MINUTE ITEM
This Calendar Item No. 76
was approved as Minute Item
No. 76 by the State Lands
Commission by a vote of 3
to 0 at its 9/23/92
meeting.

CALENDAR ITEM

76

A 11

S 7

09/23/92
W 24654
N. Smith
PRC 7660

GENERAL LEASE - RIGHT-OF-WAY USE

APPLICANT:
Rhone-Poulenc Basic Chemical Company
100 Mococo Road
Martinez, California 94553

AREA, TYPE LAND AND LOCATION:
A 1.329-acre parcel of tide and submerged land, Carquinez Straits, just east of Benicia Bridge, City of Martinez, Contra Costa County.

LAND USE:
The construction, installation, operation, and maintenance of a deepwater outfall for treated wastewater, a polyethylene pipeline. The offshore portion of the pipeline is 12 inches in diameter, approximately 750 feet long, with the onshore portion of the pipeline 10 inches in diameter, approximately 2,300 feet long.

TERMS OF PROPOSED PERMIT:
Initial period:
Twenty-five (25) years beginning August 20, 1992.

Surety bond:
$20,000.

Public liability insurance:
Combined single limit coverage of $500,000.

CONSIDERATION:
$3,580 per annum with the State reserving the right to fix a different rental on each fifth anniversary of the permit.

BASIS FOR CONSIDERATION:
Pursuant to 2 Cal. Code Regs. 2003.

APPLICANT STATUS:
Applicant is owner of upland.

PREREQUISITE CONDITIONS, FEES AND EXPENSES:
Filing fee, processing costs, and environmental costs have been received.

STATUTORY AND OTHER REFERENCES:
A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Code Regs.: Title 3, Div. 3; Title 14, Div. 6.

AB 884:
02/03/93

OTHER PERTINENT INFORMATION:
1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Code Regs. 15025), the staff has prepared a Mitigated Project/Proposed Negative Declaration identified as ND 578, State Clearinghouse No. 92013053. Such Proposed Negative Declaration was prepared and circulated for public review pursuant to the provisions of CEQA.

   Based upon the expanded Initial Study, modifications made to the project, the Proposed Negative Declaration, and the comments received in response thereto, there is no substantial evidence that the project will have a significant effect on the environment. [14 Cal. Code Regs. 15074(b)].

2. This activity involves lands identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq. Based upon the staff's consultation with the persons nominating such lands and through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.

3. The purpose of the project is to allow Rhone-Poulenc to comply with requirements of the Regional Water Quality Control Board (RWQCB). Rhone-Poulenc was required to remove its existing outfall from Peyton Slough to avoid any potentially adverse impacts to water quality in the shallow body of water.

4. The effluent to be discharged through the proposed outfall, pursuant to the RWQCB permit, has only one component other than the cooling water from the existing onshore plant, sodium sulfate (a salt) brine. The effect of the brine appeared to increase the salinity of the effluent in the same way as the addition of normal sea salt, sodium chloride, would.

   To ensure that the effluent would not have any adverse impacts on the Bay, an extensive series of acute and chronic toxicity tests were designed as a component of the environmental analysis by biological consultants working with staff of the Commission, the Department of Fish and Game, and the RWQCB. Tests showed the effluent to be non-toxic to all species even at the highest levels of concentrations and non-toxic to all species tested at all ratios when diluted to the 10:1 level the diffuser will produce. Computer models, which simulated discharges from 100,000 to 500,000 gallons per day and all possible ratios of cooling water and PEP effluent, defined the "mixing zone" of the effluent and the waters of the Strait. The output of the outfall is anticipated to be 110,000 gallons per day. Within this "mixing zone", the salinity of the effluent remains at levels non-toxic to all species tested. Beyond the "mixing zone", there is no difference between the salinity of the effluent plume and that of the receiving waters.

   To confirm these results in the long term, the entire toxicity testing program will be required over the first year of operation as a component of the Project's monitoring program.

5. A Mitigation Monitoring Program has been prepared for the proposed project and is attached as Exhibit "C".

APPROVALS OBTAINED:
Regional Water Quality Control Board.

FURTHER APPROVALS REQUIRED:
United States Army Corps of Engineers and San Francisco Bay Conservation and Development Commission.

EXHIBITS:
A. Land Description
B. Location Map
C. Mitigation Monitoring Plan

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A NEGATIVE DECLARATION, EIR ND 578, STATE CLEARINGHOUSE NO. 92013053, WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.

2. ADOPT THE PROPOSED NEGATIVE DECLARATION AND DETERMINE THAT THE PROJECT, AS APPROVED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

3. ADOPT THE MITIGATION MONITORING PROGRAM, ATTACHED AS EXHIBIT C", PREPARED PURSUANT TO THE PROVISIONS OF P.R.C. SECTION 21081.6

4. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370, ET SEQ.

5. AUTHORIZE ISSUANCE TO RHONE-POULENC BASIC CHEMICAL COMPANY OF A 25-YEAR GENERAL LEASE - RIGHT-OF-WAY USE BEGINNING AUGUST 20, 1992; IN CONSIDERATION OF ANNUAL RENT IN THE AMOUNT OF $3,580, WITH THE STATE RESERVING THE RIGHT TO FIX A DIFFERENT RENTAL ON EACH FIFTH ANNIVERSARY OF THE LEASE; PROVISION OF A $20,000 SURETY BOND; PROVISION OF PUBLIC LIABILITY INSURANCE FOR COMBINED SINGLE LIMIT COVERAGE OF $300,000; FOR TREATED WASTEWATER OUTFALL PIPELINE ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

EXHIBIT "A"

W 24654

LAND DESCRIPTION

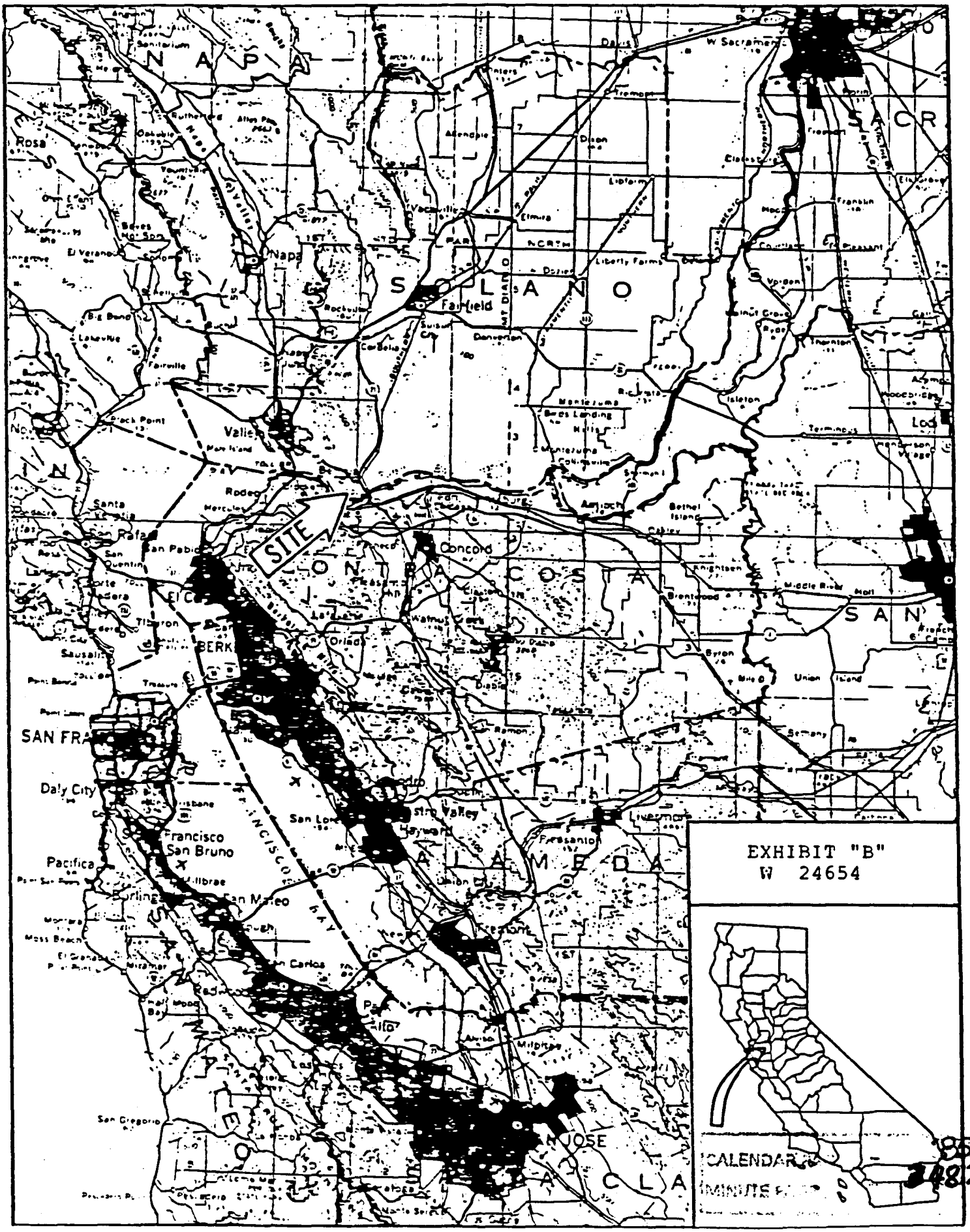
A parcel of tide and submerged land in Carquinez Strait, Contra Costa County, California, more particularly described as follows:

Commencing at a concrete monument with a 2-1/2 inch bronze disc stamped "L.S. 2742" on the easterly property line of Rhone-Poulenc Basic Chemicals Company (formerly Stauffer Chemical Company), said monument shown as Station. 1 on a Record of Survey map recorded in Book 53, Record of Survey Maps, page 49, Contra Costa County Records, State of California; thence N 57°23'44" W, 205.29 feet to the POINT OF BEGINNING; thence N 03°33'00" W, 27.21 feet; thence N 21°59'30" E, 84.59 feet; thence N 14°00'12" E, 103.27 feet; thence N 04°51'34" E, 107.06 feet; thence N 12°45'06" W, 102.35 feet; thence N 17°37' 20" W, 73.79 feet; thence S 72°22'40" W, 64.51 feet; thence N 19°18'27" W, 92.28 feet; thence N 23°57'28" W, 61.71 feet; thence N 43°34'22" W, 104.47 feet; thence N 44°04'48" W, 89.19 feet; thence N 47°14'31" W, 41.45 feet; thence N 55°12'02" W, 29.06 feet; thence N 59°03'03" W 100.84 feet; thence N 60°07'05" W, 100.64 feet; thence N 60°24'33" W, 109.50 feet; thence N 28°11'45" W, 203.09 feet; thence N 37°10'15" W, 104.90 feet; thence N 54°27'15" W, 45.42 feet; thence N 68°40'26" W, 42.44 feet; thence S 89°27'45" W, 113.82 feet; thence S 60°49'59" W, 49.11 feet to a point which forms a 90° angle in the right-of-way line; thence N 29°10'01" W; 120.00 feet to a point of intersection with the line of Mean Lower Low Water (MLLW) along the southerly shore of Carquinez Strait; thence S 60°49'59" W, 26.00 feet; thence N 29°10'01"W, 750.00 feet; thence S 60°49'59" W, 20.00 feet; thence S 29°10'01" E, 870.00 feet to a point which bears S 60°49'59" W a distance of 46.00 feet from the previously described point which formed a 90° angle in the right-of-way line; thence along the previous bearing of S 29°10'01" E, 20.00 feet; thence N 60°49'59" E, 90.00 feet; thence N 89°27'45" E, 104.85 feet; thence S 68°40'26" E, 36.09 feet; thence S 54°27'15" E, 39.89 feet; thence S 37°10'15" E,

100.28 feet; thence S 28°11'45" E, 207.89 feet; thence S 60°24'33" E, 114.89 feet; thence S 60°07'02" E, 100.74 feet; thence S 59°03'03" E, 99.98 feet; thence S 55°12'02" E, 28.23 feet; thence S 47°14'31" E, 35.19 feet; thence S 44°04'48" E 91.65 feet; thence S 43°34'22" E, 101.06 feet; thence S 23°57'28" E, 56.88 feet; thence S 19°18'27" E, 111.33 feet; thence N 72°22'41" E, 63.93 feet; thence S 17°37'20" E, 52.94 feet; thence S 12°45'06" E, 98.40 feet; thence S 04°51'34"W, 102.36 feet; thence S 14°00'12" W, 100.27 feet; thence S 21°59'30" W, 84.59 feet to a point on the easterly property line of Rhone-Poulenc Basic Chemicals Co.; thence along said property line S 03°33'00" E, 20.94 feet to a 2 inch bronze disc in concrete L.S. 4460, said point replacing destroyed Station. 3 as shown on the above-mentioned Record of Survey map; thence along said property line S 57°23'44" E, 23.10 feet to the POINT OF BEGINNING.

END OF DESCRIPTION

PREPARED JUNE, 1992 BY LLB.



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2.5 MONITORING PROGRAM

The following proposed monitoring program was developed in consultation with the Commission, the RWQCB, and the DFG to monitor compliance with water quality requirements established by the RWQCB in the Basin Plan (with revisions) and for the protection of aquatic organisms. The monitoring program would be divided into two elements: an acute toxicity testing program, and a chronic toxicity testing program. The acute program would assess the in-pipe toxicity of the combined effluent (PEP + IWTP) at the 100 percent effluent concentration. Based upon existing requirements, "acute toxicity" is less than 90 percent survival, 50 percent of the time and less than 70 percent survival, 10 percent of the time in standard test organisms in undiluted effluent in a 96-hour static or continuous flow test. The chronic test program would assess the potential for in-stream toxicity at the edge of the zone of dilution (ZID). This test program would use acceptable test organisms, which can provide an estimate of the potential for chronic toxicity from the discharge of the combined effluent. Both the acute and the chronic test programs are described in more detail below.

Acute Testing

The nature of the combined discharge makes the selection of an appropriate test species challenging. The percentage of the PEP effluent in the IWTP will determine the overall total dissolved solids concentration (TDS) of the discharge. The IWTP effluent generally has a TDS, as sodium sulfate, of 1-8 parts-per-thousand (ppt), while the PEP effluent has a projected TDS of 100-120 ppt. Theoretically a 50:50 mixture would result in an effluent TDS in excess of 50 ppt. Acute testing at this TDS would not be possible. To effectively test the effluent, it would be necessary to have a combined effluent TDS of not greater than approximately 30 ppt. At that level, the three-spine stickleback (*Gasterosteus aculeatus*) could be tested, if the fish are maintained and acclimated at 30 ppt prior to the testing.

The basic testing method for the stickleback follows EPA procedures (EPA, 1985a). The effluent would be tested at a 100 percent effluent concentration against a control. The control would be at the same TDS as the combined effluent. The test would be carried out under daily renewal conditions, using a 24 hour composite effluent sample. This type of test is generally run under flow-through conditions. However based upon

the need for a high TDS control, it would be necessary to run this test as a static renewal test. This method should provide results similar to the flow-through test program.

Testing would be carried out in a two replicate test over a 96 hour time frame. Ten fish per replicate would be tested. All fish tested would be supplied by local suppliers and would be held a minimum of one week in the laboratory to assure their health and to acclimate them to 30 ppt TDS. Water quality would be measured in each test tank daily and would include the following parameters: dissolved oxygen, pH, temperature, salinity, TDS, and ammonia. The testing would be carried out at $20^{o}C$ +/-2^{o}. The number of surviving fish would be determined daily and dead fish removed and discarded.

At the end of 96 hours, the number of surviving fish would be determined. A subsample of the test organisms would be weighed to the nearest 0.1 gram and measured for standard length. Test performance would be based upon meeting the protocol limits established for this type of testing of no more than 10 percent mortality in the controls. If the study does not meet control limits, it would be re-conducted in consultation with the RWQCB.

The acute testing program is designed to run weekly for the first two months of the discharge. The data would be reviewed by RPBC and the RWQCB on a weekly basis for the first month to assess performance. RPBC will provide the laboratory's data report, without interpretation and with the understanding that complete QA/AC checks may indicate some changes in the results. If the observed response is no significant toxicity, the frequency of sampling and testing would be biweekly for the third month, and then monthly for the duration of the discharge. If the observed response is significant with repeatable toxicity, the effluent mixture percentages may require modification and the weekly testing program rerun. Intermediate results would dictate changes in the testing as deemed appropriate, in consultation with the RWQCB.

A reference toxicant testing program will also be implemented using the stickleback acclimated to 30 ppt TDS water. The reference toxicant will be determined in consultation with the RWQCB, and may be a generally-accepted chemical such as potassium dichromate.

Chronic Testing

The chronic test program is designed to assess toxicity at the low concentrations found at the edge of the ZID. Due to the nature of the discharged effluent and the receiving waters, only salinity tolerant species can be used in this phase of the monitoring program. As described under "acute toxicity", the TDS of the discharge would be dictated by the acute test. The chronic tests all use diluted effluent as the test medium in an attempt to determine the concentration at which there is no observed effect. This estimated concentration is then compared to the IWC (Instream Waste Concentration) for the discharge to determine if toxicity will be found at diluted concentrations lower than the IWC.

The test species available for chronic monitoring in saline waters is limited to: *Mysidopsis bahia* (EPA, 1988), *Menidia beryllina* (EPA, 1988), echinoderm sperm cell bioassay (Dinnel, 1987), the bivalve larvae bioassay (ASTM, 1985), and the marine diatom bioassay (EPA, 1978). A number of studies have already been conducted on RPBC's combined effluent using a variety of testing organisms. These studies have demonstrated that a number of organisms are sensitive to the effluent and will be effective biomonitors of chronic toxicity.

Based upon the data available from previous tests, it is proposed that the echinoderm bioassay be used as the chronic test in this program. The echinoderm sperm inactiviation test (Dinnel, 1987) is run using either *Strongylocentrotus purpuratus*, the purple sea urchin, or *Dendraster excentricus*, the sand dollar. The sea urchin is used primarily in the late fall, winter, and spring when it is in reproductive condition. The sand dollar replaces the urchin during the summer and early fall. The two species have very similar responses to the same toxicant and are used interchangeably in the San Francisco Bay Region.

The test entails an induction of spawning using potassium chloride. The sperm concentrations are determined and then a specific concentration is placed in each test effluent concentration for 20 minutes. A set number of eggs is then added to each concentration and fertilization is allowed to proceed for an additional 20 minutes. The samples are then dosed with formalin to stop development and the number of fertilized

and unfertilized eggs are determined. It is expected that the test concentrations would be 100, 50, 25, 12.5, and 6.25 percent, or lower if necessary.

The chronic studies would be run monthly for the first two months of the discharge. The data would then reviewed by RPBC and the RWQCB. A significant response would be an estimated no effect concentration (NOEC) less than the IWC as defined by the RWQCB. It is expected that RPBC would receive a minimum 10:1 dilution credit; therefore, an NOEC less than 10 percent would be considered a significant response.

The chronic tests performed monthly would be used as an additional monitor of variability and quality of the effluent. If results are found to be variable or if the effluent is found to have changed substantially in terms of chronic toxicity, RPBC would notify the RWQCB and take appropriate corrective action.

The results of the acute and chronic test programs would be reported monthly to the RWQCB and the RWQCB would be informed of all changes to the total TDS of the discharge should toxicity tests indicate that a reduction in the amount of PEP is required. All of the data would be summarized in a final report to the RWQCB.

EXHIBIT C

MITIGATION MONITORING PLAN
RHONE-POULENC BASIC CHEMICALS CO. DEEPWATER OUTFALL
MARTINEZ, CALIFORNIA

Impact: The effluent from the proposed outfall could have impacts on water quality and aquatic life in Carquinez Straits.

Project Modification:

Following consultation with State Lands Commission staff, the Department of Fish and Game and the Regional Water Quality Control Board staff, a two-part monitoring program was developed. This is divided into an acute toxicity testing program and a chronic toxicity testing program. Each of these programs is described in detail in the attached sections of the environmental documentation.

Monitoring:

The results of each of the toxicity testing programs will be reported to the RWQCB, which has primary responsibility for maintaining the water quality of the Straits and San Francisco/San Pablo Bays. Evaluation of the reports on an ongoing basis will be done by the RWQCB.