

FACILITY NAME (1)
 San Onofre Nuclear Generating Station (SONGS) Unit 2

Docket Number (2)
 05000-361

Page (3)
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TITLE (4): Manual Toxic Gas Isolation System (TGIS) Actuation

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
08	28	1998	1998	-- 017	-- 00	09	22	1998	None	
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check One or More) (11)										
	20.2201(b)			20.2203(a)(2)(v)			50.73(a)(2)(i)			50.73(a)(2)(viii)	
	20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)			50.73(a)(2)(x)	
	20.2203(a)(2)(i)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)			73.71	
	20.2203(a)(2)(ii)			20.2203(a)(4)			X 50.73(a)(2)(iv)			OTHER	
	20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)			Specify in Abstract below or in NRC Form 366A	
20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)					

LICENSEE CONTACT FOR THIS LER (12)

NAME
 R.W. Krieger, Vice President, Nuclear Generation

TELEPHONE NUMBER (Include Area Code)
 949 368-6255

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
Yes (If yes, complete EXPECTED SUBMISSION DATE)	X	No						

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-spaced typewritten lines) (16)

On August 28, 1998, at about 1840 PDT, an operator investigated a faint chlorine odor and discovered a line from sulfuric acid storage tank 2T194 was leaking. Acid from the tank was spraying into the bermed area surrounding the adjacent sodium hypochlorite and lube oil vault - white smoke and chlorine gas odor were observed in the bermed area. Upon discovery, the immediate area was evacuated and barricaded with flagging and postings. As a precautionary measure, at 1921 PDT, control room operators manually isolated the control room air intake by actuating the control room Toxic Gas Isolation System (TGIS). In accordance with 10 CFR 50.72(b)(2)(ii), SCE reported this event to the NRC at 2225 PDT. SCE is submitting this 30 day follow-up report in accordance with 10 CFR 50.73(a)(2)(iv). To repair the acid leak, SCE has weld repaired the affected areas of tank 2T194. SCE is planning an inspection of the unit 3 bulk acid storage tank and will weld repair any damaged areas identified.

(4-95)

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Plant: San Onofre Nuclear Generating Station (SONGS) Unit 2
 Reactor Vendor: Combustion Engineering
 Event Date: August 28, 1998
 Event Time: 7:21 p.m.
 Mode: Mode 1 - "Normal Operations"
 Power: 100%

Description of Event:

On August 28, 1998, at about 1840 PDT, an operator [utility, non-licensed] noticed a faint chlorine odor while standing outside the control building. The operator investigated the odor and discovered a line from sulfuric acid storage tank 2T194 was leaking. Acid from the tank was spraying into the bermed area surrounding the adjacent sodium hypochlorite and lube oil vault - white smoke and chlorine gas odor were observed in the bermed area. SCE immediately began evacuating the area surrounding the tanks and isolated the nitrogen supply to the 2T194 tank (to reduce tank pressure and the acid leak). As a precautionary measure, at 1921 PDT, control room operators (utility, licensed) manually isolated the control room air intake by actuating the control room Toxic Gas Isolation System (TGIS). In accordance with 10 CFR 50.72(b)(2)(ii), SCE reported this event to the NRC at 2225 PDT. SCE is submitting this 30 day follow-up report in accordance with 10 CFR 50.73(a)(2)(iv).

Cause of the Event:

This event (manual actuation of an Engineered Safety Feature) was a precautionary action taken by plant operators in response to the sulfuric acid leak. Chlorine fumes were caused by the reaction between the leaking sulfuric acid and residual sodium hypochlorite in the bermed area surrounding the sodium hypochlorite tank.

Sulfuric Acid leaked from a hole on the manway nozzle of tank 2T194. SCE found circumferential grooving leading to a single deep crevice at the apex of the inside top surface of the manway nozzle. The grooving continued vertically approximately 14 inches along the tank shell. This is similar to the hydrogen grooving phenomenon previously reported by the National Association of Corrosion Engineers. The leak developed where the single groove at the top of the nozzle penetrated the nozzle tube adjacent to the tank shell. Following an examination of tank 2T194, SCE found no other indications of localized corrosion, pitting or porosity in the base metal or welds.

Corrective Actions:

1. Upon discovery, the immediate area was evacuated and barricaded with flagging and postings.
2. Emergency response personnel donned SCBAs and Level B personnel protective equipment for splash protection and entered the area to identify and evaluate the leak.
3. As a precautionary measure, the TGIS was manually actuated.
4. SCE weld repaired the affected areas of tank 2T194.
5. SCE is planning an inspection of the unit 3 bulk acid storage tank and will weld repair any damaged areas identified.

(4-95)

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6. Evaluations will be performed to mitigate the long term effects of hydrogen grooving.

Safety Significance:

The manual TGIS actuation was precautionary and not the result of high concentrations of toxic gas, and all TGIS components functioned correctly. Therefore, there was no safety significance associated with this event.

Additional Information:

In the past three years, there have been no manual or automatic TGIS actuation initiated or required by actual plant conditions.