PERMIT/ORDER
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 9, SAN DIEGO REGION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS

NPDES NO. CA0108073
ORDER NO. R9-2005-0005

FACILITY AND ORDER INFORMATION

The following owner/operator shall comply with the Waste Discharge Requirements set for in this Order:

Site Owner/Operator	Southern California Edison Company
Name of Facility	San Onofre Nuclear Generating Station, Unit 2
Facility Address	5000 Pacific Coast Highway
	San Clemente, CA 92672
	San Diego County
Mailing Address	P.O. Box 128 (W-44)
	San Clemente, CA 92674-0128

The owner/operator discharges wastes from the following outfalls as set forth below:

Outfall	Description	Latitude	Longitude	Receiving Water Body
002	SONGS Unit 2 Combined Discharge	33° 20' 55.84" North	117° 34' 13.5" West	Pacific Ocean
004	Fish Return System Discharge	33° 21' 50" North	117° 33' 31" West	Pacific Ocean
005	Across-the-Beach Discharge	33° 22' 0" North	117° 33' 21" West	Pacific Ocean

In addition to the outfalls to the Pacific Ocean, described above, this Order establishes effluent limitations and monitoring requirements for the following internal outfalls:

Internal Outfall	Description
	Cooling Water and Other Wastestreams Routed from Unit 1 to the 002 Outfall
001	Cooling Water Flows
001-A	Unit 1 Sewage Treatment Plant
001-B	Mesa Complex Sewage Treatment Plant
001-C	Metal Cleaning Wastes
001-D	Radwaste System
001-E	Yard Drains
001-F	Dewatering
	In-Plant Wastestreams Routed from Unit 2 to the 002 Outfall
002-A	Chemical Metal Cleaning Wastes (Steam Generator)
002-B	Non-Chemical Metal Cleaning Wastes (Steam Generator and Feedwater Piping Sludge Lancing)
002-C	Blowdown Processing
002-D	Makeup Demineralizer
002-E	Radwaste System
002-F	Polishing Demineralizer System
002-G	Steam Generator Blowdown
002-H	Hotwell Overboard
002-I	Plant Drains
002-J	Intake Structure Sump
002-K	Concrete Cutting Water

This Order/Permit was adopted by the Regional Board on:	May 11, 2005
This Order/Permit shall become effective on:	May 21, 2005
This Order/Permit shall expire on:	May 11, 2010
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Board have classified this discharge as a **major** discharge.	
The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 99-47 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements herein.

I, John H. Robertus, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on May 11, 2005.

for JOHN H. ROBERTUS
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 9, SAN DIEGO REGION

NPDES NO. CA0108073
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I. PERMIT FINDINGS

The California Regional Water Quality Control Board, San Diego Region (hereinafter the Regional Board), finds:

A. **Facility Description and Background**. The San Onofre Nuclear Generating Station (SONGS) is a nuclear-fueled electric power generating facility located within the boundaries of Camp Pendleton, a United States Marine Corps Base. SONGS Unit 1 is owned by the Southern California Edison Company (SCE) and San Diego Gas and Electric (SDG&E) and is operated solely by SCE (the Discharger). SONGS Unit 2 is owned by SCE, SDG&E, and the cities of Anaheim and Riverside, and is operated solely by the Discharger. Unit 2 began commercial operation in 1983 and has a generating capacity of 1087 megawatts.

On February 17, 2004, the Regional Board received an NPDES Permit Renewal Application from the Discharger for SONGS Unit 2. In response to a letter of March 1, 2004 from the Regional Board requesting clarifications and/or additional information, the Discharger provided supplemental application renewal information that was received by the Regional Board on March 30, 2004. In response to a letter of April 22, 2004 requesting further clarifications and/or additional information, the Discharger provided supplemental information, received by the Regional Board on June 8, 2004, to complete the NPDES permit renewal application for SONGS Unit 2.

A series of large pumps pass 1,219 MGD seawater through the condenser of Unit 2. Upon passage through the condenser, the temperature of seawater increases approximately 20ºF. During this circuit, a number of in-plant waste streams are co-mingled with the cooling water flow. These include regeneration water from water purification systems, wastewater plant effluent, and the waterside of an oil water separator. However, many of the low-volume waste discharges are periodic and only occur during unusual conditions such as maintenance outages. The combined cooling water and low-volume waste discharges (for a total of volume of up to 1,287 mgd) are routed through Outfall 002 for discharge to the Pacific Ocean. The point of discharge through Outfall 002 is latitude 33° 20' 55.84" North, longitude 117° 34' 13.5" West.

SONGS Unit 3, co-located with Unit 2, is covered under a separate NPDES permit (CA0108181, Order R9-2005-0006). The effluent limitations, provisions, and prohibitions in the NPDES permit for Unit 3 are identical to those for Unit 2.

Unit 1 is currently being decommissioned and does not generate electricity, up to 37 MGD of seawater is utilized at Unit 1 to remove waste heat from the spent fuel pool and to dilute various low-volume waste streams still generated by the plant. SCE also operates a domestic wastewater treatment plant inside the Unit 1 premises. Up to 0.1 mgd of secondarily treated effluent is discharged from the treatment plant. The combined effluent from Unit 1 is currently discharged via an ocean outfall (Outfall 001) to the Pacific Ocean at latitude 33° 21' 49" North, longitude 117° 33 '45" West. SONGS Unit 1 is subject to waste discharge requirements established by Order No. 2000-04 (NPDES Permit No. CA0001228, adopted on February 16, 2000), which was preceded by Order No. 95-02 (adopted on February 9, 1995) and Order No. 88-001 (adopted on February 8, 1988). Order No. 2000-04 will expire on February 16, 2005. Currently SCE is permitted to discharge the effluent from Unit 1 to the Unit 1 ocean outfall (i.e. Outfall 001) or route the effluent to the Unit 2 or Unit 3 outfalls (i.e. Outfalls 002 or 003). SCE has indicated

that it plans to terminate the use of Outfall 001 sometime in 2005. At that time all effluent from Unit 1 will be routed to exclusively to Outfalls 002 or 003. The Regional Board has determined that it would be appropriate not to renew the NPDES permit for Unit 1 when it expires on February 2005. Order No. 2000-04 will instead continue to be enforced administratively until such time that the Discharger notifies the Regional Board that it has terminated the use of Outfall 001. The Regional Board will consider rescinding Order No. 2000-04 at that time.

Order No. R9-2005-0005 acknowledges the impending termination of flows from Unit 1 to Outfall 001 and the routing of flows from Unit 1 to Outfall 002. The Order has been structured to account for effluent limitations and monitoring requirements as a result of the potential routing of Unit 1 flows to Outfall 002.

B. **Legal Authorities.** Pursuant to Section 402 of the Federal Clean Water Act (CWA) and Section 13370 of the California Water Code (CWC), the U.S. EPA approved the California state program to issue and enforce National Pollutant Discharge Elimination System (NPDES) permits for pollutant discharges to surface waters of the State. The Regional Board is responsible for implementing the NPDES permit program pursuant to the CWA at the facility regulated under this Order. Pursuant to Section 13263, Article 4, Chapter 4 of the CWC, the Regional Boards are required to issue Waste Discharge Requirements for discharges that could affect the quality of the State's waters. Limitations, prohibitions and provisions of this Order were established pursuant to Sections 208 (b), 257, 258, 301, 302, 303 (d), 304, 306, 307, 316, 403, 405, and/or 503 of the CWA and implementing regulations in Title 40 of the Code of Federal Regulations (40 CFR), including the NPDES program implementing regulations. This Order, including Attachments A - H, which are hereby incorporated into this Order, shall serve as an NPDES permit pursuant to Section 402 of the CWA, and amendments thereto, and shall take effect ten (10) days after its adoption provided the Regional Administrator, U.S. EPA, has no objection.

C. **CEQA.** This action to adopt an NPDES permit is exempt from the requirements of the California Environmental Quality Act (CEQA, Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.

D. **Technology-based Effluent Limitations.** The Code of Federal Regulations (CFR) at 40 CFR § 122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Effluent Limitations Guidelines and Standards for the *Steam Electric Power Generating Point Source Category* in 40 CFR 423 and/or Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment E).

E. **Water Quality-based Effluent Limitations.** Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR § 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under

CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

F. **Water Quality Control Plans.** The *Water Quality Control Plan for the San Diego Basin* designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters within the region. The specific legal requirements and detailed rationale for the applicable designated uses and objectives for the receiving water(s) identified in this Order are contained in Attachment E, Fact Sheet, as part of this Order. Requirements of this Order specifically implement the applicable Water Quality Control Plan(s) named below.

Water Quality Control Plan for the San Diego Basin (the Basin Plan, 1994)
Water Quality Control Plan for Ocean Waters of California (the Ocean Plan, 2001)
Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (the Thermal Plan, 1975)

G. **Anti-Degradation Requirements.** CWA regulations require that state water quality standards include an anti-degradation policy consistent with federal policy (40 CFR 131.12). The State Water Resources Control Board (the State Board) established California's anti-degradation policy in State Board Resolution No. 68-16, which incorporates the requirements of the federal anti-degradation policy. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The permitted discharges are consistent with the anti-degradation provision of 40 CFR 131.12 and State Board Resolution No. 68-16.

H. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR § 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

I. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires all NPDES permits to specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment D and is hereby incorporated into this Order.

J. **Rationale for Requirements.** The Regional Board developed the requirements in this Order based on information submitted as part of the Report of Waste Discharge, through monitoring and reporting programs, and through special studies. The specific legal requirements and

detailed rationale for the requirements contained in this Order are provided in the attached Fact Sheet (Attachment E).

K. **Notification of Interested Parties.** The Regional Board has notified the permittee and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet, Attachment E of this Order.

L. **Consideration of Public Comment.** The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the public hearing are provided in the Fact Sheet, Attachment E of this Order.

II. DISCHARGE PROHIBITIONS

A. Discharge of waste in a manner or to a location that has not been specifically described to the Regional Board or for which valid waste discharge requirements are not in force is prohibited.

B. Discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with waste discharge requirements or other provisions of Division 7 of the CWC, is prohibited.

C. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.

D. The discharge of polychlorinated biphenyl compounds, such as those commonly used for transformer fluid, is prohibited.

E. The discharge of waste to Areas of Special Biological Significance[1/], as designated by the State Board, is prohibited.

F. The discharge of sludge to the ocean by pipeline is prohibited; the discharge of municipal and industrial waste sludge directly to the ocean or into a waste stream that discharges to the ocean is prohibited. The discharge of sludge digester supernatant directly to the ocean or to a waste stream that discharges to the ocean without further treatment is prohibited.

G. The bypassing of untreated wastes containing concentrations of pollutants in excess of those in Tables A or B of the California Ocean Plan (2001)[2/] is prohibited, except under upset conditions, as described in *Federal Standard Provisions – Permit Compliance,* A.8 (see Attachment C of this Order)

H. A discharge flow rate (30-day running average) in excess of the following is prohibited:

SONGS Outfall	Maximum Discharge (mgd)[3/]
002	1,287

I. Total residual oxidants (chlorine, bromine, or others used for control of fouling within the main condenser cooling system) may not be discharged from Unit 2 for more than a total of two hours per day unless the Discharger demonstrates to the Regional Board that discharge for more than two hours is required for macroinvertebrate control.

J. The discharge of sewage treatment plant effluent from the Unit 1 and/or the Mesa sewage treatment plants, through Outfalls 004 or 005, is prohibited.

III. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Final Effluent Limitations – All Discharges Through Outfalls 002, 004, and 005

The discharge of wastewaters from Outfalls 002, 004, and 005 to the Pacific Ocean shall not exceed the following limitations:

1. The SONGS waste management systems that discharge to the ocean through Outfalls 002, 004, and 005 must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

2. Waste discharged to the ocean through Outfalls 002, 004, and 005 must be essentially free of:

    a. Material that is floatable or will be come floatable upon discharge.

    b. Settleable material or substances that may form sediments, which will degrade benthic communities or other aquatic life.

    c. Substances, which will accumulate to toxic levels in marine waters, sediments, or biota.

    d. Substances that significantly decrease the natural light to benthic communities and other marine life.

    e. Materials that result in aesthetically undesirable discoloration of the ocean surface.

3. Wastewater must be discharged through Outfalls 002, 004, and 005 in a manner that provides sufficient initial dilution to minimize the concentrations of substances not removed in treatment processes.

4. The location of waste discharges from Outfalls 002, 004, and 005 shall assure that:

    a. Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body contact sports.

    b. Natural water quality conditions are not altered in areas designated as being areas of special biological significance or areas that existing marine laboratories use as a source of seawater.

    c. Maximum protection is provided to the marine environment.

5. Waste that contains pathogenic organisms or viruses should be discharged from Outfalls 002, 004, and 005 a sufficient distance from shellfishing and water contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided.

Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

6. Sewage sludge shall be handled and disposed of in accordance with applicable federal, state and local laws and guidance, including 40 CFR Parts 257, 258, and 503.

7. Elevated temperature wastes (that are discharged at a temperature higher than the natural temperature of the receiving water) shall comply with all limitations necessary to assure protection of the beneficial uses of the receiving water and Areas of Special Biological Significance (ASBS).

8. Except for Outfall 005, elevated temperature wastes shall be discharged to the open ocean away from the shoreline to achieve vertical dispersion through the vertical water column.

9. Elevated temperature wastes shall be discharged a sufficient distance from areas of special biological significance to assure the maintenance of natural temperatures in these areas.

10. At all times except during heat treatment operations (see *Heat Treatment Discharge Specifications*, IV.I) the maximum temperature of the discharge through Outfall 002 to the ocean shall not exceed the natural temperature of receiving waters by more than 25°F.

11. Discharges through Outfalls 002, 004, and 005 shall be within the pH range of 6.0 to 9.0 at all times.

B. Final Effluent Limitations – Combined Discharges[4/, 5/] Through Outfall 002

Combined discharges through Outfall 002 shall represent all cooling water flows and in-plant wastestreams from Unit 2. Combined discharges through Outfall 002 shall also include cooling water flows, in-plant wastestreams, and treated sewage effluent from Unit 1, when these flows are routed to Outfall 002.

1. The combined discharge of wastewaters from Outfall 002 to the Pacific Ocean shall not exceed the following limitations:

   a. Whole Effluent Toxicity

Constituent	Units	Daily Max.[6/]
Chronic Toxicity	TUc	11

   b. Total Residual Chlorine[7/]

6-Month Median	Daily Max.	Instantaneous Max.
22 µg/L	88 µg/L	See Endnote 7

   c. Toxic Pollutants

Limitations For Protection of Marine Aquatic Life

Constituent	Units	Instantaneous Max.[8/]
Arsenic	µg/L	850.
Cadmium	µg/L	110.
Chromium (hexavalent)[10/]	µg/L	220.
Copper	µg/L	310.
Lead	µg/L	220.
Mercury	µg/L	4.4
Nickel	µg/L	550.
Selenium	µg/L	1,700.
Silver	µg/L	75.
Zinc	µg/L	2,100.
Cyanide[11/]	µg/L	110.
Ammonia	µg/L	66,000.
Non-Chlorinated Phenolic Compounds	µg/L	3,300.
Chlorinated Phenolics	µg/L	110.
Endosulfan	µg/L	0.30
Endrin	µg/L	0.066
HCH	µg/L	0.13

d. Residual Heat

At all times except during heat treatment operations, the maximum temperature of the discharge through Outfall 002 to the Pacific Ocean shall not exceed the natural temperature of the receiving water by more than 25º F.

C. Final Effluent Limitations – Combined Low Volume, In-Plant Wastewaters[11/] from Unit 2 (Internal Outfalls 002-C through 002-K) and Unit 1 (Internal Outfalls 001-D through 001-F)

All low volume, in-plant wastewaters from Unit 2 (i.e. Internal Outfalls 002-C through 002-K) shall be composited on a flow-weighted basis. All low-volume, in-plant wastewaters from Unit 1 (Internal Outfalls 001-D through 001-F) shall be included in the composite sample whenever the discharger routes the Unit 1 flows to Outfall 002. The composite sample shall not exceed the following limitations:

[Mass-based limitations for TSS, oil and grease, and toxics are based on a total, maximum low volume wastewater flows of 13.2 mgd. Compliance determination will account for the actual low volume wastewater flow rate on the day of sampling; i.e., the actual limitation shall be determined for the period of sampling in accordance with the following equation:

$L_f = (Q_a / Q_m) L_t$; where

L_f = the final limitation, in lbs/day, used for compliance determination
Q_a = the combined discharge flow rate, in mgd, of all low volume, in-plant, wastewaters from Units 1 and 2 at the time of sampling
Q_m = 13.2 mgd, the maximum possible combined flow of low volume, in-plant, wastewaters for Outfall 002.
L_t = the appropriate, maximum limitation, in lbs/day, shown in the tables below]

1. The pH of all discharges shall be within the range of 6.0 to 9.0.

2. Total Suspended Solids (TSS), and Oil and Grease (O&G)

	30-Day Average[12/]		**Daily Max.[6/]**	
Constituent	**mg/L**	**lbs/day**	**mg/L**	**lbs/day**
TSS	30	3,300	100	11,000
O&G	15	1,700	20	2,200

3. Toxics

Limitations For Protection of Marine Aquatic Life

Constituent	**Units**	**6-Month Median[13/]**	**Daily Max.[6/]**
Arsenic	lbs/day	6.4	35.
Cadmium	lbs/day	1.2	4.8
Chromium (hexavalent)[10/]	lbs/day	2.4	9.7
Copper	lbs/day	1.4	12.
Lead	lbs/day	2.4	9.7
Mercury	lbs/day	0.048	0.19
Nickel	lbs/day	6.1	24.
Selenium	lbs/day	18.	73.
Silver	lbs/day	0.67	3.2
Zinc	lbs/day	15.	88.
Cyanide[11/]	lbs/day	1.2	4.8
Ammonia	lbs/day	730.	2,900.
Non-Chlorinated Phenolic Compounds	lbs/day	36.	145.
Chlorinated Phenolics	lbs/day	1.2	4.8
Endosulfan	lbs/day	0.011	0.022
Endrin	lbs/day	0.0024	0.0048
HCH	lbs/day	0.0048	0.0097

Limitations For Protection of Human Health – Non Carcinogens

Constituent	Units	30-Day Average[12/]
Acrolein	lbs/day	270.
Antimony	lbs/day	1,500.
Bis (2-chloroethoxy) methane	lbs/day	5.3
Bis (2-chloroisopropyl) ether	lbs/day	1,500.
Chlorobenzene	lbs/day	690.
Chromium (trivalent)	lbs/day	230,000.
Di-n-butyl phthalate	lbs/day	4,200.
Dichlorobenzenes	lbs/day	6,200.
Diethyl phthalate	lbs/day	40,000.
Dimethyl phthalate	lbs/day	1,000,000.
4,6-dinitro-2-methylphenol	lbs/day	270.
2,4-dinitrophenol	lbs/day	4.8
Ethylbenzene	lbs/day	5,000.
Fluoranthene	lbs/day	18.
Hexachlorocyclopentadiene	lbs/day	70.
Nitrobenzene	lbs/day	5.9
Thallium	lbs/day	2.4
Toluene	lbs/day	100,000.
1,1,1-trichloroethane	lbs/day	650,000.
Tributyltin	lbs/day	0.0017

Limitations For Protection of Human Health – Carcinogens

Constituent	Units	30-Day Average[12/]
Acrylonitrile	lbs/day	0.12
Aldrin	lbs/day	0.000027
Benzene	lbs/day	7.1
Benzidine	lbs/day	0.000084
Beryllium	lbs/day	0.040
Bis (2-chloroethyl) ether	lbs/day	0.054
Bis (2-ethylhexyl) phthalate	lbs/day	4.2
Carbon tetrachloride	lbs/day	1.1
Chlordane	lbs/day	0.000028
Chlorodibromomethane	lbs/day	10.
Chloroform	lbs/day	160.
DDT	lbs/day	0.00021
1,4-dichlorobenzene	lbs/day	22.
3,3’-dichlorobenzidine	lbs/day	0.0098
1,2-dichloroethane	lbs/day	34.
1,1-dichloroethylene	lbs/day	1.1
Dichlorobromomethane	lbs/day	7.5
Dichloromethane	lbs/day	540.

Limitations For Protection of Human Health – Carcinogens

Constituent	Units	30-Day Average[12/]
1,3-dichloropropene	lbs/day	11.
Dieldrin	lbs/day	0.000048
2,4-dinitrotoluene	lbs/day	3.1
1,2-diphenylhydrazine	lbs/day	0.19
Halomethanes	lbs/day	160.
Heptachlor	lbs/day	0.000061
Heptachlor epoxide	lbs/day	0.000024
Hexachlorobenzene	lbs/day	0.00025
Hexachlorobutadiene	lbs/day	17.
Hexachloroethane	lbs/day	3.
Isophorone	lbs/day	880.
N-nitrosodimethylamine	lbs/day	8.8
N-nitrosodi-N-propylamine	lbs/day	0.46
N-nitrosodiphenylamine	lbs/day	3.
PAHs	lbs/day	0.011
PCBs	lbs/day	0.000023
TCDD equivalents	lbs/day	0.0000000047
1,1,2,2-tetrachloroethane	lbs/day	2.8
Tetrachloroethylene	lbs/day	2.4
Toxaphene	lbs/day	0.00025
Trichloroethylene	lbs/day	33.
1,1,2-trichloroethane	lbs/day	11.
2,4,6-trichlorophenol	lbs/day	0.35
Vinyl chloride	lbs/day	44.

D. Final Effluent Limitations – Once Through Cooling Discharges[14/] Through Outfall 002

The discharge of once through cooling water from Unit 2 to Outfall 002 shall not exceed the following limitations:

1. Total residual chlorine and/or bromine may not be discharged from SONGS Unit 2 for more than two hours per day unless the Discharger demonstrates to the Regional Board that discharge for more than two hours is required for macroinvertebrate control.

E. Final Effluent Limitations – Metal Cleaning Discharges[15/](Chemical and Non-Chemical) Through Outfalls 002-A, 002-B, and 001-C

The following effluent limitations (concentration-based and mass-based) shall be applicable to discharges of metal cleaning (chemical and non-chemical) wastewaters from Unit 2 (Internal Outfalls 002-A and 002-B). The effluent limitations in this Section shall also be applicable to Unit 1 metal cleaning wastewaters (Internal Outfall 001-C) whenever the metal cleaning discharges from Unit 1 are routed to Outfall 002:

[Mass-based limitations for TSS, oil and grease, copper and iron in the tables below are based on maximum chemical/non-chemical metal cleaning flows. Compliance determination will account for the actual low volume wastewater flow rate on the day of sampling; i.e., the actual limitation shall be determined for the period of sampling in accordance with the following equation:

$L_f = (Q_a / Q_m) L_t$; where

L_f = the final limitation, in lbs/day, used for compliance determination
Q_a = actual metal cleaning flows (chemical and non-chemical), in mgd, at the time of sampling
Q_m = maximum metal cleaning flows (chemical and non-chemical), in mgd, shown in the tables below
L_t = the appropriate, maximum limitations, in lbs/day, shown in the tables below]

Constituent	**Units**	**30-Day Avg.**[12/]	**Daily Max.**[6/]
TSS	mg/L	30.	100.
O&G	mg/L	15.	20.
Total Copper	mg/L	1.0	1.0
Total Iron	mg/L	1.0	1.0

Outfall Number	**Low Volume Source**	**Flow (mgd)**	**Units**	**TSS**		**Oil/Grease**		**Copper**		**Iron**	
				30-Day Avg.	**Daily Max.**	**30- Day Avg.**	**Daily Max.**	**30-Day Avg.**	**Daily Max.**	**30- Day Avg.**	**Daily Max.**
002-A	Unit 2 – Chemical Metal Cleaning	0.20	lbs/day	50.	170.	25.	33.	1.7	1.7	1.7	1.7
002-B	Unit 2 – Non-Chemical Metal Cleaning	0.04	lbs/day	10.	33.	5.0	6.7	0.33	0.33	0.33	0.33
001-C*	Unit 1 – Metal Cleaning	0.08	Ibs/day	20.	67.	10.	13.	0.7	0.7	0.7	0.7

* Effluent limitations for Outfall 001-C are only applicable when metal cleaning wastewater from Unit 1 is routed to Outfall 002.

F. Final Effluent Limitations – Individual, Low Volume, In-Plant, Wastewaters[11/] from Unit 2 (Internal Outfalls 002-C through 002-K) and Unit 1 (Internal Outfalls 001-D through 001-F)

The following effluent limitations (concentration-based and mass-based) shall be applicable to discharges of all individual, low-volume, in-plant wastewaters from Unit 2 (Internal Outfalls 002-C through 002-K). The effluent limitations in this Section shall also be applicable to discharges of individual, low-volume, in-plant wastewaters from Unit 1 (Internal Outfalls 001-D through 001-F) whenever these discharges are routed from Unit 1 to Outfall 002:

[Mass-based limitations for TSS and oil and grease for individual low-volume, in-plant wastewaters, in the tables below, are based on maximum flows. Compliance determination will account for the actual low-volume wastewater flow rate, for each individual wastestream on the day of sampling; i.e., the actual limitation shall be determined for the period of sampling in accordance with the following equation:

$L_f = (Q_a / Q_m) L_t$; where

L_f = the final limitation, in lbs/day, used for compliance determination
Q_a = actual individual low-volume, in-plant wastewater flow-rate, in mgd, at the time of sampling
Q_m = maximum flow-rate of each individual, in-plant wastewater stream, in mgd, shown in the tables below
L_t = the appropriate, maximum limitations, in lbs/day, shown in the tables below]

Constituent	Units	30-Day[12/] Ave.	Daily[6/] Max.	Instantaneous[8/] Max.
TSS	mg/L	30.	100.	100.
Oil/Grease	mg/L	15.	20.	20.

Outfall Number	Low Volume Wastewater Source	Max Flow (mgd)	Units	TSS		Oil/Grease	
				30-Day Avg.	Daily Max	30-Day Avg.	Daily Max
002-C	Blowdown Processing	0.085	lbs/day	21.	71.	11.	14.
002-D	Makeup Demineralizer	0.670	lbs/day	170.	560.	84.	110.
002-E	Radwaste System	0.432	lbs/day	110.	360.	54.	72.
002-F	Polishing Demineralizer System	1.4	lbs/day	350.	1,200.	180.	230.

Outfall Number	Low Volume Wastewater Source	Max Flow (mgd)	Units	TSS		Oil/Grease	
				30-Day Avg.	Daily Max	30-Day Avg.	Daily Max
002-G	Steam Generator Blowdown	0.720	lbs/day	180.	600.	90.	120.
002-H	Hotwell Overboard	7.20	lbs/day	1,800.	6,000.	900.	1,200.
002-I	Plant Drains	0.8	lbs/day	200.	670.	100.	130.
002-J	Intake Structure Sump	0.288	lbs/day	72.	240.	36.	48.
002-K	Concrete Cutting Water	0.2	lbs/day	50.	170.	25.	33.
001-D*	Radwaste	0.144	lbs/day	36.	120.	18.	24.
001-E*	Yard Drains	0.360	lbs/day	90.	300.	45.	60.
001-F*	Dewatering	0.864	lbs/day	220.	720.	110.	140.

* Effluent limitations for Outfalls 001-D through 001-F are applicable only when individual low-volume, in-plant wastewater discharges from Unit 1 are routed to Outfall 002.

G. Final Effluent Limitations – Treated Domestic Wastewater from Unit 1 (Internal Outfalls 001-A and 001-B)

The following effluent limitations shall be applicable whenever treated domestic wastewaters from the Unit 1 and Mesa Facility Complex sewage treatment plants (Internal Oufalls 001-A and 001-B) are routed to Outfall 002:

1. Discharges shall not exceed the following limitations.

Treated Domestic Wastewater

Parameter	Units	30-Day[12/] Avg.	7-Day Avg.[16/]	Instantaneous[8/] Max.
O&G (Unit 1 STP)	mg/L	25.	40.	75.
	lbs/day[17/]	21.	-	-
O&G (Mesa STP)	mg/L	25.	40.	75.
	lbs/day[18/]	9.4	-	-
TSS*	mg/L	Not more than 25% of influent TSS		
Settleable Solids*	ml/L	1.0	1.5	3.0
Turbidity*	NTUs	75.	100.	225.
pH*	S.U.	Within the limits of 6.0 to 9.0 at all times		

* Effluent limitations for these constituents are the same for both Unit 1 STP and Mesa STP.

2. Discharge of sewage treatment plant effluent through Outfall 002 may occur only when Unit 2 once-through main condenser cooling water is also being discharged through Outfall 002.

H. Final Effluent Limitations – Fish Return System and Across-the-Beach Discharges (Outfall 004 and 005)

Effluent from the Fish Return System (Outfall 004) and Across-the-Beach discharges (Outfall 005) shall not contain toxic substances in concentrations greater than the water quality objectives for ocean waters established by Table B of the 2001 Ocean Plan.

I. Heat Treatment Discharge Specifications[19/]

The Discharger may raise the temperature of the cooling water discharge to the Pacific Ocean in excess of the temperature otherwise specified in this Order (see *Final Effluent Limitations – Combined Discharges*, IV.B.1.d) in accordance with the following specifications during periods of heat treatment for Unit 2.

1. The frequency of heat treatment shall be determined, in part, by a *Growth Model for the Bay Mussel, Mytilus edulis*, as described in Attachment F (*Heat Treatment Decision Flow Chart*). Measurements and observations of biological material from the conduit and observation of cooling water system parameters shall also be used. System operational constraints may require that a heat treatment be conducted prior to the time scheduled using the parameters above, typically during the prior weekend.

2. Heat treatment temperature and duration shall be based on the *Time-Temperature Mortality Curve for the Bay Mussel, Mytilus Edulis* (Attachment G), which includes an additional amount of time added to account for temperature measurement inaccuracy, non-homogeneity of temperature in the cooling water system, and other unknown factors. The highest temperature consistent with plant operating requirements shall be selected to keep the heat treatment time to a minimum. Target times shall be rounded up to the nearest five minutes.

3. The target temperature and time is subject to the precision that can be practicably attained by station operators. Consequently, during the temperature rise period, before initiating heat treatment, and as the influent temperature varies, temperatures may be inadvertently increased above the target temperature due to equipment limitations; however, the target temperature shall not be exceeded by more than 10°F or more than fifteen (15) minutes.

4. Heat treatment of the intake conduit, fish return system and screenwell shall be performed at 100°F (as measured in the screenwell) for 2.1 hours. 100°F represents the presently expected, maximum temperature capability of each unit. The heat treatment temperature will be adjusted upward or downward to the highest temperature compatible with station operation during initial operation of the units. A corresponding change shall be made to the heat treatment duration in accordance with the *Time-Temperature Mortality Curve for the Bay Mussel, Mytilus Edulis* (Attachment G). (Heat treatment duration represents the period of time at the target temperature, and not the time required to reach 100°F, nor the time to return to normal operation.)

5. Heat treatment of the intake conduit, fish return system and screenwell shall be conducted at intervals predicted by a growth model, which is based on ambient water temperature. Heat treatments shall be scheduled using the *Heat Treatment Decision Flow Chart* (Attachment F). Heat treatments may also be conducted prior to or following a station outage, if the outage period is anticipated to extend beyond the time of the next (growth model) predicted heat treatment.

6. As long as normal operating discharge temperatures exceed 80°F for a minimum of 1000 hours, 85°F for 150 hours or 90°F for 31 hours, the discharge conduit will not require heat treatment. Unless these conditions are met, it must be assumed that settling and growth of biofouling organisms has occurred. When these conditions are not met, growth calculations, based on ambient intake water temperatures, shall be used to schedule a discharge conduit heat treatment.

7. When required, the discharge conduit for Unit 2 may be heat treated at a discharge temperature of 105°F for 1.1 hours. This time is the onshore heat treatment time required to treat the furthest point offshore for 0.58 hours, the time indicated by the *Time-Temperature Mortality Curve for the Bay Mussel, Mytilus Edulis* (Attachment G).

8. During heat treatment, heat added to the cooling water shall not cause the temperature of the discharge from the intake conduit to the Pacific Ocean to exceed 125°F, except as specified in *Heat Treatment Discharge Specification*, IV.I.3, above.

9. During heat treatment, heat added to the cooling water shall not cause the temperature of the discharge from this discharge conduit to the Pacific Ocean to exceed 105°F, except as specified in *Heat Treatment Discharge Specification*, IV.I.3, above. During Unit 3 heat treatments, the difference between intake and discharge water temperatures for Unit 2 may exceed 25°F due to crossover connections with Unit 3.

IV. RECEIVING WATER LIMITATIONS

Receiving water limitations are based upon water quality objectives contained in the Ocean Plan and Thermal Plan. As such, they are a required part of this Order. Unless specifically excepted by this Order, the discharge shall not cause the following in the receiving waters of the Pacific Ocean:

A. Water Quality Objectives Established by the Thermal Plan

Discharges from SONGS Units 1 and 2 through Outfalls 002, 004, and 005 to the Pacific Ocean shall not, by themselves or jointly with any other discharge or discharges, cause violation of the following water quality objective for coastal waters established by the Thermal Plan:

The discharges of elevated temperature wastes shall not result in increases in the natural water temperature exceeding 4°F at (a) the shoreline, (b) the surface of any ocean substrate, or (c) the ocean surface beyond 1,000 feet from the discharge system. The

surface temperature limitation shall be maintained at least 50 percent of the duration of any complete tidal cycle.

B. Water Quality Objectives Established by the Ocean Plan

Discharges from SONGS Units 1 and 2 through Outfalls 002, 004, and 005 to the Pacific Ocean shall not, by themselves or jointly with any other discharge or discharges, cause violation of the following receiving water quality objectives established by the Ocean Plan. Compliance with these objectives shall be determined by samples collected at stations representative of the area within the waste field where initial dilution is completed.

1. Bacterial Characteristics

   a. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board, but including all kelp beds, the following bacterial objectives shall be maintained throughout the water column.

   b. Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

      i. The fecal coliform density, based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

      ii. The Initial Dilution Zone of wastewater outfalls shall be excluded from designation as kelp beds for purposes of bacterial standards, and Regional Boards should recommend extension of such exclusion zone where warranted to the State Board (for consideration as Areas of Special Biological Significance/State Water Quality protection Areas). Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

   c. At all areas where shellfish may be harvested for human consumption, as determined by the Regional Board, the median total coliform density shall not exceed 70 per 100 ml throughout the water column, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

2. Physical Characteristics

   a. Floating particulates and grease and oil shall not be visible.

b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

c. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.

d. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

3. Chemical Characteristics

a. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

b. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

c. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

d. The concentration of substances set forth in Chapter II, Table B, of the 2001 Ocean Plan shall not be increased in marine sediments to levels that would degrade indigenous biota.

e. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.

f. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

g. Numerical water quality objectives established in Chapter II, Table B of the California Ocean Plan (2001) shall not be exceeded as a result of discharges from SONGS Units 1 and 2 through Outfalls 002, 004, and 005.

4. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

b. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

c. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

5. Radioactivity

   Discharge of radioactive waste, which meets the definition of "pollutant" at 40 CFR 122.2, shall not degrade marine life.

V. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all *Federal Standard Provisions* included in Attachment C of this Order.

2. **Regional Board Standard Provisions.** The Discharger shall comply with the following provisions:

   a. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the CWC.

   b. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.

   c. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following.

      i. Violation of any terms or conditions of this Order;

      ii. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts, or;

      iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

   d. In addition to any other grounds specified herein, this permit may be modified or revoked at any time if, on the basis of any data, the Regional Board determines that continued discharges may cause unreasonable degradation of the marine environment.

   e. If an effluent standard or discharge prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307 (a) of the Clean Water Act for a toxic pollutant which is present in the discharge, and such standard or prohibition is more stringent than any limitation for that pollutant in this Order, this Order may be modified or revoked and reissued to conform to the effluent standard or discharge prohibition.

f. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Board as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA or amendments thereto, the Regional Board may modify this Order in accordance with the more stringent standards.

g. If only one sample is collected during the time period associated with an effluent limitation (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

h. All analytical data shall be reported uncensored with detection limits and quantitation limits identified. For any effluent limitation, compliance shall be determined using appropriate statistical methods to evaluate multiple samples. Sufficient sampling and analysis shall be conducted to determine compliance.

i. The provisions of this Order are severable, and if any provisions of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

B. Monitoring and Reporting Program Requirements

The discharger shall comply with Monitoring and Reporting Program No. R9-2005-0005, and future revisions thereto as specified by the Regional Board, found in Attachment D of this Order.

C. Special Provisions

1. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Unit 2 CWA Section 316 (b) Comprehensive Demonstration Study[20/]

The Discharger shall comply with applicable requirements of U.S. EPA regulations pertaining to cooling water intake structures, which implement section 316 (b) of the CWA and are codified at 40 CFR Part 125, Subpart J - *Requirements Applicable to Cooling Water Intake Structures for Phase II Existing Facilities under Section 316 (b) of the Clean Water Act*. To the extent that the requirements of this Order are inconsistent with or are not as comprehensive as the requirements presented by the U.S. EPA regulations just cited, the requirements of 40 CFR Part 125, Subpart J will apply.

The Discharger shall satisfy the following requirements pertaining to Section 316 (b) of the CWA.

i. Within 180 days of the effective date of this Order, submit to the Regional Board a *Proposal for Information Collection*, as described at 40 CFR 125.95(b)(1). The *Proposal for Information Collection* shall include:

(1) A description of the proposed and/or implemented technologies, operational measures, and/or restoration measures to be evaluated in the *Comprehensive Demonstration Study*;

(2) A list and description of historical studies characterizing impingement mortality and entrainment and/or physical and biological conditions in the vicinity of the cooling water intake structure and their relevance to the proposed study. If existing data will be used, the Discharger shall demonstrate the extent to which the data are representative of current conditions and that the data were collected using appropriate quality assurance/quality control procedures;

(3) A summary of past and on-going consultations with appropriate federal, state, and tribal fish and wildlife agencies that are relevant to the *Comprehensive Demonstration Study* and copies of written comments received as a result of the consultations;

(4) A sampling plan for any new field studies proposed to develop scientifically valid estimates of impingement mortality and entrainment.

ii. Before January 9, 2008, submit to the Regional Board a *Comprehensive Demonstration Study* to characterize impingement mortality and entrainment, to describe the operation of the SONGS Unit 2 cooling water intake structure, and to confirm that the technologies, operational measures, and/or restoration measure selected and installed, or planned for installation, will meet the applicable requirements of 40 CFR 125.94. The *Comprehensive Demonstration Study* will form the basis for the Regional Board's determination of specific requirements, for inclusion into Unit 2's NPDES permit, that establish best technology available to minimize adverse environmental impacts associated with the use of the SONGS Unit 2 cooling water intake structure. The Study shall include the following components, if applicable.

- *Source Waterbody Flow Information*, as described at 40 CFR 125.95(b)(2);

- *Impingement Mortality and/or Entrainment Characterization Study*, as described at 40 CFR 125.95(b)(3), to support development of a calculation baseline for evaluating impingement mortality and entrainment and to characterize current impingement mortality and entrainment;

- *Design and Construction Technology Plan* and a *Technology Installation and Operation Plan*, as described at 40 CFR 125.95(b)(4);

- *Restoration Plan*, as described at 40 CFR 125.95(b)(5);

- Information to Support Site-Specific Determination of BAT, as described at 40 CFR 125.95 (b)(6);

- *Verification Monitoring Plan*, as described at 40 CFR 125.95(b)(6).

2. Best Management Practices and Pollution Prevention

Within 90 days of the effective date of this Order, the Discharger shall develop and implement a Best Management Practices (BMP) Plan in accordance with 40 CFR 125.100-104. If necessary, an existing BMP Plan shall be updated to address any changes in operation and/or management of the facility. Notification that a BMP Plan has been updated shall be submitted to the Regional Board within 30 days of revision. The BMP Plan shall prevent, or minimize the potential for, the release of toxic or hazardous pollutants, including any such pollutants from ancillary activities to waters of the United States. The BMP Plan shall be consistent with the general guidance contained in the U.S. EPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004). The Discharger shall maintain the BMP Plan in an up-to-date condition and shall amend the BMP Plan in accordance with 40 CFR 125.100 - 125.104 whenever there is a change in facility design, construction, operation, or maintenance, which materially affects the potential for discharge from SONGS Units 1 and 2 of significant amounts of hazardous or toxic pollutants into waters of the United States. The BMP Plan and any amendments thereto, shall be subject to the approval of the Regional Board and shall be modified as directed by the Regional Board. The Discharger shall submit the BMP Plan and any amendments thereto to the Regional Board upon request of the Regional Board. A copy of the up-to-date BMP Plan shall be maintained at SONGS Units 1 and 2 and shall be readily available to operating personnel at all times.

VI. ENDNOTE REFERENCES

1. An Area of Special Biological Significance may also be known as a State Water Quality Protection Area, in accordance with Section 36700 of the California Public Resources Code.

2. The California Ocean Plan (Water Quality Control Plan for Ocean Waters of California adopted by the State Water Resources Control Board, 2001) includes two tables of numeric water quality objectives for ocean waters. Tables A and B of the Ocean Plan contain, respectively:

- Effluent limitations for publicly owned treatment works and industrial dischargers to the ocean for which Effluent Limitations Guidelines have not been established pursuant to sections 301, 302, 304, or 306 of the CWA.

- Water quality objectives for chemical characteristics in ocean waters for protection of aquatic life and human health.

3. Flow rates are based on information provided by the Discharger in materials submitted for application to renew Waste Discharge Requirements.

4. "Combined discharges through Outfall 002" are the combined flows of once through main condenser cooling water, low volume wastewaters, and all other wastewater flows from Unit 2 that are discharged to the Pacific Ocean through Outfall 002. "Combined discharges through Outfall 002" shall also include cooling water, low-volume wastewaters, and treated domestic wastewaters from Unit 1 whenever the discharger routes these Unit 1 flows through Outfall 002.

5. All numeric effluent limitations established by this Order for the "Combined Discharges through Outfall 002" were derived from the water quality objectives of the California Ocean Plan for chronic toxicity, total residual chlorine, and toxic pollutants (the Table B pollutants) and methods required by the Ocean Plan. A minimum probable initial dilution of 10 to 1 for discharges through Outfall 002 was used in the calculations.

   The following equation from Section III.C.3.a of the Ocean Plan was used to calculate all concentration-based, effluent limitations, for Table B pollutants (except for instantaneous maximum total residual chlorine) with instantaneous maximum water quality objectives for protection of marine aquatic life applicable to the "Combined Discharges through Outfall 002":

   $$Ce = Co + Dm (Co - Cs)$$

   Where:
   Ce = the effluent concentration limit, µg/L
   Co = the concentration (water quality objective) to be met at the completion of initial dilution, µg/L
   Cs = background seawater concentration, µg/L
   Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

   Background concentrations for all Table B parameters were assumed to be zero (Cs = 0), except for the following five metals.

Constituent	**Background Concentration (µg/L)**
Arsenic	3.
Copper	2.
Mercury	0.0005
Silver	0.16
Zinc	8.

6. Daily maximum limitation is the highest allowable discharge of a pollutant over a calendar day.

7. The limitations for total residual chlorine for the "Combined Discharges through Outfall 002" are water quality based effluent limitations derived from the following Ocean Plan (Table B)

water quality objectives for total residual chlorine:

Total Residual Chlorine – Water Quality Objectives (µg/L)	
6-Month Median	**Daily Max.**
2	8

6-month median and daily maximum effluent limitations were calculated in accordance with procedures established in Section III.C.3.a of the Ocean Plan (and described in Endnote Reference 5, above). The instantaneous maximum limitation shall be calculated for intermittent discharges of chlorine in accordance with Table B, *note c.*, of the 2001 Ocean Plan. The appropriate instantaneous maximum water quality objective for intermittent discharges is a variable value that is a function of the duration in minutes of uninterrupted chlorine discharge and shall be determined using the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where:
y = the water quality objective, in µg/L, to apply when chlorine is being discharged
x = the duration of uninterrupted chlorine discharge in minutes

The instantaneous maximum effluent limitation for total residual chlorine for intermittent dischargers shall then be calculated based on the water quality objective (calculated from the above equation from Table B, *note c.*, of the 2001 Ocean Plan) in conjunction with a Dm value of 10 and procedures established in Section III.C.3.a of the Ocean Plan.
For example, an uninterrupted chlorine discharge of 25 minutes will render a water quality objective of 16 µg/l and an effluent limitation of 176 µg/l for total residual chlorine. Conversely, an uninterrupted chlorine discharge of 40 minutes will render a water quality objective of 13 µg/l and an effluent limitation of 143 µg/l for total residual chlorine.

8. Instantaneous maximum limitation is the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

9. Dischargers may meet this limitation as a total chromium limitation.

10. If a discharger can demonstrate to the satisfaction of the Regional Board (subject to U.S. EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR Part 136, as revised May 14, 1999.

11. “Low volume wastewaters”, as defined in the Effluent Limitations Guidelines for the Steam Electric Power Generating Point Source Category at 40 CFR 423.11, means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations

are otherwise established in the Effluent Limitations Guidelines.

The individual, low volume wastewaters identified by this Order for Unit 2 are:

- Blowdown Processing
- Makeup Demineralizer
- Radwaste System
- Polishing Demineralizer System
- Steam Generator Blowdown
- Hotwell Overboard
- Plant Drains
- Intake Structure Sump
- Concrete Cutting Water

The individual, low volume wastewaters that may be routed from Unit 1 to Oufall 002 are:

- Yard Drains
- Radwaste System
- Dewatering

12. A 30-day average limitation is the highest allowable average of daily discharges over a running 30-day average, calculated as the sum of all daily discharges measured during a running 30-day period divided by the number of daily discharges measured during that 30-day period.

13. A 6-month median limitation is the highest allowable moving median of all daily discharges for any 180-day period.

14. "Once through cooling water," as defined in the Effluent Limitations Guidelines for the Steam Electric Power Generating Point Source Category at 40 CFR 423.11, means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

15. "Metal cleaning waste," as defined in the Effluent Limitations Guidelines for the Steam Electric Power Generating Point Source Category at 40 CFR 423.11, means any wastewater resulting from cleaning (with or without chemical cleaning compounds) any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

16. A 7-day average limitation is the highest allowable average of daily discharges over a running 7-day average, calculated as the sum of all daily discharges measured during a running 7-day period divided by the number of daily discharges measured during that 7-day period.

17. Mass based effluent limitations for the Unit 1 Sewage Treatment Plant were calculated based on a discharge flow rate of 0.1 mgd.

18. Mass based effluent limitations for the Mesa Complex Sewage Treatment Plant were calculated based on a discharge flow rate of 0.045 mgd.

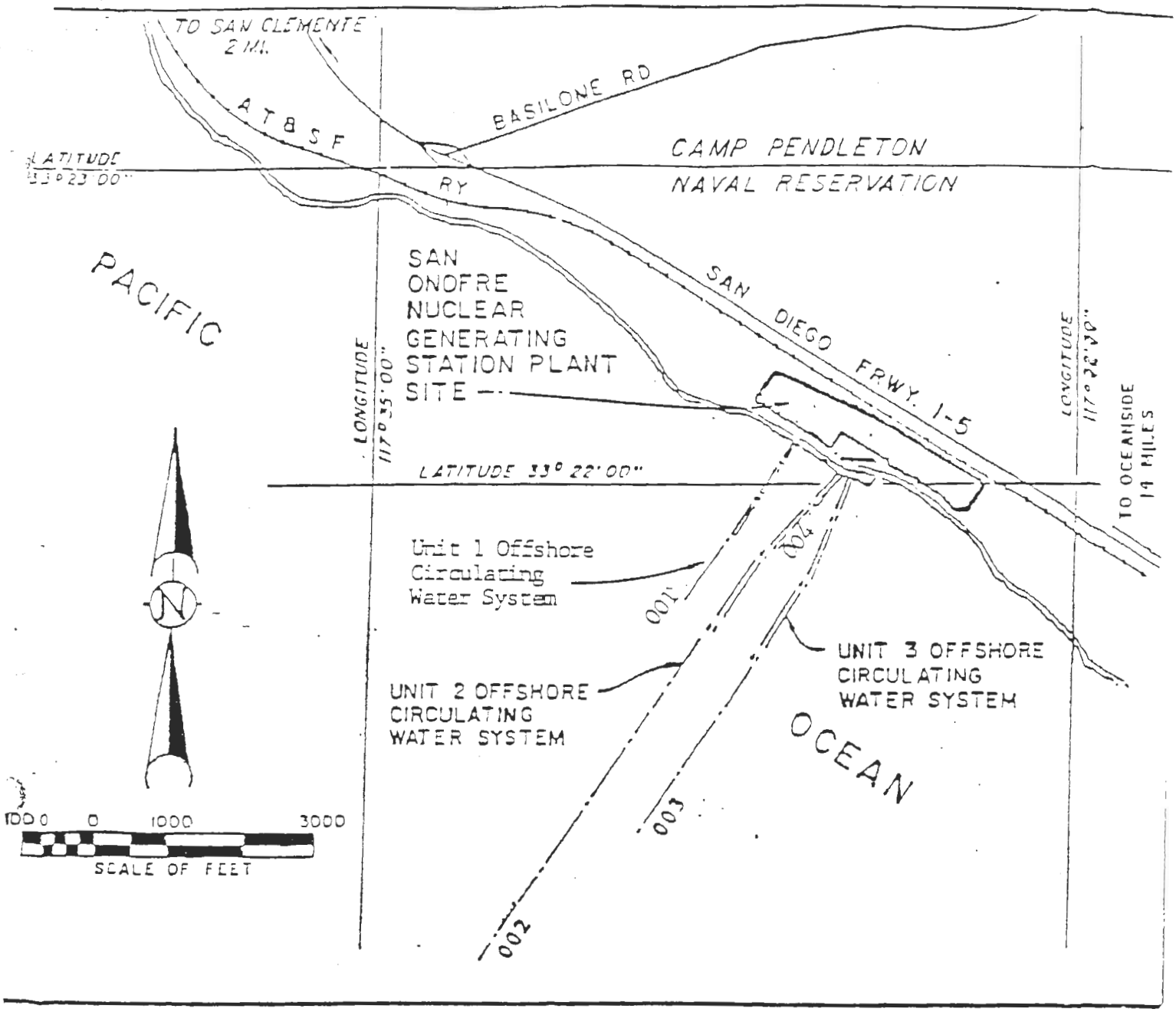
19. Heat Discharge Specifications reflect operating conditions approved by the State Board in

Resolution No. 80-95. The Resolution required the incorporation of these operating conditions into the Waste Discharge Requirements for SONGS Unit 2.

20. 40 CFR Part 125.91(a)(3) defines an existing facility, for the purposes of 316(b) Cooling Water Intake Structure regulations, as a facility that, as part of its primary activity, "both generates and transmits electric power…". Because Unit 1 ceased generation of electric power in 1992, it is not subject to new regulations concerning the minimization of adverse impacts associated with cooling water withdrawals. Unit 2, as an active steam electric generation facility, is subject to the new regulations.

ATTACHMENT A – SONGS LOCATION MAP AND FACILITY DIAGRAM

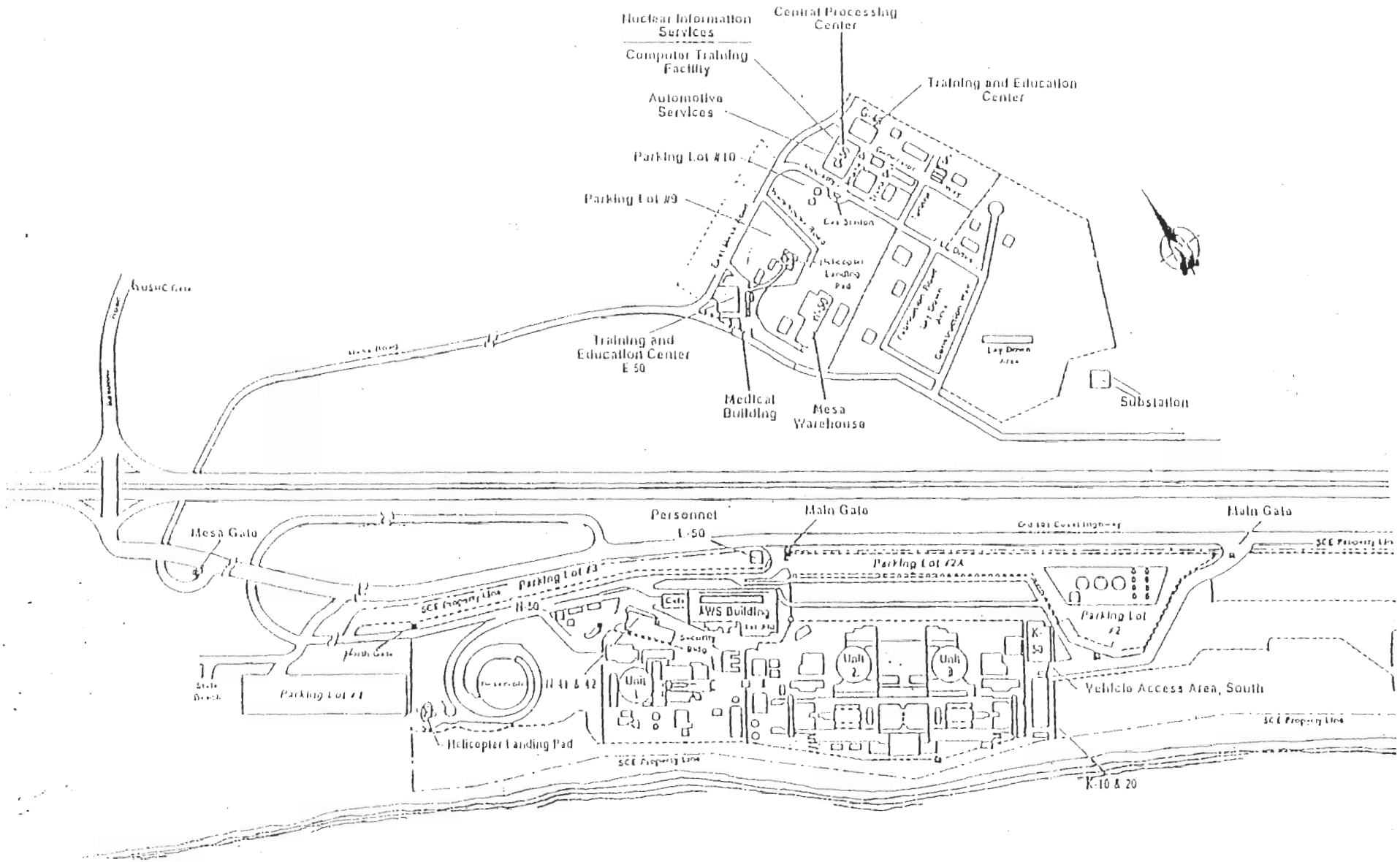
NPDES NO. CA0108073
ORDER NO. R9-2005-0005

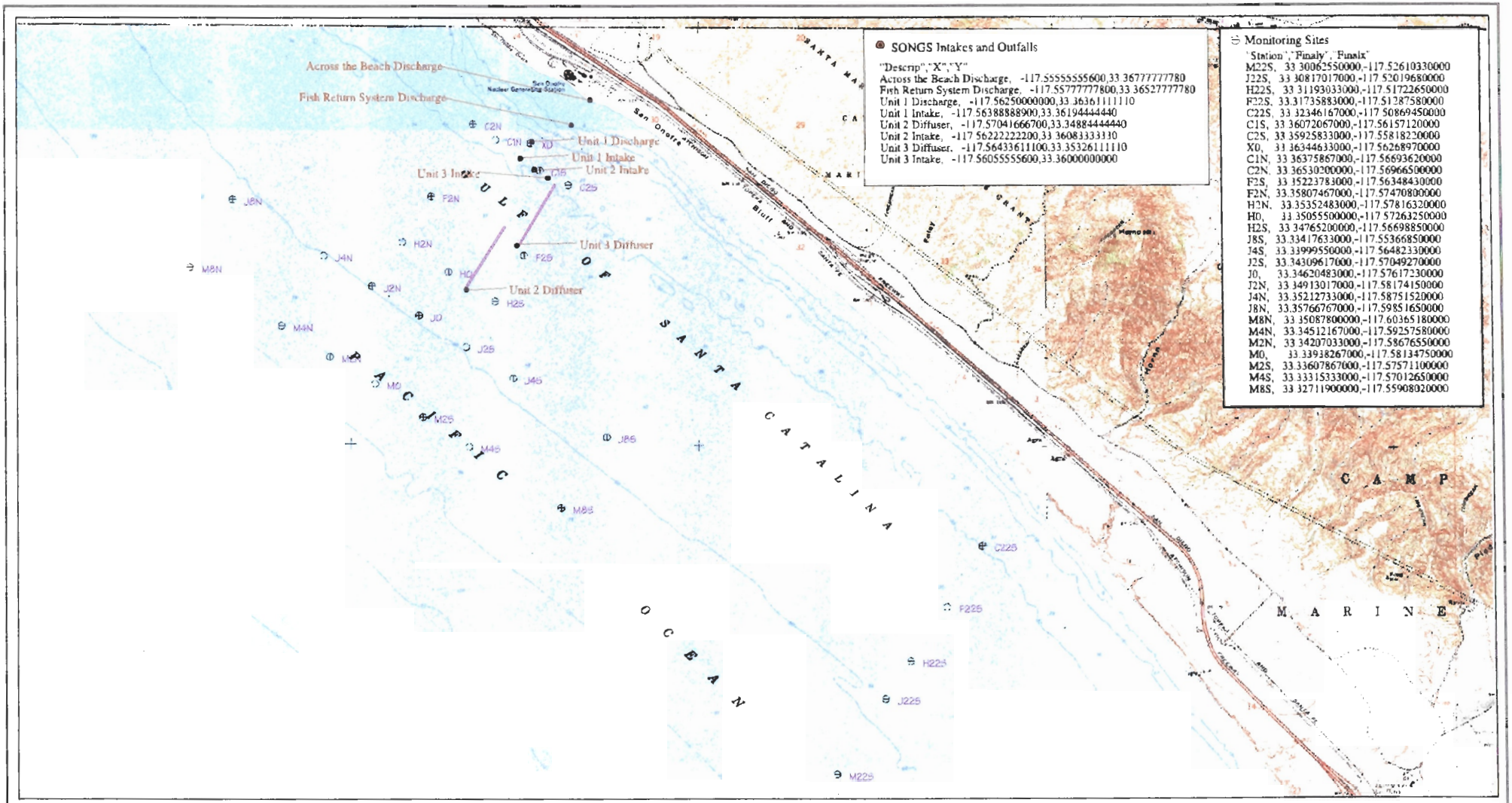


"LOCATION MAP"
Based on U.S.G.S. Quad Map San Onofre Bluff, Calif.
San Diego County, California

Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATION SITE





Fixed Offshore and Intake/Discharge Locations, SONGS

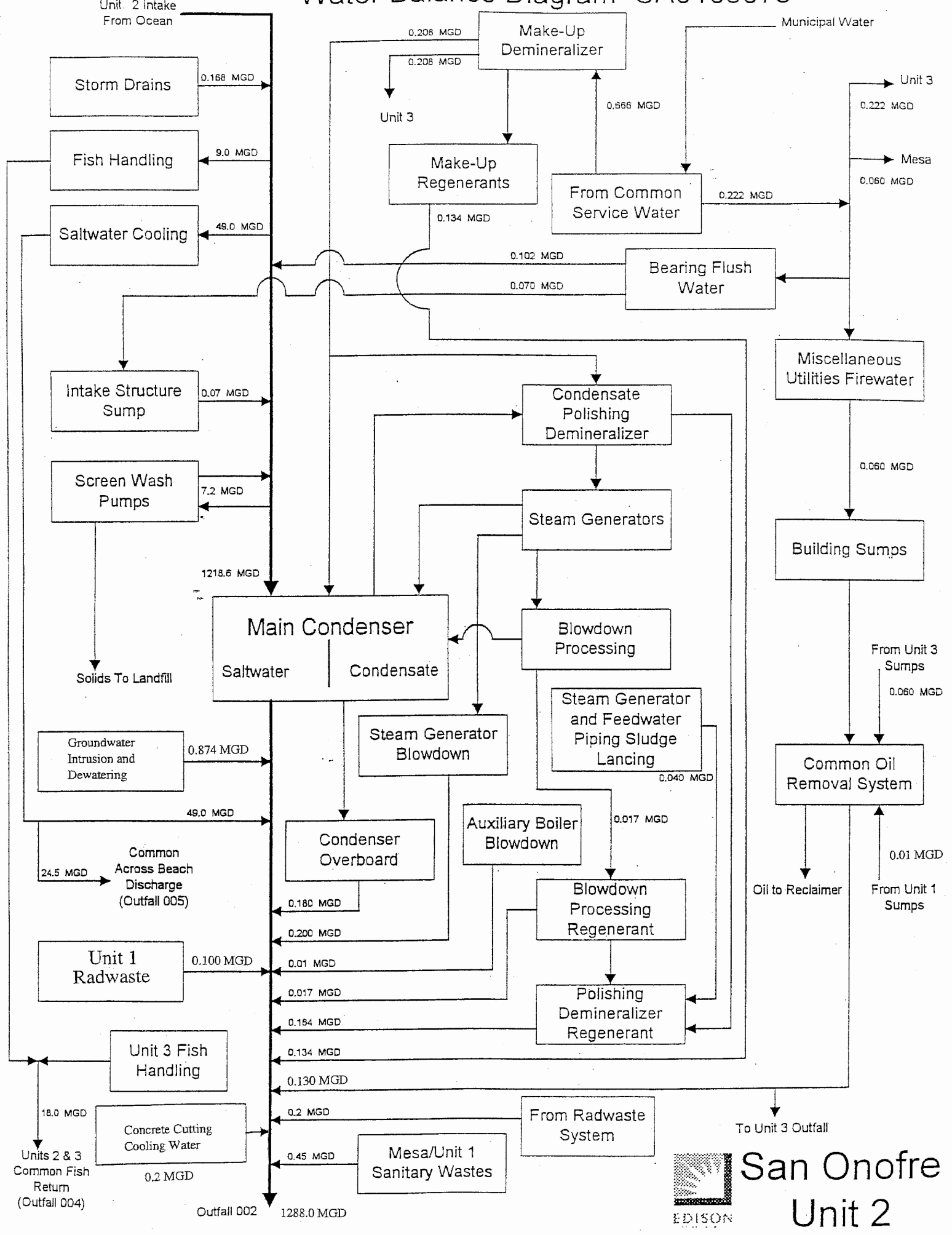
Created For D. Kay
Created By J. Schaefle
Project # gel/50404/04
Date 04/12/05

SOUTHERN CALIFORNIA EDISON

ATTACHMENT B – SONGS UNIT 2 WASTEWATER FLOW SCHEMATIC

NPDES NO. CA0108073
ORDER NO. R9-2005-0005

Water Balance Diagram CA0108073



San Onofre Unit 2

ATTACHMENT C – STATE AND FEDERAL STANDARD PROVISIONS

NPDES NO. CA0108073
ORDER NO. R9-2005-0005

A. Standard Provisions – Permit Compliance

1. Duty to Comply

a. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application. [40 CFR 122.41(a)]

b. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement. [*40 CFR 122.41(a)(1)*]

2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. [*40 CFR 122.41(c)*]

3. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. [*40 CFR 122.41(d)*]

4. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. [*40 CFR 122.41(e)*]

5. Property Rights

a. This Order does not convey any property rights of any sort or any exclusive privileges. [*40 CFR 122.41(g)*]

b. No discharge of waste into the waters of the State, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights. [*CWC 13263(g)*]

c. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations. [*40 CFR 122.5(c)*]

6. Inspection and Entry

The Discharger shall allow the Regional Board, the State Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [*40 CFR 122.41(i)*] [*CWC 13383(c)*]:

a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [*40 CFR 122.41(i)(1)*];

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*40 CFR 122.41(i)(2)*];

c. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*40 CFR 122.41(i)(3)*];

d. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the Clean Water Act or the Porter-Cologne Water Quality Control Act, any substances or parameters at any location. [*40 CFR 122.41(i)(4)*]

7. Bypass

a. Definitions

(1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. [*40 CFR 122.41(m)(1)(i)*]

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in

the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. [*40 CFR 122.41(m)(1)(ii)*]

b. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance, A.7.c. and A.7.e, below [*40 CFR 122.41(m)(2)*]

c. Prohibition of bypass – Bypass is prohibited, and the Regional Board may take enforcement action against a Discharger for bypass, unless [*40 CFR 122.41(m)(4)(i)*]:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; [*40 CFR 122.41(m)(4)(A)*];

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; [*40 CFR 122.41(m)(4)(B)*]; and

(3) The Discharger submitted notice to the Regional Board as required under Federal Standard Provision, A.7.e, below. [*40 CFR 122.41(m)(4)(C)*]

d. The Regional Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance, A.7.c., above. [*40 CFR 122.41(m)(4)(ii)*]

e. Notice

(1) Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. [*40 CFR 122.41(m)(3)(i)*]

(2) Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Federal Standard Provisions – Reporting, E.5, below. [*40 CFR 122.41(m)(3)(ii)*]

8. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment

facilities, lack of preventive maintenance, or careless or improper operation. [*40 CFR 122.41(n)(1)*]

a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 10.b of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. [*40 CFR 122.41(n)(2)*]

b. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [*40 CFR 122.41(n)(3)*]:

(1) An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR 122.41(n)(3)(i)*];

(2) The permitted facility was, at the time, being properly operated [*40 CFR 122.41(n)(3)(i)*];

(3) The Discharger submitted notice of the upset as required in Standard Provisions – Reporting, E.5.b(2). [*40 CFR 122.41(n)(3)(iii)*]; and

(4) The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance, A.3, above. [*40 CFR 122.41(n)(3)(iv)*].

c. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*40 CFR 122.41(n)(4)*].

B. Standard Provisions – Permit Action

1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. [*40 CFR 122.41(f)*]

2. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. [*40 CFR 122.41(b)*]

3. Transfers

This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the Clean Water Act and the Porter-Cologne Water Quality Control Act. [*40 CFR 122.41(l)(3)* and [*40 CFR 122.61*]

C. Standard Provisions – Monitoring

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [*40 CFR 122.41(j)(1)*]

2. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the-case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order. [*40 CFR 122.41(j)(4)*] [*40 CFR 122.44(i)(1)(iv)*]

D. Standard Provisions – Records

1. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Board at any time. [*40 CFR 122.41(j)(2)*]

2. Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements [*40 CFR 122.41(j)(3)(i)*];

b. The individual(s) who performed the sampling or measurements [*40 CFR 122.41(j)(3)(ii)*];

c. The date(s) analyses were performed [*40 CFR 122.41(j)(3)(iii)*];

d. The individual(s) who performed the analyses [*40 CFR 122.41(j)(3)(iv)*];

e. The analytical techniques or methods used [*40 CFR 122.41(j)(3)(v)*]; and

f. The results of such analyses [*40 CFR 122.41(j)(3)(vi)*]

3. Claims of confidentiality for the following information will be denied [*40 CFR 122.7(b)*]:

a. The name and address of any permit applicant or Discharger [*40 CFR 122.7(b)(1)*];

b. Permit applications and attachments, permits and effluent data [*40 CFR 122.7(b)(2)*].

E. Standard Provisions – Reporting

1. Duty to Provide Information

The Discharger shall furnish to the Regional Board, the State Board, or U.S. EPA within a reasonable time, any information which the Regional Board, the State Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Board, the State Board, or U.S. EPA copies of records required to be kept by this Order. [*40 CFR 122.41(h)*] [*CWC 13267*]

2. Signatory and Certification Requirements

a. All applications, reports, or information submitted to the Regional Board, the State Board, and/or U.S. EPA shall be signed and certified in accordance with paragraph (b) and (c) of this provision. [*40 CFR 122.41(k)*]

b. All permit applications shall be signed as follows:

(1) For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. [*40 CFR 122.22(a)(1)*]

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; [*40 CFR 122.22(a)(2)*] or

(3) For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a

principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). [*40 CFR 122.22(a)(3)*]

c. All reports required by this Order and other information requested by the Regional Board, the State Board, or U.S. EPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (b) of this provision [*40 CFR 122.22(b)(1)*];

(2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position); [*40 CFR 122.22(b)(2)*] and,

(3) The written authorization is submitted to the Regional Board, the State Board, or U.S. EPA. [*40 CFR 122.22(b)(3)*]

d. If an authorization under paragraph (c) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (c) of this provision must be submitted to the Regional Board, the State Board or U.S. EPA prior to or together with any reports, information, or applications, to be signed by an authorized representative. [40 CFR 122.22(c)]

e. Any person signing a document under paragraph (b) or (c) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." [*40 CFR 122.22(d)*]

3. Monitoring Reports

a. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment D) of this Order. [*40 CFR 122.41(l)(4)*]

b. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Board or the State Board for reporting results of monitoring of sludge use or disposal practices. [*40 CFR 122.41(l)(4)(i)*]

c. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified in 40 CFR part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board. [*40 CFR 122.41(l)(4)(ii)*]

d. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. [*40 CFR 122.41(l)(4)(iii)*]

4. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each schedule date. [*40 CFR 122.41(l)(5)*]

5. Twenty-four Hour Reporting

a. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [*40 CFR 122.41(l)(6)(i)*]

b. The following shall be included as information that must be reported within 24 hours under this paragraph [*40 CFR 122.41(l)(6)(ii)*]:

(1) Any unanticipated bypass that exceeds any effluent limitation in this Order. [*40 CFR 122.41(l)(6)(ii)(A)*]

(2) Any upset that exceeds any effluent limitation in this Order. [*40 CFR 122.41(l)(6)(ii)(B)*]

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours. [*40 CFR 122.41(l)(6)(ii)(C)*]

c. The Regional Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. [*40 CFR 122.41(l)(6)(iii)*]

6. Planned Changes

The Discharger shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [*40 CFR 122.41(l)(1)*]:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b). [*40 CFR 122.41(l)(1)(i)*] or;

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Standard Provisions – Additional Provisions, G.1.a). [*40 CFR 122.41(l)(1)(ii)*] or;

c. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. [*40 CFR 122.41(l)(1)(iii)*]

7. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Board or the State Board of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. [*40 CFR 122.41(l)(2)*]

8. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting, E.3, E.4, and E.5, at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision, E.5. [*40 CFR 122.41(l)(7)*]

9. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Board, the State Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. [*40 CFR 122.41(l)(8)*]

F. Standard Provisions – Enforcement

1. The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions. [*40 CFR 122.41(a)(2)*] [*CWC Sections 13385 and 13387*]

2. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day

during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. [*40 CFR 122.41(a)(3)*]

3. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. [*40 CFR 122.41(j)(5)*].

4. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both. [*40 CFR 122.41(k)(2)*]

G. Standard Provisions – Additional Provision (Notification Levels)

1. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Board as soon as they know or have reason to believe [*40 CFR 122.42(a)*]:

a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*40 CFR 122.42(a)(1)*]:

(1) 100 micrograms per liter (µg/l) [*40 CFR 122.42(a)(1)(i)*];

(2) 200 µg/l for acrolein and acrylonitrile; 500 µg/l for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/l) for antimony [*40 CFR 122.42(a)(1)(ii)*];

(3) Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR 122.42(a)(1)(iii)*]; or

(4) The level established by the Board in accordance with 40 CFR 122.44(f). [*40 CFR 122.42(a)(1)(iv)*]

b. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*40 CFR 122.42(a)(2)*]:

(1) 500 micrograms per liter (µg/l) [*40 CFR 122.42(a)(2)(i)*];

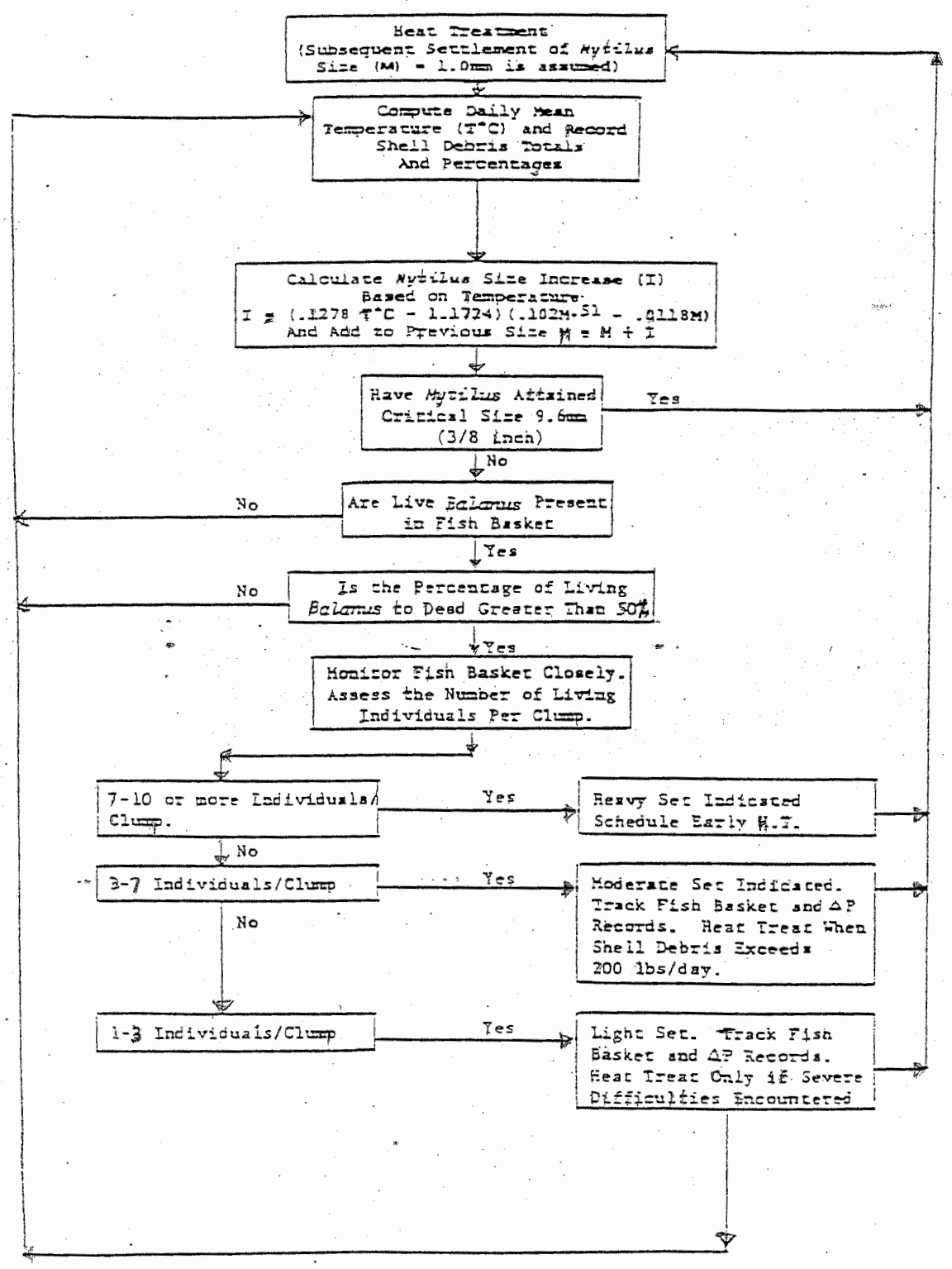
(2) 1 milligram per liter (mg/l) for antimony [*40 CFR 122.42(a)(2)(ii)*];

(3) Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR 122.42(a)(2)(iii)*]; or

(4) The level established by the Board in accordance with 40 CFR 122.44(f). [40 CFR 122.42(a)(2)(iv)]

ATTACHMENT F – SONGS HEAT TREATMENT DECISION CURVE

NPDES NO. CA0108073
ORDER NO. R9-2005-0005



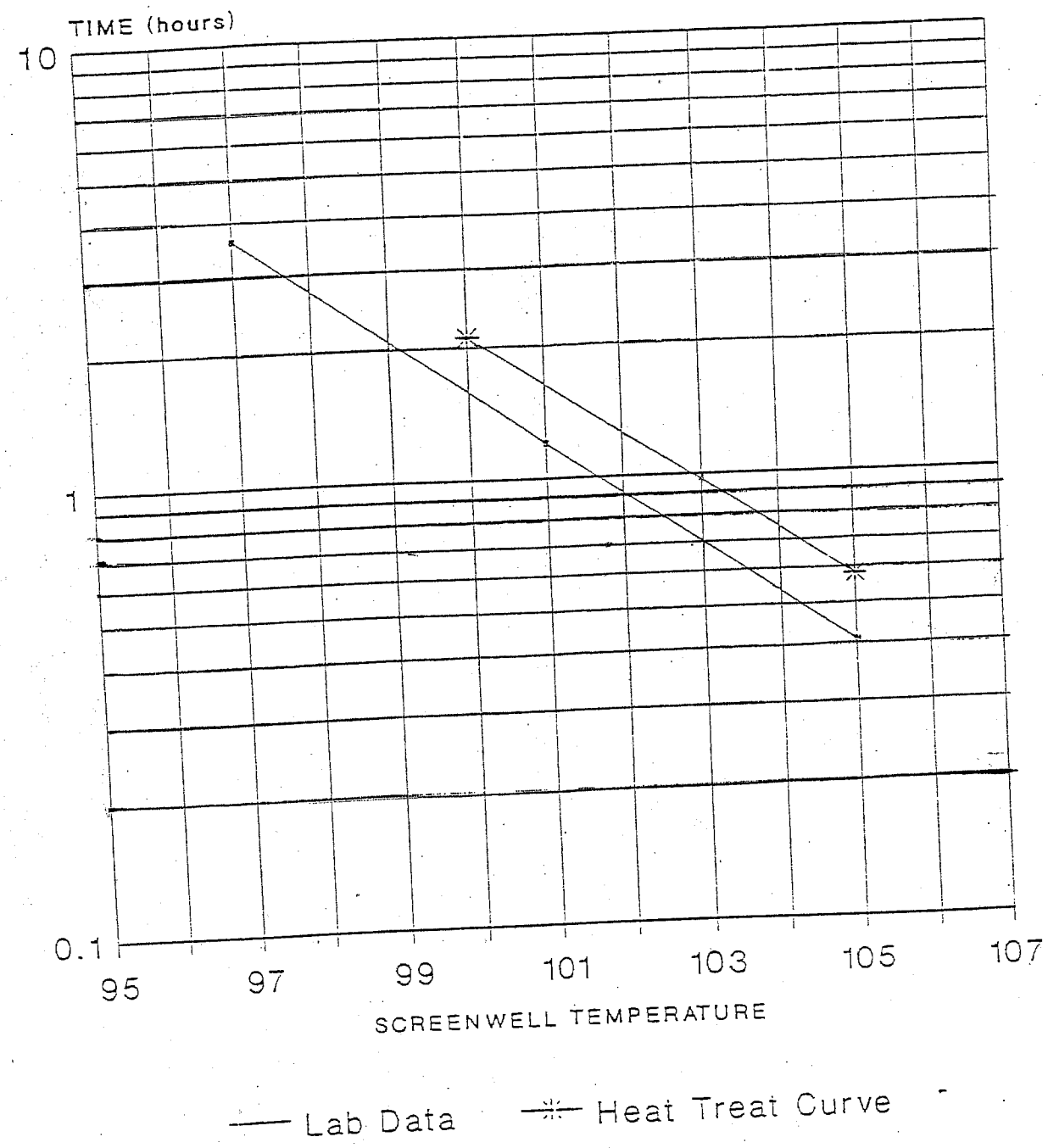
Daily heat treatment decision flow chart for San Onofre Units 2 and 3

ATTACHMENT G – TIME-TEMPERATURE MORTALITY CURVE FOR THE BAY MUSSEL

NPDES NO. CA0108073
ORDER NO. R9-2005-0005

TIME-TEMPERATURE MORTALITY CURVE

Bay Mussel (Mytilus Edulis)



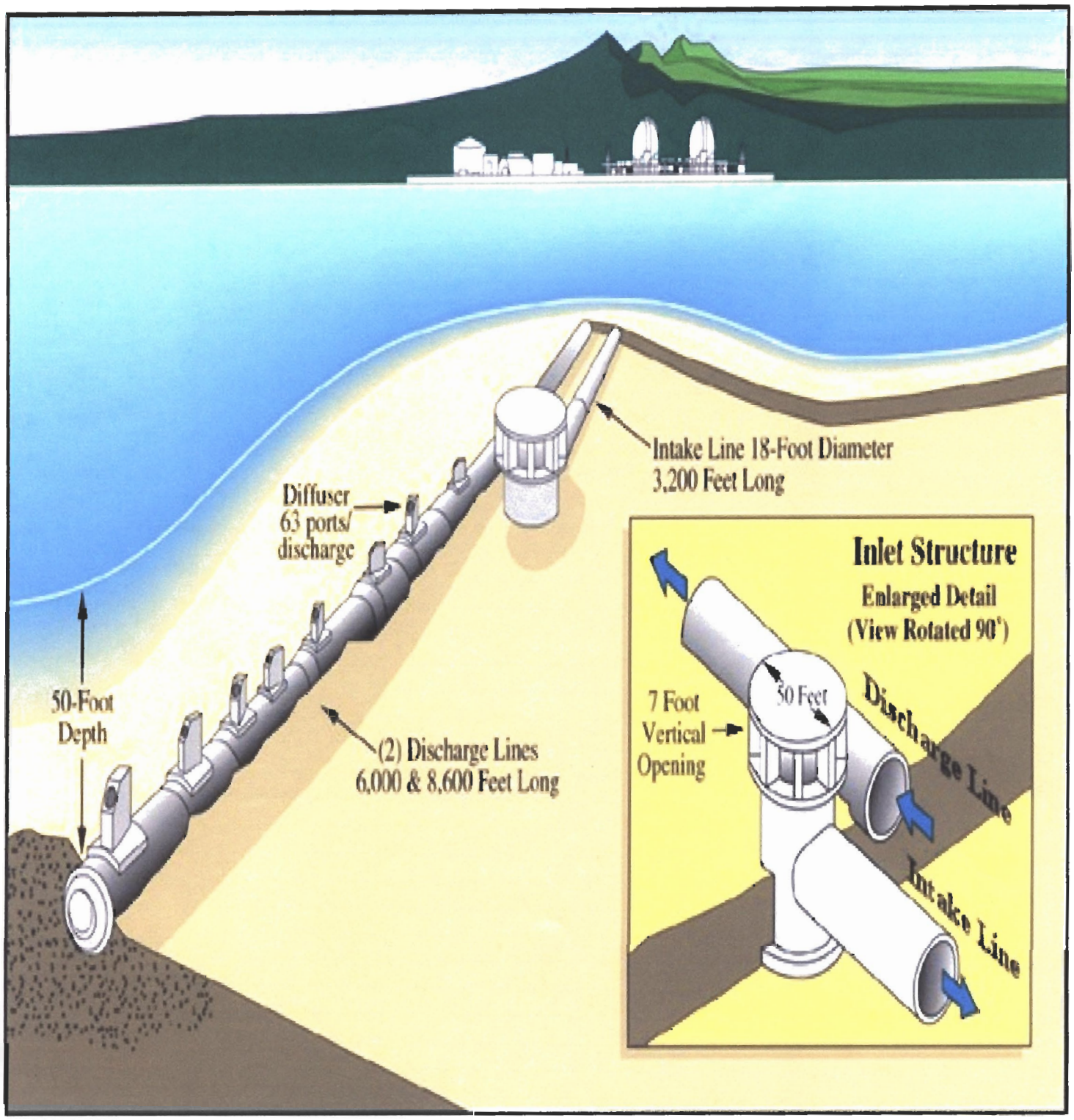
ATTACHMENT H

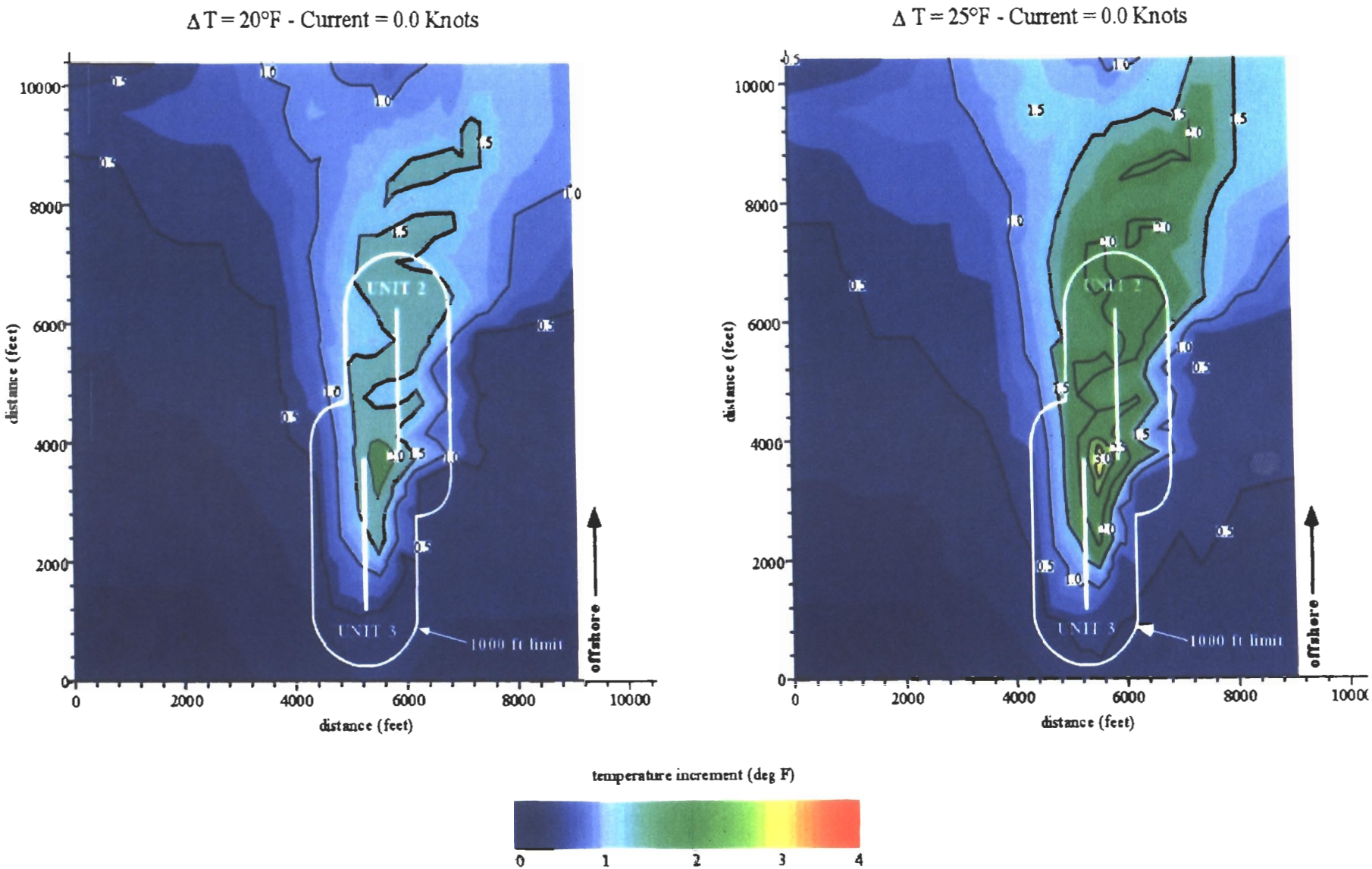
NPDES NO. CA0108073
ORDER NO. R9-2005-0005

1. Schematic of SONGS Diffuser System and Intake Velocity Cap.

2. Graphical Representation Showing Effectiveness of Unit 2 and 3 Thermal Diffusers in Complying with Receiving Water Temperature Objectives of the Thermal Plan (at Delta T values of 20 and 25 degrees F).

ATTACHMENT H-1: SCHEMATIC OF SONGS DIFFUSER SYSTEM AND INTAKE VELOCITY CAP



Note: The above schematic is not drawn to scale. The nearest shoreward discharge jet nozzle of the Unit 3 diffuser is located approximately 990 feet and 330 feet from the Unit 2 and 3 intakes respectively (in the lateral direction). The nearest shoreward discharge jet nozzle of the Unit 2 diffuser is located a very large distance (approximately 2,700 feet) away from either of the two intakes (in the longitudinal direction).

ATTACHMENT H-2: GRAPHICAL REPRESENTATION SHOWING EFFECTIVENESS OF UNIT 2 AND 3 THERMAL DIFFUSERS (AT A DELTA T OF 20 AND 25 DEGREES F)