

STATE OF CALIFORNIA  
THE RESOURCES AGENCY

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

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RESOLUTION 69 - R3

A RESOLUTION PRESCRIBING REQUIREMENTS FOR THE DISCHARGE  
OF COOLING WATERS FROM THE SAN DIEGO GAS & ELECTRIC COMPANY  
SOUTH BAY POWER PLANT INTO SAN DIEGO BAY

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WHEREAS, IN COMPLIANCE WITH THE PROVISIONS OF SECTION 13054 OF THE WATER CODE OF THE STATE OF CALIFORNIA, MR. C. M. LAFFOON, VICE PRESIDENT, DID, ON AUGUST 30, 1968, SUBMIT IN BEHALF OF THE SAN DIEGO GAS AND ELECTRIC COMPANY A REPORT ON WASTE DISCHARGE WHEREIN IS PROPOSED A DISCHARGE OF 424,500 GALLONS PER MINUTE OF COOLING WATER INTO SAN DIEGO BAY.

WHEREAS THIS REGIONAL BOARD HAS CAUSED THE FOLLOWING INVESTIGATION WITH RESPECT TO THE AFORESAID PROPOSAL TO BE MADE:

1. FIELD INSPECTIONS OF THE PROPOSED SITE AND ADJACENT AND DOWNSTREAM AREAS WERE MADE BY MEMBERS OF THE STAFF OF THIS BOARD.
2. COMMENTS AND RECOMMENDATIONS WERE REQUESTED FROM ALL KNOWN INTERESTED AGENCIES AND THE FOLLOWING WERE RECEIVED AND REVIEWED:
  - (A) MEMORANDUM FROM THE STATE DEPARTMENT OF PUBLIC HEALTH, BUREAU OF SANITARY ENGINEERING DATED OCTOBER 28, 1968;
  - (B) LETTER FROM THE SAN DIEGO COUNTY DEPARTMENT OF PUBLIC HEALTH DATED NOVEMBER 4, 1968;
  - (C) MEMORANDUM FROM THE STATE DEPARTMENT OF WATER RESOURCES DATED NOVEMBER 4, 1968; AND
  - (D) MEMORANDUM FROM THE STATE DEPARTMENT OF FISH AND GAME DATED NOVEMBER 6, 1968.
3. THE FOLLOWING WERE REVIEWED BY STAFF INSOFAR AS THEY PERTAINED TO THE PROPOSED DISCHARGE:
  - (A) RESOLUTION 66-22 OF THIS REGIONAL BOARD, "A RESOLUTION SETTING FORTH IN DETAIL WATER QUALITY CONTROL POLICY FOR SAN DIEGO BAY."

- (B) "RECOMMENDATIONS ON THERMAL OBJECTIVES FOR WATER QUALITY CONTROL POLICIES ON THE INTERSTATE WATERS OF CALIFORNIA, A REPORT TO THE STATE WATER RESOURCES CONTROL BOARD." STATE DEPARTMENT OF FISH AND GAME, AUGUST 1968.
- (C) REGIONAL BOARD STAFF SURVEILLANCE RECORDS FOR SAN DIEGO BAY.
- (D) INFORMATION SUBMITTED IN PAST YEARS BY THE SAN DIEGO GAS & ELECTRIC COMPANY.
- (E) "WATER QUALITY CRITERIA", 2ND EDITION, STATE WATER QUALITY CONTROL BOARD.
- (F) MARINE ORGANISMS OF SOUTH SAN DIEGO BAY AND THE ECOLOGICAL EFFECTS OF POWER STATION COOLING WATER DISCHARGE, PREPARED FOR SAN DIEGO GAS & ELECTRIC COMPANY BY ENVIRONMENTAL ENGINEERING LABORATORY, DECEMBER 1968.
- (G) A STUDY OF THE DISTRIBUTION OF HEAT ADDITIONS TO SOUTH SAN DIEGO BAY, CALIFORNIA, PREPARED FOR SAN DIEGO GAS & ELECTRIC COMPANY BY MARINE ADVISORS, DECEMBER 1968.

WHEREAS, ON JANUARY 13, 1968, TENTATIVE WASTE DISCHARGE REQUIREMENTS WERE SUBMITTED TO THE SAN DIEGO GAS & ELECTRIC COMPANY WITH A LETTER STATING THAT OBJECTIONS THERETO WOULD BE CONSIDERED BY THE BOARD IF SUBMITTED AT OR BEFORE THE TIME OF THIS MEETING; AND

WHEREAS, BASED UPON THE FOREGOING, THE BOARD FINDS THAT:

1. THE SAN DIEGO GAS AND ELECTRIC COMPANY'S SOUTH BAY POWER PLANT IS LOCATED ON THE SHORELINE OF SAN DIEGO BAY ADJACENT TO THE NORTH SIDE OF "L" STREET, PROLONGED, IN THE CITY OF CHULA VISTA.

2. AT THE PRESENT TIME, THE SOUTH BAY POWER PLANT HAS THREE UNITS IN OPERATION WHICH HAVE A REPORTED COMBINED ELECTRICAL GENERATING CAPACITY OF APPROXIMATELY 530,000 KILOWATTS (KW).

3. BAY WATER IS USED FOR COOLING PURPOSES THROUGHOUT THE PLANT AT THE PRESENT RATE OF 274,500 GALLONS PER MINUTE (GPM).

4. THE TEMPERATURE OF THE INCOMING BAY WATER IS RAISED AN AVERAGE OF 12.5 DEGREES FAHRENHEIT (°F) IN THE PLANT PRIOR TO BEING DISCHARGED TO THE BAY. DURING PEAK OPERATING CONDITIONS DISCHARGE TEMPERATURE MAY BE 18.5°F HIGHER THAN THE INCOMING COOLING WATER.

5. A FOURTH GENERATING UNIT WITH A REPORTED CAPACITY OF 230,000 KW IS BEING DESIGNED AND IS EXPECTED TO BE OPERATIONAL BY 1971.

6. USAGE OF BAY WATER FOR COOLING PURPOSES IS EXPECTED TO INCREASE TO APPROXIMATELY 425,000 GPM WHEN UNIT NO. 4 IS PUT INTO OPERATION. THE RISE IN TEMPERATURE OF THE COOLING WATER IS EXPECTED TO REMAIN THE SAME.

7. BOILER BLOWDOWN CONTAINING RELATIVELY SMALL CONCENTRATIONS OF WATER TREATMENT CHEMICALS WILL BE MIXED WITH THE COOLING WATER RETURNED TO THE BAY. THE TOTAL QUANTITY OF PHOSPHATE DISCHARGED TO THE BAY FROM THE OPERATION WILL BE LESS THAN 100 POUNDS PER MONTH ACCORDING TO INFORMATION SUBMITTED WITH THE REPORT ON WASTE DISCHARGE.

8. THE COOLING WATER INTAKE AND DISCHARGE AREAS ARE SEPARATED BY A DIKE WHICH EXTENDS APPROXIMATELY 3600 FEET ALMOST DUE WEST INTO THE BAY FROM THE FOOT OF "L" STREET PROLONGED. THE COOLING WATER INTAKE IS LOCATED NORTH OF THE DIKE AND THE DISCHARGE IS MADE SOUTH OF THE DIKE.

9. THE PURPOSE OF THE DIKE, WHICH WAS CONSTRUCTED BY THE SAN DIEGO GAS & ELECTRIC COMPANY WITHIN THEIR LEASE BOUNDARY, WAS TO PROVIDE A COOLING CHANNEL TO REDUCE THE TEMPERATURE OF THE DISCHARGE SO THAT THE TEMPERATURE OF THE INTAKE WATER WOULD NOT BE RAISED SIGNIFICANTLY RESULTING IN A LOSS OF COOLING EFFICIENCY.

10. ACID CLEANING OF THE BOILERS IS PERFORMED APPROXIMATELY EVERY THREE YEARS, BUT EFFLUENTS FROM THIS OPERATION ARE EITHER HAULED FROM THE SITE OR ARE DRAINED TO AN EVAPORATION BASIN LOCATED AT THE SITE.

11. APPROXIMATELY 100 POUNDS PER DAY OF FERROUS SULFATE IS USED FOR CORROSION CONTROL PURPOSES.

12. ALL DOMESTIC WASTES ARE DISCHARGED INTO THE COMMUNITY SEWER SYSTEM.

13. THE DISCHARGE IS MADE INTO ZONE 11 OF SAN DIEGO BAY, AS DEFINED IN RESOLUTION 66-22 OF THIS REGIONAL BOARD.

14. RESOLUTION 66-22, A RESOLUTION SETTING FORTH IN DETAIL WATER QUALITY CONTROL POLICY FOR SAN DIEGO BAY, PROTECTS ZONE 11 OF SAN DIEGO BAY FOR USES INVOLVING BODY CONTACT WITH WATER, SUCH AS SWIMMING, WATER SKIING, DIVING, BOATING, ETC.; USES WHICH RESULT IN FOOD PRODUCT OR ADDITIVE, SUCH AS SALT AND CHEMICAL PRODUCTION, SALINE WATER CONVERSION, ETC.; USES RELATING TO FISH AND WILDLIFE PROPAGATION AND SUSTENANCE; INDUSTRIAL USES; MARITIME USES; AND USES INVOLVING ESTHETIC CONSIDERATIONS.

15. STAFF OF THE SAN DIEGO UNIFIED PORT DISTRICT HAS INDICATED AN INTEREST IN ESTABLISHING A BIRD AND WILDLIFE REFUGE IN SOUTH SAN DIEGO BAY IN THE VICINITY OF THE SOUTH BAY POWER PLANT. THE REFUGE BEING TENTATIVELY CONSIDERED WOULD BE CREATED BY FILLING 100 ACRES, MORE OR LESS, AND ESTABLISHING WETLAND CONDITIONS SUITABLE FOR BIRD LIFE; NOW THEREFORE BE IT

RESOLVED, THAT IN ORDER TO PROTECT SAN DIEGO BAY FOR THE BENEFICIAL USES ENUNCIATED IN RESOLUTION 66-22 AND SUMMARIZED IN FINDING No. 14 ABOVE, AND TO PREVENT NUISANCES AS DEFINED IN SECTION 13005 OF THE WATER CODE OF THE STATE OF CALIFORNIA, THIS REGIONAL WATER QUALITY CONTROL BOARD, IN ACCORDANCE WITH THE AUTHORITY GRANTED BY DIVISION 7 OF SAID CODE, HEREBY PRESCRIBES THE FOLLOWING REQUIREMENTS WITH REGARD TO THE DISCHARGE OF APPROXIMATELY 425,000 GALLONS PER MINUTE OF COOLING WATER (INCLUDING BOILER BLOWDOWN) IN ZONE 11 OF SAN DIEGO BAY BY THE SAN DIEGO GAS & ELECTRIC COMPANY:

1. THE DISCHARGE SHALL NOT IMPAIR THE BENEFICIAL USES OF SAN DIEGO BAY AS ENUNCIATED IN RESOLUTION 66-22.
2. ALL INDUSTRIAL WASTES, OTHER THAN COOLING WATER AND BOILER BLOWDOWN, ARE TO BE EXCLUDED FROM THE DISCHARGE.
3. THE DISCHARGE OF DOMESTIC WASTES, EITHER TREATED OR UNTREATED, INTO SAN DIEGO BAY IS HEREBY PROHIBITED.
4. THE DISCHARGE SHALL NOT REDUCE THE DISSOLVED OXYGEN CONCENTRATION BELOW 6.0 MG/L IN ZONE 11 OF SAN DIEGO BAY EXCLUSIVE OF THE COOLING WATER DISCHARGE CHANNEL.
5. THE CONCENTRATION OF OIL AND GREASE IN THE DISCHARGE SHALL NOT EXCEED 0.01 MG/L INCREASE OVER THAT OF THE INCOMING COOLING WATER.
6. THE PH OF THE DISCHARGE SHALL NOT BE LESS THAN 7.5 NOR MORE THAN 8.5.
7. THE TOTAL AMOUNT OF PHOSPHATE ADDED TO THE DISCHARGE SHALL NOT EXCEED 100 POUNDS PER MONTH, AND THERE SHALL BE NO INCREASE IN THE TOTAL NITROGEN CONTENT.
8. THERE SHALL BE NO MEASURABLE INCREASE IN THE SUSPENDED SOLIDS CONCENTRATION IN THE DISCHARGE AS COMPARED TO THE INCOMING COOLING WATER.
9. TEMPERATURE OF THE DISCHARGE SHALL NOT AVERAGE MORE THAN 12.5°F ABOVE THAT OF THE INCOMING BAY WATER, NOR SHALL IT AT ANY TIME EXCEED 18.5°F ABOVE THAT OF THE INCOMING BAY WATER, PROVIDED THAT IF MARINE BIOTA OF SAN DIEGO BAY ARE ALTERED BY TEMPERATURE CHANGES TO THE EXTENT THAT BENEFICIAL USES ASSOCIATED THEREWITH ARE ADVERSELY AFFECTED, OR BIOTA STIMULATED SO AS TO PRODUCE TURBID, UNSIGHTLY OR MALODOROUS CONDITIONS, TEMPERATURES SHALL BE REDUCED TO LEVELS COMMENSURATE WITH SATISFACTORY CONDITIONS.
10. THE DISCHARGER SHALL SUBMIT TECHNICAL REPORTS CONCERNING THE QUANTITY AND QUALITY OF THE DISCHARGE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATION AND SCHEDULE:

#### SPECIFICATION

MEASUREMENT, SAMPLE COLLECTION AND ANALYSES SHALL BE IN ACCORDANCE WITH "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER"<sup>11</sup>, 12TH EDITION, OR EDITION CURRENT AT THE TIME OF TESTING, WHEREVER APPLICABLE. DETERMINATIONS, WITH THE EXCEPTION OF FIELD ANALYSES, SHALL BE MADE IN A LABORATORY CERTIFIED FOR THE PURPOSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH.

COOLING WATER AND DISCHARGE SAMPLES SHALL BE REPRESENTATIVE COMPOSITE SAMPLES. RESULTS OF ANALYSES SHALL BE SUBMITTED TO THIS REGIONAL BOARD MONTHLY.

SCHEDULE

THE TEMPERATURE OF THE COOLING WATER AND DISCHARGE SHALL BE CONTINUOUSLY MEASURED AND RECORDED AND A COPY OF THE LOG SUBMITTED TO THIS REGIONAL BOARD MONTHLY.

THE COOLING WATER AND DISCHARGE SHALL BE ANALYZED MONTHLY FOR THE FOLLOWING CONSTITUENTS:

GREASE AND OIL	MG/L
TOTAL PHOSPHORUS	"
SUSPENDED SOLIDS, TOTAL AND VOLATILE	"
PH	

A LOG SHALL BE KEPT OF ALL CHEMICALS USED FOR COOLING AND/OR BOILER WATER TREATMENT AND A COPY SHALL BE SUBMITTED MONTHLY TO THIS REGIONAL BOARD.

DISSOLVED OXYGEN CONCENTRATION IN THE DISCHARGE AND INCOMING COOLING WATER SHALL BE DETERMINED AT LEAST WEEKLY.

THE ECOLOGICAL STUDY CONDUCTED IN 1968 BY THE SAN DIEGO GAS & ELECTRIC COMPANY IN SOUTH SAN DIEGO BAY SHALL BE REPEATED DURING THE SECOND YEAR OF OPERATION AT THE INCREASED DISCHARGE RATE FOR THE PURPOSE OF COMPARING CONDITIONS. THE REPEAT STUDY SHALL BE PERFORMED DURING THE SAME MONTHS OF THE YEAR AS THE INITIAL STUDY. THE REPEAT STUDY MAY BE MODIFIED BY THE REGIONAL BOARD UPON THE RECOMMENDATION OF THE DEPARTMENT OF FISH & GAME. AT LEAST TWO COPIES OF THE STUDY REPORT SHALL BE SUBMITTED TO THE REGIONAL BOARD DURING THE MONTH OF JANUARY FOLLOWING THE STUDY.

DURING THE FIRST YEAR OF OPERATION AFTER THE INCREASED DISCHARGE HAS BEEN INITIATED, TEMPERATURE AND DISSOLVED OXYGEN CONCENTRATION SHALL BE MEASURED AT LEAST MONTHLY IN SAN DIEGO BAY AT LEAST AT THE FOLLOWING LOCATIONS AS DETERMINED FROM THE MAP SUBMITTED WITH THE REPORT ON WASTE DISCHARGE:

1. INLET CHANNEL AT INTAKE TO COOLING WATER LINES
2. CENTER OF COOLING CHANNEL OUTLET
3. 1500 FEET DUE WEST OF STATION 2 ABOVE
4. 1500 FEET DUE NORTH OF STATION 2 ABOVE
5. 1500 FEET DUE NORTH OF STATION 3 ABOVE
6. 1500 FEET DUE WEST OF STATION 5 ABOVE
7. 1500 FEET DUE NORTH OF STATION 6 ABOVE
8. 1500 FEET DUE NORTH OF STATION 5 ABOVE
9. 1500 FEET DUE NORTH OF STATION 4 ABOVE
10. 3000 FEET DUE NORTH OF STATION 8 ABOVE

SCHEDULE  
(CONTINUED)

THE TEMPERATURE AND DISSOLVED OXYGEN CONCENTRATION SHALL BE MEASURED AT THE SURFACE, MID-DEPTH, AND WITHIN ONE FOOT OF THE BOTTOM. AIR TEMPERATURE FOR EACH STATION SHALL ALSO BE RECORDED AS WELL AS THE TIME OF THE DAY WHEN THE MEASUREMENTS WERE MADE. MEASUREMENTS SHALL BE MADE ON BOTH AN INCOMING AND OUTGOING TIDAL CYCLE EACH MONTH; AND BE IT FURTHER

RESOLVED, THAT THE DISCHARGER BE NOTIFIED THAT:

1. THE ABOVE PRESCRIBED REQUIREMENTS MAY BE REVISED FROM TIME TO TIME AS CHANGES OR CONDITIONS MAKE NECESSARY SUCH REVISION.
2. SIGNIFICANT CHANGE IN POINT OF DISPOSAL OR CHARACTERISTICS OR VOLUME OF DISCHARGE SHALL BE PROMPTLY REPORTED TO THIS BOARD.
3. THE DISCHARGER SHALL GRANT ADMISSION TO THE PREMISES TO MEMBERS OF THE STAFF OF THIS REGIONAL BOARD AT SUCH TIMES AS MAY BE NECESSARY IN THE CONDUCT OF THEIR DUTIES IN CONNECTION WITH THE WASTE DISCHARGE REQUIREMENTS ESTABLISHED HEREIN.
4. BEFORE SIGNIFICANT PHYSICAL ALTERATIONS OF SOUTH SAN DIEGO BAY ARE MADE, STUDIES SHALL BE MADE TO DETERMINE THE EFFECTS OF SUCH ALTERATIONS ON THE THERMAL DISTRIBUTION OF THE DISCHARGE FROM THE POWER PLANT.
5. SECTION 13001, DIVISION 7 OF THE CALIFORNIA WATER CODE STATES:

"NO PROVISION OF THIS DIVISION OR ANY RULING OF THE STATE WATER RESOURCES CONTROL BOARD OR A REGIONAL WATER QUALITY CONTROL BOARD IS A LIMITATION:

  - (A) ON THE POWER OF A CITY OR COUNTY TO ADOPT AND ENFORCE ADDITIONAL REGULATIONS NOT IN CONFLICT THEREWITH IMPOSING FURTHER CONDITIONS, RESTRICTIONS OR LIMITATIONS WITH RESPECT TO THE DISPOSAL OF SEWAGE OR OTHER WASTE OR ANY OTHER ACTIVITY WHICH MIGHT RESULT IN THE POLLUTION OF WATER.
  - (B) ON THE POWER OF ANY CITY OR COUNTY TO DECLARE, PROHIBIT AND ABATE NUISANCES.
  - (C) ON THE POWER OF A STATE AGENCY IN THE ENFORCEMENT OR ADMINISTRATION OF ANY PROVISION OF LAW WHICH IT IS SPECIFICALLY PERMITTED OR REQUIRED TO ENFORCE OR ADMINISTER.
  - (D) ON THE RIGHT OF ANY PERSON TO MAINTAIN AT ANY TIME ANY APPROPRIATE ACTION FOR RELIEF AGAINST ANY PRIVATE NUISANCE AS DEFINED IN THE CIVIL CODE OR FOR RELIEF AGAINST ANY CONTAMINATION OR POLLUTION."

BE IT FURTHER RESOLVED, THAT A CERTIFIED COPY OF THIS RESOLUTION BE FORWARDED BY MAIL TO THE SAN DIEGO GAS & ELECTRIC COMPANY AND TO ALL KNOWN INTERESTED AGENCIES OR PERSONS WHO MAY HAVE NEED THEREFOR OR WHO MAY REQUEST SAME.

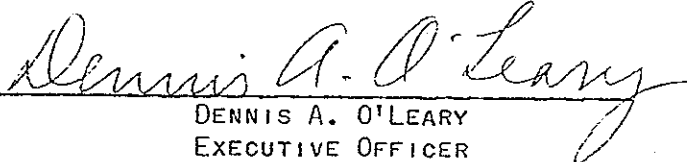
UNANIMOUSLY APPROVED THIS 14TH DAY OF JANUARY, 1969.

/SIGNED/

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J. B. ASKEW, M.D.  
CHAIRMAN

I HEREBY CERTIFY THAT THE ABOVE AND FOREGOING IS A FULL, TRUE AND CORRECT COPY OF RESOLUTION 69-R3 OF THE SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD, PASSED AND ADOPTED BY SAID BOARD ON JANUARY 14, 1969.

  
DENNIS A. O'LEARY  
EXECUTIVE OFFICER