

March 14, 1994

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
PACIFIC GAS & ELECTRIC COMPANY) Docket Nos. 50-275 OLA-2
) 50-323 OLA-2
)
(Diablo Canyon Nuclear Power Plant) (Construction Period Recovery)
Units 1 and 2)

AFFIDAVIT OF WILLIAM T. LEFAVE
IN SUPPORT OF NRC STAFF RESPONSE
TO SAN LUIS OBISPO MOTHERS FOR PEACE'S
MOTION TO REOPEN THE RECORD

I, William T. LeFave, first being duly sworn, depose and state:

1. My name is William T. LeFave. I am employed by the Nuclear Regulatory Commission as a senior reactor systems engineer in the Plant Systems Branch of the Office of Nuclear Reactor Regulation.

2. Since October 1973 I have worked with service water system related issues, including a number of generic issues related to service water systems starting from around 1978. More recently I have been involved in reviewing licensee responses to Generic Letter (GL) 89-13, "Service Water System Problems Affecting Safety-Related Equipment."

3. The NRC staff has been studying the problems associated with service water cooling systems for a number of years. At Arkansas Nuclear One, Unit 2, on September 3, 1980, the licensee shut down the plant when the NRC Resident Inspector

discovered that the service water flow rate through the containment cooling units did not meet the technical specification requirement due to extensive flow blockage. Prompted by this event and after determining that it represented a generic problem, the NRC issued Bulletin No. 81-03, "Flow Blockage of Cooling Water to Safety System Components by Corbicula sp. (Asiatic Clam) and Mytilus sp. (Mussel)," which required licensees to assess macroscopic biological fouling problems at their facilities in accordance with specific actions. After issuance of Bulletin No. 81-03, one event at San Onofre Unit 1 and two events at Brunswick station indicated that conditions not explicitly discussed in the bulletin can occur and cause loss of direct access to the ultimate heat sink, *i.e.* for cooling purposes. As a result of these events and additional concerns, the NRC issued Information Notice No. 81-21.

By March 1982, several serious fouling events caused by mud, silt, corrosion products, or aquatic bivalve organisms in open-cycle service water systems had been received. These events led to plant shutdowns, reduced power operation for repairs and modifications, and degraded modes of operation. This led the NRC to establish Generic Issue 51, "Improving the Reliability of Open-Cycle Service Water Systems," and conduct a research program on minimizing the effects of fouling on plant safety. The research program was completed and the results on recommended surveillance and control programs were published in "Technical Findings Document for Generic Issue 51...", NUREG/CR-5210.

Shortly after completing the research program on Generic Issue 51, the NRC issued GL 89-13, dated July 18, 1989, which described these recurring industry

problems with the service water systems at nuclear power plants. GL 89-13 recommended that certain actions be taken by licensees to minimize the effects of fouling in service water systems on plant safety. Since the advent of Generic Issue 51 and GL 89-13, a considerable number of events with safety implications for the service water system have been reported. Due to ongoing concerns, the NRC developed Temporary Instruction 2515/118 to inspect licensees' implementation of the GL 89-13 program.

4. In its motion, San Luis Obispo Mothers for Peace (SLOMFP) states that the basis for the proposed reopening of the record is new evidence regarding PG&E's maintenance of the plant's vital auxiliary saltwater (ASW) system. SLOMFP relies on NRC Inspection Report 93-36 issued on January 12, 1994 as the substance of this new evidence.

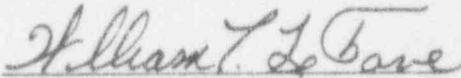
5. The Inspection Report discussed the results of a routine inspection conducted from December 13 through December 17, 1993 under TI 2515/118. Similar inspections have been or will be conducted at a number of other nuclear power plant facilities where problems relating to biofouling of heat exchangers might occur. These problems will be assessed generically through studying the results of routine NRC inspections similar to these conducted at Diablo Canyon in December 1993, NRC service water system operational performance inspections (SWOPIs), and licensee self-conducted inspections, testing and maintenance.

Problems with biofouling of heat exchanges are endemic in plants with open cycle cooling. Surveillance and control programs, including continuous chlorination, have been adopted in response to the Generic Letter. Although a final

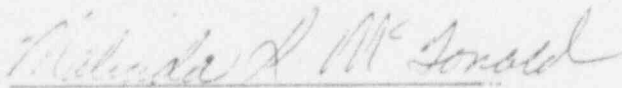
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assessment of responses to GL 89-13 and inspections conducted pursuant to TI 2515/118 are yet to be completed, the NRC Staff's expectation is that it will find that surveillance and control programs are effectively combatting biofouling in service water systems.

6. The matters stated above are true and correct to the best of my knowledge.


William T. LeFave

Subscribed and sworn to before me
this 14th day of March 1994


Notary Public

My commission expires: 12/1/97

ATTACHMENT

PROFESSIONAL QUALIFICATIONS

WILLIAM T. LEFAVE

ORGANIZATION: Division of Systems Safety and Analysis
Office of Nuclear Reactor Regulation

TITLE: Senior Reactor Systems Engineer
Plant Systems Branch

EDUCATION: B.S. Nuclear Engineering, 1973
Lowell Technological Institute

A.S. Electronics, 1964
Massachusetts Bay Community College

EXPERIENCE:

1973 - Present Nuclear Regulatory Commission/Atomic Energy Commission.
Senior Reactor Systems Engineer in the Plant Systems Branch.
During this tenure the Plant Systems Branch has also been
titled the Auxiliary and Power Conversion Systems Branch and
the Auxiliary Systems Branch. I have been involved with the
evaluation of service water system and other cooling water
systems issues since my inception into this branch. These
evaluations have included operating plants, and applications
for construction permits and operating licenses.

1964 -1970 United States Navy. Qualified Reactor Operator aboard an
S5W nuclear powered submarine.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

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) Docket Nos. 50-275 OLA-2
PACIFIC GAS & ELECTRIC COMPANY) 50-323 OLA-2
)
(Diablo Canyon Nuclear Power Plant,) (Construction Period Recovery)
Units 1 and 2))
)

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE TO SAN LUIS OBISPO MOTHERS FOR PEACE'S MOTION TO REOPEN," "AFFIDAVIT OF PAUL P. NARBUT IN SUPPORT OF NRC STAFF RESPONSE TO SAN LUIS OBISPO MOTHERS FOR PEACE'S MOTION TO REOPEN THE RECORD," and "AFFIDAVIT OF WILLIAM T. LEFAVE IN SUPPORT OF NRC STAFF RESPONSE TO SAN LUIS OBISPO MOTHERS FOR PEACE'S MOTION TO REOPEN THE RECORD" in the above captioned proceeding have been served on the following by deposit in the United States mail first class or, as indicated by an asterisk, by deposit in the Nuclear Regulatory Commission's internal mail system, this 14th day of March 1994:

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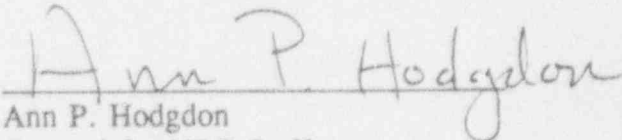
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