

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER No. 01-100

NPDES NO. CAG912002

GENERAL WASTE DISCHARGE REQUIREMENTS FOR:

**Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Fuel Leaks and Other Related Wastes at Service Stations and Similar Sites**

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

1. **General:** This National Pollutant Discharge Elimination System (NPDES) general permit regulates discharge or reuse of extracted and treated groundwater resulting from the cleanup of groundwater polluted by fuel leaks and other related wastes at service stations and similar sites. All dischargers eligible for this general permit must submit a Notice of Intent (NOI) described in the attachment and appropriate annual fee to obtain coverage. Written authorization to initiate the discharge will be issued by the Executive Officer.
2. **Authority:** States may request authority to issue general NPDES permits pursuant to Code of Federal Regulations, Title 40, Chapter 1, Subchapter D, part 122.28 (40 CFR 122.28). On June 8, 1989, the State Water Resources Control Board (hereinafter State Board) submitted an application to the United States Environmental Protection Agency (hereinafter USEPA) requesting revisions to its NPDES program in accordance with 40 CFR 122.28, 123.62 and 403.10. The application included a request to add general permit authority to its approved NPDES program. On September 22, 1989, the USEPA, Region IX, approved the State Board's request and granted authorization for the State to issue general NPDES permits.
3. **Types of Discharges:** 40 CFR 122.28 provides for the issuance of general permits to regulate discharges of waste which result from similar operations, are the same types of waste, require the same effluent limitations, require similar monitoring, and are more appropriately regulated under a general permit rather than individual permits.
4. **Eligibility for General Permit:** A general permit for existing and proposed discharges of extracted and treated groundwater to surface waters of the San Francisco Bay Region (except for direct discharges to the Pacific Ocean) from groundwater cleanup projects

meets the requirements of 40 CFR 122.28. The discharges and proposed discharges:

- a. result from similar operations (all involve extraction, treatment, and discharge of groundwater),
- b. are the same types of waste (all are groundwater containing petroleum hydrocarbons and other related wastes due to leaks and spills from service stations and similar sites),
- c. require similar effluent limitations for the protection of the beneficial uses of surface waters in the San Francisco Bay Region (this general permit does not cover direct discharges to the Pacific Ocean),
- d. require similar monitoring, and
- e. are more appropriately regulated under a general permit rather than individual permits.

Therefore, this Order establishes a general permit regulating extracted and treated groundwater discharges resulting from the cleanup of groundwater polluted by fuel and other related wastes. Entities that fall into this category are hereinafter referred to as discharger(s) and may be regulated by this Order. The following fuel-cleanup discharges are normally not eligible for coverage: discharges from cleanups involving significant contamination by metals, pesticides, or other conservative pollutants; discharges from cleanups involving reinjection of treated groundwater; and discharges from sites with other NPDES discharges (e.g. process waste or stormwater).

5. Former Permit: On June 19, 1996, the Board adopted Order No. 96-078 (NPDES No. CAG912002) allowing the discharge of extracted and treated groundwater resulting from the cleanup of groundwater polluted by fuel leaks and other related wastes at service stations and similar sites. During the period June 1996 to July 2001, 91 discharges were authorized under Order No. 96-078. Most dischargers authorized under this general permit use aeration and/or granular activated carbon (GAC) systems to treat their pollutants of concern.
6. Benefits of General Permit: Approximately 9,700 sites with underground fuel storage tanks within the San Francisco Bay Region are known to be leaking or have leaked in the past. Fuel is also discharged to groundwater from other sources (surface spills, pipeline breaks or leakages, etc.). Within the next five years, approximately 400 of these sites will be conducting groundwater cleanups by extracting contaminated groundwater, treating, and discharging treated groundwater, particularly in Santa Clara County. Because some publicly owned treatment works (POTWs) do not accept new discharges from groundwater cleanups, approximately 100 of these sites will require waste discharge requirements from the Board for discharge to surface water. These cleanups will exceed the capacity of available staff to develop and bring individual waste discharge requirements to the Board for adoption. These circumstances create the need for an

expedited system to process the anticipated numerous requests. The renewal of the 1996 fuel general NPDES permit will expedite the processing of requirements, enable the Board to better utilize limited staff resources, and permit cleanups to begin promptly.

7. Annual Fees: California Regulations establish an annual fee schedule dated May 18, 1995, based on the discharges' Threat To Water Quality and Complexity. The dischargers to be regulated under this General Permit are classified as category 2-B:
  - a. Category 2 Threat To Water Quality - Those discharges of waste which could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance; and
  - b. Category B Complexity - Any discharger not included in the major discharger category A, but has physical, chemical, or biological treatment system (except for septic systems with subsurface disposal), or any Class II or Class III waste management Units.
8. Basin Plan: The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (hereinafter called Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The State Water Resources Control Board (State Board) and the Office of Administrative Law (OAL) approved the revised Basin Plan on July 20, 1995 and November 13, 1995, respectively. The OAL'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. This Order implements the plans, policies, and provisions of the Board's Basin Plan.
9. Beneficial Uses: The Basin Plan defines beneficial uses and water quality objectives for surface waters and groundwaters within the San Francisco Bay Region. Groundwaters have the following potential and existing beneficial uses: Municipal and Domestic Supply, Industrial Service Supply, Industrial Process Supply, Agricultural Supply, and Freshwater Replenishment. Surface waters have the following potential and existing beneficial uses: Municipal and Domestic Supply, Fish Migration and Fish Spawning, Industrial Service Supply, Navigation, Industrial Process Supply, Marine Habitat, Agricultural Supply, Estuarine Habitat, Groundwater Recharge, Shellfish Harvesting, Water Contact and Non-Contact Recreation, Ocean, Commercial, and Sport Fishing, Wildlife Habitat, Areas of Special Biological Significance, Cold Freshwater and Warm Freshwater Habitat, and Preservation of Rare and Endangered Species.
10. State Implementation Policy for California Toxics Rule (CTR): The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) was adopted by the State Board on March 2, 2000. The U.S.

EPA published the CTR, the *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (Federal Register, Volume 65, Number 97, 31682-31719), adding Section 131.38 to Title 40 of the Code of Federal Regulations, on May 18, 2000. OAL approved the SIP with some modifications on May 22, 2000.

11. Reuse Policy: 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/or 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 authorize the discharge of treated extracted groundwater in accordance with the requirements of this Order.
12. Reuse Allowed: This Order permits reuse or reclamation of extracted treated groundwater in conjunction with the discharge to surface water, except for purposes of recharge or reinjection. Reuse of extracted treated groundwater can take many forms, such as irrigation of landscaping or agriculture, dust control or soil compaction on construction sites, and industrial water supply.
13. Basin Plan Prohibition and Exception: The Basin Plan prohibits discharge of "wastewater which has particular characteristics of concern to beneficial uses": (a) "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" and (b) at any point in "San Francisco Bay south of the Dumbarton Bridge." The Basin Plan allows for exceptions to this prohibition if a discharge is approved as part of a groundwater clean-up project in accordance with Resolution No. 88-160, it has been demonstrated that neither reclamation nor discharge to a POTW is technically and economically feasible, and the discharger has provided certification of the adequacy and reliability of treatment facilities and a plan that describes procedures for proper operation and maintenance of all treatment facilities. The Basin Plan also 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." Prior to discharge under this permit, dischargers must demonstrate to the satisfaction of the Executive Officer that their groundwater extraction and treatment systems and associated operation, maintenance, and monitoring plans constitute acceptable programs for minimizing the discharge of toxic substances to waters of the State.
14. Anti-degradation Policies: Federal Regulations (40 CFR 131.12) and State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" requires that any increase in pollutant loading to a receiving water

shall be consistent with the following:

- a. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected; and
  - b. Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.
15. Anti-degradation Results: This permit complies with State and Federal "antidegradation" policies:
- a. The conditions and effluent limitations established in this Order for discharges of treated groundwater to surface waters in this Region ensure that the existing beneficial uses and quality of surface waters in this Region will be maintained and protected; and
  - b. Discharges regulated by this Order should not lower water quality if the terms and conditions of this Order are met.
16. No Preemption: This Order permits the discharge of treated groundwater to waters of the State subject to the prohibitions, effluent limitations, and provisions of this Order. It does not pre-empt or supersede the authority of municipalities, flood control agencies, or other local agencies to prohibit, restrict, or control discharges of waste to storm drain systems or other watercourses subject to their jurisdiction.
17. CEQA: This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) pursuant to Section 13389 of the California Water Code.
18. Notice: The Board has notified interested agencies and persons of its intent to issue general waste discharge requirements for groundwater dewatering discharges resulting from the cleanup of groundwater polluted by fuel leaks and other related wastes at service stations and similar sites, and has provided them with an opportunity to submit their written views and recommendations.
19. Hearing: The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that dischargers of treated groundwater polluted by fuel leaks and other related wastes at service stations and similar sites, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under and the provisions of the Clean Water Act as amended and regulations and guidelines adopted there under, shall comply with the following:

**A. Discharge Prohibitions**

1. The discharge of extracted and treated groundwater polluted by fuel leaks and other related wastes at service stations and similar sites and related wastes to surface waters is prohibited unless an NOI application for proposed discharge for the discharge has been submitted and the Executive Officer has provided the discharger with written authorization to initiate the discharge.
2. The discharge shall be limited to extracted and treated groundwater and those added treatment chemicals approved by the Executive Officer which do not adversely affect the environment and comply with the requirements of this Order.
3. The discharge of extracted and treated groundwater from a specific site in excess of the flow rate specified in each discharger's authorization letter from the Executive Officer is prohibited, unless an increase in gallons per day is approved by the Executive Officer.
4. The discharge of extracted and treated groundwater discharge shall not cause pollution, contamination, or nuisance.
5. The discharge shall cause no scouring or erosion at the point where the storm drain discharges into the receiving waters.
6. 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.
7. 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.

**B. Effluent Limitations (Surface water discharges only)**

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 B.1 Effluent Limits

No.	Compound	CAS Number	Discharge to Drinking Water Areas**		Discharge to Other Surface Water Areas	
			Average Monthly Effluent Limitation (ug/L)	Maximum Daily Effluent Limitation (ug/L)	Average Monthly Effluent Limitation (ug/L)	Maximum Daily Effluent Limitation (ug/L)
1	Benzene	71432		1		5
2	Carbon Tetrachloride	56235	0.25*	0.50	4.4	5
3	Chloroform	67663		5		5
4	1,1-Dichloroethane	75343		5		5
5	1,2-Dichloroethane	107062	0.38*	0.5		5
6	1,1-Dichloroethylene	75354	0.057*	0.11*	3.2	5
7	Ethylbenzene	100414		5		5
8	Methylene Chloride (Dichloromethane)	75092	4.7	5		5
9	Tetrachloroethylene	127184	0.8	1.6		5
10	Toluene	108883		5		5
11	Cis 1,2-Dichloroethylene	156592		5		5
12	Trans 1,2-Dichloroethylene	156605		5		5
13	1,1,1-Trichloroethane	71556		5		5
14	1,1,2-Trichloroethane	79005	0.6	1.2		5
15	Trichloroethylene	79016	2.7	5		5
16	Vinyl Chloride	75014		0.5		5
17	Total Xylenes	1330207		5		5
18	Methyl Tertiary Butyl Ether (MtBE)	1634044		5		13
19	Total Petroleum Hydrocarbons			50		50
20	Ethylene Dibromide (1,2-Dibromoethane)	106934		0.05*		5
21	Trichlorotrifluoroethane	76131		5		5

\* If reported detection level is greater than effluent limit, then a non-detect result using a 0.5 ug/L detection level is deemed to be in compliance.

\*\* Drinking water areas are defined as surface waters with the existing or potential beneficial uses of "municipal and domestic supply" and "groundwater recharge" (the latter includes recharge areas to maintain salt balance or to halt salt water intrusion into fresh water aquifers).

2. pH: The pH of the discharge shall not exceed 8.5 nor be less than 6.5.
3. Toxicity: The survival of rainbow trout 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.

### C. Receiving Water Limitations

1. Narrative Limits: 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. Numerical Limits: 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:
    - For all tidal waters:
      - In the Bay downstream of Carquinez Bridge - 5.0 mg/l minimum
      - Upstream of Carquinez Bridge - 7.0 mg/l minimum
    - For nontidal waters:
      - Waters designated as cold water habitat - 7.0 mg/l minimum
      - Waters designated as warm water habitat - 5.0 mg/l minimum
    - For all inland surface waters:
      - The median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those

specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

- b. pH: Variation from natural ambient pH by more than 0.5 pH units.
3. **More Stringent Standards May Apply:** The discharge shall not cause or contribute to 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 there under. 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. Water Reclamation Specifications (water reuse only)**

1. Water reclaimed for beneficial reuse as applied shall meet the requirements in Section B-Effluent Limitations.
2. The water reclamation activities shall be described in the discharger's NOI, including method of any additional treatment and location and type of water reuse.
3. No reclaimed water shall be allowed to escape from the authorized use area by airborne spray, nor by surface flow except in minor amounts associated with good irrigation practice, nor from conveyance facilities.
4. Reclamation involving irrigation shall not occur when the ground is saturated.
5. The use of reclaimed water shall not impair the quality of waters of the State, nor shall it create a nuisance as defined by Section 13050(m) of the California Water Code.
6. Adequate measures shall be taken to minimize public contact with reclaimed water and to prevent the breeding of flies, mosquitoes, and other vectors of public health significance during the process of reuse.
7. Appropriate public warnings must be posted to advise the public that the water is not suitable for drinking. Signs must be posted in the area, and all reclaimed water valves and outlets appropriately labeled.
8. There shall be no cross-connection between the potable water supply and piping containing treated groundwater intended for reuse.

9. Water reclamation consisting of recharge or reinjection is not authorized under this Order.

#### **E. Provisions**

1. Notice of Intent (NOI) Application: The NOI application for each point of proposed discharge to a storm drain system shall contain the information required in the attached "Fuel General NPDES Permit Notice of Intent Contents."
2. NOI Review: Upon receipt of a complete NOI application package for proposed discharge, the Executive Officer will review the application to determine whether the proposed discharger is eligible to discharge waste under this general permit. The application package should document that:
  - a. The proposed discharge results from the cleanup of groundwater polluted by fuel leaks and other related wastes at service stations and similar sites and similar wastes;
  - b. The proposed discharger has met the provisions of Resolution No. 88-160; and
  - c. The proposed treatment system and associated operation, maintenance, and monitoring plans are capable of ensuring that the discharge will meet the provisions, prohibitions, effluent limitations, and receiving water limitations of this Order.
3. Discharge Authorization: If the Executive Officer determines that the proposed discharger is eligible to discharge waste under this general permit, the Executive Officer will authorize the proposed discharge. If the Executive Officer authorizes the discharge, a "discharge authorization letter" will be transmitted to the discharger authorizing the initiation of the discharge subject to the conditions of this Order and any other conditions necessary to protect the beneficial uses of the receiving waters. The discharge authorization letter from the Executive Officer will specify the maximum allowed discharge flow rate. The discharge authorization letter may be terminated or revised by the Executive Officer at any time.
4. Non-Compliance As A Violation: Upon receipt of the Executive Officer's discharge authorization letter, the discharger(s) shall comply with all applicable conditions and limitations of this Order and the discharge authorization letter. Any permit noncompliance (violations of requirements in this Order or Self Monitoring Program) constitutes a violation of the Clean Water Act and the California Water Code and is grounds for the following: enforcement action, permit or authorization letter termination, revocation and reissuance, or modification, the issuance of an individual permit, or for denial of a renewal application.

5. **Self-Monitoring Program:** Dischargers shall comply with the attached "Self-Monitoring Program" or an amended Self-Monitoring Program specified in the discharge authorization letter. The sampling and analysis schedule in the attached Self-Monitoring Program is the program expected to be followed for six months. After six months, the results will be reviewed, if requested by the dischargers, and the Executive Officer may modify the Self-Monitoring Program to cover constituents of concern. If the groundwater extraction and/or treatment system(s) described in the application for proposed discharge and certification report is modified, the schedule of monitoring specified in Table A of the Self-Monitoring Program will be reviewed for possible modification.
6. **Order Modification:** 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 general permit (through the comprehensive monitoring program included as part of this Order). This permit will be re-opened if necessary, before May 22, 2003, to 1) add effluent limitations for other CTR constituents that are shown to have reasonable potential to cause, or contribute to an excursion of numeric or narrative water quality criteria based on data collected pursuant to the Self-Monitoring Program; or 2) to incorporate waste load allocations developed during the TMDL process.
7. **Mass/Concentration Based Triggers -** The following mass and concentration based triggers are not effluent limitations, and should not be construed as such. Instead, they are levels at which additional investigation is warranted to determine whether a numeric limit for a particular constituent is necessary.
  - a. If any inorganic constituent in the effluent of a discharge exceeds the mass based trigger as listed in the table E.7.1 below, then the discharger shall take three additional samples for each exceeded constituent during the following quarter and conduct activities as explained in the Provisions E.8, E.9, or E.10.

Table E.7.1 INORGANIC COMPOUNDS – MASS BASED TRIGGERS

		Mass Based Trigger by flow range* (grams/day)		
No.	Constituent	Flows less than 10 gpm	Flows 10 to 100 gpm	Flows over 100 gpm
1	Antimony	3	6	10
2	Arsenic	1	3	10
3	Beryllium	3	6	10
4	Cadmium	1	2	4
5	Chromium (VI)**	2	6	20
6	Copper	3	6	10
7	Lead	5	6	10

8	Mercury	0.01	0.1	0.5
9	Nickel	5	30	40
10	Selenium	2	20	45
11	Silver	1	3	10
12	Thallium	3	6	10
13	Zinc	10	70	200
* Based on average flow computed from last 12 months of operation				
** Dischargers, at their option, may meet this trigger as total chromium				

- b. If any organic constituent in the effluent of a discharge exceeds the concentration based trigger as listed in the table E.7.2 below, then the discharger shall take three additional samples for each exceeded constituent during the following quarter and conduct activities as explained in the Provisions E.8, E.9, or E.10.

Table E.7.2 ORGANIC COMPOUNDS – CONCENTRATION BASED TRIGGERS

No.	Compound	CAS Number	Conc. Based Trigger * (ug/L)	No.	Compound	CAS Number	Conc. Based Trigger * (ug/L)
1-13	See Table E.7.1			Continued			
14	Cyanide	57125	1	86	Fluoranthene	206440	5.0
15	Asbestos	1332214	7 MFibers/L	87	Fluorene	86737	5.0
16	2,3,7,8-TCDD (Dioxin)	1746016	1.3E-08	88	Hexachlorobenzene	118741	0.00075
17	Acrolein	107028	5.0	89	Hexachlorobutadiene	87683	0.44
18	Acrylonitrile	107131	2.0	90	Hexachlorocyclopentadiene	77474	5.0
20	Bromoform	75252	4.3	91	Hexachloroethane	67721	1.9
22	Chlorobenzene	108907	5.0	92	Indeno(1,2,3-cd)Pyrene	193395	0.0044
23	Chlorodibromomethane	124481	0.401	93	Isophorone	78591	5.0
24	Chloroethane	75003	5.0	94	Naphthalene	91203	5.0
25	2-Chloroethylvinyl Ether	110758	5.0	95	Nitrobenzene	98953	5.0
27	Dichlorobromomethane	75274	0.56	96	N-Nitrosodimethylamine	62759	0.00069
31	1,2-Dichloropropane	78875	0.52	97	N-Nitrosodi-n-Propylamine	621647	0.005
32	1,3-Dichloropropylene	542756	0.5	98	N-Nitrosodiphenylamine	86306	5.0
34	Methyl Bromide	74839	5.0	99	Phenanthrene	85018	5.0
35	Methyl Chloride	74873	5.0	100	Pyrene	129000	5.0
37	1,1,2,2-Tetrachloroethane	79345	0.17	101	1,2,4-Trichlorobenzene	120821	5.0
45	2-Chlorophenol	95578	5.0	102	Aldrin	309002	0.00013
46	2,4-Dichlorophenol	120832	5.0	103	alpha-BHC	319846	0.0039
47	2,4-Dimethylphenol	105679	5.0	104	beta-BHC	319857	0.014
48	2-Methyl-4,6-Dinitrophenol	534521	5.0				

No.	Compound	CAS Number	Conc. Based Trigger *	No.	Compound	CAS Number	Conc. Based Trigger *
			(ug/L)				(ug/L)
49	2,4-Dinitrophenol	51285	5.0	105	gamma-BHC	58899	0.019
50	2-Nitrophenol	88755	5.0	106	delta-BHC	319868	5.0
51	4-Nitrophenol	100027	5.0	107	Chlordane	57749	0.00057
52	3-Methyl-4-Chlorophenol	59507	5.0	108	4,4'-DDT	50293	0.00059
53	Pentachlorophenol	87865	0.28	109	4,4'-DDE	72559	0.00059
54	Phenol	108952	5.0	110	4,4'-DDD	72548	0.00083
55	2,4,6-Trichlorophenol	88062	2.1	111	Dieldrin	60571	0.00014
56	Acenaphthene	83329	5.0	112	alpha-Endosulfan	959988	0.0087
57	Acenaphthylene	208968	5.0	113	beta-Endosulfan	33213659	0.0087
58	Anthracene	120127	5.0	114	Endosulfan Sulfate	1031078	5.0
59	Benzidine	92875	0.00012	115	Endrin	72208	0.0023
60	Benzo(a)Anthracene	56553	0.0044	116	Endrin Aldehyde	7421934	0.76
61	Benzo(a)Pyrene	50328	0.0044	117	Heptachlor	76448	0.00021
62	Benzo(b)Fluoranthene	205992	0.0044	118	Heptachlor Epoxide	1024573	0.0001
63	Benzo(ghi)Perylene	191242	5.0	119-125	PCBs total	1336363	0.00017
64	Benzo(k)Fluoranthene	207089	0.0044	126	Toxaphene	8001352	0.0002
65	Bis(2-Chloroethoxy)Methane	111911	5.0	127	1,4-dioxane	123911	5.0
66	Bis(2-Chloroethyl)Ether	111444	0.031	128	Freon 12 (Dichlorodifluoromethane)	75718	0.19
67	Bis(2-Chloroisopropyl)Ether	39638329	5.0	129	Freon 22 (Chlorodifluoromethane)	75456	5.0
68	Bis(2-Ethylhexyl)Phthalate	117817	1.8	130	Paraldehyde	123637	5.0
69	4-Bromophenyl Phenyl Ether	101553	5.0	131	2-Methylnaphthalene	91576	5.0
70	Butylbenzyl Phthalate	85687	5.0	132	2-Methylphenol	95487	5.0
71	2-Chloronaphthalene	91587	5.0	133	4-Methylphenol	106445	5.0
72	4-Chlorophenyl Phenyl Ether	7005723	5.0	134	Benzyl Alcohol	100516	5.0
73	Chrysene	218019	0.0044	135	1,2,4-Trimethylbenzene	95636	5.0
74	Dibenzo(a,h)Anthracene	53703	0.0044	136	1,3,5-Trimethylbenzene	108678	5.0
75	1,2-Dichlorobenzene	95501	5.0	137	Isopropylbenzene (Cumene)	98828	5.0
76	1,3-Dichlorobenzene	541731	5.0	138	n-Propylbenzene	103651	5.0
77	1,4-Dichlorobenzene	106467	5.0	139	p-Isopropyltoluene (Cymene)	99876	5.0
78	3,3'-Dichlorobenzidine	91941	0.04	140	Tertiary Amyl Methyl Ether (TAME)	994058	5.0
79	Diethyl Phthalate	84662	5.0	141	Diisopropyl Ether (DIPE)	108203	5.0
80	Dimethyl Phthalate	131113	5.0	142	Ethyl Tertiary Butyl Ether (ETBE)	637923	5.0
81	Di-n-Butyl Phthalate	84742	5.0	143	Tertiary Butyl Alcohol (TBA)	75650	5.0

No.	Compound	CAS Number	Conc. Based Trigger *	No.	Compound	CAS Number	Conc. Based Trigger *
			(ug/L)				(ug/L)
82	2,4-Dinitrotoluene	121142	0.11	144	Ethanol	64175	5.0
83	2,6-Dinitrotoluene	606202	5.0	145	Methanol	67561	5.0
84	Di-n-Octyl Phthalate	117840	5.0	146	Tetrahydrofuran (THF)	109999	5.0
85	1,2-Diphenylhydrazine	122667	0.04	147	Nitromethane	75525	5.0
	Blank			148	Other VOCs	-	5.0
	Blank			149	Other SVOCs	-	5.0

\* If reported detection level is greater than the concentration based trigger, then a non-detect result using the lowest detection level from Appendix 4 of SIP is deemed to be in compliance

8. Mass or Concentration Based Triggers Case 1 - If the results of the three additional samples for the effluent **do not** exceed the triggers 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.
9. Mass or Concentration Based Triggers Case 2 - If the results of **any one of the three** additional samples exceed the triggers, the discharger has two options of submitting a rational for not doing the special studies explained below or performing the following:
- 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.
  - 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.
  - 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.

As an alternative, the discharger may submit a specific technical rational for not conducting the above special studies, subject to the Executive Officer's approval.

10. Mass or Concentration Based Triggers Case 3 - If the results of **two or three** of the additional samples exceed the triggers, the discharger shall perform the following:
- Calculate median and maximum concentration values and mass load for the

constituent(s) of concern, as described in Case 2 above.

- b. Explain or identify source(s) of the compound and any other related chemicals of concern.
- c. Define the properties of the compound and any other related chemicals of concern. Attach Material Safety Data Sheets, if available or applicable.
- d. Document what standard or customized EPA approved test methods are used to detect this compound.
- e. List and evaluate all available technologies for treatment or pre-treatment of this compound and any other related chemicals of concern. This evaluation may include the cost of increased treatment to reduce the constituent(s) of concern, and the amount of reduction in terms of concentration.
- f. Discuss any proposed plan for pilot bench scale and field tests for treatment of this compound and any other related chemicals of concern and associated timetable.
- g. Determine best available technology economically achievable for treatment of this compound and any other related chemicals of concern or propose the next step after obtaining the results of the pilot tests.
- h. If the results of the evaluation indicates that treatment of the discharge does not appear to be a feasible option, then:
  - 1) 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. For metals, include discussions regarding effects related to total or dissolved fraction and hardness 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.
  - 2) If the receiving water study finds that the discharge has potential to cause adverse impacts to beneficial uses of the receiving water, then 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.
- i. Within 180 days of the discharger receiving results of the confirmation sampling,

report the results of tasks (a) through (h) above to the Executive Officer, including a proposed method to eliminate or minimize future exceedances, or provide a rationale for why no change to the existing treatment program should take place. The discharger may be required to perform additional evaluations or take additional actions, as deemed necessary by the Executive Officer. The discharger may apply or may be required to apply for an individual NPDES permit. If the Executive Officer determines that additional numeric limits are necessary for a particular compound (including but not limited to a VOC), these limits will be calculated using the procedures specified in the SIP, Basin Plan, and applicable USEPA regulations.

As an alternative, the discharger may submit a specific technical rationale for not conducting the above special studies, subject to the Executive Officer's approval.

11. Exceedance of the same Mass or Concentration Based Triggers: If an exceedance of the same mass based trigger in Table E.7.1 or concentration based trigger in Table E.7.2 occurs less than 60 months after completion of the required tasks in Provisions E.8, E.9, or E.10, then the Executive Officer may waive the evaluation required above. This waiver will not apply if a different constituent exceeds the triggers set in Tables E.7.1 or E.7.2. In that case, the discharger shall perform an evaluation for that constituent. During and after any additional monitoring, the discharger should continue the required schedule of sampling and analysis in the Self-Monitoring Program.
12. Individual NPDES Permit May Be Required: The U.S. EPA Administrator may request the Board Executive Officer to require any discharger authorized to discharge waste by the general permit to subsequently apply for and obtain an individual NPDES permit. The Executive Officer of the Board may require any discharger authorized to discharge waste by a general permit to subsequently apply for and obtain an individual NPDES permit. An interested person may petition the Executive Officer or the Regional Administrator to take action under this provision. Cases where an individual NPDES permit may be required include the following:
  - a. The discharger is not in compliance with the conditions of this Order or the discharge authorization letter from the Executive Officer;
  - b. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
  - c. Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit;
  - d. A water quality control plan containing requirements applicable to such point sources is approved; or
  - e. The requirements of 40 CFR 122.28(a), as explained in Finding No. 4, are not met.

13. **Duty to Comply:** The filing of a request by the discharger for modification or termination of permit coverage, or a notification of planned changes or anticipated non-compliance does not stay any permit condition.
14. **Duty to Mitigate:** The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order which has a reasonable likelihood of adversely affecting public health or the environment, including such accelerated or additional monitoring as requested by the Board or Executive Officer to determine the nature and impact of the violation.
15. **Inspection and Entry:** The Board or its authorized representatives shall be allowed:
  - a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the Order;
  - b. Reasonable access to and duplication of any records that must be kept under the conditions of the Order;
  - c. To inspect at reasonable times any facility, equipment, practices, or operations regulated or required under the Order; and
  - d. To photograph, sample, and monitor at reasonable times for the purpose of assuring compliance with the Order or as otherwise authorized by the Clean Water Act any substances or parameters at any locations.
16. **Treatment Reliability:** The dischargers shall, at all times, properly operate and maintain all facilities that are used by the dischargers to achieve compliance with this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. All of these procedures shall be described in an Operation and Maintenance manual. The discharger shall keep in a state of readiness all systems 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 tests and made available to the Board for at least five years. Additional requirements for compliance with this provision are explained in item number 5 of the attached "Fuel General NPDES Permit Notice of Intent Contents."
17. **Transfers:** Coverage by this permit is not transferable to any person except after notice to the Executive Officer. The Executive Officer may require modification of the discharge authorization letter to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
18. **Planned Changes:** The discharger shall file with the Executive Officer an amended Notice of Intent at least 60 days before making any material change in the character,

location, or volume of the discharge.

19. A General NPDES Permit and Continuous Coverage: This Order shall serve as a general 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, USEPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 96-078. Order No. 96-078 will be considered rescinded when it is determined that USEPA has no objection to the new permit. Dischargers who (i) were previously subject to Order No. 96-078, (ii) filed a complete NOI before the effective date of this Order, and (iii) have not yet received an Executive Officer authorization letter pursuant to this Order will remain subject to the requirements of Order 96-078 or this order pending receipt of a new authorization letter. This provision will assure no lapse in NPDES permit coverage for authorized discharges.
20. Expiration Date: This Order expires on September 19, 2006. Dischargers who need to discharge treated groundwater after September 19, 2006, must file an application for proposed discharge no later than March 19, 2006, as application for issuance of new waste discharge requirements.

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 September 19, 2001.

  
Loretta K. Barsamian  
Executive Officer

Attachments: Fuel General NPDES Permit Notice of Intent Contents  
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 01-100

NPDES NO. CAG912002

**General Waste Discharge Requirements for Discharge or Reuse of Extracted and Treated  
Groundwater Resulting from the Cleanup of Groundwater Polluted by Fuel Leaks and  
Other Related Wastes at Service Stations and Similar Sites**

Fuel General NPDES Permit Notice of Intent Contents

The Notice of Intent (NOI) is an application package that contains all the information required by the Executive Officer to determine whether the proposed discharge is eligible to be authorized under this general permit. The NOI for each point of proposed discharge to a storm drain system shall include the following materials:

1. Reclamation: An effluent reclamation feasibility study for demonstration of compliance with the Board Resolution No. 88-160. This resolution requires an effluent reuse or reclamation evaluation to assess the practicality of reclaiming all or a portion of the treated effluent from the site. Reclamation alternatives may include irrigation of landscaping or agriculture, dust control or soil compaction on construction sites, decorative pond or fountain supply, or industrial water supply. If a portion of the extracted and treated groundwater is to be reclaimed, describe the proposed reuse, including:
  - a. The volume of water planned for reuse;
  - b. The type of reuse;
  - c. The reuse location and areal extent;
  - d. The method of transport and application (e.g. fixed piping and spray application);
  - e. Schedule of operation (e.g. time of day, days of week, seasonal changes);
  - f. Precautions planned to minimize runoff and human contact;
  - g. Duration of reuse activity - temporary or permanent project;
  - h. Proposed method(s) of monitoring reused groundwater; and
  - i. Name, address, and telephone number of user(s), if different than supplier.

The reclamation evaluation must demonstrate that an effort was made to notify potential users in the area of the availability of reclaimed water, and that all alternatives were explored. The evaluation must include name, address, and type of businesses contacted and their response.

Note: Reclamation involving engineered recharge or reinjection of treated groundwater will require a separate application to the Board.

If reuse or reclamation is demonstrated to be technically or economically infeasible, then discharge to a Publicly Owned Treatment Works (POTW) is encouraged. If access to the local POTW is denied or is infeasible, you must provide documentation of this fact (i.e. a

letter from the POTW or a written summary of your discussions with POTW officials).

2. NPDES Application Forms:

- a. Completed U.S.EPA application form 1 (General Information) and
- b. Completed U.S.EPA application form 2D (New Sources and New Dischargers). Existing dischargers should use form 2C instead of Form 2D. Forms may be obtained from the U.S. EPA Web Page at: <http://www.epa.gov/owmitnet/npdes.htm#forms>

All forms must be signed by an appropriate corporate officer, general partner, principal executive officer, or ranking elected official (see page I-4 of form 2D for more information). In no case should the consultant sign the forms.

3. Analytical Results: The NOI shall include analytical results, including the date the samples were taken, for influent and the projected maximum concentrations in the effluent, for the following constituents:

- a. MTBE, Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA Method 8020 or equivalent);
- b. Total Petroleum Hydrocarbons (as identified by modified EPA Method 8015 or equivalent) as gasoline and diesel;
- c. Volatile organic compounds including oxygenates (using EPA Method 8260b or equivalent);
- d. Semi volatile organic compounds using EPA Method 8270c or equivalent;
- e. Ethylene Dibromide (US EPA Method 504 or its equivalent); and
- f. Inorganic compounds (U.S. EPA priority pollutant metals samples shall be analyzed for total or unfiltered constituents). The maximum recommended detection limits are as follows: 0.2 ug/l for Mercury; 0.25 ug/l for Cadmium and Silver; 0.5 ug/l for Antimony, Beryllium, Total Chromium, Copper, and Lead; 1.0 ug/l for Nickel, Selenium, Thallium, and Zinc; 2.0 ug/l for Arsenic; and 5.0 ug/l for Cyanide.
- g. Others, if there is evidence of a release or being present.

Analyses shall be performed according to the appropriate U.S. EPA methods by a California certified laboratory.

4. Filing Fee: California Regulations has established an annual fee schedule dated May 18, 1995 based on the discharges' Threat To Water Quality and Complexity. The dischargers to be regulated under this General Permit are classified as category 2-B. The fee for category 2-B is currently \$2,000. This fee may change in future. New dischargers shall submit a check for \$2,000, which is the fee for processing the application and operation during the remainder of the fiscal year (July 1st through June 30th). The check shall be made **payable to the State Water Resources Control Board** and submitted with the application package.

5. Operation and Maintenance (O & M) Manual: Each discharger shall submit, as part of the application for proposed discharge, a report, to the satisfaction of Executive Officer, certifying

the adequacy of each component of the proposed treatment facilities along with the associated O & M Manual. This certification report shall contain an item-by-item analysis of the permit's requirements, based on accepted engineering practice, of how the process and physical design of the treatment facilities will ensure compliance with this Order. Each report shall also certify that (a) all treatment facility startup and operation instruction manuals are adequate and available to operating personnel, (b) adequate treatment facility maintenance and testing schedules are included in the treatment facility O & M Manual, and (c) influent and effluent sampling locations or ports are located in areas where samples representative of the waste stream to be monitored can be obtained. The design engineer shall affix his/her signature and engineering license number to this certification report.

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. 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 O & M Manual. The O & M Manual 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 and the authorization letters from the Executive Officer. The O & M Manual 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. If the O & M Manual would be finalized after start-up of the treatment system, it should be stated so in the NOI cover letter, the final O & M Manual should be submitted no later than 60 days after initiation of this discharge.

6. Other Information: The NOI shall include the following items:
  - a. A brief discussion of the cleanup project, including a description and schematics of the extraction system design;
  - b. The estimated average and maximum daily flow rates, and the maximum capacity of the treatment system;
  - c. Maps indicating extraction well locations, treatment facilities, the point(s) of initial discharge, and the path to the ultimate location of the discharge;
  - d. Documentation that local storm water management agency has been notified of the proposed discharge (new discharge only); and
  - e. Chemical Additives: If use of any chemical in the treatment, operation, and/or maintenance of the treatment units is needed, name(s) of the chemical, method of chemical application and disposal of any chemicals in the treatment, or operation and maintenance of the treatment units, and toxicity data of the chemical should be provided.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of  
Groundwater Polluted by Fuel Leaks and Other Related Wastes at Service Stations and Similar  
Sites

ORDER NO. 01-100

NPDES NO. CAG912002

**A. GENERAL**

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383 and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16 and the Environmental Protection Agency's Discharge Monitoring Report (Form 3320-1).

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, are: (1) to document compliance with waste discharge requirements and prohibitions established by this Regional Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent or other limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

**B. SAMPLING AND ANALYTICAL METHODS**

Sample collection, storage, and analyses shall be performed according to the 40 CFR 136 or other methods approved and specified by the Executive Officer of this Regional Board.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (DOHS) or a laboratory waived by the Executive Officer from obtaining a certification for these analyses by the DOHS. The director of the laboratory whose name appears on the certification or his/her laboratory supervisor who is directly responsible for analytical work performed shall supervise all analytical work including appropriate quality assurance/quality control procedures in his or her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

### C. DEFINITION OF TERMS

1. A **grab sample** is defined as an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with daily maximum limits and **instantaneous maximum** limits. Grab samples represent only the condition that exists at the time the wastewater is collected.
2. A **flow sample** is defined as the accurate measurement of the average daily flow volume using a properly calibrated and maintained flow measuring device.
3. **Duly authorized representative** is one whose:
  - a. Authorization is made in writing by a principal executive officer or ranking elected official;
  - b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general partner in a partnership, sole proprietor in a sole proprietorship, 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.)
4. **Instantaneous maximum** is defined as the highest measurement obtained for the calendar day.

### D. SPECIFICATIONS FOR SAMPLING AND ANALYSES

The discharger is required to perform sampling and analyses according to the schedule in Table A in accordance with the following conditions:

#### 1. Influent

Influent samples shall not include any treatment system recirculation.

#### 2. Effluent

- a. Samples of effluent and receiving waters shall be collected on days coincident with influent sampling unless otherwise stipulated. The Board

or Executive Officer may approve an alternative sampling plan if it is demonstrated to the Board's satisfaction that expected operating conditions for the facility warrant a deviation from the standard sampling plan.

- b. Fish bioassay samples shall be collected on days coincident with effluent sampling.
  - 1) Bioassay tests should be performed on effluent samples after chlorination-dechlorination.
  - 2) Total ammonia nitrogen shall be analyzed and un-ionized ammonia calculated whenever fish bioassay test results fail to meet the specified percent survival.
- c. If analytical results are received showing any instantaneous maximum limit (Effluent Limitation B.1) is exceeded, a confirmation sample shall be taken within 24 hours and results known within 24 hours of the sampling. If any instantaneous maximum limit for a constituent is exceeded in the confirmation sample, the discharge shall be terminated until the cause of the violation is found and corrected. In this case, the initial and confirmed exceedances will both be considered violations.
- d. If the final or intermediate results of any single bioassay test indicate a threatened violation (i.e. the percentage of surviving test organisms is less than the required survival percentage), a new test will begin and the discharger shall investigate the cause of the mortalities and report the finding in the next self-monitoring report.
- e. When any type of bypass occurs, grab samples shall be collected on a daily basis for all constituents at all affected discharge points that have effluent limits for the duration of the bypass.

### 3. Receiving Waters

- a. Receiving water samples shall be collected on days coincident with sampling of effluent.
- b. Receiving water samples shall be collected at each station on each sampling day during the period within 1 hour following low slack water. Where sampling at lower slack water period is not practical, sampling shall be performed during higher slack water period. Samples shall be collected within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated.

- c. Samples shall be collected within one foot below the surface of the receiving water body, unless otherwise stipulated.

**E. DESCRIPTION OF SAMPLING STATIONS**

1. **Influent I-1:** At a point in the extraction system immediately prior to inflow to the treatment unit.
2. **Effluent E-1:** At a point in the discharge line immediately following treatment and before it joins or is diluted by any other waste stream, body of water, or substance.
3. **Receiving Waters RU-1:** At a point 50 feet upstream from the point of discharge into the receiving water, or if access is limited, at the first point upstream which is accessible.
4. **Receiving Waters RD-1:** At a point 50 feet downstream from the point of discharge into the receiving water, or if access is limited, at the first point downstream which is accessible.

**F. START UP PHASE MONITORING AND REPORTING**

1. **Notification:** 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.
2. **Monitoring:** During the original start up for the treatment system, sampling of the effluent must occur on the first and fifth day of operation.
  - a. On the first day of the original start up, the system shall be allowed to run until at least three to five well volumes are removed and until three consecutive readings for pH, conductivity, and temperature are within five percent of each other; then, the influent and effluent shall be sampled and submitted for analyses. Prior to receipt of the results of the initial samples, all effluent shall be discharged into a holding tank (that is contained, not discharged to the receiving water) or discharged to the sanitary sewer until the results of the analyses show the discharge to be within the effluent limits established in this Order and/or in the authorization letter. The treatment system may be shut down after the first day's sampling to await the analyses results and, thereby, reduce the amount of storage needed. For the stored effluent, if the results of the analyses show the discharge to be in violation, the effluent shall: (1) be retreated until the retreated effluent is in compliance, or (2) be disposed in accord with the provisions of Chapter

15, Title 23, California Code of Regulations.

- b. If the first day's sampling shows compliance, the treatment system shall be operated for a total of five days with the discharge to the storm sewer or other conveyance system leading to the receiving water, and be sampled again. While the fifth day's samples are being analyzed, the effluent may be discharged to the receiving water as long as the analyses are received within 48 hours of sampling, and then, continue to be discharged to the receiving water if the analyses show compliance. If the treatment system is shut down more than 48 hours during the original start up (awaiting analyses results, etc.), the original start up procedures and sampling must be repeated.
3. Reporting: The discharger shall present the results of the laboratory analyses, flow rates, chain of custody forms, and descriptions of any changes or modifications to the treatment system in the start up report.

#### G. STANDARD OBSERVATIONS

##### 1. Receiving Water

- a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.
- b. Discoloration and turbidity: description of color, source, and size of affected area.
- c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
- d. Evidence of beneficial water use: presence of waterfowl or wildlife, fishermen, and other recreational activities in the vicinity of the site.
- e. Hydrographic condition, if relevant:
  - 1) Time and height of corrected high and low tides (corrected to nearest NOAA location for the sampling date and time of sample and collection).
  - 2) Depth of water columns and sampling depths.
- f. Weather condition:

- 1) Air temperature.
- 2) Wind - direction and estimated velocity.
- 3) Precipitation - total precipitation during the previous five days and on the day of observation.

**2. Onsite Usage of Reclaimed Water**

- a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.
- b. Discoloration and turbidity: description of color, source, and size of affected area.
- c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
- d. Weather condition:
  - 1) Air temperature.
  - 2) Wind - direction and estimated velocity.
  - 3) Precipitation - total precipitation during the previous five days and on the day of observation.
- e. Deposits, discolorations, and/or plugging in the conveyance system that could adversely affect the system reliability and performance.
- f. Operation of the valves, outlets, sprinkler heads, and/or pressure shutoff valves in conveyance system.

**3. Groundwater Treatment System**

- a. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
- b. Weather condition: wind direction and estimated velocity.
- c. Deposits, discolorations, and/or plugging in the treatment system (stripping tower, carbon filters, etc.) that could adversely affect the system reliability and performance.
- d. Operation of the float and/or pressure shutoff valves installed to prevent system overflow or bypass.

## H. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. **Start-up Report:** A report on the start up phase shall be submitted to the Regional Board no more than fifteen days after the end of the start up phase.
2. **Self-Monitoring Reports**

Written reports shall be submitted on a calendar quarter basis, not later than 15 days following the last day of the quarter. The reports shall be comprised of the following:

- a. **Letter of Transmittal:**

A letter transmitting self-monitoring reports should accompany each report. Such a letter shall include:

- 1) Identification of all violations of waste discharge requirements found during the reporting period, including the date of occurrence and date of determination for each violation,
- 2) Details of the magnitude, frequency, and dates of all violations,
- 3) The cause of the violations,
- 4) Discussion of the corrective actions taken or planned and the time schedule for completion. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory.
- 5) If a Self-Monitoring Report is submitted via E-Mail, the E-Mail should have the following components: (1) Subject: Site address, the quarter, and year (e.g. 12345 Main Street, San Jose, 1Q2001); (2) Message: Identification of all violations of waste discharge requirements found during the reporting period; (3) Attachment: The Self-Monitoring Report.

Monitoring reports and the letter transmitting reports shall be signed by a principal executive officer or ranking elected official of the discharger, or by a *duly authorized representative* of that person.

The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed 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."

- b. **Compliance Evaluation Summary**  
The report format shall be acceptable to the Executive Officer.
- c. **Map or Aerial Photograph** A map or aerial photograph shall accompany the report showing sampling and observation station locations.
- d. **Results of Analyses and Observations** The report format shall be a format that is acceptable to the Executive Officer.
  - 1) If the discharger monitors any pollutant more frequently than required by this permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Self-Monitoring Report.
  - 2) Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
  - 3) The report shall also include a table identifying by method number the analytical procedures used for analyses. Any special methods shall be identified and should have prior approval of the Board's Executive Officer.
  - 4) Lab results shall be summarized in tabular form but do not need to be included in the report.
  - 5) Please note that dischargers with an average flow rate greater than 10 gpm are required to perform monitoring of several additional contaminants.

e. **List of Approved Analyses**

- 1) Listing of analyses for which the discharger is approved by the State Department of Health Services.
- 2) List of analyses performed for the discharger by another approved laboratory.
- 3) List of "waived" analyses, as approved by the Executive Officer.

f. **Flow and Mass Removed Data**

- 1) The tabulation pursuant to Section I.2.
- 2) An estimate of the fuel mass removal in pounds.

- g. **Operation Status** Summary of treatment system status during the reporting period (e.g. in operation/on standby) and reason(s) for non-routine treatment system shut down.

3. **Annual Reporting**

By January 15 of each year, the discharger shall submit an annual report to the Regional Board covering the previous calendar year. The annual report shall contain all data required for the fourth quarter in addition to summary data required for annual reporting. This report may be submitted in lieu of the report for the fourth quarter of a calendar year.

The report shall contain tabular summary of the monitoring data obtained during the previous year. In addition, the report shall contain a comprehensive discussion of the compliance record and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.

4. **Spill Reports**

If any hazardous substance is discharged in or on any waters of the state, or discharged and deposited where it is, or probably will be discharged in or on any waters of the state, the discharger shall report such a discharge to this Regional Board, at (510) 622-2300 on weekdays during office hours from 8 a.m. to 5 p.m., and to the Office of Emergency Services at (800) 852-7550 during non-office hours. A written report shall be filed with the Regional Board within five (5) working days and shall contain information relative to:

- a. nature of waste or pollutant,
- b. quantity involved,
- c. duration of incident,
- d. cause of spilling,
- e. Spill Prevention, Control, and Countermeasure Plan (SPCC) in effect, if any,
- f. estimated size of affected area,
- g. nature of effects (i.e., fish kill, discoloration of receiving water, etc.),
- h. corrective measures that have been taken or planned, and a schedule of these activities, and
- i. persons/agencies notified.

**5. Reports of Treatment Unit Bypass and Permit Violation**

In the event the discharger violates or threatens to violate the conditions of the waste discharge requirements and prohibitions or intends to permit a treatment unit bypass due to:

- a. maintenance work, power failures, or breakdown of waste treatment equipment,
- b. accidents caused by human error or negligence,
- c. the self-monitoring program results exceeding effluent limitations,
- d. any activity that would result in a frequent or routine discharge of any toxic pollutant not limited by this Order, or
- e. other causes, such as acts of nature;

The discharger shall notify the Board within one day as soon as the discharger or discharger's agent has knowledge of the incident and confirm this notification in writing within 5 working days of the initial notification. The written report shall include time, date, duration and estimated volume of waste bypassed, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

If a violation of INSTANTANEOUS MAXIMUM LIMITS should occur (and be confirmed), the discharge shall be directed to a holding tank and contained, or the extraction and treatment system shall be shut down. The content of the holding tank shall be retreated until the retreated effluent is in compliance, or be disposed

in accord with the provisions of Chapter 15, Title 23, California Code of Regulations.

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.

6. **Construction Projects:** The discharger shall file a written technical report to be received at least 30 days prior to advertising for bid (or 60 days prior to construction) on any construction project which would cause or aggravate the discharge of waste in violation of requirements; said report shall describe the nature, cost, and scheduling of all action necessary to preclude such discharge. In no case will any discharge of wastes in violation of permit and order be permitted unless notification is made to the Executive Officer and approval obtained from the Regional Board.
7. **Chemical Additives:** 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.

#### I. RECORDS TO BE MAINTAINED

1. Written reports, strip charts, calibration and maintenance records, and other records shall be maintained by the discharger and accessible and retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board or Regional Administrator of the U.S. Environmental Protection Agency, Region IX. Such records shall show the following for each sample:
  - a. Identity of sampling and observation stations by number.
  - b. Date and time of sampling and/or observations.
  - c. Method of sampling (See Section C - Definition of Terms).

- d. Type of fish bioassay test (96-hour static or flow-through bioassay)
  - e. Date and time that analyses are started and completed, and name of personnel performing the analyses.
  - f. Complete procedure used, including method of preserving sample and identity and volumes of reagents used. A reference to a specific section of ***Standard Methods*** or the standard U.S. EPA method number is satisfactory.
  - g. Calculations of results.
  - h. Results of analyses and/or observations.
- 2. Weekly discharge flow volume shall be recorded, as well as totalized quarterly and annual flow.
  - 3. A tabulation reflecting bypassing and accidental waste spills shall be maintained.

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

- 1. Has been developed in accordance with the procedure set forth in the 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. 01- 100.
- 2. Was adopted by the Board on September 19, 2001.
- 3. May be revised by the Executive Officer pursuant to U.S. EPA regulations (40 CFR 122.36); other revisions may be ordered by the Board.



Loretta K. Barsamian  
Executive Officer

Attachment: Table A

**TABLE A - SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS**

Sampling Station	Type of sample	Units	U.S. EPA Std. Method*	I-1	E-1	RD-1/RU-1
	Flow Rate			Grab	Grab	Grab
	Turbidity				Continuous	
	Fish Toxicity, 96-hr	% survival			D/Q/Y	
	pH				Q/Y	
	Dissolved Oxygen	mg/L		D/M/Q/Y	D/M/Q/Y	V
	Temperature	°C				V
	Electrical Conductivity					
	All Applicable Standard Observations			D	D/M/Q/Y	
	Benzene			D	D/M/Q/Y	
	Toluene				D/M/Q/Y	
	Ethylbenzene	µg/L	8020		M	V
	Total Xylenes	µg/L	8020	D/M	D/M	V
	Methyl Tertiary Butyl Ether (MTBE)	µg/L	8020	D/M	D/M	V
	Total Petroleum Hydrocarbons (as Gasoline and Diesel)	µg/L	8020	D/M	D/M	V
	Ethylene Dibromide (EDB)	µg/L	8020	D/M	D/M	V
	Volatile Organic Compounds	µg/L	8015 Modified	D/M	D/M	V
	Tertiary Amyl Methyl Ether (TAME)	µg/L	504	Y	D/M	V
	Diisopropyl Ether (DIPE)	µg/L	8260b	Y	2/Y	V
	tert-Butyl Tertiary Butyl Ether (ETBE)	µg/L	8260b	Y	2/Y	V
	tert-Butyl Alcohol (TBA)	µg/L	8260b	Y	2/Y	
	1-Propanol	µg/L	8260b	Y	2/Y	
	2-Propanol	µg/L	8260b	Y	2/Y	
	Volatile Organic Compounds	µg/L	8260b	Y	2/Y	
	Nuclear Aromatic Hydrocarbons (PAHs)	µg/L	8260b	Y	2/Y	
	Asbestos	µg/L	8270c	Y	2/Y	
	Hardness Total	mg/L as CaCO <sub>3</sub>	8310	Y	2/Y	
	Calcium Total	µg/L & g/day			D/Q/Y	
	Magnesium Total	µg/L & g/day	204	D/Y	D/Q/Y	
	Iron Total	µg/L & g/day	206	D/Y	D/Q/Y	
	Copper Total	µg/L & g/day	210	D/Y	D/Q/Y	
	Hexavalent and Total Chromium	µg/L & g/day	213	D/Y	D/Q/Y	
		µg/L & g/day	218	D/Y	D/Q/Y	

Sampling Station	Units	U.S. EPA Std. Method*	I-1	E-1	RD-1/RU-1
Type of sample			Grab	Grab	Grab
Copper Total	µg/L & g/day	220	D/Y	D/Q/Y	
Cyanide Total	µg/L & g/day	335	D/Y	D/Q/Y	
Lead Total	µg/L & g/day	239	D/Y	D/Q/Y	
Mercury Total	µg/L & g/day	1631	D/Y	D/Q/Y	
Nickel Total	µg/L & g/day	249	D/Y	D/Q/Y	
Selenium Total	µg/L & g/day	270	D/Y	D/Q/Y	
Silver Total	µg/L & g/day	272	D/Y	D/Q/Y	
Thallium Total	µg/L & g/day	279	D/Y	D/Q/Y	
Zinc Total	µg/L & g/day	289	D/Y	D/Q/Y	
Asbestos (if average flow rate is greater than 10 gpm)	MFL	100.1	A	A	
Dioxin/Furan (if average flow rate is greater than 10 gpm)	µg/L	1613		A	
Organochlorine Pesticides and PCBs (if average flow rate is greater than 10 gpm)	µg/L	608	A	A	

Definitions: ug/L = microgram per liter or parts per billion (ppb), g/day = grams per day, gpm = gallons per minute, mg/L = milligram per liter or parts per million (ppm), gpd = gallons per day, MFL = million fibers per liter

Types of Stations: I=Influent, E=Effluent, RD=Receiving Water Downstream, RU=Receiving Water Upstream

**Frequency of Sampling**

D Once during the first and fifth day of start up.

M Once each month.

Y Once during the first week of start up; annually thereafter.

2/Y Once during the first week of start up; twice per year thereafter.

D/M Once during the first and fifth day of start up; monthly thereafter.

D/Y Once during the first and fifth day of start up; annually thereafter.

Q/Y Quarterly for first year of operation, annually thereafter.

D/Q/Y Once during the first and fifth day of start up; quarterly for first year of operation, annually thereafter.

D/M/Q/Y Once during the first and fifth day of start up; monthly for first year of operation, quarterly for the second year, and annually thereafter. In case of pH analysis, only for facilities not performing pH-adjusting chemical addition.

V Sampling should be performed within 24 hours after an exceedance is confirmed in E-1.

A Once during the first year of operation; annually thereafter if compounds present in first sample.

Footnote: \* U.S. EPA Standard Method or equivalent.

General Notes: Inorganic compounds samples shall be analyzed for total (unfiltered) constituents with the detection levels as follows: 0.2 ug/l for Mercury; 0.25 ug/l for Cadmium and Silver; 0.5 ug/l for Antimony, Beryllium, Total Chromium, Copper, and Lead; 1 ug/l for Nickel, Selenium, Thallium, and Zinc; 2.0 ug/l for Arsenic; and 5 ug/l for Cyanide (SIP Appendix 4 Minimum Levels <http://www.swrcb.ca.gov/iswp/index.htm>).