CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. 97-120
NPDES PERMIT NO. CA0030104

WASTE DISCHARGE REQUIREMENTS FOR:
CATERPILLAR, INC.
100 N.E. Adams Avenue
Peoria, IL 61629

for: GROUNDWATER TREATMENT SYSTEM NO. 3
at: 359 105TH AVENUE
OAKLAND, ALAMEDA COUNTY

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

1. Caterpillar, Inc. (hereinafter the discharger) by application dated May 19, 1997 and additional information submitted on June 3, 1997, July 1, 1997, July 24, 1997, and August 1, 1997 applied for issuance of waste discharge requirements and a permit to discharge under the National Pollutant Discharge Elimination System (NPDES).

2. The discharger operated a heavy equipment manufacturing and assembly plant at 800 Davis Street in the City of San Leandro, Alameda County, located approximately 3/4 mile northeast of the intersection of Highway 880 and Davis Street. The discharger's operation was terminated in 1984. In late 1986, the discharger made preliminary arrangements to sell a parcel of its property and the site investigation revealed pollution in areas generally bounded by Davis Street, the Nimitz Freeway (880), 105th Avenue, and San Leandro Blvd. (See Figure 1).

3. To contain the plumes of pollution, the discharger reports three pump and treatment facilities were installed and are operating with effluent being discharged to the storm drains at three different locations. This Order establishes waste discharge requirements for Groundwater Treatment System No. 3. Another Order will be adopted with waste discharge requirements for Groundwater Treatment System No. 2. A letter authorizing discharge from Groundwater Treatment System No. 1 under the General Permit will be issued.

4. Groundwater Treatment System No. 3 is located 359 105th Avenue in Oakland and discharges into a nearby storm sewer draining into San Leandro Creek, which flows into San Francisco Bay. The principal groundwater pollutant in this area is trichloroethylene (TCE). The discharger also reported

that chlorodifluoromethane (Freon 22) was detected in the influent with a concentration of 7.7 ppb. Dichlorodifluoromethane (Freon 12) and Freon 22 were detected in the influent of treatment system No. 2 with concentrations of 9.6 ppb and 8.4 ppb, respectively.

5. Aeration and activated carbon treatment would remove all other volatile pollutants to 5 parts per billion (ppb) or less concentrations. However, the discharger installed only activated carbon treatment which the discharger reports will remove all other volatile pollutants except Freon 12 and 22 to the required 5 ppb or less concentration. The discharger proposes to conduct chronic toxicity tests on three aquatic species to demonstrate that the effluent contains no chronic toxicity.

6. The discharger reports a treatment system consisting of two 5000 pound containers of activated carbon was installed. This system is currently operating with a average flow rate of 144,000 gpd with discharge to the storm sewer draining into San Leandro Creek which flows to San Francisco Bay. The latitude and longitude of the outfall to San Leandro Creek are 37°43′32″ and 122°11′18″.

7. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21,1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Board on July 20, 1995 and the Office of Administrative Law on November 13, 1995. The Office of Administrative Law's action is published in Section 3912 of Title 23 of the California Code of Regulations. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

8. The existing and potential beneficial uses of San Leandro Creek and Lower San Francisco Bay include:

   * freshwater replenishment,
   * industrial process supply,
   * groundwater recharge,
   * water contact and non-contact recreation,
   * wildlife habitat,
   * cold freshwater habitat,
   * warm freshwater habitat,
   * fish migration and fish spawning,

* industrial service supply,
* navigation,
* estuarine habitat,
* shellfish harvesting,
* ocean commercial and sport fishing, and
* preservation of rare and endangered species.

9. The Basin Plan prohibits discharge of wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any nontidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof.

10. The Basin Plan allows for exceptions to the prohibition referred to in Finding 9 above when it can be demonstrated that net environmental benefit can be derived as a result of the discharge.

11. Exceptions to the prohibitions referred to in Finding 10 are warranted because the discharge is an integral part of a program to cleanup polluted groundwater and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would effect beneficial uses.

12. The Board adopted Resolution No. 88-160 on October 19, 1988. The Resolution urges dischargers of extracted groundwater from site cleanup projects to reclaim their effluent and that when reclamation is not technically and economically feasible, to discharge to a publicly owned treatment works (POTW). If neither reclamation nor discharge to a POTW is technically or economically feasible and if beneficial uses of the receiving water are not adversely affected, it is the intent of the Board to adopt NPDES permits authorizing the discharge of extracted groundwater.

13. According to the discharger, neither reclamation nor discharge to a POTW is technically and economically feasible.

14. The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin." The dischargers' groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants to waters of the State.

15. The chronic effects of the treated discharge with Freon 22 must be shown to be nontoxic, and effluent limitations of all other pollutants in this Order are based on the Basin Plan, State plans and policies, U.S. Environmental Protection Agency guidance, and best engineering judgment as to best available technology economically achievable.

16. Effluent limitations and toxic effluent standards established pursuant to Sections 301, 304, and 307 of the Clean Water Act, and amendments thereto are applicable to the discharge.

17. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Codes (CEQA) pursuant to Section 13389 of the California Water Code.

18. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

19. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, its agents, successors, and assigns; in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder; shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated polluted groundwater to waters of the State, either at the treatment system or from any of the collection or transport systems or pump stations tributary to the treatment system, is prohibited.

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

3. The discharge shall be limited to extracted and treated groundwater and added treatment chemicals approved by the Executive Officer which do not

adversely affect the environment and comply with the requirements of this Order.

4. The discharge of extracted and treated groundwater from this site in excess of 144,000 gpd is prohibited.

B. **Effluent Limitations**

1. The effluent (at a point after full treatment but before it joins or is diluted by any other waste stream, body of water, or substance) shall not contain constituents in excess of the following:

TABLE A INSTANTANEOUS AND MASS* MAXIMUM LIMITS

Requirements		Limits
a) ORGANICS		
	Purgeable Halocarbons (EPA Method 601 or equivalent)	
1)	1,1,1-Trichloroethane	5.0 (ug/l)
2)	Tetrachloroethylene	5.0 (ug/l)
3)	Trichloroethylene	5.0 (ug/l)
4)	1,1-Dichloroethylene	5.0 (ug/l)
5)	1,2-Dichloroethane	0.5 (ug/l)
6)	Vinyl Chloride	0.5 (ug/l)
7)	1,2-Dichloroethylene isomers	5.0 (ug/l)
8)	1,1-Dichloroethane	5.0 (ug/l)
9)	1,1,2-Trichloroethane	5.0 (ug/l)
10)	Methylene Chloride	5.0 (ug/l)
11)	Chloroform	5.0 (ug/l)
12)	any other (except Freon 12 and Freon 22)	5.0 (ug/l)
	Purgeable Aromatics (EPA Method 602 or equivalent)	
13)	Benzene	1.0 (ug/l)
14)	Toluene	5.0 (ug/l)
15)	Ethylbenzene	5.0 (ug/l)
16)	Total Xylenes	5.0 (ug/l)
17)	Total Petroleum Hydrocarbons (as identified by modified EPA Method 8015 or equivalent)	50.0 (ug/l)
18)	Ethylene Dibromide (as identified by EPA Method 504 or equivalent)	0.05 (ug/l)
19)	Total Polynuclear Aromatic Hydrocarbons (as identified by EPA Method 610, 625, or equivalent)	15.0 (ug/l)
20)	Semi-Volatile Organics Base/Neutral, Acid, and Pesticide Compounds, as identified by EPA Method 625)	5.0 (ug/l)
b) INORGANICS		
1)	Arsenic	10.0 (ug/l)
2)	Cadmium	2.2** (ug/l)
3)	Chromium (VI)	22.0*** (ug/l)
4)	Copper	23.6** (ug/l)

Requirements		Limits
5)	Lead	6.4** (ug/l)
6)	Nickel	320.0** (ug/l)
7)	Selenium	10.0 (ug/l)
8)	Silver	8.2** (ug/l)
9)	Zinc	220.0**(ug/l)
10)	Mercury	1.0* gram/day
(*)	Mercury has a mass limit	
(**)	Assumes hardness = 100 mg/l CaCO	
(***)	Dischargers, at their option, may meet this limit as total chromium	

2. The pH of the effluent shall not exceed 8.5 nor be less than 6.5.

3. Toxicity (Acute): The survival of test fish in 96-hour static renewal bioassays of the discharge shall be a three sample moving median of 90% survival and a minimum value of not less than 70% survival.

4. Toxicity (Chronic): Waste, as discharged shall meet both of the following chronic toxicity limitations:

   a. an eleven sample median value[1] of 1 TUc[2]; and

   b. a 90 percentile value[3] of 2 TUc[2].

   [1] Test species specified by the Executive Officer in the Self-Monitoring Program. A test sample showing chronic toxicity greater than 1 Toxicity Unit Chronic (TUc) represents consistent toxicity and a violation of this limitation, if five or more of the past ten or less tests show toxicity greater than 1 TUc.

   [2] A TUc equals 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEC values. These terms and their usage in determining compliance with the limitations are defined in Part B. of Self-Monitoring Program of this Order. The NOEL shall be based on a critical life stage test using the most sensitive test species as specified by the Executive Officer. If more than one compliance test species is specified, compliance shall be based on the maximum TUc value obtained through concurrent testing of the different species.

   [3] A test sample showing chronic toxicity greater than 2 TUc represents consistent toxicity and a violation of this limitation, if one or more of the past ten or less tests shows toxicity greater than 2 TUc.

C. Receiving Water Limitations

1. The discharge shall not cause the following conditions to exist in waters of the State at any place:
   a. Floating, suspended, or deposited macroscopic particulate matter or foam;
   b. Bottom deposits or aquatic growths;
   c. Alteration of temperature, turbidity, taste, odor, or apparent color beyond present natural background levels;
   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
   e. Toxic or other deleterious substances to be present in concentrations or quantities that will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

   a. Dissolved oxygen: 5.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolve oxygen content at saturation. When natural factors cause lesser concentration(s) than specified above, the discharge shall not cause further reduction in the concentration of dissolved oxygen.

   b. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient Ph levels by more than 0.5 units.

   c. Un-ionized ammonia:
      0.025 mg/l as N annual median
      0.16 mg/l as N maximum at any time

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. EVALUATION OF METALS EFFLUENT LIMITS VIOLATIONS

If any inorganic effluent limit, presented in Provisions B.1.b., is exceeded then the discharger shall take three additional samples for that constituent(s) during the following quarter.

Case 1 If the results of the three additional samples for the effluent **do not** exceed the effluent limit(s) the discharger shall report the results to the Executive Officer in the next Self-Monitoring Report, and shall return to the schedule of sampling and analysis in the Self-Monitoring Program.

Case 2 If the results of **any one of the three** additional samples exceed the effluent limit(s), the discharger shall perform the following:

a) Calculate the median and maximum concentration values for the constituent(s) of concern, using the three recent samples **and** all samples collected and analyzed for that constituent in the previous 12 month period.

b) Estimate the mass load discharged in the previous 12 month period for the constituent(s) of concern. Report the results in grams per day and in pounds per year, using the average flow rate for the previous 12 month period.

c) Report the results to the Executive Officer in the next Self-Monitoring Report, and return to the schedule of sampling and analysis in the Self-Monitoring Program.

Case 3 If the results of **two or three** of the additional samples exceed the effluent limit(s), the discharger shall perform the following:

a) Calculate median and maximum concentration values and mass load for the constituent(s) of concern, as described in Case 2 above.

b) Perform a cost analysis for treatment of the discharge for the constituent(s) of concern. The analysis should include, but need not be limited to, a discussion of various treatment technologies or pre-treatment filtration options, the cost and technical feasibility of increased treatment to reduce the constituent(s) of concern, and the amount of reduction in terms of concentration and average annual mass load. A joint effort may be

undertaken and submitted by more than one discharger to evaluate cost and feasibility of treatment technologies or options.

If the results of the cost analysis indicates that metals treatment of the discharge does not appear to be a feasible option, then:

c) Perform an evaluation of the potential adverse impacts to the beneficial uses of the receiving water. The evaluation should include, but need not be limited to, description of the beneficial uses specific to the receiving water, physical and chemical characteristics of the water body and sediment, and the physical, chemical, or biological effects from the constituent(s) on the beneficial uses, including effects related to hardness for metals with hardness-dependent objectives.

If exceedances are only for metals with hardness-dependent objectives, then the discharger may conduct a hardness study prior to completing this task. The hardness study should assess receiving water hardness (as $CaCO_3$) and compute a "no effect" concentration for affected metals, using (i) the minimum of a statistically significant number of hardness samples, and (ii) hardness-dependent formula for US EPA freshwater criteria. If effluent metals concentrations fall below the computed "no effect" concentration, then the discharger need not complete the remainder of this task.

If the receiving water study finds that the discharge is having potential adverse impacts to beneficial uses of the receiving water, then:

d) Evaluate control measures other than treatment to reduce the constituent(s) of concern in the discharge, such as re-evaluating options for re-use, discharge to POTW, or alternatives to groundwater extraction.

e) Within 180 days of the discharger receiving results of the consecutive sampling, report the results of tasks (a) through (d) above to the Executive Officer, including:

- the proposed method to eliminate or minimize future non-compliance, or

- provide a rationale for why no change to the existing program should take place, and
- return to the schedule of sampling and analysis in the Self-Monitoring Program.

The discharger may be required to perform additional evaluations or take additional actions to minimize noncompliance, as deemed necessary by the Executive Officer.

If a violation of the same effluent limit occurs less than 60 months after completion of the required tasks in Cases 1, 2, or 3, then the Executive Officer may waive the evaluation required above. This waiver will not apply if a different inorganic constituent exceeds the effluent limit. In that case, the discharger shall perform an evaluation for that constituent(s).

2. 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 in this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Order. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection results and maintenance performed and made available to the Board. All of the above procedures shall be described in an Operation and Maintenance (O & M) Manual. The O & M Manuals shall also contain a description of the safeguards to assure that, should there be reduction, loss, or failure of electric power, the dischargers will be able to comply with the terms and conditions of this Order. The O & M Manuals shall describe preventive (fail-safe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources of accidental loss, untreated or partially treated waste bypass, and polluted drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes shall be considered.

3. The discharger shall comply with the Self-Monitoring Program as adopted by the Board and as amended by the Executive Officer.

4. The discharger shall notify the Board if any activity has occurred or will occur which would result in the discharge, on a frequent or routine basis, of a toxic pollutant which is not limited by this Order.

5. This Order may be modified by the Board prior to the expiration date to include effluent or receiving water limitations for toxic constituents determined to be present in significant amounts in discharges regulated by this permit (through the comprehensive monitoring program included as part of this Order).

6. The discharger shall notify the local stormwater management agency in writing of its proposed discharge, with a copy to the Board.

7. Discharger shall comply with all applicable items of the attached "Standard Provisions And Reporting Requirements for NPDES Surface Water Discharge Permits" dated August 1993 except Items A.7., B., C., D.2., D.3., and E.5. Item E.6.d.2)iii. shall be modified by substituting "instantaneous maximum or toxicity" for "maximum daily".

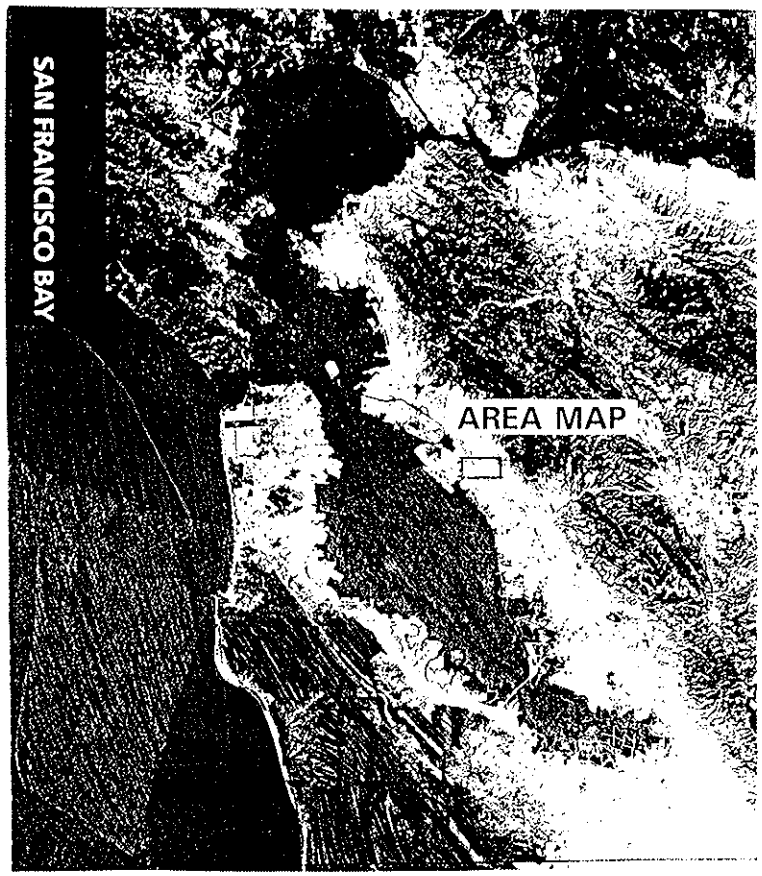
8. This Order expires on October 15, 2002. The discharger must file an application for proposed discharge not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

9. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Loretta K. Barsamian, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 15, 1997.

Loretta K. Barsamian
Executive Officer

Attachments:
Figure No. 1
Standard Provisions & Reporting Requirements, August 1993
Self-Monitoring Program, Parts A and B



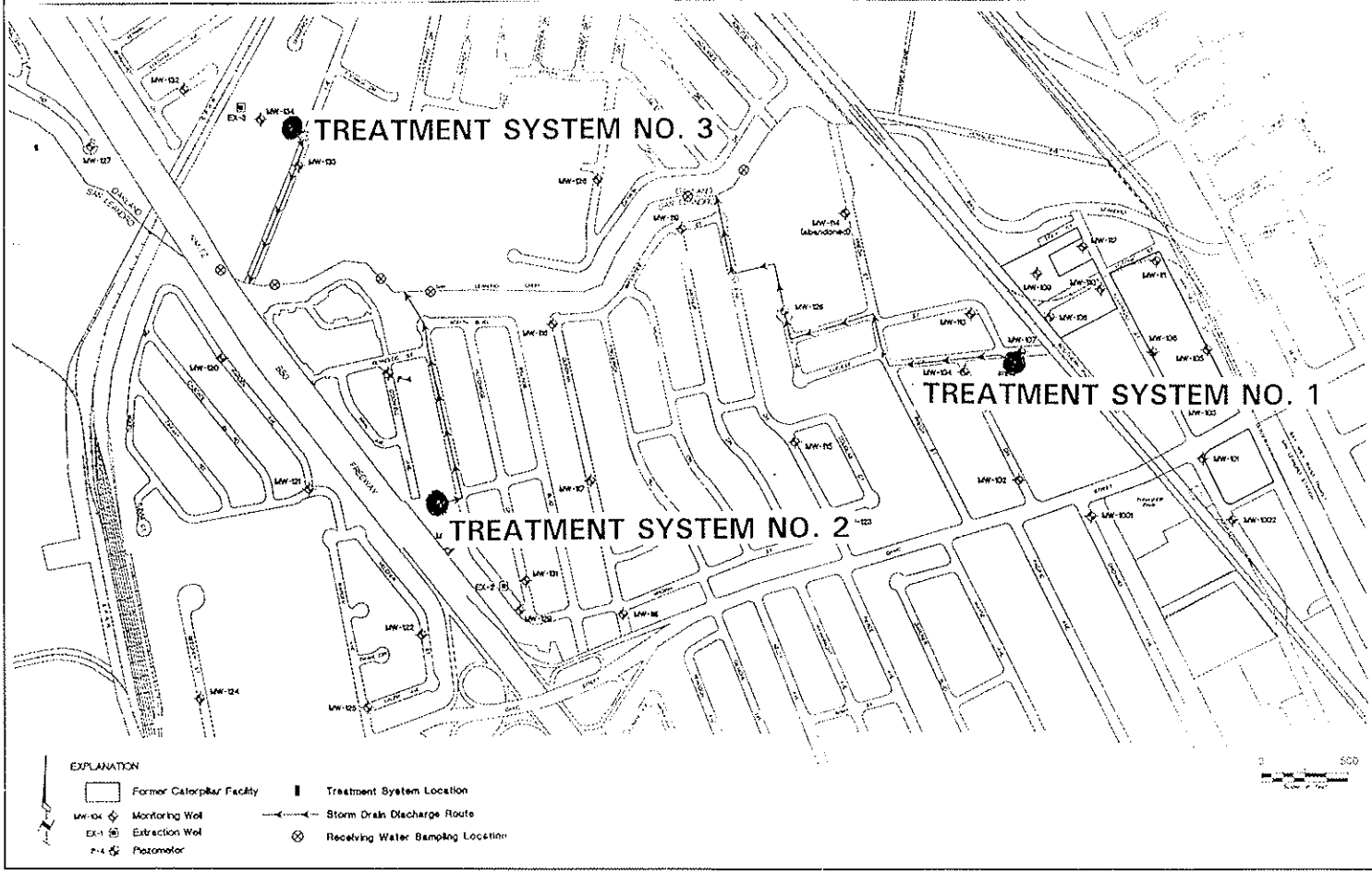


Figure 1 - Caterpillar Groundwater Treatment Systems No. 1, 2, and 3
San Leandro and Oakland
Alameda County

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CATERPILLAR, INC.
GROUNDWATER TREATMENT SYSTEM NO. 3
359 105TH AVENUE
OAKLAND, ALAMEDA COUNTY

NPDES NO. CA0030104

ORDER NO. 97-120

CONSISTS OF

PART A dated August 1993

AND

PART B

PART B

SELF MONITORING PROGRAM FOR CATERPILLAR, INC. GROUNDWATER TREATMENT SYSTEM NO. 3 AT 359 105TH AVENUE OAKLAND, ALAMEDA COUNTY

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
I-1	At a point after groundwater extraction and immediately prior to discharge into the treatment system.

B. EFFLUENT

E-1	At a point after full treatment but before it joins or is diluted by any other waste stream, body of water, or substance.

C. RECEIVING WATERS

RD-1	At a point 50 feet downstream from the point of discharge into the receiving water.

II. START UP PHASE AND REPORTING

A. The Board's Executive Officer shall be notified in writing of the date of start up within 7 to 14 days before start up begins.

B. During the original start up for the treatment system, sampling and analysis of the effluent must occur weekly for the first month in accordance with Table 1.

A report on the one month start up phase shall be submitted to the Regional Board that presents the results of the laboratory analyses, flow rates, chain of custody forms, and describes any changes or modifications to the treatment system. This report shall be submitted to the Regional Board no more than fifteen days after the end of the one month start up phase.

III. ADDITIONAL REPORTING REQUIREMENTS

A. Discharger shall notify the Board within one day if the self-monitoring program results exceed effluent limitations, chronic toxicity

limitations, or if any activity has occurred or will occur that would result in a frequent or routine discharge of any toxic pollutant not limited by this Order.

If the treatment system is shut down for more than 120 consecutive hours after the start up period (maintenance, repair, violations, etc.) the reason(s) for shut down, proposed corrective action(s) and estimated start up date shall be orally reported to the Board within five days of shut down and a written submission shall also be provided within 15 days of shut down.

If feasible, the corrective action(s) taken and the proposed start up procedures shall be reported to the Board at least 15 days before start up.

B. A report describing the need, method of chemical application and disposal shall be submitted to the Board at least 30 days before the use of any chemicals in the treatment, or operation and maintenance of the treatment units, is to begin. This report shall include toxicity data. The Executive Officer must approve the use of any chemicals prior to the usage of any chemicals in the treatment, operation, and/or maintenance of the treatment units.

C. The daily status (e.g., personnel on-site, in operation/on standby, shut down, standard observation results, etc.) of any treatment systems used to achieve compliance with this Order shall be included in the Self- Monitoring Report submittal. The reason(s) for the treatment system being shut down shall also be included in this submittal.

IV. SCHEDULE OF SAMPLING AND ANALYSES

The schedule of sampling and analyses shall be that given in Table 1 (attached) for sampling stations I-1, E-1, and RD-1.

V. ACUTE TOXICITY MONITORING REQUIREMENT

The fish species to be used for compliance in the 96-hour percent survival static renewal fish toxicity bioassay shall be rainbow trout.

VI. CHRONIC TOXICITY MONITORING REQUIREMENT

A. DEFINITION

1. No observed effect level (NOEL) for compliance determination is equal to IC_{25}, EC_{25}, or LC_{25} depending on the test species and endpoint.

2. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation.

3. Effective concentration (EC) is toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used.

4. Inhibition Concentration (IC) is toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25% reduction in average young per female or growth.

B. Test Species: The Discharger shall collect samples at E-1 on consecutive days for critical life stage toxicity testing for the species indicated below:
The cladoceran, Ceriodaphnia dubia
The green algae, Selennastrum capricornutum
The fathead minnow, Pimephales promelas

C. Test Type: The Discharger shall have effluent samples analyzed for critical life stage toxicity testing with no dilution (100% of effluent) with appropriate controls and concurrent reference toxicant tests. Other dilutions are required to determine compliance if toxicity is greater than 1 TUc using EPA-600-4-91-002 Protocols with appropriate dilution series of effluent.

D. Methodology: Sample collection, handling and preservation shall be in accordance with EPA protocols. The test methodology used shall be in accordance with US EPA procedures or as approved by the Executive Officer. A concurrent reference toxicant test shall be

performed for each test.

E. Frequency[1]: The frequency shall be at least once each calendar quarter but may be reduced in the future by the Executive Officer from the frequency shown in Table 1.

F. Conditions for Accelerated Monitoring: The Discharger shall repeat the toxicity test and accelerate the frequency of monitoring as specified by the Executive Officer when there is a violation of a single sample maximum value of 1 TUc. If more than one species is tested per VI.B. requirements, then every TUc for each test species (compared from each of the tests) must be in compliance with the above requirements.

VII. CHRONIC TOXICITY REPORTING REQUIREMENTS

A. Routine Reporting: Toxicity test results for the current reporting period shall include at a minimum, for each test

a. Sample date(s)
b. Test initiation date
c. Test species
d. End point values for each dilution (e.g., number of young, growth rate, percent survival
e. NOEC value(s) in percent effluent
f. IC_{15}, IC_{25}, IC_{40}, and IC_{50} values (or EC_{15}, EC_{25} ... etc.) in percent effluent
g. Tuc values (100/NOEC, $100/IC_{25}$, and $100/EC_{25}$)
h. Mean percent mortality ($\pm$s.d.) after 96 hours in 100% effluent
i. NOEC and LOEC values for reference toxicant test(s)
j. IC_{50} or EC_{50} value(s) for reference toxicant test(s)
k. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, and hardness)

If data is provided to show cost of providing specific information is excessive, Executive Officer will evaluate the data to determine if the

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[1] After completion of at least three suites of tests, the discharger may request the Executive Officer to decrease the required frequency of testing, and/or to reduce the number of compliance species to one. Such a request may be made only if toxicity exceeding the TUc values specified in the effluent limitations are not observed using that test species.

requested reported information may be reduced.

B. Compliance Summary: Each self-monitoring report shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include items a, c, e, f (IC_{25} or EC_{25}), g, and h from Section A.

C. Reporting Raw Data in Electronic Format: On a quarterly basis, by February 15, May 15, August 15, and December 15 of each year, the discharger shall report all chronic toxicity data for the previous calendar quarter in the format specified in "Suggested Standardized Reporting Requirements for Monitoring Chronic Toxicity," August 1993, SWRCB. The data shall be submitted in either high or low density, double sided 3.5-inch floppy diskettes.

VIII. MODIFICATION TO PART A OF THE SELF MONITORING PROGRAM

A. Delete Sections:

C.I., C.2.a., C.2.b., C.2.d., C.2.e., C.2.g., C.3., C.5., D.4., E.2., E.3., and E.5.

B. Insert Sections:

C.2.a. Samples of effluent and receiving waters shall be collected at times coincident with influent sampling unless otherwise stipulated. The Executive Officer may approve an alternative sampling plan if it is demonstrated to the Executive Officer's satisfaction that expected operating conditions warrant a deviation from the standard sampling plan.

C.2.d. If analytical results are received showing any instantaneous maximum organics limit (Effluent Limitation B.1.a.) or chronic toxicity limit (Effluent Limitation B.5.) is exceeded, a confirmation sample shall be taken within 24 hours or 7 days, respectively, and results known within 24 hours or 10 days, respectively, of the sampling.

D.6. Waste Treatment Facilities

a. Deposits, discolorations, and/or plugging in the treatment

system (stripping tower, carbon filters, etc.) which could adversely affect the system reliability and performance.

b. Operation of the float and/or pressure shutoff valves installed to prevent system overflow or bypass.

E.2. Discharge flow rates shall be recorded and average daily flow rates reported for each month.

C. Modify Sections:

C.2.c. Delete the word "composite" from the sentence.

C.4.a. Delete the word "composite" from the sentence.

F.4.b. The report format shall be a format that is acceptable to the Executive Officer.

F.4.d. The report format shall be a format that is acceptable to the Executive Officer. Electronic formats are being developed.

F.4.e. The report format shall be a format that is acceptable to the Executive Officer. NPDES Discharge Monitoring Report, EPA Form 3320-1, is provided as guidance. Influent and effluent data summary reports shall be submitted only to the Regional Board and do not need to be submitted to the EPA.

Address the copy to the Regional Board as follows:
Executive Officer / Attention: Farhad Azimzadeh
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, 5th Floor
Oakland, CA 94612

I, Loretta K. Barsamian, Executive Officer do hereby certify the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 97-120.

2. Was adopted by the Board on October 15, 1997.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from discharger, and revisions may be ordered by the Executive Officer or Regional Board.

Loretta K. Barsamian
Executive Officer

Attachments: Table 1

Revised Table 1	Schedule for Sampling, Measurement, and Analysis for Caterpillar's Treatment System No. 3 at 359 105th Ave. Oakland, Alameda County		
Sampling Station	**I-1**	**E-1**	**RD-1**
Type of sample	**Grab**	**Grab**	**Grab**
Flow Rate (gpm & gpd)		Continuous	
Turbidity		M	
Chronic Toxicity *(Effective March 13, 1998, use only the cladoceran, Ceriodaphnia dubia)*		Q	
Fish Acute Toxicity, 96-hr (% survival)		Y	
pH	Ms	Ms	V
Dissolved Oxygen (mg/l)		Ms	
Temperature (°C)		Ms	
Electrical Conductivity		Y	
Arsenic Total (μg/l & gram/day)		Y	
Cadmium Total (μg/l & gram/day)		Y	
Chromium Hexavalent or Total Chromium Total (μg/l & gram/day)		Y	
Copper Total (μg/l & gram/day)		Y	
Cyanide Total (μg/l & gram/day)		Y	
Lead Total (μg/l & gram/day)		Y	
Mercury Total (μg/l & gram/day)		Y	
Nickel Total (μg/l & gram/day)		Y	
Selenium Total (μg/l & gram/day)		Y	
Silver Total (μg/l & gram/day)		Y	
Zinc Total (μg/l & gram/day)		Y	
All Applicable Standard Observations		Q	Q-V
Volatile Organic Compounds EPA 601, EPA 624, or equivalent EPA approved tests (μg/l & g/day) including Freon 11, Freon 12, Freon 22, Freon 113, and Freon 123a. At least once a year EPA 624 shall be the analysis used.	Ms	Ms	V

Revised Table 1	Schedule for Sampling, Measurement, and Analysis for Caterpillar's Treatment System No. 3 at 359 105th Ave. Oakland, Alameda County

Definitions

ug/l micro-gram per liter or parts per billion (ppb)
g/day grams per day

Types of Stations

I = Influent, E = Effluent, RD = Receiving Water Downstream

Frequency of Sampling

M Monthly
Ms Once a week for the first month of start up; monthly thereafter
Q Once during the start up; quarterly thereafter
Y Once during the first week of start up; annually thereafter
V Sampling should be performed within 24 hours whenever the effluent (E-1) is in violation

Self-Monitoring Reports

Self-Monitoring Reports shall be submitted on a calendar quarter basis, no later than 30 days following the last day of the quarter.

Note for metals sampling and analysis:

* Metal samples shall be analyzed for total (unfiltered) constituents (Total).
* The maximum detection limits shall be: 2 ug/l for Cadmium; 0.2 ug/l for Mercury; 5 ug/l for Arsenic, Chromium VI, Copper, Lead, Nickel, Selenium, and Silver; and 10 ug/l for Antimony, Beryllium, Cyanide, Thallium, and Zinc