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11 UNITED STATES OF AMERICA
12 NUCLEAR REGULATORY COMMISSION

14 In the Matter of) Docket No. 50-206
15 SOUTHERN CALIFORNIA EDISON)
COMPANY) AFFIDAVIT OF KENNETH P.
16) BASKIN IN SUPPORT OF
(San Onofre Nuclear) SUPPLEMENTAL REQUESTS
17 Generating Station Unit 1) FOR EXEMPTION AND
RECONSIDERATION

18
19 STATE OF CALIFORNIA)
20 COUNTY OF LOS ANGELES) ss

21 KENNETH P. BASKIN, being first duly sworn, hereby
22 attests and deposes as follows:

23 1. At all pertinent times referred to herein, I
24 have been employed by Southern California Edison Company
25 ("SCE") as Manager, Generation Engineering Services (prior to
26 January 1, 1980), Manager, Nuclear Engineering and Licensing

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1 (from January 1, 1980 to September 1, 1980), and Manager of
2 Nuclear Engineering, Safety and Licensing (since September 1,
3 1980). In this capacity I have direct management
4 responsibility for Nuclear Regulatory Commission ("NRC")
5 licensing proceedings for the San Onofre Nuclear Generating
6 Station, Units 1, 2 and 3 ("SONGS 1, 2 and 3").

7 2. My educational background and professional
8 affiliations are as follows: I received by Bachelor of
9 Science in Mechanical Engineering from the University of
10 Southern California in 1960, and a Master of Science Degree
11 in Nuclear Engineering from Purdue University in 1968. At
12 all pertinent times referred to herein, I have been
13 registered in California as a Professional Engineer in
14 Mechanical Engineering and Nuclear Engineering. I am a
15 member of the American Society of Mechanical Engineers, the
16 American Nuclear Society, and the Pacific Coast Electric
17 Association.

18 3. I have been employed as an engineer or manager
19 by SCE for the last twenty years and the positions I have
20 held include those of Project Engineer for SONGS 1,
21 Supervising Engineer and Project Manager for SONGS 2 and 3
22 and Chief of Nuclear Engineering.

23 4. SCE is currently in the midst of a
24 comprehensive safety review of SONGS 1 under the Systematic
25 Evaluation Program ("SEP").

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1 5. SCE has also undertaken extensive fire safety
2 modifications at SONGS 1. These modifications have included
3 installation of fire detection equipment, water supply,
4 water, foam and gas suppression equipment, fire doors,
5 barriers and dampers and emergency lighting, isolation
6 devices and combustibles control measures.

7 6. The fire protection measures described above
8 have substantially enhanced the fire safety of SONGS 1, and
9 have led to improved protection of the public health and
10 safety.

11 7. SCE will be required to make additional
12 extensive modifications to SONGS 1 in response to the Fire
13 Protection Rule. It is estimated, based on conceptual
14 engineering performed to date, that the total cost to
15 Applicant of these measures will be approximately \$50
16 million. Because extensive facility modifications would have
17 been required under an alternative or dedicated shutdown
18 approach in any event, SCE elected to adopt a separation and
19 fire suppression approach involving many of the same measures
20 by providing two fully safety-qualified shutdown trains
21 meeting the separation requirements, together with any
22 necessary fire suppression measures. Applicant considers the
23 additional costs resulting from this safety-related approach
24 to be justified by the broad safety benefits that will be
25 provided.

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1 8. Separation and suppression modifications that
2 require plant shutdown are to be implemented under 10 C.F.R.
3 § 50.48(c)(3) before start up after the earliest of the
4 following events commencing 180 days or more after the
5 effective date of the Fire Protection Rule (February 17,
6 1981): (1) the first refueling outage, (2) another planned
7 outage that lasts for at least 60 days, or (3) an unplanned
8 outage that lasts for at least 120 days. This schedule would
9 require implementation of all of the measures identified by
10 SCE during the current outage, with the exception of the
11 modifications associated with the Remote Shutdown Panel,
12 which is the only alternative shutdown system identified by
13 NRC. Application of this schedule could cause a prolonged
14 outage of SONGS 1 lasting two or three years.

15 9. Supply of backup power during such an extended
16 outage will result in substantial costs to SCE's ratepayers
17 without corresponding safety benefits.

18 10. Because SCE elected to implement a safety
19 related system offering additional safety benefits, the scope
20 of the improvements proposed for SONGS 1 will be of a
21 magnitude similar to, and in some cases more extensive than,
22 that of alternative or dedicated shutdown systems proposed by
23 other utilities.

24 11. Many of the modifications identified by SCE
25 will require coordination with SEP. Under the current
26 timetable, if SCE is held to its July 1 submission,

1 duplicative, wasteful and inefficient modifications may
2 result.

3 12. Ongoing analysis may produce alternative fire
4 safety approaches that will better serve health and safety
5 concerns.

6 13. Among the more significant Additions
7 identified in SCE's July 1, 1982 submission are a second 4KV
8 Switchgear Room, approximately 1000 power and control
9 circuits to meet separation requirements and for new
10 equipment, a new Auxiliary Feedwater Train, a Remote Shutdown
11 Panel, and new redundant valves for the CVCS and RHR Systems.

12 14. The Modifications and Additions described in
13 Enclosure 1 to the July 1 submissions may be impacted by the
14 results of SEP Integrated Assessment. The SEP Topics which
15 may impact the Modifications and Additions for Fire
16 Protection Safe Shutdown are:

17 III-2 Wind and Tornado Loadings.

18 III-4 Tornado Missiles.

19 III-5.A Effects of Pipe Break on Structures Systems and
20 Components Inside Containment.

21 III-5.B Pipe Break Outside Containment.

22 V-10.B RHR Reliability.

23 V-11.A Requirements for Isolation of High and Low Pressure
24 Systems.

25 V-11.B RHR Interlock Requirements.

26 VII-3 Systems Required for Safe Shutdown.

1 15. The resolution of open items in the area of
2 applied criteria and backfit requirements resulting from SEP
3 Integrated Assessment may lead to design changes to the
4 Modifications and Additions of Fire Protection Safe Shutdown.

5 16. The new circuits that will be installed must
6 satisfy the separation requirements of Appendix R. These
7 requirements will be used as design criteria for the location
8 of these circuits. SEP Topics III-5.A and III-5.B involve
9 the review of pipe breaks inside and outside containment and
10 their effect on neighboring safe shutdown equipment. An
11 integrated design approach would include the requirements
12 resulting from these topic reviews as part of the design
13 criteria for locating the new circuits. This would eliminate
14 the risk of routing the new circuits associated with
15 redundant trains of safe shutdown equipment in an area where
16 they would be impacted by a high energy pipe break. Similar
17 design criteria should be applied to the design of the new
18 Auxiliary Feedwater Train and in addition, the possible
19 effects of tornadoes should be included as defined in SEP
20 Topics III-2 and III-4.

21 17. The Modifications and Additions of Fire
22 Protection Safe Shutdown provide improved redundancy through
23 separation of the systems and equipment required for safe
24 shutdown. As such, these modifications will both impact and
25 be impacted by the SEP review of Topic VII-3. In some cases,
26 new equipment is required to be added such as the redundant

1 MOV's for the RHR system. These were added to the Fire
2 Protection Safe Shutdown system since they resolve possible
3 single failure concerns which might arise from SEP Integrated
4 Assessment of the Safe Shutdown Topic and Topic V-10.B.
5 Topics V-11.A and V-11.B have resulted in NRC concerns with
6 respect to the RHR system which are to be resolved as part of
7 SEP Integrated Assessment. The resolution of these concerns
8 may create new requirements on the RHR system which should be
9 included as design criteria in conjunction with the criteria
10 for these systems resulting from Fire Protection.

11 18. Due to the extensive nature of the
12 Modifications and Additions proposed by SCE to provide a safe
13 shutdown capability in compliance with Appendix R to 10
14 C.F.R. § 50.48, exemptions are necessary from the current
15 implementation schedule to allow coordination with SEP.

16 19. Because fire safety measures have already been
17 installed at SONGS 1 and these measures provide the
18 capability to ensure a safe shutdown of the station, the
19 requested exemptions and reconsideration will not endanger
20 life or property or the common defense and security and is
21 otherwise in the public interest.

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20. Reconsideration of the July 1 deadline for submission of fire safety plans and schedules is necessary to allow modification of SCE's July 1 submission as SEP develops.

Kenneth P. Baskin
KENNETH P. BASKIN

Subscribed and sworn to before me
this 2nd day of August, 1982.

Amos Krattler
Notary Public for the State of California
County of Los Angeles

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Rebecca Howard

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