effects on sensitive biological resources. Therefore, this reference to reduction of impacts should be removed from the EIR. The Draft EIR does appropriately point out that the existing use of the Beach and Road Route, as well as portions of the other routes, is actively used by the MCBCP for training purposes. It is relevant to note that the past, current, and future use of all routes (i.e., the environmental baseline) on MCBCP, and portions of the Beach and Road Route in particular, include frequent movement of personnel and heavy military land and

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amphibious vehicles. This is an important consideration when analyzing the relative impacts of the Proposed Project.

Correction and enhancement to Project Described for Replacement Transmission Facilities, Page ES-16

The Draft EIR discussion of the No Project Alternative's replacement transmission facilities states that SONGS is connected to a 500 kV system. This is incorrect. SONGS connects to the transmission grid at a 230 kV system. A global change in the EIR should be performed to change references of SONGS being connected to a 500 kV transmission system to a 230 kV transmission system.

RSG Transport on the Southbound Lanes of I-5, Page ES-37

This section states that all southbound lanes of I-5 will be closed for one hour during the bypass of Skull Canyon. The proposed plan does not necessarily require the closure of all southbound lanes of I-5. Partial lane closure may be acceptable. All southbound lanes would be closed for a very short time only if Caltrans requires the full closure of the southbound lanes. Closure, if needed, is expected to last no longer than one hour, and may be much less. As stated in SCE's response to deficiency letter Question 117 dated June 7, 2004, a total closure time is estimated to be less than one hour. The transporter will travel approximately 0.2 miles, or 1000 feet, and it should take approximately 5 minutes; however, additional time will be required for placement and removal of advance warning signs and traffic cones. The Draft EIR should be modified to reflect this more accurate description, which demonstrates lower adverse effects on traffic on I-5 for the Beach and Road Route option than the other transport options.

SCE-15

Shift Staggering and Proposed Mitigation for Shift Change to Off-peak Hours as indicated on Page ES-38 and Elsewhere

Information provided in several deficiency letter responses demonstrates that the potential impact with the proposed mitigation of staggering the shift changes over three periods is adequate mitigation to reduce traffic impacts. It should not be necessary to schedule the normal shift change outside worker expectation. As indicated in previous data submittals on this topic, a maximum of 2,000 extra employees (1,000 of which are affiliated with the routine refueling and maintenance outage) traveling in two shifts staggered over 3 periods will result in 6 vehicular shifts for only a short duration. This results in approximately 200 vehicles per shift change (assuming 1 to 2 persons per vehicle). The worst case effect on I-5 is approximately 200 additional vehicles at a given period's shift change. Furthermore, 50% would be expected to be southbound, 50% northbound. It is estimated that this would represent 1% of the peak hour volume on I-5. We believe there is no need to require an off-peak shift change condition for this project. This minor effect does not exceed significance criteria stated in the Draft EIR D.13, Traffic and Circulation, and mitigation measures for this issue should be removed from the EIR.

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Northbound/Southbound Closures on I-5 for the MCBCP Inland Route, Page ES-38

The MCBCP Inland Route and the I-5/Old Highway 101 Route options require crossings of both sides of the freeway (i.e., all northbound and southbound lanes) and closing of I-5 during each crossing for a period of up to 2 hours. The Draft EIR should be modified to reflect this more accurate representation of the project description. Therefore, impacts on traffic are least for the Beach and Road Route, intermediate for the MCBCP Inland Route, and highest for the I-5/Old Highway 101 Route. All impacts may be mitigated to a level of not significant, and this portion of the Executive Summary should reflect this fact.

Impacts on Visual Resources related to Transportation, Page ES-39

SCE believes that the requirement to potentially close San Onofre State Beach is excessive and is not required based on visual impact caused by transport. This minor effect does not exceed significance criteria stated in the Draft EIR, D.14, Visual Resources, and mitigation measures for this issue should be removed from the EIR. Please refer to comments in this attachment on Section D.14, and modify the Executive Summary accordingly.

Visual impact related to Steam Generator Staging and Preparation, Page ES-39

When discussing visual impacts related to project activities within the SONGS Owner Controlled Area (OCA) for Replacement Steam Generator Staging and Preparation, OSG Removal, Staging, and Disposal, and Steam Generator Installation, the Draft EIR indicates that there is a potential impact on viewers from I-5 and adjacent roadways. Although the conclusion is that these impacts can be mitigated, the discussion as stated for Impact V-2 does not seem to accurately emphasize the baseline condition of the overall facility and overstates the potential for adverse effect. SONGS is an industrial facility that routinely brings equipment onsite, stages material, and takes other actions similar to those for the Proposed Project. For example, the current decommissioning activity associated with SONGS Unit 1 is visible from the same general viewpoints (I-5 and adjacent public road way leading to San Onofre State Beach) as identified in the Draft EIR. SCE believes that the baseline for SONGS is as an industrial facility that routinely conducts activities similar in nature to the Proposed Project and the views that will be created by the Proposed Project should not be considered unique. It is also important to note that viewers traveling on I-5 will only be exposed to such views for a matter of just a few seconds as they pass the site at substantial distance from the site. These conditions do not exceed significance criteria stated in the Draft EIR. Although SCE intends to mitigate potential visual impacts, the EIR should consider the baseline industrial condition and corresponding potential visual impacts as less than significant. Please refer to comments on Section D.14, and modify the Executive Summary accordingly.

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Table ES-2, Summary of Impacts for Transportation Options, Pages ES-43 and 44

Air Quality

Please refer to comments on Section D.2, Air Quality, regarding justification of this request to modify Table ES-2. We have reviewed the calculations that were used in preparing the Draft EIR, and found that they were miscalculated. These miscalculations resulted in over estimation of the cumulative, total emissions for the Beach and Road Route, while under estimating the cumulative, total emissions for both the MCBCP Inland Route and I-5/Old Highway 101 Route options. The correct comparison of cumulative, total emissions among these routes is that the Beach and Road Route has the lowest emissions, the I-5/Old Highway 101 Route has intermediate emissions, and the MCBCP Inland Route has the highest emissions. However, cumulative, total emissions from each of these routes are not significant, and therefore, none of these route options are environmentally superior.

Geology, Soils, and Paleontology

The Draft EIR identifies the MCBCP Inland Route as the Clearly Preferred Alternative under Geology, Soils, and Paleontology (Section D.5) because it would avoid transportation along the alleged potentially unstable San Onofre Bluffs. The Draft EIR indicates transport routes could approach within 200 feet of the edges of the bluffs along Old Highway 101 and that there is potential that the weight of the transporter could trigger a landslide in the area.

The potential for heavy loads along Old Highway 101 to trigger a landslide is very low given that the proposed transport route is 200 feet or so from the edges of the bluffs. Based on review of available geologic mapping, the route does not appear to be underlain by existing landslides; therefore, the risk that the transporter could trigger landslide movement is low. There is insufficient evidence to support a conclusion that the MCBCP Inland Route is Clearly Preferred and such reference should be removed from the EIR.

Recreational Impacts under Land Use, Recreation, and Military Operations

The MCBCP Inland Route is described as Clearly Preferred in the Draft EIR because it would reduce disruption of recreational facilities on MCBCP at the Camp Del Mar Recreational Area and San Onofre State Beach. Comments in this attachment on Section D.8, Land Use, Recreation, and Military Operations, document that no adverse effects on recreation on MCBCP will occur and that effects on San Onofre State Beach will be minimal and not significant. Therefore, this lack of significant adverse effects does not support selection of the MCBCP Inland Route option as environmentally superior.

It is also not appropriate for the CEQA review to assess impacts on MCBCP, which will be addressed by MCBCP during the National Environmental Policy Act (NEPA) review. In particular, determinations of effects on the training mission, which includes all aspects of facilities and activities on MCBCP (including recreational facilities), must be

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determined by MCBCP. No significant impacts on recreation or other land uses on MCBCP were determined during NEPA review for the SONGS Unit 1 Reactor Pressure Vessel (RPV) Project in 2003, and that project's route is identical to the Beach and Road Route. The Inland Route is primarily on MCBCP and preferences for which portions of MCBCP should be used for transport will be determined by MCBCP during NEPA review, and its issuance and administration of a Real Estate License. Table ES-2 should be changed to reflect no substantial difference among the transport options for Land Use, Recreation, and Military Operations. Reference to MCBCP and military operations in general should be removed from the EIR.

SCE-22

Visual Resources

The MCBCP Inland Route is described as Clearly Preferred because it has the least likelihood of disrupting use of San Onofre State Beach with regard to Visual Resources. Comments on Section D.14, Visual Resources, document that there are no substantive differences among the transport options and this table should be modified to reflect this.

SCE-23

Section 4.2.3 Conclusion for Transportation Route Alternatives, Page ES-46

The Draft EIR has indicated that no significant impacts will result from use of any of the transportation options with the implementation of mitigation measures. This conclusion is prior to making the changes requested in this attachment that result in even fewer differences among the transportation options. SCE's application has indicated that the three identified transportation routes are options that are part of the Proposed Project, not alternatives pursuant to CEQA. All three options may be needed and used during transport. The following statement should be added to this section: "All three transportation options are acceptable."

SCE-24

Table ES-3, Summary of Impacts and Mitigation

Please refer to comments on specific resources sections in Section D about Impacts and Mitigation Measures, and modify the Executive Summary accordingly.

3.2 DRAFT EIR SECTION A - INTRODUCTION

Discussion of Plugging on Page A-7

The EIR should be modified with the suggested changes to make it more technically accurate. The first paragraph on page A-7 incorrectly describes the Nuclear Regulatory Commission (NRC) approved tube identification and repair process at SONGS. —This paragraph should be corrected by replacing the entire first paragraph on page A-7 with:

SCE_25

The current NRC tube repair limit is 44% throughwall flaw or a crack-like flaw, which is plugged upon detection. When a flaw reaches the repair limit, the tube must either be taken out of service through plugging or repaired using a sleeve. Various probes are

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used to measure tube degradation; each has limitations and is able to detect different types of degradation. The bobbin probe works by sending a magnetic field into the tubing material. When the magnetic field encounters cracking or other tube damage, it is disrupted and measured in voltage.

Page A-7, second paragraph:

- a) Replace "...flattening it using a roller" with "...expanding it using a roller".
- b) Replace " ...in a violation of NRC license requirements" with "...reaching the plugging limit."
- c) Replace "..., which is a temporary repair..." with "..., which is a repair method..."

Dates of Replacement and first Paragraph of Page A-8

Change the outage dates in the fifth and sixth lines of the first paragraph on page A-8 from: "...are scheduled to commence in March 2009 and September 2010..." to "...are currently scheduled to commence in October 2009 and October 2010...."

Table A-1, Permits Required for the SONGS Steam Generator Replacement Project, Page A-12

Not all permits listed in this table will be required for the project. This table should be renamed as: "Permits that may be Required for the SONGS Steam Generator Replacement Project."

Several of the permits listed are not expected to be required as stated in the table, such as Section 404 and Section 10 permits from the U.S. Army Corps of Engineers. Section 404 of the Clean Water Act permits from the U.S. Army Corps of Engineers are required for discharges of dredged or fill material to waters of the United States (U.S.). The ford crossings proposed for this project will not result in a discharge of dredged or fill material and will not require a Section 404 permit (this was confirmed during the SONGS Unit 1 RPV Project). This reference should be removed from the table.

Section 10 of the Rivers and Harbors Act permits from the U.S. Army Corps of Engineers are required for potential obstruction of navigation in navigable waters of the U.S. The U.S. Army Corps of Engineers has developed a list of official navigable waters of the U.S. in California, and only the Pacific Ocean is on that list for this region of southern California. Therefore, a Section 10 permit may only be required for activities covered by this regulation that are within the tidal waters of the Pacific Ocean (this was confirmed during the SONGS Unit 1 RPV Project).

It is uncertain that a Coastal Development Permit will be required through the California Coastal Commission because this activity does not meet the definition of a development under the Coastal Act and is maintenance. This reference should be changed to "may be

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required." SCE will coordinate with the California Coastal Commission to determine if specific permits are required.

SCE-26

The integrated leak rate test is not part of the Proposed Project (it is not part of the steam generator replacement). It should be removed from this table under Local Agencies, Permit to Operate or Statewide Portable Equipment Registration Program, third column.

3.3 DRAFT EIR SECTION C - ALTERNATIVES

Applicant-Proposed Options, Page C-1

SCE-27

The Draft EIR Section C.1 describes that SCE presented several options for transport of the RSGs from the Camp Del Mar Boat Basin on MCBCP to the SONGS site. These routes are intended by SCE to be options, any of which may be used at the time of transport. SCE requests in the application that all three options be approved by the CPUC.

Three transport options have been proposed to ensure the availability of at least one of the options at the time of transport. The transport will not occur for several years and it is not possible to predict with certainty that all routes will be available at the time of transport. The portions of the transport options that are on MCBCP will be subject to MCBCP authorization and compatibility with the MCBCP Training and other defense-related missions at the time of transport. MCBCP will be solely responsible to determining the effects of transport on their property.

The Draft EIR treats these transport options as alternatives under CEQA, rather than options of the Proposed Project. This treatment is not correct. The EIR should reflect that all three options are part of the Proposed Project, any of which may be used at the time of transport, and that these options are not separate alternatives pursuant to CEQA.

Missing Route Segment T on Figure C-1a, Page C-5

SCE-28

Figure C-1a, page C-5 omits segment T, which is shown on that figure as segment U. The portion of segment U as shown on that figure in the Draft EIR that goes under the railroad tracks is segment T. This should be corrected in the EIR. Refer to the SCE Proponent's Environmental Assessment (PEA) for correct identification of the segments.

C.6.2 Replacement Transmission Facilities, Page C-32

Replace the last sentence in the first paragraph with the following:

SCE-29

Shutdown of SONGS, which provides up to 5 percent of the total power consumed in the State, would likely cause segments of the 230 kV transmission system connected to SONGS to become stressed and cause substantial changes in power flow patterns on

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the wider regional 230 kV - 500 kV transmission system. This would necessitate substantial reconfiguration and/or upgrade of the transmission grid in the SONGS area and wider Southern California region.

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3.4 DRAFT EIR SECTION D.1 – INTRODUCTION TO ENVIRONMENTAL ANALYSIS

No comment.

3.5 DRAFT EIR SECTION D.2 - AIR QUALITY

3.5.1 ISSUES

Table D.2-5, Page D.2-3 Attainment Status of San Diego Air Basin

SCE-30

On April 5, 2005, San Diego County was redesignated to attainment with respect to the Federal PM2.5 standards. This table should be changed to reflect this.

SCE-31

SCE-32

Replacement Steam Generator Transport, Page D.2-7

The emissions data shown in the Draft EIR for the three transport routes have been incorrectly calculated and show the Beach and Road Route having the highest cumulative, total emissions and the MCBCP Inland Route having the lowest cumulative, total emissions. The Beach and Road Route is the shortest of the routes and has the least cumulative, total emissions, while the MCBCP Inland Route is the longest and has the highest cumulative, total emissions. The I-5/Old Highway 101 Route is intermediate between them. No significant adverse impacts on air quality will result from any of these three transport options. However, it is very important to note that the current language in the Draft EIR incorrectly skews a preference towards the MCBCP Inland Route and against the Beach and Road Route for environmental reasons when, in fact, the Draft EIR should be doing the opposite and favoring the Beach and Road Route as the Environmentally Superior Transport Option. The EIR should be modified to reflect this corrected analysis and emissions information.

The following text presents results of appropriately calculated cumulative emissions. The air quality analysis presented in the PEA showed tables of emissions for each of the three optional transport routes. Detailed calculations supporting these emissions data were provided in SCE's response to Comment 57 in that document.

The air emission spreadsheet from the CPUC that supported the Draft EIR shows that cumulative, total emissions (i.e., emissions for the entire transport routes, including areas on MCBCP) were not derived by emission calculations. Instead, the daily emission values presented in the PEA and response to Comment 57 for the Beach and Road Route were scaled for use in the Draft EIR using new and incorrect numbers of hours per day that various pieces of equipment would operate on specific segments of the route, and

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also reflecting incorrect assumed numbers of days for the durations of these segments. In some cases, the emissions were incorrectly multiplied by factors of 7 and 8 times for the Beach and Road Route, thus grossly over-predicting air emissions. The resulting daily emissions for each segment of the route were scaled by their assumed number of days and totaled up to arrive at cumulative trip emissions in the Draft EIR

This approach used in the Draft EIR to scale emissions, instead of directly calculating emissions, led to incorrect numbers because daily equipment hours within each segment and numbers of days for the duration of each segment were incorrectly used in the scaling. Furthermore, the scaling was inconsistently applied. The Draft EIR increased the number of days of transport operations within the State Park and MCBCP segments of the Beach and Road Route. Specifically, the Draft EIR cumulative emissions for each trip are based on 7 days (rather than 4 days) within MCBCP and 8 days (rather than less than 1 day) within the State Park in addition to the I-5 portion. This is the largest single miscalculation for the approach in the Draft EIR for the Beach and Road Route, and is the principal reason for the finding that emissions for this route will be higher than for the other two transport options. Days of transport and numbers of hours for the other two transport options were not equally scaled in the Draft EIR to reflect similar increases, and were actually decreased, thus skewing the results toward predicting lower emissions from the other two, longer transport route options.

The tables provided below show the correct cumulative, total emissions for each transport option. The Beach and Road Route is the shortest transport option and has the lowest level of cumulative, total air emissions, thus being superior to the other two transport options in this respect. It is very important to note that there are no significant adverse effects on air quality from any of the transport options. The EIR should be modified to reflect proper emission estimates and that all transport options should be approved by the CPUC.

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Cumulative, Total Project Transport Emissions in Tons (Comparison of Correct SCE Calculations to Miscalculated Draft EIR Calculations)					
Type of Emissions	Source of Calculation	Beach and Road Route	I-5/Old Highway 101 Route	MCBCP Inland Route	
CO	SCE	2.73	5.17	5.45	
	Draft EIR	8.14	3.55	2.92	
ROC	SCE	0.41	0.59	0.66	
	Draft EIR	0.79	0.37	0.41	
NOx	SCE	4.02	5.21	6.16	
	Draft EIR	6.53	3.72	4.24	
SO ₂	SCE	0.01	0.00	0.01	
	Draft EIR	0.01	0.04	0.01	
PM ₁₀	SCE	0.28	0.45	0.58	
	Draft EIR	0.39	0.29	0.23	

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Summary of Estimated	Emissions - the E	Beach and Road Ro	ute Transport Optio	on	
	Daily Emissions (lbs/day)				
Emissions	co	ROC	NOx	SOx	PM10
Tug Boat and Barge Emissions	3.53	10.58	77.80	13.93	1.67
Equipment Exhaust Emissions - Offload	87.34	14.62	119.41	0.00	5.57
Vehicle Exhaust Emissions - Offload	3.06	0.31	1.14	0.01	0.07
Equipment Exhaust Emissions - Within MCBCP	65.48	9.01	101.67	0.00	3.70
Vehicle Exhaust Emissions - Within MCBCP	6.11	0.58	1.53	0.01	0.08
Equipment Exhaust Emissions - on Beach	121.76	21.37	242.73	0.00	10.08
Vehicle Exhaust Emissions - on Beach	3.06	0.31	1.14	0.01	0.07
Equipment Exhaust Emissions - On I-5	154.17	14.25	90.35	0.00	2.65
Vehicle Exhaust Emissions - On I-5	15.52	1.42	3.25	0.02	0.17
Equipment Exhaust Emissions - On Paved State Park	66.98	8.85	75.16	0.00	3.34
Vehicle Exhaust Emissions - On Paved State Park	7.14	0.67	1.67	0.01	0.09
Fugitive Dust Emissions on I-5 and State Park	0.00	0.00	0.00	0.00	8.38
Fugitive Dust Emissions within MCBCP Paved Roads	0.00	0.00	0.00	0.00	18.74
Maximum Daily Emissions (excludes tug)	169.69	21.68	243.86	0.01	10.15
	Annual Emissions (tons/year)				
Emissions	со	ROC	NOx	SOx	PM10
Tug Boat and Barge (two deliveries)	0.004	0.011	0.078	0.014	0.002
Total On-land Emission per Trip	0.39	0.06	0.56	0.00	0.04
Total Emissions, Seven Trips	2.73	0.41	4.02	0.01	0.28

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Summary of Estimated Emissions - I-5/Old Highway 101 Option					
	Daily Emissions (lbs/day)				
Emissions	co	ROC	NOx	SOx	PM10
Tug Boat and Barge Emissions	3.53	10.58	77.80	13.93	1.67
Equipment Exhaust Emissions - Offload	87.34	14.62	119.41	0.00	5.57
Vehicle Exhaust Emissions - Offload	3.06	0.31	1.14	0.01	0.07
Equipment Exhaust Emissions - Within MCBCP	208.38	26.98	233.31	0.00	10.18
Vehicle Exhaust Emissions - Within MCBCP	9.80	0.89	1.89	0.01	0.09
Equipment Exhaust Emissions - On I-5	377.20	41.73	387.45	0.00	15.37
Vehicle Exhaust Emissions - On I-5	16.66	1.49	2.90	0.01	0.14
Equipment Exhaust Emissions - On Non MCBCP Roads	177.68	18.59	164.10	0.00	7.17
Vehicle Exhaust Emissions - On Non MCBCP Roads	9.52	0.87	1.97	0.01	0.10
Fugitive Dust Emissions - Non MCBCP Paved Roads	0.00	0.00	0.00	0.00	19.57
Fugitive Dust Emissions - MCBCP Paved Roads	0.00	0.00	0.00	0.00	13.47
Maximum Daily Emissions(excludes tug)	393.86	43.22	390.35	0.01	35.08
	Annual Emissions (tons/year)				
Emissions	co	ROC	NOx	SOx	PM10
Tug Boat and Barge (two deliveries)	0.004	0.011	0.078	0.014	0.002
Total On-land Emission per Trip	0.74	0.08	0.74	0.00	0.06
Total Emissions, Seven Trips	5.17	0.59	5.21	0.00	0.45

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Detailed SCE Comments on CPUC Draft Environmental Impact Report SONGS Steam Generator Replacement Project

Summary o	of Estimated Emis	ssions - MCBCP Ir	nland Option		······
	Daily Emissions (lbs/day)				
Emissions	со	ROC	NOx	SOx	PM10
Tug Boat and Barge Emissions	3.53	10.58	77.80	13.93	1.67
Equipment Exhaust Emissions - Offload	87.34	14.62	119.41	0.00	5.57
Vehicle Exhaust Emissions - Offload	3.06	0.31	1.14	0.01	0.07
Equipment Exhaust Emissions - Within MCBCP	176.16	28.25	321.89	0.00	15.08
Vehicle Exhaust Emissions - Within MCBCP	14.50	1.33	3.11	0.02	0.16
Equipment Exhaust Emissions - Non MCBCP	251.35	35.53	358.91	0.00	16.29
Vehicle Exhaust Emissions - Non MCBCP	15.86	1.45	3.29	0.02	0.17
Fugitive Dust Emissions - Non MCBCP	0.00	0.00	0.00	0.00	4.77
Fugitive Dust Emissions - Within MCBCP	0.00	0.00	0.00	0.00	30.53
Maximum Daily Emissions (excludes tug)	267.21	36.98	362.20	0.02	21.23
		Annu	al Emissions (tons	s/year)	
Emissions	со	ROC	NOx	SOx	PM10
Tug Boat and Barge (two deliveries)	0.004	0.011	0.078	0.014	0.002
Total On-land Emission per Trip	0.78	0.09	0.87	0.00	0.08
Total Emissions, Seven Trips plus Tug	5.45	0.66	6.16	0.01	0.58