Docket No.: A.14-12-007

Exhibit No.: 40

Date: September 4, 2015

Joint Application of Southern California Edison Company (U338E) and San Diego Gas & Electric Company (U902E) to find the 2014 SONGS Units 2 and 3 Decommissioning Cost Estimate Reasonable and Address Other Related Decommissioning Issues.	Application 14-12-007 (Filed December 10, 2014)

LATE-FILED EXHIBIT 40

David A. Peffer
3412 Herman Ave, Unit B
San Diego, California 92104
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Attorney for Donna Gilmore

Gilmore Opening Testimony

Attachment 1

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Joint Application of Southern California Edison Company (U338E) and San Diego Gas & Electric Company (U902E) to find the 2014 SONGS Units 2 and 3 Decommissioning Cost Estimate Reasonable and Address Other Related Decommissioning Issues.	Application 14-12-007 (Filed December 10, 2014)

ATTACHMENT A – STATEMENT OF WITNESS QUALIFICATIONS

Donna Gilmore.

I am the founder of San Onofre Safety, an organization that provides factual government and scientific information on the serious safety and cost issues found at the San Onofre Nuclear Generating Station in San Clemente, California. Since the closure of the nuclear reactors, the focus has turned from operational safety issues to issues of nuclear dry cask storage. The San Onofre Safety website (sanonofresafety.org) is used around the world by journalists, engineers, elected officials and the general public for creditable sourced information on nuclear safety and cost issues.

I have over 30 years experience in information technology project management and systems analysis, including the design and implementation of major technology systems for the State of California and the management of a large engineering data center.

Activities:

I frequently participate in NRC and other federal, state and local government meeting on nuclear waste storage issues and related issues, such as material corrosion. I collaborate with nuclear engineers, material engineers and nuclear physicists in my research. Research and collaboration extends both nationally and internationally.

Recent publications:

- High Burnup Nuclear Fuel – Pushing the Safety Envelope, January 2014 (co-authored with nuclear physicist Dr. Marvin Resnikoff)
- Diablo Canyon: Conditions for Stress Corrosion Cracking in Two Years, October 23, 2014, and San Onofre Dry Cask Storage Issues, September 23, 2014
- San Onofre Dry Cask Storage Issues, September 23, 2014
- Reasons to buy thick nuclear waste dry storage casks, January 20, 2015
- Myths about nuclear waste storage, January 30, 2015
- San Onofre Dry Cask Storage Issues, September 23, 2014
- Years to Cool Chart and Nuclear Waste Recommendations
- High Burnup Fuel – Executive Summary
- Stop the High Burnup Nuclear Experiment
- NRC Safety Allegations – Worst Safety Record in Nation
- California has Excess Power Without Nuclear
- San Onofre Steam Generator Problem Summary

Nuclear Waste Storage Presentations

- NRC Annual Nuclear Waste Conference, November 2014

- Sierra Club Nuclear Summit, November 2014 Summit
- California Energy Commission IEPR Nuclear Workshop, 2015
- California Coastal Commission, 2015
- Numerous presentation on nuclear waste storage to local, state and national government and non-governmental organizations, and other educational venues
- Interviews with international, national and local news media

Conference, Workshops, Meetings

- SCE California Engagement Panel (CEP) Nuclear Waste Workshop member
- Participate in meetings and workshops on nuclear waste storage and transport, material corrosion and related issues (Nuclear Regulatory Commission, California Energy Commission, Nuclear Waste Technical Review Board, SCE California Engagement Panel

I submit public comments and testimony on pending state, federal and local regulations and decisions.

- Comments on NRC pending approval of a Holtec UMAX system and the Areva NUHOMS system that SCE planned to procure resulted in those approvals being withdrawn due to significant adverse comments.
- Comments to the California Coastal Commission regarding SCE's request for a Coastal Permit Waiver, resulted in the waiver being denies.

Gilmore Opening Testimony

Attachment 2

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Robert Bledsoe
Title: Project Manager
Dated: 06/05/2015

Question 47:

47. Please confirm that the dry storage system selected by SCE and that SCE intends to use is the Holtec Hi-Storm UMAX system, including the following elements:

a. The MPC-37 Multi-Purpose Canister.
b. The Hi-Storm UMAX underground storage module.
c. The Hi-Trac VW On-Site Transfer Cask.
d. The Hi-Star 190 Off-Site Transportation Cask.

Response to Question 47:

SCE objects to this request on the ground that it is vague and ambiguous, particularly in regard to the time period being questioned. SCE also objects to this request to the extent it seeks information that is outside the scope of this proceeding. The scoping memo excludes vendor selection and specifications from the scope of this proceeding. Subject to and without waiving these objections, SCE responds as follows:

Yes, SCE intends to use the Holtec Hi-Storm UMAX system, including MPC-37 multi-purpose canisters, Hi-Storm UMAX underground storage modules, the Hi-Trac VW on-site transfer cask, and the Hi-Star 190 off-site transportation cask. These components were illustrated in the slide presentation presented by Holtec at the October 14, 2014 SONGS Community Engagement Panel meeting. SCE provided this slide presentation in its response to Gilmore-SCE-001 Question 15.

Gilmore Opening Testimony

Attachment 8

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Jose Luis Perez
Title: Prinicipal Manager, Regulatory, Finanical Planing, and Analysis
Dated: 06/05/2015

Question 48:

48. For each element of the dry storage system listed in Question 47, please provide the element's lifespan that SCE assumed in calculating the DCE.

Response to Question 48:

SCE objects to the request on the ground that it is vague and ambiguous. SCE assumes that this question only seeks information regarding the Holtec system. SCE also objects to the request to the extent it seeks information that is beyond the scope of this proceeding. The scoping memo excludes vendor selection and specifications from the scope of this proceeding. Subject to and without waiving these objections, SCE responds as follows:

Due to the lack of a federal repository for high level waste, no definitive estimate can be provided for the length of time on-site storage will be required. With proper maintenance and monitoring, it is reasonable to conclude that safe storage could continue for 100 years without the use of extraordinary means. The current SONGS 2&3 decommissioning cost estimate includes provisions for maintaining spent fuel at the station through 2049. SCE (and the other responsible participants) will continue to monitor this issue as the DOE moves toward a decision on the final repository for the spent fuel. The DCE includes the maintenance of the facility but not replacement of major components. SCE (and the other responsible participants) will continue to have the responsibility to ensure safe storage of the spent fuel until it is removed from SONGS, and will budget for the continued maintenance of the facility in future years as appropriate.

The NRC has exclusive jurisdiction over the radiological aspects of the Proposed Project. Therefore, consideration of the structural integrity of the proposed technology is outside the scope of this proceeding. In addition, SCE does not believe that consideration of impacts beyond 2049 is reasonable or necessary. Nevertheless, SCE also provides the following for informational purposes:

As stated in the HI-STORM UMAX Final Safety Analysis Report (FSAR), the design life for all components (including the Multi-Purpose Canisters (MPCs), cavity enclosure containers (CECs), closure lids, ISFSI pads, subgrade materials, etc.) of the HI-STORM UMAX system is 60 years. This is accomplished by using materials of construction with a long proven history in the nuclear industry, specifying materials known to withstand their operating environments with

little to no degradation and protecting material from corrosion by using appropriate mitigation measures.

In addition to this 60-year design life, the HI-STORM UMAX system has a comprehensive maintenance program that is implemented to ensure that the service life of the system exceeds the design life. Based on the maintenance program outlined in the FSAR, the HI-STORM UMAX service life is expected to be at least 100 years. An Aging Management Plan (AMP) will also be developed as a condition of license renewal beyond the initial 20-year licensing term. The detailed AMP will follow NRC guidance, including NUREG-1927.

Gilmore Opening Testimony

Attachment 25

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Jose Luis Perez
Title: Principal Manager, Decom Regulatory, Financial Planning, & Analysis
Dated: 06/05/2015

Question 119:

119. Please indicate whether SCE considered concrete degradation in estimating the lifespan of the dry storage system and developing the cost estimate.

Response to Question 119:

SCE objects to the request on the ground that it is vague and ambiguous. SCE assumes that the questions applies only to the Holtec system. SCE also objects to the request on the ground that it is argumentative, and poses an incomplete hypothetical. Subject to and without waiving these objections, SCE responds as follows:

The NRC has exclusive jurisdiction over the radiological aspects of the Proposed Project. Therefore, consideration of the structural integrity of the proposed technology is outside the scope of this proceeding. In addition, SCE does not believe that consideration of impacts beyond 2049 is reasonable or necessary. Nevertheless, SCE provides the following for informational purposes:

Holtec Portion of Dry Storage System

The DCE did not specifically consider concrete degradation. However, as stated in the HI-STORM UMAX Final Safety Analysis Report (FSAR), the design life for all components (including the Multi-Purpose Canisters (MPCs), cavity enclosure containers (CECs), closure lids, ISFSI pads, subgrade materials, etc.) of the HI-STORM UMAX system is 60 years. This is accomplished by using materials of construction with a long proven history in the nuclear industry, specifying materials known to withstand their operating environments with little to no degradation and protecting material from corrosion by using appropriate mitigation measures.

In addition to this 60-year design life, the HI-STORM UMAX system has a comprehensive maintenance program that is implemented to ensure that the service life of the system exceeds the design life. Based on the maintenance program outlined in the FSAR, the HI-STORM UMAX service life is expected to be at least 100 years. An Aging Management Plan (AMP) will also be developed as a condition of license renewal beyond the initial 20-year licensing term. The detailed AMP will follow NRC guidance, including NUREG-1927.

Gilmore Opening Testimony

Attachment 36

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Robert Bledsoe
Title: Project Manager
Dated: 06/05/2015

Question 79:

79. Does the DCE cost estimate in any way include the cost of repairing or replacing damaged canisters/casks? If it does, please identify the specific budget category or categories from Table 1 of the Decommissioning Cost Estimate that include(s) the cost.

Response to Question 79:

SCE objects to the request on the ground that it is vague and ambiguous. SCE also objects to the request on the ground that it is argumentative, and poses an incomplete hypothetical. Subject to and without waiving these objections, SCE responds as follows:

The DCE includes the costs to perform all decommissioning work that was known at the time it was developed. This includes the cost to safely store the fuel as long as it remains in the SONGS 2 & 3 pools; the cost to expand the ISFSI, to procure a sufficient number of canisters, and to transfer the fuel to the ISFSI; the cost to maintain the fuel in the ISFSI until it can be shipped offsite; and the cost to transfer the fuel canisters from the ISFSI to the DOE's transportation device for shipment to an offsite disposal or interim storage facility. The DCE does not include costs for hypothetical or speculative scenarios that are beyond the known scope of decommissioning work. SCE and the other SONGS decommissioning co-participants acknowledge their responsibility to ensure safe storage of the spent fuel until it is removed from SONGS, and will update the estimated spent fuel storage costs in the DCE as may be required by changed future circumstances.

The NRC has exclusive jurisdiction over the radiological aspects of the Proposed Project. Therefore, consideration of the structural integrity of the proposed technology is outside the scope of this proceeding. Nevertheless, SCE provides the following for informational purposes:

As discussed during a Community Engagement Panel (CEP) meeting, the technology to repair damaged stainless steel components is currently available and has been successfully utilized in the nuclear industry to repair various stainless steel reactor components, including for example, nozzles in reactor coolant systems. The tooling, however, for repairing canisters would need to be developed based upon these prior experiences. It is common within the industry to develop special tooling for particular applications as needed. Based on the robust design of the two dry storage systems for SONGS (Areva and Holtec), it is not anticipated that major repairs or

replacement of ISFSI components would be necessary.

In the unlikely event that a repair is needed, corrective actions would be undertaken in accordance with the ISFSI's AMP (to be developed as required for license renewal beyond the initial 20-year licensing term). These actions could include, but are not limited to, placing the canister in a transportation cask or using a secondary container around the canister. The exact tools, equipment, and facilities needed would depend on the nature of the damage being repaired or components that need to be replaced. As major repairs are not anticipated within the 60-year design life, nor expected within the 100-year service life of the system, this is an issue that should be periodically revisited as part of the AMP.

Gilmore Opening Testimony

Attachment 37

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Robert Bledsoe
Title: Project Manager
Dated: 06/05/2015

Question 63:

63. Regarding SCE-01, p. 14, please provide all concrete (i.e. not "wholly speculative") bases for SCE's assumption that the DOE will start accepting fuel in 2024, other than the fact that SCE and PG&E previously chose to adopt this date as an assumption.

Response to Question 63:

SCE objects to the request on the ground that it is vague and ambiguous, particularly as to what is meant by the term "concrete." SCE also objects to the request on the ground that it is argumentative. Subject to and without waiving these objections, SCE responds as follows:

SCE explained the basis for its assumption that the DOE will start accepting spent fuel in 2024 in Exhibit SCE-01 at page 14. The DOE has provided no other information upon which to base a different assumption. SCE will update the SONGS 2 & 3 DCE as appropriate when additional information becomes available, consistent with Public Utilities Code Section 8326.

Gilmore Opening Testimony

Attachment 39

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Robert Bledsoe
Title:
Dated: 06/05/2015

Question 109:

109. Please provide a narrative describing how SCE's cost estimates will be affected if the DOE's spent fuel acceptance date is unable to accept fuel until:

a. 2025 (one year after the assumed acceptance date)
b. 2029 (five years after the assumed acceptance date)
c. 2034 (ten years after the assumed acceptance date)
d. 2044 (twenty years after the assumed acceptance date)
e. 2054 (thirty years after the assumed acceptance date)

Response to Question 109:

SCE objects to the request on the ground that it is vague and ambiguous. SCE further objects on the ground that the request is overbroad and unduly burdensome. Subject to and without waiving these objections, SCE responds as follows:

In June 2014, SCE calculated that a 10-year delay from the assumed 2024 start date for the removal of the spent fuel from the SONGS site by the DOE would increase decommissioning costs by approximately $133 million. SCE has not performed similar analyses for the other years in this request.

Gilmore Opening Testimony

Attachment 40

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Jose Luis Perez
Title: Principal Manager, Decom Regulatory, Financial Planning, and Analysis
Dated: 06/05/2015

Question 54:

54. For each of the following elements of the Dry Storage System listed in Question 47, please identify all budget categories from Table 1 of the DCE that include any costs associated with purchasing, delivering, installing, operating, or maintaining that element.

Response to Question 54:

SCE objects to the request on the ground that it is vague and ambiguous. SCE also objects to the request to the request it seeks information that is beyond the scope of this proceeding to the extent the question refers to the selection of a particular vendor and associated costs for 2014-2015 costs. Subject to and without waiving these objections, SCE responds as follows:

The cost for spent fuel management is included in the Decommissioning Cost Estimate (DCE), in section B of Table 1 of the estimate.

The DCE identifies the following estimated distributed costs for the construction of the ISFSI, in several lines as identified below. The total estimated cost is $405 million, and was not necessarily based upon any particular final vendor selection, and instead is based upon information available at the time of the estimate.

DCE Line Number	Item Description	Total Cost 100% Level 2014 $
SFM-1-D-7.02	Design & Fab Spent Fuel Canisters - U2	4,420,939
SFM-1-D-7.02	Design & Fab Spent Fuel Canisters - U3	4,420,939
SFM-2-D-8.07	ISFSI Pad Study - U2	64,313
SFM-2-D-8.07	ISFSI Pad Study - U2	64,313
SFM-2-D-8.08	Design ISFSI Expansion - U2	1,968,750
SFM-2-D-8.08	Design ISFSI Expansion - U3	1,968,750
SFM-2-D-8.09	Construct ISFSI Expansion - U2	21,000,000
SFM-2-D-8.09	Construct ISFSI Expansion - U3	21,000,000
SFM-2-D-8.10	Procure & Fab Fuel Canisters & AHSM - U2	62,015,625
SFM-2-D-8.11	Procure & Fab Fuel Canisters & AHSM - U3	63,492,188
SFM-2-D-8.12	Del/Load Fuel Canister, ISFSI Trans - U2	111,020,560
SFM-2-D-8.13	Del/Load Fuel Canister, ISFSI Trans - U3	113,663,906
	Total ISFSI	405,100,282

Costs for operating and maintaining the ISFSI are also provided in section B of the DCE, periods 2, 3, 4, and 5. These costs include the operation and maintenance of the entire ISFSI, both the existing and the expansion.

Gilmore Opening Testimony

Attachment 41

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Robert Bledsoe
Title: Project Manager
Dated: 06/05/2015

Question 70:

70. Regarding DCE assumption 21, pg. 25, please provide all information, documents and other materials regarding the costs for ISFSI construction and transfer of spent fuel from Units 2 and 3 that was provided to EnergySolutions.

Response to Question 70:

SCE objects to the request on the ground that it is vague and ambiguous. Subject to and without waiving this objection, SCE responds as follows:

See attached documents.

Gilmore Opening Testimony

Attachment 42

Barry Sims

From: <George.Munger.Jr@sce.com>
To: "Mike S. Williams" <mswilliams@energysolutions.com>
Cc: "Barry Sims" <barrysims@msn.com>; "Jeff Martin" <jmartin@energysolutions.com>; <John.Manso@sce.com>; "Terry Vesely" <terrence.vesely@cbi.com>
Sent: Monday, January 27, 2014 12:34 PM
Attach: Drawing 40028 GA for NIA.pdf; Proposed ISFSI Layout.docx
Subject: Re: Spent Fuel Related information

Mike,
Here is the information you requested I have available to date: See below in color for comments.
Robert Munger
(949) 368-6135

From: "Mike S. Williams" <mswilliams@energysolutions.com>
To: "george.munger.jr@sce.com" <george.munger.jr@sce.com>,
Cc: "John.Manso@sce.com" <John.Manso@sce.com>, Barry Sims <barrysims@msn.com>, Jeff Martin <jmartin@energysolutions.com>, Terry Vesely <terrence.vesely@cbi.com>
Date: 01/24/2014 03:15 PM
Subject: Spent Fuel Related information

Robert
We have not been formally introduced but I plan to rectify that next week. I am Mike Williams the Energy Solutions / CB&I Decommissioning Cost Estimate project manager. We provided a listing of information and data needs at the Kick off meeting for the DCE project. John Manso has indicated to me that you are the proper contact from which to obtain spent fuel related information needed to complete the cost estimate. I have included the below the items relating to spent fuel from the master listing. We are in a position that requires us to get this information into the cost estimating software very soon. I would appreciate your assistance to get this stuff rounded up as quickly as practical. I can be reached at PAX86818 if you have any questions
Thanks for your assistance and hope to meet you very soon – Regards Mike

Spent Fuel Information

A. Current inventory of spent fuel assemblies and activated hardware stored in each spent fuel pool. Weight, volume and approximate waste classification of activated hardware will also be required to estimate disposition costs.
2668 Fuel assemblies total. (1318 in U2 and 1350 in U3). There are approximately 526 CEA's (263 per unit) that are activated and located in the 2 spent fuel pools.
There are also 35 known/suspect damaged fuel assemblies/rod storage baskets/trash cans with fuel particulate. The weight is assumed at 800 lbs each, and the material is all expected to be greater than class C so it will need to be stored on the ISFSI pad. The volume of each trash can is equal to a fuel assembly so 16 x 16 x 176 inches. There is some material that is expected to be Class B/C that has been proposed for storage on the ISFSI. This would be waste generated from the processing of the CEA's, particularly the CEA hubs. The estimated volume is one canisters per pool which includes the CEA hubs and any additional trash in the trash cans determined to be class B/C.

B. Current inventory of spent fuel in the Independent Spent Fuel Storage Installation (ISFSI).
There are 1187 fuel assemblies located on the ISFSI pad in 50 canisters and 1 canisters full of Greater than Class C waste. 408 FA's from U2, 384 from U3, and 395 from Unit 1 (canisters have some empty cells)

C. Number, size and weight of spent fuel racks in each spent fuel pool.

The racks weight approximately 66,000 lbs each. I have 8 per unit. They are approximately 10.5 ft x 11 ft each.

D. Currently available plans and projected costs, if any, for transfer of spent fuel into dry storage.

The current plan would be to perform ISFSI expansion construction starting in mid 2015 and complete by early 2016. Fuel can then be moved to the ISFSI pad starting 2nd quarter of 2016 and ending 1st quarter of 2018. The cost to move to storage includes not only the cost of the canisters and modules, but other activities such as inspection of fuel, characterization of fuel and trash, development of loading plans, processing of CEA's for storage in the canisters. The current estimated costs for this scope of work is bounded by $265,000,000 based upon vendor proposals.

E. Construction drawings of the existing ISFSI. Currently available plans and associated costs, if any, for expansion of the existing ISFSI required for spent fuel transfer to dry storage.

The PDF drawing is the current ISFSI and the word document shows one of the proposed layouts for expansion. The estimated cost for the design and construction of the ISFSI to include a new hardened security post meeting the anticipated changes to NRC rules for ISFSI security and additional security requirements is bounded by $35,000,000 based upon vendor proposal.

F. Spent fuel schedules for transfers to dry storage and projections of annual shipments to the DOE repository for all scenarios to be analyzed.

See item D above for the schedule of moving fuel. I don't have any particular information on projected annual shipments to the DOS repository. It is not currently part of the scope of this project.

Note the $300,000,000 between items D and E above are based upon proposals supplied by dry fuel storage vendors and bounds the cost for a turn key project where the vendor is responsible for the entire scope of work and SONGS only provides Edison oversight.

Office 865-481-6369
Cell 865-548-9078
mswilliams@energysolutions.com

Gilmore Opening Testimony

Attachment 43

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-007

To: GILMORE
Prepared by: Robert Bledsoe
Title: Project Manager
Dated: 06/30/2015

Question 139:

Please provide an exact description of how SCE reached the $265,000,000 figure referenced in Section D of the email, including all inputs, assumptions, and mathematical calculations used to reach that figure.

Response to Question 139:

SCE objects to the request on the ground that it is vague and ambiguous. Subject to and without waiving this objection, SCE responds as follows:

The figure provided was based on the highest value from the rough order of magnitude proposals that were provided by three vendors, and a rough order of magnitude estimate of the SONGS oversight required for the project.

Gilmore Opening Testimony

Attachment 44

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-007

To: GILMORE
Prepared by: Robert Bledsoe
Title: Project Manager
Dated: 06/30/2015

Question 140:

Please provide an exact description of how SCE reached the $35,000,000 figure referenced in Section E of the email, including all inputs, assumptions, and mathematical calculations used to reach that figure.

Response to Question 140:

SCE objects to the request on the ground that it is vague and ambiguous. Subject to and without waiving this objection, SCE responds as follows:

The figure provided was based on the highest value from the rough order of magnitude proposals that were provided by three vendors.

Gilmore Opening Testimony

Attachment 45

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-005

To: GILMORE
Prepared by: Robert Bledsoe
Title: Project Manager
Dated: 06/05/2015

Question 67:

67. Please provide a narrative explaining why SCE directed EnergySolutions to apply a 25% contingency rate to all but six budget categories. For each budget category, please provide the basis of the 25% estimate including any risk analysis or risk management plan that the estimate is based on.

Response to Question 67:

SCE objects to the request on the ground that it is vague and ambiguous, particularly as to form (e.g. the question is compound). Subject to and without waiving these objections, SCE responds as follows:

"Contingencies" are defined in the American Association of Cost Engineers "Project and Cost Engineers' Handbook" as "specific provision for unforeseeable elements of cost within the defined project scope; particularly important where previous experience relating to estimates and actual costs has shown that unforeseeable events which will increase costs are likely to occur."

SCE researched cost engineering industry literature to identify accepted practices for applying contingency to construction projects in varying stages of planning. The consensus among all sources is that the contingency factor applied to any cost estimate should reflect several factors, including but not limited to the then-current planning status of the estimate, and the complexity of the project, the extent to which environmental restoration is included in the work scope, etc.

As stated in Exhibit SCE-01, page 23, lines 11-16, the SONGS DCE is a conceptual estimate. At the time it was developed, no detailed engineering studies for any of the decommissioning work scopes had been performed, no procurement activities had commenced, and no contracts had been signed. Moreover, whereas SCE had gained first-hand experience in many decommissioning activities while decommissioning SONGS 1, some activities in the future work scopes have not yet been performed anywhere in the industry. Therefore, SCE has only been able to include allowances for those work scopes in their cost estimates. In addition, no nuclear facility has been required to perform environmental restoration work to the extent that SCE may be required to cleanup the SONGS site to terminate its easement with the U.S. Department of the Navy.

Therefore, the level of planning in the DCE still did not meet the threshold for a "Detailed

Estimate" as defined in the industry literature. The planning status in the literature that precedes a "Detailed Estimate" is "Budget, Authorization, or Control," or a "Preliminary Estimate." The consensus in the industry literature, including sources from the U.S. Department of Energy (DOE), the Association for the Advancement of Cost Engineering International (AACEI), and the Electric Power Research Institute is that an appropriate contingency factor for cost estimates in this stage of development should fall within a range of 15% to 30%. When the work scope requires environmental restoration activities, the contingency factor is generally increased.

In addition, PG&E identified several other documents, including several documents that originated from the U.S. Nuclear Regulatory Commission (NRC), that specifically identify 25% as an appropriate contingency factor for nuclear plant decommissioning cost estimates. PG&E compiled and summarized these documents in a document titled, "Technical Position Paper for Establishing an Appropriate Contingency Factor for Inclusion in the Decommissioning Revenue Requirements", dated February 2008. In summary, each of the industry and regulatory documents cited in this technical position paper concluded that it is appropriate to add a contingency factor of 25% to the sum of all estimated decommissioning costs because the 25% contingency factor provides reasonable assurance for unforeseen circumstances that could increase decommissioning costs, and should not be reduced or eliminated simply because foreseeable costs are low.

For all of these reasons, SCE directed EnergySolutions to apply a contingency factor of 25% to nearly all of the estimated decommissioning costs. SCE believes a 25% contingency factor was both conservative and appropriate for use this decommissioning cost estimate.

Cross Examination Exhibit

Gilmore-x-SCE-10

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-006

To: GILMORE
Prepared by: Jose Luis Perez
Title: Principal Manager, Decom Regulatory, Financial Planning, and Analysis
Dated: 06/30/2015

Question 127:

Please provide the exact date that Holtec's dry storage system bid was selected by SCE.

Response to Question 127:

SCE objects to the request on the ground that it is vague and ambiguous. Subject to and without waiving this objection, SCE responds as follows:

SCE views the final selection of a vendor as synonymous with entering into a contract with the vendor. The contract date for the Holtec Independent Spent Fuel Storage Installation system was December 5, 2015.

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-006

To: GILMORE
Prepared by: Jose Luis Perez
Title: Principal Manager, Decom Regulatory, Financial Planning, and Analysis
Dated: 06/30/2015

Question 128:

Please provide the exact date that SCE's contract with Holtec for the dry storage system was executed.

Response to Question 128:

SCE objects to the request on the ground that it is vague and ambiguous. Subject to and without waiving this objection, SCE responds as follows:

SCE views the final selection of a vendor as synonymous with entering into a contract with the vendor. The contract date for the Holtec Independent Spent Fuel Storage Installation system was December 5, 2015

Cross Examination Exhibit

Gilmore-x-SCE-12

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-001 Follow-Up 2

To: GILMORE
Prepared by: Walker Matthews
Title: Senior Attorney
Dated: 05/06/2015

Question 09 Supplemental:

Please state SCE's grounds for its claim of confidentiality with respect to this data request. Please provide Donna Gilmore with a redacted version of the contract with any confidential information removed.

Response to Question 09 Supplemental:

SCE previously objected to the request on several grounds including that the request was outside the scope of this proceeding and sought confidential information that SCE could not disclose without a non-disclosure agreement or protective order. The scoping memo provided that "the reasonableness of the Nuclear Decommissioning Cost Estimates does not include operational decisions, such as vendor selection or equipment specifications," such as SCE's selection of Holtec. SCE met and conferred with with intervenor Donna Gilmore (Gilmore) regarding this request to determine whether and to what extent SCE can provide responsive information to Gilmore. During the meet and confer process, in the spirit of cooperation, SCE agreed to provide a redacted contract containing warranty provisions.

Subject to and without waiving its objections, SCE responds as follows: See the attached redacted contract containing warranty provisions from the Holtec contract.

ARTICLE XII.
CONTRACTOR'S WARRANTIES

12.1 WARRANTIES.

(a) Contractor warrants to Company that all Equipment shall be (i) new and of good quality; (ii) free from improper workmanship and Defects; (iii) conform to all applicable requirements of all Applicable Laws and all Applicable Permits; and (iv) be fit for Company's use in the nuclear power industry for the intended purpose. If Contractor accepts the Existing Canisters for use, Contractor warrants that the Existing Canisters shall be free from Defects or improper workmanship to the extent caused by or due to Contractor's acts or omissions.

(b) Contractor warrants to Company that the Work will be performed in a good and workmanlike manner, and that the Work will: (i) conform to and be designed, engineered and constructed in accordance with the Drawings, Scope of Work, all Applicable Laws and Applicable Permits and other terms of the Contract Documents; (ii) conform with, and be designed and engineered according to professional standards and skill, expertise and diligence of design professionals regularly involved in decommissioning projects similar to the Project, and comply with the requirements of the relevant Government Authorities, including the NRC; (iii) be suitable for the use as set forth in the Technical Specification; (iv) be compatible with the spent fuel pools for Units 2 and 3, spent fuel, fuel handling building, the existing ISFSI, Jobsite, and the SONGS site conditions; (v) contain the Equipment, supplies and materials described in the Scope of Work, all installed in accord with the applicable Contract Documents; (vi) in the case of Apparatus be designed, engineered, licensed, fabricated and manufactured using appropriate and approved processes, procedures and materials and to comply with and satisfy all the terms of the Certificate of Compliance issued by the NRC to Contractor as modified or amended as contemplated herein; (vii) in the case of Drawings or documents required hereunder, accurately and completely present information required to be included therein or necessary to avoid misunderstandings of the included content; and (viii) at such times as the NRC issues or amends a Certificate of Compliance with respect to an Apparatus or Existing Canisters, as applicable, the Apparatus or such Existing Canister specifically approved by the NRC to perform functions required by regulation as described in such Certificate of Compliance shall perform its required functions set forth in such Certificate.

(c) Contractor warrants to Company that all of the documents prepared by Contractor for submittal to a Government Authority for review and approval shall be prepared in full compliance with Applicable Laws and in form and substance such that Company shall not be

required to modify or revise such documents due to a failure to include any required information, inaccuracies or the use of inappropriate forms or formats.

(d) Contractor warrants to Company that none of the Work, including the Equipment (but not including the Existing Canisters), the Drawings, Final Plans and the design, engineering and other services rendered by Contractor hereunder, nor the use or ownership thereof by Company in accordance with the licenses granted hereunder, infringes, violates or constitutes a misappropriation of any trade secrets, proprietary rights, intellectual property rights, patents, copyrights or trademarks.

(e) Except as expressly stated herein to the contrary, Contractor warrants that it shall remedy, in accordance with Section 12.2, any Defects in the Work due to faulty design, materials or workmanship which appear within a period commencing upon the date of ISFSI Scope Completion and continuing for the applicable period following the ISFSI Scope Completion Date (as such period may be extended in accordance with the terms hereof, the "Warranty Period"), as follows:

(i) with respect to the MPC-37 canisters, twenty five (25) years;

(ii) with respect to Contractor's Work on Existing Canisters used to store non-fuel waste from the spent fuel pools, twenty five (25) years; provided that the Warranty Period with respect to such Work shall commence on the date that the last of the Existing Canisters containing non-fuel waste are loaded on the ISFSI during Post-ISFSI Scope Work and the related Milestone has been completed;

(iii) with respect to the Contractor's Work on Existing Canisters used to store greater than class "C" radioactive waste from reactor vessel segmentation in the Post-ISFSI Scope Work, twenty five (25) years; provided that the Warranty Period with respect to such Work shall commence on the Final Acceptance Date;

(iv) with respect to the HI-STORM UMAX System, ten (10) years;

(v) with respect to any other Work that is required to be completed in order to achieve ISFSI Scope Completion, including Contractor's Work on any newly assembled AHSM-HS modules that are used by Contractor in the performance of the Work, two (2) years; and

(vi) with respect to any other Work that is completed after the ISFSI Scope Completion Date, two (2) years from the Final Acceptance Date.

Contractor shall bear all costs of corrections and repairs during the Warranty Period. The provisions of this Section 12.1 apply to Work performed by Subcontractors as well as Work performed directly by Contractor. The provisions of this Article XII do not apply to corrective work caused by the acts or omissions of Company or any separate contractor of Company. If and in the event Company notifies Contractor of a Defect within the Warranty Period, Contractor, at Contractor's expense, shall perform all Work necessary to remedy the Defect, and the repair or replacement Work performed by Contractor to accomplish that purpose shall be subject to an additional express warranty from the date the repair or replacement is completed which shall continue for a duration equivalent to the original Warranty Period.

(f) Notwithstanding anything to the contrary herein, the warranties set forth in this Section 12.1 shall not apply with respect to any claims to the extent arising from (i) any use of the Work or components thereof by Company that exceeds the requirements or recommendations in Contractor's operation and maintenance manuals; (ii) the failure of any Equipment or Work to be maintained in accordance with Contractor's written instructions; or (iii) the modification of any Equipment or Work without Contractor's written consent.

(g) THE WARRANTIES OF CONTRACTOR SET FORTH IN THIS AGREEMENT ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER STATUTORY, EXPRESS OR IMPLIED (INCLUDING ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL WARRANTIES ARISING FROM COURSE OF DEALING AND USAGE OF TRADE). The foregoing sentence is not intended to disclaim any other obligations of Contractor set forth herein.

12.2 REPAIR OF NONCONFORMING WORK.

(a) If any of the Work is found to contain Defects, or Contractor is otherwise in breach of any of the warranties set forth in Section 12.1 within the Warranty Period, Contractor shall at its sole cost and expense and without reimbursement hereunder correct, reperform, repair or replace such Defect or otherwise cure such breach as promptly as practicable upon being given notice thereof. Subject to Section 12.3, Company shall give notice to Contractor within two (2) Business Days of discovery of such Defect. Company shall provide Contractor with reasonable access to the Project in order to perform such corrective Work and the Parties shall schedule such corrections or replacements as necessary so as to minimize disruptions to any on-going activities at SONGS. Contractor shall bear all costs and expenses associated with correcting any Defect or breach of warranty, including necessary disassembly, transportation, reassembly and retesting, as well as reworking, repair or replacement of such Work, disassembly and reassembly of piping, ducts, machinery, Equipment or other Work as necessary to give access to improper, defective or non-conforming Work and correction, removal or repair of any damage to other work or property that arises from the Defect. If Contractor is obligated to repair, replace or renew any Equipment, item or portion of the Work hereunder, Contractor will undertake a technical analysis of the problem and correct the "root cause" unless Contractor can demonstrate to Company's satisfaction that there is not a risk of the reoccurrence of such problem. Contractor's obligations under this Section 12.2 shall not be impaired or otherwise adversely affected by any actual or possible legal obligation or duty of any Subcontractor to Contractor or Company concerning any Defect or breach of warranty.

(b) If (i) Contractor fails to complete or commence with due diligence to complete the correction of any Defect or cure of any breach of warranty as required herein within twenty (20) days after receipt of written request from Company to perform such obligations, or (ii) a Defect cannot be corrected within twenty (20) days and Contractor fails to provide a correction plan within five (5) Business Days after receipt of Company's written request to perform such obligations or thereafter fails to implement the plan with due diligence following Company's approval of the plan, then Company may correct or cause to be corrected such Defect or cure such breach of warranty and Contractor shall be liable for all reasonable costs, charges, and expenses incurred by Company in connection therewith (including reasonable and necessary consultants' fees), and Contractor shall, within fifteen (15) days after request therefore, pay to

Company an amount equal to such reasonable costs, charges, and expenses. Any such request by Company shall be accompanied by proper documentation evidencing such reasonable costs, charges and expenses. Any amounts not paid when due shall accrue interest at the Reference Rate (established as of the first day of the month in which payment is due) from the date due until paid. Company and Contractor agree to treat (and shall cause each of their respective Affiliates to treat) any payment made to Company pursuant to this Section 12.2(b) as an adjustment to the Contract Price unless a final determination (which shall include execution of an Internal Revenue Service Form 870-AD or successor form) provides otherwise.

(c) If, during the Warranty Period, Contractor shall change, repair or replace any major Equipment item or component, Company, in its reasonable discretion and consistent with Applicable Laws or Applicable Permits, may require Contractor to assist Company in conducting any test required by any Applicable Law or Applicable Permit with respect to the affected Equipment; provided, however, in connection with any such test, appropriate allowance with respect to the performance of such Equipment shall be made for the fact that such Equipment may have operated prior thereto. If after running such test, the results indicate Contractor has not fulfilled any of its warranty obligations and there is a degradation in the performance of the Project and such degradation results from the warranty Work performed in accordance with this Article XII, then Contractor shall repair, correct or replace such affected Equipment and assist Company in re-running such test until the results no longer indicate a degradation in the performance of the Project resulting from the warranty Work performed in accordance with this Article XII. If Contractor cannot reasonably correct such degraded warranted performance condition then the Parties shall negotiate an equitable settlement of Company's damages based on the amount and scope of such deficient warranted performance, or if the amount of such deficient warranted performance is considered by Company to be a material breach of the terms of this Agreement, then Company may declare such breach to be a Contractor Event of Default pursuant to Section 15.1.

12.3 REPAIRS AND TESTING BY COMPANY.

During the Warranty Period, in the event of an emergency and if, in the reasonable judgment of Company, the delay that would result from giving notice to Contractor could cause serious loss or damage which could be prevented by immediate action, any action (including correction of Defects) may be taken by Company or a third party chosen by Company. Company shall give notice to Contractor within two (2) Business Days of discovery, and in the case of a Defect, the reasonable cost of correction shall be paid by Contractor. In the event such action is taken by Company, Contractor shall promptly respond within five (5) Business Days after correction efforts are implemented, and shall assist whenever and wherever possible in making the necessary corrections. All such warranties obtained shall be in addition to, and shall not alter the warranties of, Contractor. Upon Company's request, Contractor shall use all reasonable efforts to cause Subcontractors to honor warranties including filing suit to enforce same.

12.4 SUBCONTRACTORS. Contractor shall, for the protection of Contractor and Company, obtain from the Subcontractors such guarantees and warranties with respect to Work performed and Equipment supplied, used and installed hereunder as are reasonably obtainable, which guarantees and warranties shall equal or exceed those set forth in Section 12.1 and shall be made available and assignable to Company to the full extent of the terms thereof upon the expiration of Contractor's warranty hereunder. Company shall be an express third party

beneficiary of all such guarantees and warranties, provided such third party beneficiary rights shall not be effective unless this Agreement has been terminated. If available, Company may require Contractor to secure additional warranty or extended guarantee protection pursuant to a Change Order issued in accordance with the provisions of Article VI. Upon the earlier of the ISFSI Scope Completion Date or termination of this Agreement, Contractor shall deliver to Company copies of all relevant contracts providing for such guarantees and warranties.

12.5 CONDITIONS OF WARRANTIES. The warranties set forth in this Article XII are subject to the following conditions applicable to the item for which Company claims a breach of warranty exists:

(a) Company shall notify Contractor in writing of any Defect in the Work as soon as reasonably practicable after Company becomes aware of such Defect.

(b) Company shall have the right to continue to use the Equipment, including the Apparatus, as applicable, or any part thereof, which may require warranty correction or repair until such time as Company elects to remove such Equipment, or part thereof, as applicable, from service; provided, however, in such event, Company shall release Contractor from any additional claims for further defects or damage incurred as a result of such continued operation.

(c) Company shall use and maintain the Equipment, including the Apparatus, in accordance with the operation and maintenance procedures agreed upon by the Parties pursuant to this Agreement (these procedures shall be written by Contractor as part of Contractor's Work so as to integrate (where applicable) or replace and supersede (where not applicable) the operations and maintenance procedures required by the original manufacturer for the Existing Equipment and Existing Canisters such that Contractor may not assert that Company's failure to comply with any separate requirements from the existing manufacturer limits the warranty provided herein by Contractor).

(d) Completion of payments by Company shall not relieve Contractor of any of its warranty obligations.

12.6 ASSIGNMENT OF WARRANTIES. Contractor shall assign to Company or obtain for Company's benefit the manufacturer's warranties for all of the Equipment, including the Apparatus and other deliverables, which are provided in connection with the Work, but which are not manufactured by Contractor, including for Work performed under Section 12.3. Such assignment of warranties to Company must also allow Company to further assign such warranties.

12.7 SURVIVAL OF WARRANTIES. The provisions of this Article XII shall survive the expiration or termination of this Agreement.

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-001 Follow-Up 2

To: GILMORE
Prepared by: Walker Matthews
Title: Senior Attorney
Dated: 05/06/2015

Question 10 Supplemental:

Please state SCE's grounds for its claim of confidentiality with respect to this data request. Please provide Donna Gilmore with a redacted version of the requested manufacturer's warranties with any confidential information removed.

Response to Question 10 Supplemental:

Please see SCE's response to Question No. 9 Supplemental.

In addition, SCE provides the following additional information regarding the warranties, and what the warranties provide:

As defined by the final safety analysis report (SAR) for the UMAX system, the UMAX Design Life is the minimum duration for which the component is engineered to perform its intended function set forth in this SAR, if operated and maintained in accordance with this SAR. The design life of the HI-STORM UMAX System is 60 years. This is accomplished by using materials of construction with a long proven history in the nuclear industry, specifying materials known to withstand their operating environments with little to no degradation, and protecting material from corrosion by using appropriate mitigation measures.

Where the design life of the system is founded in technical basis, the warranty life is a solely contractual item determining which party holds responsibility for necessary repairs or rework should the need arise. The warranty for the system is a written guarantee by Holtec promising to remedy any Defects in the Work due to faulty design, materials or workmanship which appear within a period beginning on the date of ISFSI Scope Completion and continuing for a contractually agreed upon duration following the ISFSI Scope Completion Date.

NOTE: For the MPC-37s, the warranty period is 25 years. For the UMAX system, the warranty period is 10 years.

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-001 Follow-Up 2

To: GILMORE
Prepared by: Walker Matthews
Title: Senior Attorney
Dated: 05/06/2015

Question 11 Supplemental:

Please state SCE's grounds for its claim of confidentiality with respect to this data request. Please provide Donna Gilmore with a redacted version of the requested manufacturer's warranties with any confidential information removed.

Response to Question 11 Supplemental:

Please see SCE's response to Question No. 10 Supplemental.

Southern California Edison
SCE-SDGE Joint DCE Application A.14-12-007

DATA REQUEST SET A.14-12-007 Gilmore-SCE-001 Follow-Up 2

To: GILMORE
Prepared by: Walker Matthews
Title: Senior Attorney
Dated: 05/06/2015

Question 12 Supplemental:

Please state SCE's grounds for its claim of confidentiality with respect to this data request. Please provide Donna Gilmore with a redacted version of the builder's warranties with any confidential information removed.

Response to Question 12 Supplemental:

Please see SCE's response to Question No. 10 Supplemental.