MONITORING AND REPORTING PROGRAM NO. R9-2014-0006

UNITED STATES MARINES CORPS BASE CAMP PENDLETON
NORTHERN REGIONAL TERTIARY TREATMENT PLANT, SAN DIEGO COUNTY

This Monitoring and Reporting Program (MRP) is issued to the United States Marines Corps Base Camp Pendleton pursuant to Water Code Section 13267, which authorizes the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to require technical and monitoring reports.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements collected as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be collected at the monitoring points specified in this Monitoring and Reporting Program (MRP) 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 notifying, and receiving approval from the San Diego Water Board for the proposed monitoring location change.

B. 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 10 percent from true discharge rates throughout the range of expected discharge volumes.

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

D. Unless otherwise permitted by the San Diego Water Board, all analyses shall be conducted at a laboratory certified to perform such analyses by the California Department of Public Health (CDPH). The Discharger must use a laboratory capable of producing and providing quality assurance/quality control (QA/QC) records for San Diego Water Board review. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports submitted to the San Diego Water Board.

E. Any report presenting new analytical data is required to include the complete laboratory and analytical report(s). The laboratory analytical report must be signed by the laboratory director and contain:

1. A complete sample analytical report.

2. A complete laboratory quality assurance/quality control (QA/QC) report.

3. A discussion of the QA/QC data.

4. A transmittal letter that shall indicate whether or not all the analytical work was supervised by the director of the laboratory, and contain the following statement, "All analyses were conducted at a laboratory certified for such analyses by the CDPH in accordance with current USEPA procedures."

F. Specific methods of analysis must be identified in the Discharger's monitoring reports. If the Discharger proposes to use methods or test procedures other than those included in the most current version of 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants; Procedures for Detection and Quantification*, the exact methodology must be submitted for review and must be approved by the San Diego Water Board prior to use.

G. Monitoring results must be reported on discharge monitoring report forms approved by the San Diego Water Board.

H. If the Discharger monitors any pollutants more frequently than required by this MRP, using test procedures approved under 40 CFR, part 136, or as specified in this MRP, 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.

I. 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 and copies of all reports required by this MRP, and records of all data used to complete the application for this MRP. 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 required by the San Diego Water Board. Records of monitoring information shall include the following:

1. The date, exact place, and time of sampling or measurements.

2. The individual(s) who performed the sampling or measurements.

3. The date(s) analyses were performed.

4. The individual(s) who performed the analyses.

5. The analytical techniques or methods used.

6. The results of such analyses.

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

K. The Discharger shall report any noncompliance that may endanger health or the environment. Pursuant to section 5411.5 of the Health and Safety Code, any sewage overflow or spill shall be immediately reported to the County of San Diego, Department

of Environmental Health to the extent permitted by federal law. In addition, any such information shall be provided orally to the San Diego Water Board within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within 5 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 San Diego Water Board 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 San Diego Water Board within 24 hours:

1. Any bypass from any portion of the treatment facility.

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

3. Any treatment plant upset which causes the discharge specifications of this Order to be exceeded.

4. Failure of disinfection system.

L. Any person who, without regard to intent or negligence, causes or permits an unauthorized discharge of 50,000 gallons or more of recycled water that has been treated to at least disinfected tertiary recycled water[1] or 1,000 gallons or more of recycled water that is treated at a level less than disinfected tertiary recycled water in or on any waters of the State, or causes or permits such unauthorized discharge to be discharged where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (1) that person has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the San Diego Water Board in accordance with reporting requirements in Provision VI. B to the extent permitted by federal law.

M. All applications, reports, or information submitted to the San Diego Water Board shall be signed and certified as follows:

1. The Report of Waste Discharge shall be signed as follows:

a. By the Commanding Officer for Marine Corps Base Camp Pendleton; or

b. By Direction of the person designated in paragraph (a)(1) of this provision only if:

i. The authorization is made in writing by a person described in

[1] Disinfected tertiary recycled water is defined in California Code of Regulations, Title 22, Chapter 3, section 60301.230

paragraph (a)(1) of this provision;

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

iii. The written authorization is submitted to the San Diego Water Board.

2. 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."

N. A composite sample is defined as a combination of at least eight sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots 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. Aliquots may be collected manually or automatically.

O. 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.

P. The Discharger shall identify all missing or non-valid monitoring or sampling results in monitoring reports submitted. All instances of missing or non-valid results must be accompanied by an explanation of their root cause and the steps the Discharger has or will take to prevent future instances. Missing or non-valid results may be considered violations of MRP No. R9-2014-0006 that could result in enforcement action depending on the frequency of such instances and efforts by the Discharger to prevent such failures.

II. DISCHARGE MONITORING REQUIREMENTS

A. The Discharger shall monitor the effluent that will be discharged to the percolation ponds after the media filters in accordance with Table 1 below. Effluent that will be discharged to landscape irrigation sites or reuse sites subject to Water Recycling Criteria specified in CCR Title 22 regulations shall be monitored downstream from the chlorine contact basin.

Table 1. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency [a,b]	Reporting Frequency
Flow Rate	mgd	Continuous	Continuous	Monthly
Chlorine Residual [c,g]	mg/L	Continuous	Continuous	Monthly
Chlorine-Contact Time (CT)[d,g]	mg-min/L	Continuous	Continuous	Monthly
Total Coliform Bacteria [e,g]	MPN/ 100 mL	Grab	Daily	Monthly
Turbidity [f,g]	NTU	Continuous	Continuous	Monthly
Biological Oxygen Demand (BOD_5 @ 20ºC)	mg/L	Composite	Weekly	Monthly
Total Suspended Solids	mg/L	Composite	Weekly	Monthly
pH	pH units	Grab	Weekly	Monthly
Chloride (Cl)	mg/L	Composite	Quarterly	Quarterly
Sulfate (SO_4)	mg/L	Composite	Quarterly	Quarterly
Percent Sodium (% Na)	%	Composite	Quarterly	Quarterly
Nitrate (NO_3)	mg/L	Composite	Quarterly	Quarterly
Total Nitrogen	mg/L	Composite	Quarterly	Quarterly
Iron (Fe)	mg/L	Composite	Quarterly	Quarterly
Manganese (Mn)	mg/L	Composite	Quarterly	Quarterly
Methylene Blue-Activated Substances (MBAS)	mg/L	Composite	Quarterly	Quarterly
Boron (B)	mg/L	Composite	Quarterly	Quarterly
Fluoride (F)	mg/L	Composite	Quarterly	Quarterly
Total Dissolved Solids (TDS)	mg/L	Composite	Quarterly	Quarterly
Aluminum[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Arsenic[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Antimony[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Barium[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Beryllium[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Cadmium[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Cyanide[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Mercury[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Nickel[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Perchlorate[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Selenium[g]	mg/L	Composite	Once every 5 years	Once every 5 years
Thallium[g]	mg/L	Composite	Once every 5 years	Once every 5 years

Parameter	Units	Sample Type	Minimum Sampling Frequency [a,b]	Reporting Frequency
Priority Pollutants[h]	mg/L	Composite	Annual	Annually

a. The Discharger shall increase the sampling frequency from weekly to daily, from quarterly to monthly, and from once every 5 years to annually for any constituent that exceeds the Discharge Specifications of the Order. The increased frequency of monitoring shall continue until the Discharger achieves compliance with the Specification for three consecutive periods, at which point the Recycled Water Agency shall resume sampling at the specified frequency.

b. Weekly is defined as a calendar week (Sunday through Saturday). Monthly is defined as a calendar month. Quarterly is defined as a period of three consecutive calendar months beginning on January 1, April 1, July 1, or October 1. Annually is defined as a period of 12 consecutive calendar months beginning on January 1.

c. Chlorine residual concentrations shall be recorded by a continuous recording meter at a location in the pipeline where the effluent has experienced 90 minutes or more of modal contact time at a maximum flow. The minimum daily chlorine residual concentrations shall be reported monthly.

d. Calculated CT (chlorine concentration multiplied by modal contact time) values shall be determined and recorded continuously. The daily minimum CT value shall be reported monthly. The Discharger shall report monthly the date (s), value(s), time and duration when the CT value falls below 450 mg-min/L, and/or the modal contact time falls below 90 minutes.

e. 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. Results of daily coliform bacteria monitoring, running 7-day median determination shall be reported monthly.

f. Effluent samples collected to determine turbidity (when required) shall be collected after the media filters. Effluent tertiary turbidity analyses shall be conducted continuously using a continuous monitoring and recording turbidity meter. Compliance with the daily average operating filter effluent turbidity limit of 2 NTU shall be determined using levels of recorded turbidity levels at a minimum of four-hour intervals over a 24-hour period. Compliance with the turbidity standard of not exceeding 5 NTU more than 5 percent of the time over a 24-hour period shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2 hours over a 24-hour period. Should the continuous turbidity meter and/or recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours. The Discharger shall report quarterly results of four-hour turbidity readings, average effluent turbidity (24-hours), 95 percentile effluent turbidity (24-hours), and daily maximum turbidity readings.

g. The following constituents shall be monitored when effluent is discharge to landscape irrigation sites or reuse sites subject to Water Recycling Criteria specified in CCR Title 22 regulations.

h. Required by the State Water Board Recycled Water Policy, see section 7.b.4 of the State Water Board Recycled Water Policy

III. RECYCLED WATER USERS SUMMARY REPORTS

A. Upon initiation of discharges of recycled water to reuse sites, the Discharger shall begin to submit quarterly recycled water users' summary reports containing the following information:

1. Total volume of recycled water supplied to all recycled water users for each month of the reporting period.

2. Total number of recycled water use sites.

3. Address of the recycled water use site.

4. Basin Plan name and number of hydrologic subarea underlying the recycled water use sites.

B. Upon initiation of discharges of recycled water to reuse sites, the Discharger shall begin to submit annual recycled water users' compliance reports containing the following information:

1. Recycled water use site summary report

   a. Name of each reclaimed water reuse site.

   b. Owner of each reclaimed water use facility.

   c. Address of each reuse site.

   d. Name of the reclaimed water user supervisor.

   e. Phone number of the on-site user supervisor.

   f. Mailing address of the recycled water use supervisor, if different from site address.

   g. Volume of reclaimed water delivered to each reuse site for each of the 12 months in a calendar year.

   h. Total area (in acres) of each landscape irrigation site.

   i. The amount of nitrogen[2] (in pounds per acre per year) applied in recycled water on each landscape irrigation site.

   j. The amount of nitrogen (in pounds per acre) applied as fertilizer on each landscape irrigation site.

2. Recycled water user site inspections

   The Discharger shall report the number of reclaimed water reuse site inspections conducted by its staff and identify the sites inspected for the reporting period.

3. Recycled water user violations of the Discharger's rules and regulations.

   The Discharger shall identify all recycled water users known to be in violation of its rules and regulations for recycled 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.

[2] Concentration of nitrogen in recycled water can be obtained from the recycled water producer.

IV. REPORTING REQUIREMENTS

A. The Discharger shall report in the Self-Monitoring Report (SMR) the results for all monitoring specified in Section II (Discharge Monitoring Requirements) of this MRP. The Discharger shall submit quarterly SMRs including the results of all required monitoring using test methods approved by the U.S. Environmental Protection Agency or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

B. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table 2. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period	SMR Due Date
Continuous	All	Submit with monthly SMR
Daily	Daily	Submit with monthly SMR
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the first day of the second month following sampling (i.e March 1 for January)
Quarterly	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Annually	January 1 through December 31	March 1
5 years	5 year period	March 1

Laboratory reporting limits shall be lower than or equal to the discharge specifications. Constituents not detected below the method detection limit shall be reported as non-detect with the applicable value (i.e. ND<0.05 mg/L). Constituents detected between the laboratory reporting limit and method detection limit shall be reported as "estimated concentrations" or noted with appropriate laboratory flags.

C. The Discharger shall submit SMRs in accordance with the following requirements:

1. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final discharge specifications.

2. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

3. The Discharger shall include historical data in either tabular or graphical format for parameters in section II of this MRP.

4. SMRs must be submitted to the San Diego Water Board, signed and certified as required by General Monitoring Provision M of this Monitoring and Reporting Program Unless directed otherwise by the Executive Officer, SMRs must be submitted to the address below:

California Regional Water Quality Control Board
San Diego Region
2375 Northside Drive, Suite 100
San Diego, CA 92108
Attn: Supervisor, Land Discharge Unit

Ordered by: 

David W. Gibson
Executive Officer
DATE: August 13, 2014