

California Regional Water Quality Control Board
Santa Ana Region

July 19, 2002

ITEM: *5

SUBJECT: Waste Discharge Requirements for Parallel Products, Rancho Cucamonga, San Bernardino County - Order No. R8-2002-0030

DISCUSSION:

On July 12, 1996, the Regional Board adopted waste discharge requirements Order No. 96-21, NPDES No. CA8000386 for Parallel Products for the use of evaporator wastewater for irrigation of an on-site agricultural experiment. The waste discharge requirements also included provisions for the discharge of storm water from the facility due to the high volume of material processed by the discharger and the resultant potential for commingling of storm water with pollutants. Order No. 96-21 expired on July 1, 2001 and the agricultural experiment was discontinued as of December 31, 2001. In order to update the characterization of their waste streams, Parallel Products submitted a report of waste discharge on July 5, 2001. Supplemental information was provided on January 24, 2002.

Parallel Products is a subsidiary of U.S. Liquids Company (Houston, Texas). The 11-acre facility is located at 12281 Arrow Route in the southeastern portion of the City of Rancho Cucamonga, in the SE ¼ of Sec. 8, T1S, R6W, SBB&M, at Latitude N34° 5' 30", Longitude W117 32' 00" (see map, Attachment A).

Parallel Products processes products containing sugar and alcohol into ethanol. These products include waste beer, brewers yeast, outdated soda syrup and fruit juices, waste ice cream, spent alcohol and wine from retail businesses and industry. These raw materials arrive at the facility by rail, in bulk tank trucks, and on pallets in containers (bottles, cans and cartons). Parallel Products crushes the containers and captures the liquid for processing. The liquid is fermented and distilled.

Raw materials are received and crushed on the western side of the facility. This area is washed down daily. In 1995, in order to contain liquids from crushed containers, spills, washdown water, and stormwater, this area was walled at its southern and western sides, then bermed with asphalt-concrete on its southern and eastern sides. The contained wastewater is captured in a sump beside the southern wall for transfer to a second sump, located on the southeast side of the facility. A third sump, located in the northwestern portion of the facility, collects waste liquids that are pumped directly to the fermentation tanks.

Fermentation tanks, boilers, a two-stage distiller, and three cooling towers are located on the eastern side of the facility. The sump in the southern end of this area collects stormwater runoff from the area, as well as wastewater transferred to it from the southwestern sump. Wastewater collected in this sump is typically pumped to a 5,000 gallon "sludge tank", and then into the fermentation tanks for inclusion in processing and production of ethanol. A rain switch, which is set to activate after one tenth of an inch of rain has fallen, is located above the sump. When activated, the switch opens a motorized sliding gate within the sump. Wastewater collected in

the sump then flows by gravity through a pipe that discharges to an on-site vegetated swale. The swale empties into a sandy percolation basin at the southernmost end of the property. This rain switch is normally overridden and the wastewater in the sump is pumped to the 5,000-gallon “sludge tank” and fermentation tanks. Monitoring data for the past two years show that there have been no discharges into the percolation basin.

The percolation basin was designed to minimize the potential for off-site releases of wastewater, due to storms and/or the failure of one or more of the processing units. The percolation basin has capacity to accommodate storm flows from a 24-hour, 25-year storm event, as well as the flows from the largest process storage tank onsite, should it rupture during rainy conditions.

On March 7, 2002, the discharger obtained coverage under General Industrial Activity Stormwater Permit Order No. 97-03-DWQ, NPDES No. CAS000001 for discharges of storm overflows from the facility. The facility has a stormwater management plan. In accordance with that plan, any overflow from the percolation basin will be monitored for total organic carbon, suspended solids, and other constituents as required by the General Stormwater Permit. Ongoing maintenance of the basin, including intermittent removal of bottom sediments and construction of berms, is necessary to assure adequate capacity. Consequently, tentative Order No. R8-2002-0030 requires the discharger to implement this maintenance operation on a routine basis.

Wastewater from the fermentation/distillation process is pre-treated through an evaporator, a trickling filter¹, an aeration tank, and a clarifier. During evaporation, the wastewater is condensed. The stillage waste from the evaporators is sold for cattle feed. The condensate (about 100,000 gallons per day (gpd)) is further treated before being discharged into the sanitary sewer. Some of the pretreated wastewater is used for watering Parallel Products’ on-site tree farm. Parallel Products proposes to use a part of the wastewater now discharged into the sewer for a number of land application purposes, including pressure-washing of the working area, primarily the western area of the facility. The discharger also proposes to use the pre-treated water for irrigation of on-site landscaping, for dust control on the slag piles at the neighboring Tamco Steel facility, and for other land applications. Such uses would result in lower sewerage costs.

Tentative Order No. R8-2002-0030 would revise and replace Order No. 96-21. Because stormwater discharges from the Parallel Products facility are now regulated under the General Industrial Stormwater NPDES Permit, Order No. R8-2002-0030 does not include stormwater requirements and would not serve as an NPDES permit. Tentative Order No. R8-2002-0030 regulates waste discharges from the sump in the southeastern portion of the facility into the vegetated swale/percolation basin and specifies requirements for the use of recycled wastewater.

The discharge overlies the Chino I Groundwater Subbasin. The beneficial uses of this Subbasin include municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

¹ In 2002, Parallel Products anticipates replacing the trickling filter and aeration tank with a skid-mounted, activated-sludge anaerobic digester and a biomethanator.

The proposed Order contains limits, as twelve-month averages, for TDS, total hardness, nitrate, sodium, chloride, sulfate, and pH. The mineral limitations are based on the water quality objectives of the underlying Chino I Groundwater Subbasin. As a result of the ongoing watershed-wide Nitrogen/TDS study, the boundaries and water quality objectives of groundwater subbasins in the Chino Basin, including the Chino I Groundwater subbasin, may be modified. This Order will be reopened to address these changes, if appropriate.

This Order requires the discharger to submit a list of proposed land-application sites for approval by the Regional Board's Executive Officer before any discharge to such locations is permitted.

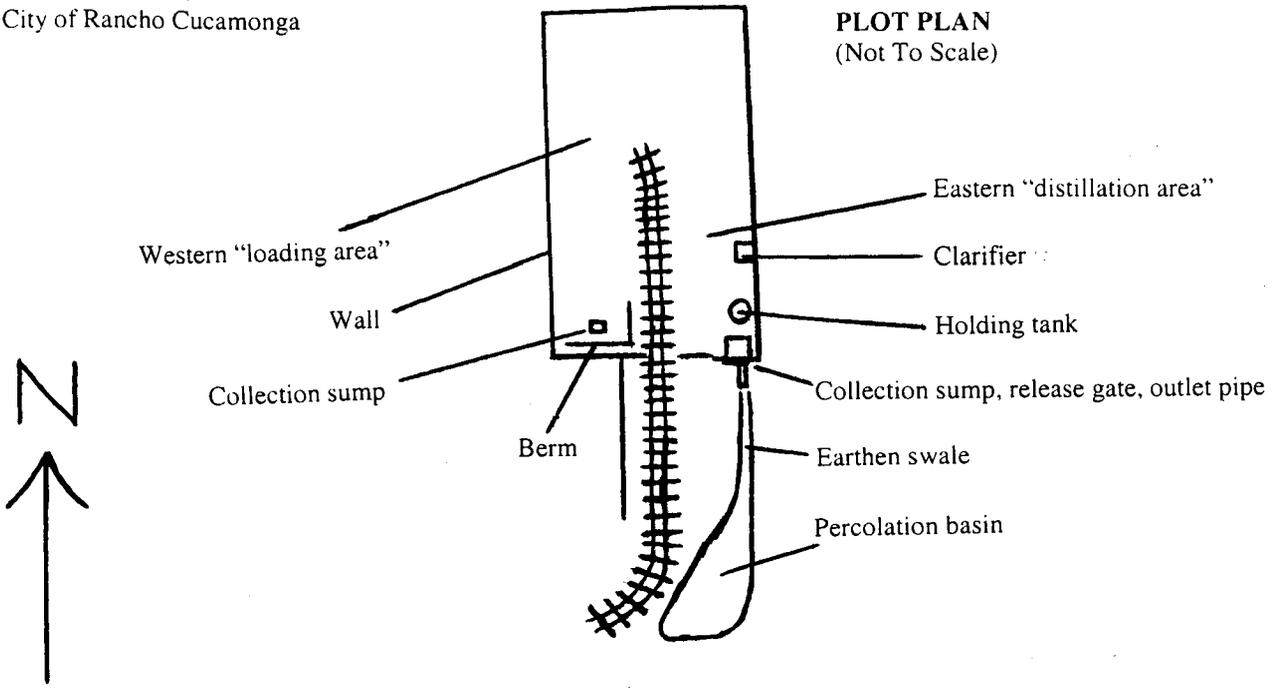
The requirements in this Order should be adequate to protect the beneficial uses of the Chino I Groundwater Subbasin.

RECOMMENDATION:

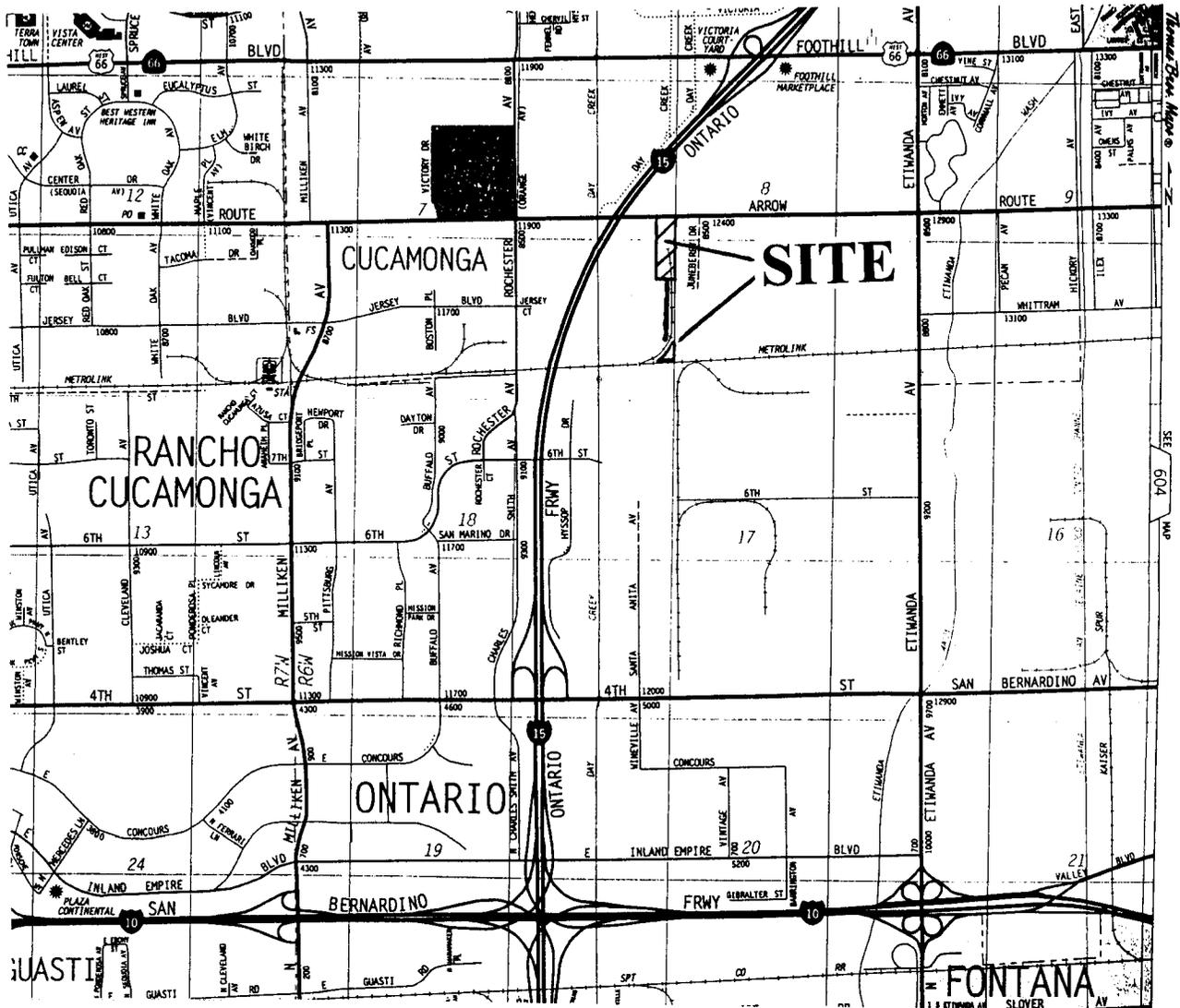
Adopt Order No. R8-2002-0030 as presented.

Comments were solicited from the following:

US EPA Permits Issuance Section (WTR-5) – Terry Oda
State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality – Jim Maughan
State Department of Water Resources - Glendale
State Department of Health Services, Office of Drinking Water, San Bernardino – Bill Gedney
San Bernardino Co. Dept.of Environmental Health - James Trujillo
San Bernardino Co. Dept.of Public Works, Environmental Management Division
Inland Empire Resource Conservation District
San Bernardino Co. Dept. of Public Works, Flood Control Operations – Glenn Pruum
San Bernardino Co. Dept. of Env. Health Services – Pamella Bennett
City of Rancho Cucamonga Public Works Department
Cucamonga County Water District, Operations Director - Gerald Black/Greg Springman



VICINITY MAP



California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2002-0030

Waste Discharge Requirements
for

Parallel Products
Rancho Cucamonga, San Bernardino County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Board), finds that:

1. Parallel Products (hereinafter discharger), a subsidiary of U.S. Liquids Company, operates a facility that recycles waste liquids into ethanol. The 11-acre facility is located at 12281 Arrow Route in the southeastern portion of the City of Rancho Cucamonga, at Latitude N34° 5' 30", Longitude W117 32' 00".
2. Order No. 96-21, NPDES No. CA8000386, which expired on July 1, 2001, regulated the wastewater and stormwater discharges from the facility.
3. On January 24, 2002, the discharger completed a report of waste discharge for:
 - a. Discharges of wastewater commingled with stormwater runoff to an on-site vegetated swale and percolation basin.
 - b. The use of pre-treated wastewater for landscaping and offsite land applications.
4. The discharger processes products containing sugar and alcohol into ethanol. These products include waste beer, brewers yeast, outdated soda syrup and fruit juices, waste ice cream, spent alcohol and wine from retail businesses and industry. These raw materials arrive at the facility by rail, in bulk tank trucks and on pallets in containers (bottles, cans and cartons). The discharger crushes the containers and captures the liquid for processing. The liquid is fermented and distilled.
5. The discharger washes down the yard and production equipment daily. This washdown water and stormwater runoff from the facility are collected in on-site sumps. The collected wastewater is normally pumped to the fermentation tanks for processing into ethanol. If necessary as the result of storms, the wastewater can be conveyed via a vegetated swale to an un-lined percolation basin at the southeastern side of the facility. If properly maintained, this percolation basin has the capacity to contain runoff resulting from a 25-year, 24-hour storm event as well as the flows from the largest process storage tank onsite, should it rupture during stormy conditions.

6. Wastewater from the fermentation/distillation process is pre-treated through an evaporator, a trickling filter¹, an aeration tank, and a clarifier. During evaporation, the wastewater is condensed. The stillage waste from the evaporators is sold for cattle feed. The condensate (about 100,000 gallons per day (gpd)) is further treated before being discharged into the sanitary sewer. Some of the pretreated wastewater is used for watering the discharger's on-site tree farm.
7. On March 7, 2002, the discharger obtained coverage under General Industrial Activity Stormwater Permit Order No. 97-03-DWQ, NPDES No. CAS000001 for discharges of storm overflows from the facility. As required by that Order, the facility has a stormwater management plan.
8. The discharger proposes to use pre-treated process wastewater from the clarifier for on-site landscaping and offsite land applications.
9. A revised Water Quality Control Plan (Basin Plan) became effective on January 24, 1995. The Basin Plan identifies beneficial uses and water quality objectives for the ground and surface waters of the Santa Ana Region.
10. The requirements contained in this Order are necessary to implement the Basin Plan. It is necessary to require control of constituents in order to meet water quality objectives and to protect the beneficial uses of the affected receiving water. It is necessary to update Order No. 96-21 to reflect changes in operations at the facility, as well as changes in plans, policies, and regulations adopted by the State and Regional Board.
11. The discharge overlies the Chino I Groundwater Subbasin. The beneficial uses of the Chino I Groundwater Subbasin are:
 - a. Municipal and domestic supply,
 - b. Agricultural supply,
 - c. Industrial process supply, and
 - d. Industrial service supply.
12. The water for washing down the yards and equipment will come from the City of Rancho Cucamonga. The total dissolved solids (TDS) concentration of the water supply is approximately 214 milligram per liter (mg/l).
13. This project involves the continued operation of an existing facility, and as such, is exempt from the California Environmental Quality Act (Public Resources Code, Section 21100 et seq.) in accordance with Section 15301, Chapter 3, Title 14, California Code of Regulations.

¹ In 2002, Parallel Products anticipates replacing the trickling filter and aeration tank with a skid-mounted, activated-sludge anaerobic digester and a biomethanator.

14. The Board has notified the discharger and other interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
15. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the 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:

A. Discharge Specifications

1. The discharge of wastes to waters of the Santa Ana Region, except as authorized pursuant to the terms and conditions of General Industrial Activity Stormwater Permit Order No. 97-03-DWQ, NPDES No. CAS000001, or use of recycled water containing constituent concentrations in excess of the following limits is prohibited:

Constituents	Twelve-Month Average Concentration
Total Dissolved Solids (TDS)	470 mg/l
Total Inorganic Nitrogen	10 mg/l
Sodium (Na)	15 mg/l
Chloride (Cl)	15 mg/l
Sulfate (SO ₄)	20 mg/l

2. The discharge of wastewater containing a 12-month average concentration of total dissolved solids which exceeds the concentration of that constituent in the water supply by more than 250 ppm is prohibited.

For Discharge Specification 1 or 2, the lower of the two dissolved solids limits shall be the controlling limit.

3. The pH of the discharge shall at all times be within the range of 6.0 and 9.0 pH units.
4. The discharge of any substances in concentrations toxic to animal or plant life in the affected receiving water is prohibited.
5. The discharge of excessively saline waste, defined by an electrical conductivity greater than 2,000 umhos/cm, is prohibited.

B. Provisions

1. Neither the treatment nor the discharge of waste shall cause or threaten to cause a nuisance or pollution as defined in Section 13050 of the California Water Code. Odors, vectors, and other nuisances of waste origin are prohibited outside of the treatment system/ percolation basin area.
2. Order No. 96-21 is hereby rescinded.
3. The discharger shall maintain, design, and construct containment structures (including the existing walls and percolation basin, and any additional excavation and berms) to retain all wastewater within the facility, including all precipitation and stormwater runoff resulting from, at minimum, a 25-year, 24-hour storm.
4. A minimum of 18 inches of freeboard shall be maintained in the percolation basin at all times.
5. The discharger must comply with all of the terms, requirements, and conditions of this Order. Any violation of this Order constitutes a violation of the California Water Code and its regulations, and is grounds for enforcement action, termination of the Order, revocation and reissuance of the Order, denial of an application for reissuance of the Order, or a combination thereof.
6. The discharger shall comply with Monitoring and Reporting Program No. R8-2002-0030 as issued by the Executive Officer of the Regional Board. The monitoring and reporting program may be revised at any time during the term of this Order, and may include a reduction or an increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples to be collected.
7. Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval, that sample shall serve to characterize the discharge for the entire interval.
8. The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment, or to prevent any discharge that has a reasonable likelihood of adversely affecting human health or 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.
9. The discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.
10. Collected clarifier sludge and other solids removed from liquid wastes shall be used or disposed of in an approved manner.
11. The discharge of wastes to property not owned or controlled by the discharger is prohibited unless prior approval is granted by the Executive Officer for the use of recycled water.

12. The discharger shall conduct periodic inspections of the facilities of the recycled water users to monitor compliance by the users with this Order. The discharger shall assure that recycled water users do not discharge the wastewater into storm drains or other conveyances that could affect surface waters.
13. The direct or indirect discharge of recycled water into storm drains is prohibited.
14. The storage, delivery, or use of recycled water shall not individually or collectively, directly or indirectly, result in a pollution or nuisance, or adversely affect water quality, as defined in the California Water Code.
15. An on-site supervisor responsible for the operation of the recycled water distribution system shall be designated by the discharger. The supervisor shall be responsible for enforcing this Order, prevention of potential hazards, the installation, operation and maintenance of the distribution system, maintenance of the distribution and irrigation system plans in "as-built" form, and for the distribution of the recycled wastewater in accordance with this Order.
16. This Order does not convey any property rights of any sort, or any exclusive privilege.
17. In the event of any change in control or ownership of the land or waste discharge operation presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this Board.
18. This Order is not transferable to any person except after notice to the Board. The 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.
19. The discharger shall give advance notice to the Board as soon as possible of any planned physical alterations or additions to the facility or changes in operation or activity that may result in noncompliance with these waste discharge requirements.
20. It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.
21. 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 the conditions of this Order.

22. The discharger shall report any noncompliance or discharge of waste that may endanger health or the environment. Any information shall be provided to the Executive Officer (909-782-4130) and the Office of Emergency Services (800-852-7550), if appropriate, as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within five (5) days and 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 reoccurrence of the discharge. The Executive Officer or the Executive Officer's designee may waive the above-required written report on a case-by-case basis.
23. The discharger shall file with the Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location, or volume of the discharge or in the method of disposal of the discharge, or before making any proposed change in ownership of the facility.
24. The Regional Board, and other authorized representatives shall be allowed:
 - a. Entry upon premises where an effluent source is located, or where any required records are kept under the terms and conditions of this Order;
 - b. Access to copy any records required to be kept under the terms and conditions of this Order;
 - c. Inspection of monitoring and control equipment or records; and
 - d. To sample, monitor, and photograph any discharge for the purpose of assuring compliance with this Order.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on July 19, 2002.

Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2002-0030

Parallel Products
Rancho Cucamonga, San Bernardino County

A. General Monitoring Guidelines

1. Chemical analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services or at laboratories approved by the Executive Officer of the Regional Board.
2. The discharger shall retain records of all monitoring information, including all sampling and analytical results, and copies of all reports required by this order. The sampling and analytical records shall include the sampler's name; the exact location, date, and time of sampling; the analyst's name, and the analytical techniques used.
3. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.
4. Whenever the discharger monitors any pollutant more frequently than is required by this monitoring and reporting program, the results of the monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report for that monitoring period.
5. A "grab" sample is defined as any individual sample collected in less than 15 minutes.
6. Monthly samples shall be collected on a representative day of the month.

B. Water Supply Monitoring

1. On the first working day of each month, a grab sample of the water supply shall be obtained. The sample shall be analyzed for total dissolved solids, total hardness, nitrate as NO₃-N, sodium, chloride, and sulfate.

C. Effluent Monitoring

1. Sampling station(s) shall be established at the point(s) of discharge and shall be located where representative samples of the discharges to the percolation basin and/or recycled water can be obtained.

2. The following shall constitute the effluent monitoring program for the discharge of commingled wastewater and stormwater into percolation basin and for recycled water use:

Constituent	Units	Type of Sample	Minimum Frequency of Sampling & Analysis
Flow	gpd	Flow meter	Daily
Total Dissolved Solids (TDS)	mg/l	Grab	Monthly
Hardness	"	"	"
Nitrate as NO3-N	"	"	"
Nitrogen as Ammonia	"	"	"
Total Inorganic Nitrogen	"	"	"
Sodium	"	"	"
Chloride	"	"	"
Sulfate	"	"	"
pH	pH units	"	"
Electrical conductivity	umhos/cm	"	"

D. Water Recycling Monitoring and Reporting:

1. Whenever recycled water is supplied to a user, the volume of recycled water, the user of recycled water, the locations of those sites including the names of the groundwater subbasins underlying the recycled water use sites, type of use (e.g. irrigation, industrial, etc) and the dates at which water is supplied shall be recorded. A summary report of water use by groundwater subbasins shall be submitted annually. In addition, the discharger shall submit an annual report certifying that the users have complied with the requirements of this Order.

E. Site Monitoring

Storm water containment, diversion and drainage structures (including walls, wastewater transfer system, earthen swale to percolation basin, and percolation basin) shall be inspected for erosion or damage in November and again after the rainy season. Observations regarding their adequacy shall be recorded in a permanent, bound log and reported with the next month's report.

F. Reporting

1. The results of all monitoring required by this Order shall be reported to the Board, and shall be submitted in a tabular format to clearly show compliance or noncompliance in direct comparison with the discharge specifications of this Order. If no discharge occurs during the previous monitoring period, a letter to that effect shall be submitted in lieu of a monitoring report.
2. Monitoring reports shall be submitted monthly by the 30th day of the month following the monitoring period, and shall include:
 - a. Copies of all analyses of supply water performed during the previous month;
 - b. Copies of all analyses of effluent and recycled water, performed during the previous month, with a statement of which constituents were found to be in compliance and not in compliance from the average of the last twelve months as shown in tabular form;
 - c. Copies of the log of the wastewater discharges to the percolation basin and water recycling in accordance with Section D., above, and
 - d. During winter months, monthly observations on the physical integrity of the stormwater containment structures. Discussion/description of maintenance measures and implementation schedule as appropriate.
 - e. For every item where the requirements are not met, the discharger shall submit a statement of actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and a timetable for correction shall be submitted.
3. The results of any analysis of samples taken more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Board.
4. All reports shall be signed by a responsible officer or duly authorized representative of the discharger and shall be submitted under penalty of perjury.

Ordered by _____
Gerard J. Thibeault
Executive Officer

July 19, 2002