Appendix BB

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. 93-70

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF ESCONDIDO HALE AVENUE REGIONAL RECLAMATION FACILITY SAN DIEGO COUNTY

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

1. On June 6, 1988, this Regional Board adopted Order No. 88-04 (NPDES Permit No. CA0107981), "Waste Discharge Requirements for the City of Escondido Hale Avenue Water Pollution Control Facility Discharge Through the San Elijo Ocean Outfall". Order No. 88-04, as amended by addenda, establishes requirements for the discharge of up to 17.5 million gallons per day (MGD) of treated wastewater from the Hale Avenue Regional Reclamation Facility through the 8,000-foot-long San Elijo ocean outfall.

2. On April 27, 1993, the City of Escondido (hereinafter discharger) submitted a report of waste discharge (RWD) for the Hale Avenue Regional Reclamation Facility to discharge an annual average of 3 MGD and a peak flow 5 MGD of Title 22 treated reclaimed water to water reclamation markets located within the City of Escondido and Rincon Del Diablo Water District. After additional information submitted by the discharger on June 7, 1993, the RWD was considered complete.

3. The City of Escondido provides wastewater collection, treatment, and disposal to areas within its incorporated boundaries. Through a contract with the City of San Diego, the City of Escondido also treats up to 5.3 MGD of sewage from a portion of the community of Rancho Bernardo. Wastewaters are treated at the City of Escondido Hale Avenue Regional Reclamation Facility (RRF).

4. The discharger has proposed a water reclamation program within the City of Escondido and Rincon Del Diablo Water District. The first phase of this water reclamation program would distribute reclaimed water to large users of irrigation water, including golf courses, parks, street landscaping, schools, agriculture, and other landscaped areas. The proposed reuse sites are currently utilizing potable water as a source of irrigation supply. Under the

proposed reclaimed water use project, up to 3 MGD of reclaimed water from the Hale Avenue RRF would be distributed for use at these existing irrigation markets.

5. Reclaimed water markets proposed as part of the 3 MGD City of Escondido Phase 1 reclaimed water program are located in the following areas:

   (a) approximately 0.3 MGD of reuse within the eastern portion of the Richland HSA (4.52) of the San Marcos HA (4.5) of the Carlsbad HU (4.0).

   (b) approximately 1.5 MGD of reuse within the central, southern, and western portions of the Escondido HSA (4.62) of the Escondido Creek HA (4.6) of the Carlsbad HU (4.0).

   (c) approximately 1.1 MGD of reuse within the northeastern portion of the Del Dios HSA (5.21) of the Hodges HA (5.2) of the San Dieguito HU (5.0).

   (d) approximately 0.1 MGD of reuse within the Felicita HSA (5.21) of the Hodges HA (5.2) of the San Dieguito HU (5.0).

6. The existing 17.5 MGD Hale Avenue RRF is an activated sludge treatment plant. Wastewater is treated by manually cleaned bar screen and comminutors, aerated grit chambers, primary settling basins, primary clarifiers, aeration basins utilizing fine bubble diffusion, and secondary clarifiers.

7. The discharger reports that secondary treatment facilities at the Hale Avenue RRF are to be upgraded to provide tertiary treatment and disinfection of dry weather wastewater flows of up to 18 MGD. Proposed improvements to existing secondary treatment facilities include providing a new headworks facility with mechanically cleaned bar screens, providing new grit chambers, modifying the aeration basin air diffusers, and providing two additional secondary clarifiers. Proposed tertiary facilities include providing a tertiary treatment equalization basin, chemical addition facilities (alum, polymer, and chlorine), six monomedia gravity-flow filters with backwash facilities, and four chlorine contact basins. Dechlorination facilities are also to be provided to dechlorinate excess disinfected reclaimed water which is to be discharged to the ocean outfall.

8. The discharger reports that the Hale Avenue RRF will provide reclaimed water which meets Title 22 treatment and reliability requirements for nonrestricted public contact and landscape irrigation of lawns, parks,

playgrounds, and golf courses. In accord with Title 22, reclaimed water used for nonrestricted body contact must undergo tertiary treatment, and must be adequately disinfected, oxidized, coagulated, clarified, and filtered. In addition, the median number of coliform organisms must not exceed 2.2 per 100 milliliters, and the maximum number of coliforms in any sample must not exceed 23 organisms per 100 milliliters.

9. The discharger reports that sludge from the Hale Avenue RRF is thickened through dissolved air flotation, treated in anaerobic digesters, conditioned with lime and ferric chloride, and dewatered in plate and frame filter presses. Screenings and grit are hauled to a landfill. Through a contract with a private contractor, dewatered sludge is hauled to a composting site in Corona. As a backup to the private contractor, the City maintains the ability to truck sludge to a landfill.

10. The discharger reports that reclaimed water flows produced by the Hale Avenue RRF which are in excess of irrigation demands would continue to be discharged to the San Elijo ocean outfall.

11. As part of the tertiary facilities upgrade, the discharger reports that a flood control berm at the Hale Avenue RRF is to be constructed to protect proposed tertiary treatment facilities from the waters of a once-in-100-year flood.

12. The discharger reports that, in the absence of reclaimed water use, the City of Escondido potable water supply would serve as the water supply for the proposed reuse sites. The discharger reports the following quality for the replacement water supply:

Constituent	Replacement Water Supply Concentration (mg/l)
Total dissolved solids	525
Chloride	80
Sulfate	185
Iron	0.02
Manganese	0.005

Methylene Blue Active Substances (MBAS)	<0.05
Boron	0.2
Fluoride	0.5

13. On March 20, 1991, the City of Escondido adopted Ordinance 91-3, "An Ordinance of the City Council of the City of Escondido, California, Establishing a Water Reclamation Plan". City Ordinance 91-3 establishes rules, permitting requirements, and enforcement procedures which apply to all users of the City's reclaimed water. Ordinance 91-3 also provides the City with authority to monitor and enforce federal, state, and local reuse standards. As part of Ordinance 91-3, the City is regulating industrial discharges to reduce mineral loads to the Hale Avenue RRF influent. The ordinance also prohibits the installation of water softeners in new construction and requires the removal of water softeners upon the transfer of property.

14. The Hale Avenue RRF reclaimed water supply is derived from a combination of water supplies delivered within the City of San Diego and Escondido. The discharger reports the following approximate average water quality and incremental increase associated with water use for the City of Escondido and Rancho Bernardo (City of San Diego) water supplies.

Constituent	Average Escondido/San Diego Water Supply Concentration (mg/l)	Projected Concentration Increase Through Use (mg/l)
Total dissolved solids	600	400
Chloride	90	150
Sulfate	210	90
Iron	0.04	0.02
Manganese	0.01	0.09

Methylene Blue Active Substances (MBAS)	<0.05	0.25
Boron	0.2	0.6
Fluoride	0.3	1.1

15. The discharger reports that the City of Escondido source control program is projected to result in Hale Avenue RRF tertiary effluent concentrations of total dissolved solids, sulfate, chloride, iron, and manganese which are equal to or less than existing Basin Plan groundwater quality objectives within the Richland (4.52), Escondido (4.62), Del Dios (5.21), and Felicity (5.23) HSA's. The discharge reports, however, that Hale Avenue RRF effluent concentrations of boron and fluoride may be higher than Basin Plan groundwater quality objectives for the four HSA's.

16. The discharger provides the following results of groundwater quality analyses for the Richland (4.52), Escondido (4.62), Del Dios (5.21), and Felicity (5.23) HSA's:

Hydrologic Subarea	Mean Boron Groundwater Concentration (mg/l)	Mean Fluoride Groundwater Concentration (mg/l)
Eastern 1000 acres of Richland HSA (4.52)	0.16	0.2
Escondido HSA (4.62)	0.12	0.3
Northern and eastern portion of Del Dios HSA (5.21)	0.30	0.5
Felicita HSA (5.23)	0.14	0.3

17. The "Comprehensive Water Quality Control Plan Report, San Diego Basin (9)" (Basin Plan) was adopted by this Regional Board on March 17, 1975; and subsequently approved by the State Water Resources Control Board (State Board). Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board.

18. The Basin Plan establishes the following beneficial uses for the groundwaters of the Richland HSA (4.52), Escondido HSA (4.62), and Del Dios HSA (5.21), and Felicity HSA (5.23):

    (a) Municipal and domestic supply
    (b) Agricultural supply
    (c) Industrial service supply.

19. The Basin Plan establishes the following beneficial uses for surface waters of the Richland HSA (4.52):

    (a) Agricultural supply
    (b) Water contact recreation
    (c) Non-contact water recreation
    (d) Warm fresh-water habitat
    (e) Wildlife habitat
    (f) Preservation of rare and endangered species.

20. The Basin Plan establishes the following beneficial uses for surface waters of the Escondido HSA (4.62):

    (a) Municipal and domestic supply
    (b) Agricultural supply
    (c) Industrial service supply (potential use)
    (d) Water contact recreation
    (e) Non-contact water recreation
    (f) Warm fresh-water habitat
    (g) Cold fresh-water habitat
    (h) Wildlife habitat
    (i) Preservation of rare and endangered species.

21. The Basin Plan establishes the following beneficial uses for surface waters of the Del Dios HSA (5.21), Felicita HSA (5.23):

    (a) Municipal and domestic supply
    (b) Agricultural supply
    (c) Industrial service supply
    (d) Industrial process supply
    (e) Water contact recreation
    (f) Non-contact water recreation
    (g) Warm fresh-water habitat
    (h) Cold fresh-water habitat
    (i) Wildlife habitat.

22. The Basin Plan establishes the following beneficial uses for Lake Hodges:

(a) Municipal and domestic supply
(b) Agricultural supply
(c) Industrial service supply
(d) Industrial process supply
(e) Water contact recreation[1]
(f) Non-contact water recreation
(g) Warm fresh-water habitat
(h) Cold fresh-water habitat
(i) Wildlife habitat.

[1] Fishing from shore or boat is permitted, but other water contact recreational uses are prohibited.

23. The Basin Plan establishes the following water quality objectives for the Richland HSA (4.52), Del Dios HSA (5.21), and Felicita HSA (5.23):

	Concentration not to be exceeded more than 10 percent of the time			
Constituent	Surface Water		Groundwater	
Total Dissolved Solids	500	mg/l	1000[2]	mg/l
Chloride	250	mg/l	400[2]	mg/l
Percent Sodium	60	%	60	%
Sulfate	250	mg/l	500[2]	mg/l
Nitrate (as NO_3)	--		10[2]	mg/l
Nitrogen and phosphorus	*		--	
Iron	0.3	mg/l	0.3[2]	mg/l
Manganese	0.05	mg/l	0.05[2]	mg/l
Methylene blue active substances	0.5	mg/l	0.5	mg/l
Boron	0.5	mg/l	0.5[2]	mg/l
Odor	none		none	
Turbidity	20	NTU	5	NTU
Color	20	units	15	units
Fluoride	1.0	mg/l	1.0	mg/l

* Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total phosphorus (P) concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any reservoir or lake, nor 0.025 mg/l in any reservoir or lake. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds, however natural rations of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ration of N:P = 10:1 shall be used.

2 Within the Del Dios HSA (5.21) and Felicita HSA (5.23), detailed salt balance studies are recommended to determine limiting mineral concentration levels for discharge. On the basis of existing data, the tabulated objectives would probably be maintained in most areas. Upon completion of the salt balance studies, significant water quality objective revisions may be necessary. In the interim period of time, projects of groundwater recharge with water quality inferior to the tabulated values may be permitted following individual review and approval by the Regional Board if such projects to not degrade existing groundwater quality to the aquifers affected by the recharge.

24. The Basin Plan establishes the following water quality objectives for the Escondido HSA (4.62):

	Concentration not to be exceeded more than 10 percent of the time			
Constituent	Surface Water		Groundwater	
Total Dissolved Solids	500	mg/l	1000*	mg/l
Chloride	250	mg/l	300	mg/l
Percent Sodium	60	%	60	%
Sulfate	250	mg/l	400*	mg/l
Nitrate (as NO_3)	--		10	mg/l
Nitrogen and phosphorus	**		--	
Iron	0.3	mg/l	0.3	mg/l
Manganese	0.05	mg/l	0.05	mg/l
Methylene blue active substances	0.5	mg/l	0.5	mg/l
Boron	0.5	mg/l	0.5	mg/l
Odor	none		none	
Turbidity	20	NTU	5	NTU

Color	20	units	15	units
Fluoride	1.0	mg/l	1.0	mg/l

* As modified by Regional Board Resolution No. 93-02 and State Water Resources Control Board Resolution No. 93-51, which at the time of adopting of this Order, was not yet reviewed and approved by the State of California Office of Administrative Law.

** Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total phosphorus (P) concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any reservoir or lake, nor 0.025 mg/l in any reservoir or lake. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds, however natural rations of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ration of N:P = 10:1 shall be used.

25. The discharger presents computer modeling of the Richland (4.52), Escondido (4.62), Del Dios (5.21), and Felicita (5.23) HSA's to assess the potential assimilative capacity of HSA's to accommodate reclaimed water use without causing existing Basin Plan groundwater quality objectives for boron and fluoride to be exceeded. The discharger applies a lumped-parameter model to each basin to evaluate ultimate steady-state groundwater concentrations as a function of estimated and observed natural and man-induced groundwater recharge and discharge. The groundwater concentrations simulated within the model represent long-term concentrations associated with 100 years or more of sustained local groundwater pumping, imported water use, reclaimed water use, and average natural groundwater recharge. The modeling assessed the 3 MGD Phase 1 reclaimed water flows proposed by the City of Escondido, plus an additional 3 MGD of potential future reuse within the basins. On the basis of the modeling, the discharger concludes that adequate boron and fluoride assimilative capacity exists in each basin to insure that the City of Escondido Phase 1 reuse program will remain in compliance with Basin Plan groundwater quality objectives. The discharger further concludes that sustained reclaimed water use within the four HSA's may lead to increases in groundwater total dissolved solids concentrations potentially ranging from 3 to 15 percent, but that the potential increase in dissolved solids concentrations would not result in an unreasonable impact to existing or potential beneficial use within the basins.

26. As part of the modeling effort, the discharger performs a model sensitivity analysis for each basin. The sensitivity analysis demonstrates most model

input parameters have little effect on model results. The analysis concludes, however, that simulated groundwater concentrations projected by the model can be influenced by 10 percent with approximately a 20 percent change in any of the following four estimated parameters:

(a) reclaimed water pollutant concentrations,
(b) the quantity of reclaimed water use within each basin,
(c) the quantity of applied water which ultimately percolates to groundwater, and
(d) the quantity of groundwater which ultimately flows out of the basin.

27. On the basis of Regional Board staff review of the modeling and sensitivity analyses submitted by the discharger, staff concludes that sufficient uncertainty exists in the model simulations to warrant ground and surface water monitoring of reuse sites and control areas to (1) insure compliance with Basin Plan ground and surface water quality objectives, and (2) assess the parameters and relations on which the assimilative capacity modeling is based.

28. The discharger reports that the City of Escondido would control proposed and potential reclaimed water use within the eastern portion of the Richland HSA (4.52), Escondido HSA (4.62), and Felicita HSA (5.23). The City of Escondido would also have jurisdiction over reuse within the eastern and northern portion of the Del Dios HSA (5.21). Within the southern portion of the Del Dios HSA (5.21), the City of Poway and City of San Diego may wish to implement reclaimed water use. The discharger reports that the City of Escondido may enter into future contracts with the City of Poway and City of Escondido to provide Hale Avenue RRF reclaimed water for use within Poway and San Diego jurisdictions. Potential City of Poway and City of San Diego reclaimed water demands within the Del Dios HSA (5.21) are estimated at approximately 2 MGD. Separate reports of waste discharge would be filed with the Regional Board should the City of Poway or City of San Diego wish to pursue water reclamation in the southern portion of the Del Dios HSA (5.21).

29. The discharge of reclaimed water to the areas authorized under this Order is in conformance with SWRCB Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters of California". The planned wastewater reclamation and reuse projects within the Richland HSA (4.52), Escondido HSA (4.62), Del Dios HSA (5.21), and Felicita HSA (5.23) proposed under the terms and conditions of this order will:

(a) Have maximum benefit to the people of the State, in part because, in the absence of reclaimed water, imported potable water would be used for irrigating the reuse areas described in this Order;

(b) Not unreasonably affect the beneficial uses of groundwaters in the Richland, Escondido, Del Dios, or Felicita HSA's; and

(c) Not cause the groundwater quality objectives in the Richland, Escondido, Del Dios, or Felicita HSA's to be exceeded.

30. The Basin Plan contains the following prohibitions which are applicable to the discharge:

"Discharge of treated or untreated sewage or industrial wastewater, exclusive of cooling water or other waters which are chemically unchanged, to a watercourse, is prohibited except in cases where the water quality of said discharge complies with the receiving body water quality objectives."

"Discharging of treated or untreated sewage or industrial wastes in such a manner or volume as to cause sustained surface flow or ponding on lands not owned or under the control of the discharger is prohibited except in cases defined in the previous paragraph and in cases in which the responsibility for all downstream adverse effects is accepted by the discharger."

"The dumping or deposition of oil, garbage, trash or other solid municipal, industrial or agricultural waste directly into inland waters or watercourses or adjacent to the watercourses in any manner which may permit its being washed into the watercourse is prohibited."

"Dumping or deposition of oil, garbage, trash or other solid municipal, industrial or agricultural waste into natural or excavated sites below historic water levels or deposition of soluble industrial wastes at any site is prohibited, unless such site has been specifically approved by the Regional Board for that purpose."

31. On June 1992, the City of Escondido has certified a final environmental impact report in accordance with the California Environmental Quality Act (Public Resources Code Section 21000, et seq.)."
The project as approved by the City of Escondido will not have a significant effect on water quality.

32. This Order prescribes waste discharge requirements and reclamation requirements governing the production and use of reclaimed water, which the Regional Board has determined are necessary to protect the public health, safety and welfare pursuant to California Water Code, Division 7, Chapter 7, Sections 13500-13550 ("Water Reclamation Law"). This Order, which applies to the producer of reclaimed water, requires that the producer of the reclaimed water establish and enforce rules and regulations which apply to users, including purveyors, of the reclaimed water.

33. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

    (a) Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;

    (b) Other waste discharges;

    (c) The need to prevent nuisance;

    (d) Past, present, and probable future beneficial uses of the hydrologic subunits under consideration;

    (e) Environmental characteristics of the hydrologic subunits under consideration;

    (f) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;

    (g) Economic considerations;

    (h) The need for additional housing within the region; and

    (i) Need to develop and use recycled water.

34. The Regional Board has considered all water resource related environmental factors associated with the proposed discharge of reclaimed water.

35. The Regional Board has notified the City of Escondido and all known interested parties of the intent to prescribe waste discharge requirements for the proposed discharge.

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

IT IS HEREBY ORDERED, that the City of Escondido, hereinafter discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following requirements for the City of Escondido Water Reclamation and Reuse Project:

A. PROHIBITIONS

1. Discharges of wastes to lands which have not been specifically described in the report of waste discharge and for which valid waste discharge requirements are not in force are prohibited.

2. The discharge of any radiological, chemical or biological warfare agent, or high-level radiological waste is prohibited.

3. Storage or disposal of wastes in a manner that would result in ponding or surfacing of wastes on lands beyond the disposal area, as described in the findings of this Order, is prohibited.

4. The discharge of wastewater shall not:

   (a) Cause the occurrence of coliform or pathogenic organisms in waters pumped from the basins;

   (b) Cause the occurrence of objectionable tastes and odors in waters pumped from the basins;

   (c) Cause waters pumped from the basins to foam;

   (d) Cause the presence of toxic materials in waters pumped from the basins;

   (e) Cause the pH of waters pumped from the basins to fall below 6.0 or rise above 9.0;

   (f) Cause this Regional Board's objectives for the ground or surface waters of the Richland HSA (4.52), the Escondido HSA (4.62), the Del Dios HSA (5.21), and the Felicita HSA (5.23) as established in the Basin Plan to be exceeded;

   (g) Cause odors, septicity, mosquitos or other vectors, weed growth or other nuisance conditions in any inland watercourse;

(h) Cause a surface flow recognizable as sewage in any inland watercourse; or

(i) Cause a pollution, contamination or nuisance or adversely affect beneficial uses of the ground or surface waters of the Richland HSA (4.52), the Escondido HSA (4.62), the Del Dios HSA (5.21), and the Felicita HSA (5.23) as established in the Basin Plan.

5. A maximum flowrate of tertiary treated effluent in excess of 5.0 MGD for reclaimed uses from the Hale Avenue Resource Recovery Facility is prohibited unless the discharger obtains revised waste discharge requirements for the proposed increased flow.

6. Odors, vectors, and other nuisances of sewage or sewage sludge origin beyond the limits of the treatment plant site or disposal area are prohibited.

7. The bypassing of wastewater to be used for landscape irrigation which does not meet the discharge specifications of this Order is prohibited.

8. The discharge of waste in a manner other than as described in the Findings of this Order is prohibited unless the discharger obtains revised waste discharge requirements that provide for the proposed changes.

9. Disposal of wastewater to waters of the United States other than as authorized by an NPDES permit issued by this Regional Board is prohibited.

B. DISCHARGE SPECIFICATIONS

1. The discharge for landscape irrigation and other land disposal projects of a tertiary treated effluent containing pollutants in excess of the following effluent limitations is prohibited:

Effluent Limitations				
Constituent	unit	12-month Average[1]	30-day Average[2]	Daily Maximum[3]
Biochemical Oxygen Demand (BOD_5 @ 20°C)	mg/l		30	45
Total Suspended Solids	mg/l		30	45
PH		Within the limits	of 6.0 to 9.0 at all	times
Total Dissolved Solids	mg/l	1,000[4]		1,100
Chloride	mg/l	300		330
Sulfate	mg/l	350		400
Percent Sodium	%	60		65
Manganese	mg/l	0.05		0.06
Iron	mg/l	0.3		0.4
Boron	mg/l	0.8		
Fluoride	mg/l	2.0		
Coliform	MPN/100ml		*	*
Turbidity	NTU		**	**

1 The 12-month average effluent limitation shall apply to the arithmetic mean of the results of monthly averages of all samples collected during the previous 12 months.

2 The 30-day average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during any 30 consecutive calendar day period.

3 The daily maximum effluent limitation shall apply to the results of a single composite or grab sample.

4 The 12-month average concentration of the discharge shall not exceed the lesser of 1,000 mg/l or the imported water supply concentration plus an incremental increase equal to the typical incremental increase added to the water supply which has been used for domestic purposes. The discharge limitation for the discharge to the Escondido HSA will be 750 mg/l for TDS if Regional Board Resolution No. 93-02 and State Water Resources Control Board Resolution No. 93-51 are not approved by the State of California Office of Administrative Law.

* The median number of coliform organisms shall not exceed 2.2 per 100 milliliters and the number of coliform organisms shall not exceed 23 per 100 milliliters in more than one sample within any 30-day period.

** Not to exceed an average operating turbidity of 2 turbidity units. Not to exceed 5 turbidity units more than 5 percent of the time during any 24-hour period.

2. All waste treatment, containment and disposal facilities shall be protected against 100-year peak stream flows as defined by the San Diego County flood control agency.

3. All waste treatment and containment facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year frequency 24-hour storm.

4. Collected screening, sludge, other solids removed from liquid wastes, and filter backwash shall be disposed in a manner approved by the Executive Officer. Before sludge is disposed of by means other than discharge to a landfill regulated under waste discharge requirements, used or supplied for use by others, the discharger shall submit written notification to the Executive Officer of the proposed disposal method or use. Such disposal, use or supply for use by others shall not be initiated until approved by the Executive Officer.

5. Effluent used for irrigation purposes shall be treated to the most restricted level in conformance with all applicable provisions of California Code of Regulations, Title 22, Division 4, Chapter 3 (**Reclamation Criteria**) for a landscape irrigation (currently Section 60313 (b) and 60320.5).

6. Effluent storage facilities shall be designed, constructed, operated, and maintained so as to prevent surfacing of wastes on property not owned or controlled by the discharger. Surface runoff of any wastes which surface onto property not owned or controlled by the discharger shall be prevented.

C. PROVISIONS

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

2. The discharger must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for (a) enforcement action; (b) termination, revocation and reissuance, or modification of this Order; or (c) denial of a report of waste discharge in application for new or revised waste discharge requirements.

3. In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies for example, when the primary source of power of the treatment facility is failed, reduced, or lost.

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

5. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.

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

(a) Violation of any terms or conditions of this Order;

(b) Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or

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

The filing of a request by the discharger for the modification, revocation and reissuance, or termination of this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

7. This Order is not transferrable to any person except after notice to the Executive Officer. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the discharger and incorporate such other requirements as may be necessary under the California Water Code. The discharger shall submit notice of any proposed transfer of this Order's responsibility and coverage to a new discharger as described under Reporting Requirement E.3.

8. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from liability under federal, state or local laws, nor create a vested right for the discharger to continue the waste discharge.

9. The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

(d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

10. The discharger's wastewater treatment facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Chapter 3, Subchapter 14, Title 23 of the California Code of Regulations.

11. A copy of this Order shall be maintained at the Hale Avenue Resource Recovery Facility and shall be available to operating personnel at all times.

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

13. The potable water supply shall not be used to supplement the reclaimed water supply except through an approved air gap. In other areas where the potable water supply is piped to premises where sewage is pumped, treated or reclaimed (e.g., sewage treatment plants or pumping stations, golf course, etc.) the potable water supply shall be protected at the property line in accordance with the State Department of Health Services' **Regulations Relating to Cross-Connections.**

14. All waste water treatment and disposal facilities shall be completely constructed and operable prior to the initiation of any landscape irrigation, and the complete facilities shall have adequate capacity for the full design flow of 5.0 MGD. A report from design engineer certifying the adequacy of each component of the treatment and disposal facilities shall be submitted by the discharger prior to commencement of the irrigation. The certification report shall contain a requirement-by-requirement analysis based on acceptable engineering practices, of how the process and physical designs of the facilities will ensure compliance with the waste discharge requirements. The design engineer shall affix his signature and engineering license number to the certification report and should submit it prior to construction of the facilities. The irrigation shall not be initiated until:

a. The certification report is received by the Regional Board Executive Officer;
b. The Regional Board Executive Officer has been notified of the completion of facilities by the discharger;
c. An inspection of the facilities has been made by staff of the Regional Board; and
d. The Regional Board Executive Officer has notified the discharger by letter that the irrigation can be initiated.

15. The discharger shall meet the design, operational, and reliability requirements of Articles 7, 8, 9 and 10 of the California Code of Regulations, Title 22, Division 4, Chapter 3. The discharger shall prepare an engineering report conforming to Section 60323, Article 7 of the California Code of Regulations, Title 22, Division 4, Chapter 3. The engineering report shall be submitted to the State Department of Health Services, County Department of Health Services, and the Regional Board Executive Officer. Reclaimed water from the Hale Avenue Resource Recovery Facility shall not be used for irrigation until the engineering report is approved by the Regional Board Executive Officer.

D. RECLAIMED WATER USE PROVISIONS

1. The City of Escondido (discharger/producer) shall have **Rules and Regulations for Reclaimed Water Users** governing the design and construction of reclaimed water use facilities and the use of reclaimed water. The Rules and Regulations shall be reviewed and updated if necessary by the discharger/producer when a new Order or Addendum is adopted by the Regional Board, and shall, at a minimum, contain the following provisions:

   a. Provisions implementing Title 22, Division 4, Chapter 3, **Wastewater Reclamation Criteria**, and Title 17, Division 1, Chapter 5, Group 4, Articles 1 & 2, of the California Code of Regulations;

   b. Provisions implementing the State Department of Health Services (DOHS) **Guidelines For Use of Reclaimed Water and Guidelines for Use of Reclaimed Water for Construction Purposes** and measures that are deemed necessary for protection of public health, such as the American Water Works Association (AWWA) California/Nevada Section, **Guidelines for the Distribution of Non-Potable Water** or alternate measures, acceptable to DOHS, providing equivalent protection of public health;

   c. Provisions authorizing the Regional Board, the discharger/producer, or an authorized representative of these parties, upon presentation of proper credentials, to inspect the facilities of any reclaimed water user to ascertain whether the user is complying with the discharger/ producer's rules and regulations;

   d. Provision for written notification, in a timely manner, to the discharger/producer by the reclaimed water user of any material change or proposed change in the character of the use of reclaimed water;

   e. Provision for submission of a preconstruction report to the discharger/producer by the reclaimed water user in order to enable the discharger/ producer to determine whether the user will be in compliance with the discharger/producer's rules and regulations;

f. Provision requiring reclaimed water users to designate a reclaimed water supervisor responsible for the reclaimed water system at each use area under the user's control. Reclaimed water supervisors should be responsible for the installation, operation, and maintenance of the irrigation system, enforcement of the discharger/ producer's reclaimed water user rules and regulations, prevention of potential hazards, and maintenance of the reclaimed water distribution system plans in "as built" form;

g. Provision authorizing the discharger/producer to cease supplying reclaimed water to any person who uses, transports, or stores such water in violation of the discharger/producer's rules and regulations;

h. Provision requiring notification and concurrence of the State Department of Health Services and the San Diego County Department of Health Services, Environmental Health Services for new reclaimed water users;

i. Provision requiring all windblown spray and surface runoff of reclaimed water applied for irrigation onto property not owned or controlled by the discharger or reclaimed water user shall be prevented by implementation of best management practices;

j. Provision requiring all reclaimed water storage facilities owned and/or operated by reclaimed water users to be protected against erosion, overland runoff, and other impacts resulting from a 100-year frequency storm, 24 hour storm;

k. Provision requiring all reclaimed water storage facilities owned and/or operated by reclaimed water users to be protected against 100 - year frequency peak stream flows as defined by the San Diego County flood control agency;

l. Provision for notification to reclaimed water users that the Regional Board may initiate enforcement action against any reclaimed water user who discharges reclaimed water in violation of any applicable discharge prohibitions prescribed by the Regional Board or in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code Section 13050; and

m. Provision for notification to reclaimed water users that the Regional Board may initiate enforcement action against the discharger/ producer, which may result in the termination of the reclaimed water supply, if any person uses, transports, or stores such water in violation of the discharger/producer's rules and regulations or in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code Section 13050.

The revised rules and regulations shall be subject to the approval of the Regional Board Executive Officer; the State Department of Health Services; and the San Diego County Department of Health Services, Environmental Health Services. The revised rules and regulations or a letter certifying that the discharger/ producer's rules and regulations contain the updated provisions in the Order, shall be submitted to the Regional Board within 90 days of adoption of this Order by the Regional Board.

2. The City of Escondido (discharger/producer) shall implement and enforce the approved rules and regulations for reclaimed water users. Use of reclaimed water by the discharger/producer shall be consistent with provisions a. through m. in item D.1 above. In addition, the discharger/producer shall submit an annual report certifying that the users have implemented the Rules and Regulations established by the discharger.

3. The City of Escondido (discharger/producer) shall within 90 days of the adoption of this order, develop and submit to the Regional Board a program of Best Management Practices (BMP) for the reclaimed water users governing the irrigation practices, management and maintenance to avoid runoff, ponding, and overspray. The discharger/producer shall oversee that the reclaimed water users have implemented the BMP upon approval of the BMP program by the Regional Board Executive Officer.

4. The City of Escondido (discharger/producer) shall, within 90 days of the adoption of this Order, develop and submit to the Regional Board a program to conduct compliance inspections of reclaimed water reuse sites to determine the status of compliance with the approved rules and regulations for reclaimed water users. The discharger/producer shall implement the inspection program upon its approval by the Regional Board Executive Officer.

5. Reclaimed water shall not be supplied to parties who use, transport, or store such water in a manner which causes a pollution,

contamination or nuisance, as defined by Section 13050 of the California Water Code.

6. Prior to using reclaimed water or supplying reclaimed water for use by other parties in any manner or in any area other than as described in the findings of this Order, the discharger/producer shall obtain proper authorization from this Regional Board.

E. REPORTING REQUIREMENTS

1. The discharger shall file a new Report of Waste Discharge at least 120 days prior to the following:

   (a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the wastes.

   (b) Significant change in the treatment or disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste.)

   (c) Change in the disposal area from that described in the findings of this Order.

   (d) Increase in flow beyond that specified in this Order.

   (e) Other circumstances which result in a material change in character, amount, or location of the waste discharge.

   (f) Any planned change in the regulated facility or activity which may result in noncompliance with this Order.

2. The discharger shall furnish to the Executive Officer of this Regional Board, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.

3. The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on.

4. The discharger shall comply with attached Monitoring and Reporting Program No. 93-70, and future revisions thereto as specified by the Executive Officer. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 93-70.

5. If a need for a discharge bypass is known in advance, the discharger shall submit prior notice and, if at all possible, such notice shall be submitted at least 10 days prior to the date of the bypass.

6. Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information.

7. The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24

hours. The following occurrence(s) must be reported to the Executive Officer within 24 hours:

(a) Any bypass from any portion of the treatment facility.

(b) Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.

(c) Any treatment plant upset which causes the effluent limitations of this Order to be exceeded.

8. The discharger shall submit a facility operations manual within 90 days of the commencement of the discharge.

9. All applications, reports, or information submitted to the Executive Officer shall be signed and certified as follows:

(a) The Report of Waste Discharge shall be signed as follows:

(1) For a corporation - by a principal executive officer of at least the level of vice-president.

(2) For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.

(b) All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph (a) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this provision;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and

(3) The written authorization is submitted to the Executive Officer.

(c) Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

10. The discharger shall submit reports required under this Order, or other information required by the Executive Officer, to:

Executive Officer
California Regional Water Quality Control Board
San Diego Region
9771 Clairemont Mesa Blvd, Suite B
San Diego, California 92124-1331

F. NOTIFICATIONS

1. California Water Code Section 13263(g) states:

   "No discharge of waste into waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights"

2. These requirements have not been officially reviewed by the United States Environmental Protection Agency and are not issued pursuant to Section 402 of the Clean Water Act.

3. The California Water Code provides that any person who intentionally or negligently violates any waste discharge requirements issued, reissued, or amended by this Regional Board is subject to a civil monetary remedy of up to 20 dollars per gallon of waste discharged or, if a cleanup and abatement order is issued, up to 15,000 dollars per day of violation or some combination thereof.

4. The California Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or falsifying any information provided in the monitoring reports is guilty of a misdemeanor.

5. This Order becomes effective on the date of adoption by the Regional Board.

I, Arthur L. Coe, 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 Diego Region, on June 21, 1993.

Arthur L. Coe
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

MONITORING AND REPORTING PROGRAM NO. 93-70
FOR THE
CITY OF ESCONDIDO
HALE AVENUE RESOURCE RECOVERY FACILITY
SAN DIEGO COUNTY

A. MONITORING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this Order and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Executive Officer.

2. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 5 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

   (a) "A Guide to Methods and Standards for the Measurement of Water Flow," U. S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 97 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)

   (b) "Water Measurement Manual," U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No.

127,19/2:W29/2, Stock No. S/N 24003-0027.)

(c) "Flow Measurement in Open Channels and Closed Conduits," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Service (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273-535/5ST.)

(d) "NPDES Compliance Sampling Manual," U.S. Environmental Protection Agency, Office of Water Enforcement. Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO 80225.)

3. Monitoring must be conducted according to United States Environmental Protection Agency test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified in this Order.

4. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.

5. Monitoring results must be reported on discharge monitoring report forms approved by the Executive Officer.

6. If the discharger monitors any pollutants more frequently than required by this Order, using test procedures approved under 40 CFR, Part 136, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharger's monitoring report. The increased frequency of monitoring shall also be reported.

7. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

8. Records of monitoring information shall include:

   (a) The date, exact place, and time of sampling or measurements;

   (b) The individual(s) who performed the sampling or measurements;

   (c) The date(s) analyses were performed;

   (d) The individual(s) who performed the analyses;

   (e) The analytical techniques or method used; and

   (f) The results of such analyses.

9. All monitoring instruments and devices which are used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

10. The discharger shall report all instances of noncompliance not reported under Reporting Requirement E.7 of this Order at the time monitoring reports are submitted. The reports shall contain the information listed in Reporting Requirement E.7.

11. The monitoring reports shall be signed by an authorized person as required by Reporting Requirement E.9.

12. A composite sample is defined as a combination of at least eight sample aliquot of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24 hour period. For volatile pollutants, aliquot must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquot may be collected manually or automatically.

13. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

14. Sampling and analysis shall, as a minimum, be conducted in accordance with Article 6 of California Code of Regulations, Title 22, Division 4, Chapter 3 (**Reclamation Criteria**).

B. EFFLUENT MONITORING

1. The City of Escondido shall continue to submit effluent monitoring reports in accordance with the monitoring program specified in NPDES No. CA0107981. The City shall review the Hale Avenue Resource Recovery Facility NPDES monitoring results for compliance with the following effluent limitations specified in Order No. 93-70 and submit a statement of compliance as part of Monitoring and Reporting Program No. 93-70. The statement of compliance shall identify and report all effluent limitation violations of Discharge Specifications No. B.1. of this Order from samples of the discharge collected pursuant to NPDES No. CA0107981 as part of the monthly reports to this Order. The following constituents are monitored pursuant to NPDES No. CA0107981.

CONSTITUENT	UNIT
Flowrate	GPD
Biochemical Oxygen Demand (5-Day @ 20 C)	mg/l
Total Suspended Solids	mg/l
Volatile Suspended Solids	mg/l
PH	unit
Arsenic	mg/l
Cadmium	mg/l
Chromium	mg/l
Copper	mg/l
Lead	mg/l
Mercury	mg/l
Silver	mg/l
Zinc	mg/l
Aluminum	mg/l
Barium	mg/l
Selenium	mg/l

2. The following monitoring program shall constitute the effluent monitoring program for the Hale Avenue Resource Recovery Facility specific to this Order:

Monitoring Program				
Determination	Unit	Sample Type	Sampling Frequency	Reporting Frequency
Flowrate	GPD	Continuous	Continuous	Monthly
Total Dissolved Solids	mg/l	Composite	Monthly	Monthly [1]
Chloride	mg/l	Composite	Monthly	Monthly [1]
Adjusted Sodium Adsorption Ratio		Composite	Monthly	Monthly
Electrical Conductivity	mmho/cm	Composite	Monthly	Monthly
Sulfate	mg/l	Composite	Monthly	Monthly [1]
Iron	mg/l	Composite	Monthly	Monthly [1]
Manganese	mg/l	Composite	Monthly	Monthly [1]
Boron	mg/l	Composite	Monthly	Monthly [1]
Fluoride	mg/l	Composite	Monthly	Monthly [1]
Coliform	MPN/ 100 ml	Grab	*	Monthly
Turbidity	NTU	Continuous	**	Monthly

* Samples for coliform bacteria shall be collected at least daily and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures. In addition, one day in each quarter, 6 representative samples (one every 4 hours) shall be collected and reported in that quarter.

** Turbidity analysis shall be performed by a continuous recording turbidimeter.

1 Report daily maximum and the 12-month average if required by the discharge specification. The 12-month average is the monthly average over the previous 12 months period.

Note:
MGD = Million gallons per day
mg/l = milligrams per liter
MPN/100 ml = Most Probable Number per 100 milliliters
NTU = Nephelometric Turbidity Units
mmho/cm = inverse of milliohms per centimeter

3. The monitoring report shall indicate the flowrate and Title 22 levels being achieved in the effluent discharged for land disposal and/or reclamation from the Hale Avenue Resource Recovery Facility. Flowrate reported in the monitoring report shall be representative of the flow discharged from the Title 22 treatment facility.

C. POTABLE SUPPLY WATER

Analysis of the potable water supplied to the service area of the wastewater treatment facilities shall be conducted for the following constituent semiannually with the results reported semiannually.

CONSTITUENT	UNIT
Total Dissolved Solids	mg/l

Annually, based upon the monitoring results for the previous 12-months of the potable water supply and the reclaimed water effluent, the discharger shall submit a report demonstrating that the TDS increment in the effluent over the supply water was typical for municipal wastewater systems in Southern California.

D. GROUNDWATER

1. The discharger shall develop a monitoring program to confirm that the use of reclaimed water as indicated in the computer model will not cause significant impact to the groundwater quality. This program shall be approved by the Executive Officer prior to initiation of the discharge.

E. RECLAIMED WATER USERS SUMMARY REPORT

1. The City of Escondido (discharger/producer) shall submit a quarterly reclaimed water users summary report containing the following information:

   a) Total volume of reclaimed water supplied to all reclaimed water users for each month of the reporting period.
   b) Total number of reclaimed water use sites.
   c) Address of the reclaimed water use site
   d) Basin Plan name and number of hydrologic subarea underlying the reclaimed water use site

2. Annually the City of Escondido (discharger/producer) shall submit a reclaimed water users compliance report containing the following information:

   a) **Reclaimed water use site summary information**

      The following information shall be submitted for each reclaimed water use site.

1) Name of the reclaimed water use site
2) Owner of the reclaimed water use facility
3) Name of the reclaimed water use supervisor
4) Phone number of the reclaimed water use supervisor
5) Mailing address of the reclaimed water use supervisor, if different from site address
6) Volume of reclaimed water delivered to the reclaimed water use site on a monthly basis.

b) **Reclaimed water use site inspections**

Number of reclaimed water use site inspections conducted by discharger/producer staff and identification of sites inspected for the reporting period.

c) **Reclaimed water user violations of the discharger/producer's rules and regulations**

The discharger/producer shall identify all reclaimed water users known by the discharger/producer to be in violation of the discharger/producer's rules and regulations for reclaimed water users. The report shall include a description of the noncompliance and its cause, including the period of noncompliance, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

F. REPORTING

Monitoring reports shall be submitted to the Executive Officer in accordance with the following schedule:

Reporting Frequency	Report Period	Report Due
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the 30th day of the following month
Quarterly	January-March April-June July-September October-December	April 30 July 30 October 30 January 30
Semiannually	January-June July-December	July 30 January 30
Annually	January-December	January 30

Monitoring reports shall be submitted to:

California Regional Water Quality Control Board
San Diego Region
9771 Clairemont Mesa Blvd., Suite B
San Diego, CA 92124-1331

Ordered by _____

Arthur L. Coe
Executive Officer
June 21, 1993

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 1
TO
ORDER NO. 93-70

WASTE DISCHARGE REQUIREMENTS
FOR
THE CITY OF ESCONDIDO
HALE AVENUE REGIONAL RECLAMATION FACILITY
SAN DIEGO COUNTY

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

1. The City of Escondido (hereinafter discharger) submitted a report of waste discharge (RWD) dated December 7, 1998 requesting a modification to Order No. 93-70 to increase the permitted peak daily flowrate specified by Prohibition A.5 from 5.0 million gallons per day (MGD) to 9.0 MGD for the Hale Avenue Regional Reclamation Facility (hereinafter HARRF).

2. The discharger also reported the proposed disinfection process has been changed to ultraviolet irradiation with supplemental chlorination to insure a chlorine residual within the City of Escondido's reclaimed water distribution system.

3. The discharge of reclaimed water to the areas authorized under this Addendum should not cause the water quality objectives in the *Comprehensive Water Quality Control Plan, San Diego Basin* (Basin Plan) to be exceeded.

4. The discharge of reclaimed water to the areas authorized under this Addendum is in conformance with SWRCB Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters of California."

5. As noted in Finding No. 31 of Order No. 93-70, the City of Escondido certified a final environmental impact report in accordance with the California Environmental Quality Act (Public Resources Code Section 21000, et seq) in June 1992. The increased flows in this Addendum should not have a significant effect on water quality.

6. The Regional Board has notified the City of Escondido and all known interested parties of its intent to amend Order No. 93-70.

7. This Regional Board has, in a public meeting heard and considered all comments pertaining to the terms and conditions of this Addendum.

IT IS HEREBY ORDERED, that Order No. 93-70 and Monitoring and Reporting Program 93-70 are amended as follows:

1. Prohibition No. A.5 is superseded by the following:

A.5 A maximum flowrate of tertiary treated effluent in excess of 9.0 MGD for reclaimed uses from the HARRF is prohibited unless the discharger obtains revised waste discharge requirements for the proposed increased flow.

2. Provision No. C.14 is superseded by the following:

C.14 All waste water treatment and disposal facilities shall be completely constructed and operable prior to the initiation of any landscape irrigation, and the complete facilities shall have adequate capacity for the full design flow of 9.0 MGD. A report from the design engineer certifying the adequacy of each component of the treatment and disposal facilities shall be submitted by the discharger prior to commencement of the irrigation. The certification report shall contain a requirement-by-requirement analysis based on acceptable engineering practices, of how the process and physical designs of the facilities will ensure compliance with the waste discharge requirements. The design engineer shall affix his signature and engineering license number to the certification report and should submit it prior to construction of the facilities. The irrigation shall not be initiated until:

a. The certification report is received by the Regional Board;
b. The Regional Board has been notified of the completion of facilities by the discharger;
c. An inspection of the facilities has been made by staff of the Regional Board; and
d. The Regional Board has notified the discharger by letter that the irrigation can be initiated.

3. Discharge Specifications B.7, B.8 and B.9 are added as follows:

B.7 Coagulation need not be used as part of the treatment process provided that the filter effluent turbidity does not exceed 2 NTU, the turbidity of the influent to the filters is continuously measured, the influent turbidity does not exceed 5 NTU, and that there is capability to automatically activate chemical addition or divert wastewater should the turbidity of the influent to the filters exceed 5 NTU.

B.8 Disinfection of recycled water shall comply with all requirements of California Code of Regulations, Title 22, Division 4. Disinfection may be accomplished by either:

a. A chlorine disinfection process that provides a CT (chlorine concentration times modal contact time) value of not less than 450 mg-min/liter at all times with a modal chlorine contact time of at least 90 minutes based on peak dry weather design flow; or

b. The discharge shall be considered adequately disinfected if the discharge undergoes ultraviolaet (UV) disinfection as herein specified. Unless otherwise approved by the Department of Health Services, UV disinfection shall deliver under worst operating conditions a minimum UV dose of 140 milli-watts seconds per square centimeter (mW-s/cm^2) at maximum weekly flow and 100 mW-s/cm^2 at peak flow (maximum day), or

c. A disinfection process, that, when combined with the filtration process, has been demonstrated to reduce the concentration of plaque-forming units of F-specific bacteriophage MS2, or polio virus, per unit volume of water in the wastewater to one hundred thousandths (1/100,000) of the initial concentration in the filter influent throughout the range of qualities of wastewater that will occur during the recycling process. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration.

B.9 The median concentration of total coliform bacteria measured in the disinfected recycled water effluent from the HARRF shall not exceed an MPN of 2.2 per 100 milliliters, utilizing the bacteriological results of the last seven days for which analyses have been completed; and the number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30-day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.

4. Effluent Monitoring B.4 and B.5 are added as follows:

B.4 Representative samples of the effluent discharged shall be collected at a point located downstream of the disinfection process in accordance with the following criteria:

CONSTITUENT	UNIT	TYPE OF SAMPLE	SAMPLING FREQUENCY	REPORTING FREQUENCY
Turbidity	NTU	Continuous	*	Monthly
Chlorine Residual[1]	mg/l	Continuous	**	Monthly
Total Coliform	MPN/100 ml	Grab	***	Monthly

Notes: MPN/100 ml = Most Probably Number per 100 milliliters
ml/l = milliliters per liter
mg/l = milligrams per liter
NTU = Nephelometric Turbidity Units

1 Required if chlorine disinfection process is used.

* Turbidity analysis shall be performed by a continuous recording turbidimeter. From the continuous recording turbidimeter, the discharger shall report on a daily log whether the estimated average value is above or below 2 NTU's each day, if the turbidity value exceeds 5 NTU's more than 5% of the time during a 24-hour period and shall not exceed 10 NTU at any time.

** Chlorine concentrations shall be recorded by a continuous recording meter. Calculated CT ((chlorine concentration (x) modal contact time) values shall be calculated and recorded continuously. The modal contact time must be at least 90 minutes based on peak daily design flow.

*** Samples for total coliform bacteria shall be collected at least daily and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures.

B.5 The turbidity of the filter influent and plant effluent shall be continuously measured. The discharger shall report orally to the Regional Board staff within 24-hours if effluent turbidity exceed 2 NTU or if the influent turbidity exceeded 5 NTU, and shall describe the measures taken to automatically activate chemical addition or to divert wastewater should the turbidity of the influent to the filters exceed 5 NTU. The discharger shall submit a written report of the incident as part of the monthly monitoring report.

I, John H. Robertus, 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 Diego Region, on March 10, 1999.

for JOHN H. ROBERTUS
Executive Officer

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