ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Contents

Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. §122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Coast Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Laboratories analyzing monitoring samples shall be certified by the Department of Public Health (DPH), in accordance with Water Code §13176, and must include quality assurance/quality control data with their reports.

B. 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 locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and approval of the Central Coast Water Board.

C. 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 is 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. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references.

1. *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, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)

2. *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. 172.19/2:W29/2, Stock No. S/N 24003-0027.)

3. *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 Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

4. *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, CO 80225.)

D. 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. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.

F. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using the specified methodology. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005). Analyses for toxics listed in Table 1 of the California Ocean Plan (2012) shall adhere to guidance and requirements contained in that document.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point	Monitoring Location Name	Monitoring Location Description
---	INF-001	Influent wastewater prior to treatment and following all significant inputs to the collection system or to the headworks of untreated wastewater where representative samples of wastewater influent can be obtained.
001	EFF-001	Location where representative effluent sample can be collected after treatment.
---	SRF-K4	County Surf Zone Station K-4, Mission Point. (Previously identified as K-4)
---	SRF-K5	County Surf Zone Station K-5, North Shore Carmel River Mouth (Previously identified as K-5)
---	SRF-K6	County Surf Zone Station K-6, Point an North End of Monastery Beach (Previously identified as K-6)
---	BIO-001	The last point in the biosolids handling process where representative samples of residual solids from the treatment process can be obtained.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF - 001

1. The Discharger shall monitor the untreated wastewater at Monitoring Location INF – 001 as follows:

Table E-2. Influent Monitoring at INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Daily Flow	MGD	Metered	Daily
Instantaneous Maximum Flow	MGD	Metered	Daily
Maximum Daily Flow	MGD	Metered	Monthly
Mean Daily Flow	MGD	Calculated	Monthly
BOD_5	mg/L	24-hr Composite	1x / 13 Days
TSS	mg/L	24-hr Composite	1x / 13 Days

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF - 001

1. The Discharger shall monitor effluent discharged at Discharge Point 001 at Monitoring Location EFF – 001 as follows:

Table E-3. Effluent Monitoring at EFF - 001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Daily Flow	MGD	Metered	Daily
Maximum Daily Flow	MGD	Metered	Daily
Mean Daily Flow	MGD	Calculated	Monthly
pH	pH units	Grab	5 Days/ Week
Temperature	º F	Grab	5 Days/ Week
Total & Fecal Coliform Bacteria [1]	MPN/100 mL	Grab	5 Days/ Week
Enterococci Bacteria [3]	MPN/100 mL	Grab	5 Days/ Week
BOD_5	mg/L	24-hr Composite	1x / 13 Days
TSS	mg/L	24-hr Composite	5 Days/ Week
Settleable Solids	mL/L/hr	Grab	1x / 13 Days
Total Chlorine Residual [4]	mg/L	Continuous	Daily
Turbidity	NTUs	Grab	1x / 13 Days
Oil and Grease	mg/L	Grab	1x / 13 Days
Ammonia	mg/L	Grab	Monthly
Nitrate	mg/L	Grab	Monthly
Urea	mg/L	Grab	Monthly
Silicate	mg/L	Grab	Monthly
Acute Toxicity [5], [10]	TUa	Grab	Semiannually
Chronic Toxicity [5], [10]	TUc	Grab	Semiannually
Total Dissolved Solids	mg/L	Grab	Semiannually
DDT	µg/L	Grab	Quarterly (Jan, Apr, Jul, Oct)
Ocean Plan Table 1 Metals [7], [8], [10]	µg/L	HVWS [6]	Semiannually
Ocean Plan Table 1 pollutants [8], [9], [10]	µg/L	HVWS [6]	Semiannually
Remaining Priority Pollutants [8], [11], [12]	µg/L	24-hr composite	3x / permit term

[1] Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 C.F.R. Part 136 (revised edition of May 14, 1999), unless alternate methods have been approved in advance by USEPA pursuant to 40 C.F.R. Part 136.

[3] Detection methods used for enterococcus shall be those presented in USEPA publication EPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure, or any improved method determined by the Central Coast Water Board to be appropriate.

[4] The Discharger shall monitor effluent continuously for chlorine residual at any point after dechlorination and before the discharge. The Discharger shall review the continuous monitoring strip charts and submit a summary of the daily range and daily average concentrations to the Executive Officer with monthly monitoring reports.

[5] Whole effluent, acute and chronic toxicity monitoring shall be conducted according to the requirements established in section V. of this Monitoring and Reporting Program.

[6] HVWS = High-volume water sampling

[7] Those twelve metals (Sb, As, Cd, Cr^{+3}, Cr^{+6}, Cu, Pg, Hg, Ni, Se, Ag, and Zn) with applicable water quality objectives established by Table 1 of the Ocean Plan. Analysis shall be for total recoverable metals.

[8] Procedures, calibration techniques, and instrument/reagent specifications shall conform to 40 C.F.R. 136 and applicable provisions of the Ocean Plan, including the Standard Monitoring Procedures presented in Appendix III of the Ocean Plan. The Discharger shall instruct its analytical laboratory to establish calibration standards so that the Minimum Levels (MLs) presented in Appendix II of the Ocean Plan are the lowest calibration standards. The Discharger and its analytical laboratory shall select MLs, which are below applicable water quality criteria of Table 1; and when applicable water quality criteria are below all MLs, the Discharger and its analytical laboratory shall select the lowest ML. In addition, data must comply with QA/QC requirements of 40 C.F.R. 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 C.F.R. 136.

[9] Those pollutants in 2012 Ocean Plan Table 1. Analyses, compliance determination, and reporting shall adhere to applicable provisions of the Ocean Plan, including the Standard Monitoring Procedures presented in Appendix III. The Discharger shall ensure its analytical laboratory uses the Minimum Levels (MLs) presented in Ocean Plan Appendix II as the lowest calibration standards. The Discharger shall select the lowest ML necessary to demonstrate compliance with effluent limitations. If effluent limitations are less than the lowest MLD, then the Discharger shall use the lowest ML.

[10] Monitoring for the Ocean Plan (2012) Table 1 pollutants and whole effluent acute and chronic toxicity shall occur one time in a dry season and one time in a wet season each year so that characterization of effluent occurs one time per year when the discharge is primarily secondary treated wastewater (wet season) and one time per year when the discharge is primarily brine waste (dry season). Toxicity and Ocean Plan Table 1 pollutant sampling/monitoring shall be conducted concurrently as practicable.

[11] The "Remaining Priority Pollutants" (see Table E-4 below) consist of the priority pollutants listed in Part D of EPA Form 3510-2A (Rev. 1-99) that currently do not have ocean criteria (water quality objectives) per Table 1 of the Ocean Plan. A complete EPA Form 3510-2A is required for all new and renewal NPDES permit applications pursuant to 40 C.F.R. 122.21. Expanded Effluent Testing Data per Part D of EPA Form 3510-2A is required for all treatment works with design flows greater than or equal to 1.0 MGD or with a pretreatment program (or required to have a pretreatment program), or otherwise required by the permitting authority to provide the data.

[12] At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old. Remaining priority pollutant monitoring shall occur at least one time in a dry season and one time in a wet season.

Table E-4. Remaining Priority Pollutants

Volatile Organic Compounds
Bromoform
Chloroethane
2-Chloroethyl Vinyl Ether
1,1-Dichloroethane
Trans-1,2-Dichloro-Ethylene
1,2-Dichloropropane
1,3-Dichloro-Propylene
Methyl Bromide
Methyl Chloride
Methylene Chloride
Acid Extractable Compounds
P-Chloro-M-Cresol

2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-O-Cresol
2-Nitrophenol
4-Nitrophenol
Pentachlorophenol
Phenol
Base-Neutral Compounds
Acenaphthene
Acenaphthylene
Anthracene
Benzo(A)Anthracene
Benzo(A)Pyrene
3,4-Benzo-Fluoranthene
Benzo(ghi)Perylene
Benzo(K)Fluoranthene
4-Bromophenyl Phenyl Ether
Butyl Benzyl Phthalate
2-Chloronapthalene
4-Chlorophenyl Phenyl Ether
Chrysene
Di-N-Octyl Phthalate
Dibenzo(A,H)Anthracene
1,4-Dichlorobenzene
2,6-Dinitrotoluene
Fluorene
Indeno(1,2,3-CD)Pyrene
Naphthalene
Phenanthrene
Pyrene
1,2,4-Trichlorobenzene

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity

Compliance with acute toxicity objective shall be determined using a U.S. EPA approved protocol as provided in 40 C.F.R. 136 (*Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, U.S. EPA Office of Water, EPA-821-R-02-012 or the latest edition).

Acute Toxicity (TUa) = 100/96-hr LC 50.

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by 96-hour static or continuous flow bioassay techniques using standard marine test species as specified in EPA-821-R-02-012 and as noted in the following table.

Table E-5. Approved Test - Acute Toxicity (TUa)

Species	Scientific Name	Effect	Test Duration
shrimp	*Holmesimysis costata*	survival	48 or 96 hours
shrimp	*Mysidopsis bahia*	survival	48 or 96 hours
silversides	*Menidia beryllina*	survival	48 or 96 hours

sheepshead minnow	*Cyprinodon variegatus*	survival	48 or 96 hours

If the effluent is to be discharged to a marine or estuarine system (e.g., salinity values in excess of 1,000 mg/L) and originates from a freshwater supply, salinity of the effluent must be increased with dry ocean salts (e.g., FORTY FATHOMS®) to match salinity of the receiving water. This modified effluent shall then be tested using marine species.

Reference toxicant test results shall be submitted with the effluent sample test results. Both tests must satisfy the test acceptability criteria specified in EPA-821-R-02-012. If the test acceptability criteria are not achieved or if toxicity is detected, the sample shall be retaken and retested within 5 days of the failed sampling event. The retest results shall be reported in accordance with EPA-821-R-02-012 (chapter on report preparation) and the results shall be attached to the next monitoring report.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

TUa = [log(100 – S)]/1.7

where S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

When toxicity monitoring finds acute toxicity in the effluent above the effluent limitation established by the Order, the Discharger shall immediately resample the effluent, if the discharge is continuing, and retest for acute toxicity. Results of the initial failed test and any toxicity monitoring results subsequent to the failed test shall be reported as soon as reasonable to the Executive Officer (EO). The EO will determine whether to initiate enforcement action, whether to require the Discharger to implement toxicity reduction evaluation (TRE) requirements (section V.C.2.a of the Order), or to implement other measures.

A. Chronic Toxicity

The presence of chronic toxicity shall be estimated as specified in *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, EPA-821/600/R-95/136; *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, EPA-600-4-91-003; *Procedures Manual for Conducting Toxicity Tests developed by the Marine Bioassay Project*, SWRCB 1996, 96-1WQ; and/or *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, EPA/600/4-87-028 or subsequent editions.

Chronic toxicity measures a sublethal effect (e.g., reduced growth or reproduction) to experimental test organisms exposed to an effluent compared to that of the control organisms.

Chronic Toxicity (TUc) = 100/NOEL.

The no observed effect level (NOEL) is the maximum tested concentration in a medium which does not cause known adverse effects upon chronic exposure in the species in question (i.e., the highest effluent concentration to which organisms are exposed in a chronic test that causes no observable adverse effects on the test organisms; e.g., the highest concentration of a toxicant to which the values for the observed responses are not statistically significantly different from the controls). Examples of chronic toxicity include but are not limited to measurements of toxicant effects on reproduction, growth, and sublethal effects that can include behavioral, physiological, and biochemical effects.

In accordance with the 2012 Ocean Plan, Appendix III, *Standard Monitoring Procedures*, the Discharger shall use the critical life stage toxicity tests specified in the table below to measure TUc. Other species or protocols will be added to the list after State Water Resources Control Board review and approval.

A minimum of three test species with approved test protocols shall be used to measure compliance with the toxicity limitation. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period of no fewer than three sampling events, monitoring can be reduced to the most sensitive species. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

Table E-6. Approved Tests—Chronic Toxicity

Species	Test	Tier [1]	Reference [2]
Giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	a, c
Red abalone, *Haliotis rufescens*	abnormal shell development	1	a, c
Oyster, *Crassostrea gigas*; mussels, *Mytilus spp*.	abnormal shell development; percent survival	1	a, c
Urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent normal development	1	a, c
Urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent fertilization	1	a, c
Shrimp, *Homesimysis costata*	percent survival; growth	1	a, c
Shrimp, *Mysidopsis bahia*	percent survival; fecundity	2	b, d
Topsmelt, *Atherinops affinis*	larval growth rate; percent survival	1	a, c
Silverside, *Menidia beryllina*	larval growth rate; percent survival	2	b, d

[1] First tier methods are preferred for compliance monitoring. If first tier organisms are not available, the Discharger can use a second tier test method following approval by the Central Coast Water Board.

[2] Protocol References:

a. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. U.S. EPA Report No. EPA/600/R-95/136.

b. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. U.S. EPA Report No. EPA-600-4-91-003.

c. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.

d. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and

F. Kessler (eds). 1998. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

Dilution and control waters shall be obtained from an area of the receiving waters, typically upstream, which is unaffected by the discharge. Standard dilution water can be used, if the receiving water itself exhibits toxicity or if approved by the Central Coast Water Board. If the dilution water used in testing is different from the water in which the test organisms were cultured, a second control sample using culture water shall be tested.

If the effluent is to be discharged to a marine or estuarine system (e.g., salinity values in excess of 1,000 mg/L) originates from a freshwater supply, salinity of the effluent must be increased with dry ocean salts (e.g., FORTY FATHOMS®) to match salinity of the receiving water. This modified effluent shall then be tested using marine species.

If chronic toxicity is measured in the effluent above 122 TUc, the Discharger shall re-sample and submit the results to the Central Coast Water Board as described in section V.C.2.a of this Order.

C. Toxicity Reporting

1. The Discharger shall include a full report of toxicity test results with the regular monthly monitoring report and include the following information.

   a. Toxicity test results,

   b. Dates of sample collection and initiation of each toxicity test, and

   c. Acute and/or chronic toxicity discharge limitations (or value).

2. Toxicity test results shall be reported according to the appropriate guidance - *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, U.S. EPA Office of Water, EPA-821-R-02-012 (2002) or the latest edition, or *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, EPA-821-R-02-012 (2002) or subsequent editions.

3. If the initial investigation TRE workplan is used to determine that additional (accelerated) toxicity testing is unnecessary, these results shall be submitted with the monitoring report for the month in which investigations conducted under the TRE workplan occurred.

4. Within 30 days of receipt of test results exceeding an acute or chronic toxicity discharge limitation, the Discharger shall provide written notification to the Executive Officer of:

   a. Findings of the TRE or other investigation to identify the cause(s) of toxicity, and

   b. Actions the Discharger has taken/will take, to mitigate the impact of the discharge and to prevent the recurrence of toxicity.

When corrective actions, including a TRE, have not been completed, a schedule under which corrective actions will be implemented, or the reason for not taking corrective action, if no action has been taken.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS

The Discharger shall comply with applicable state and local requirements regarding the production and use of recycled wastewater, including requirements of California Water Code (CWC) sections 13500 – 13577 (Water Reclamation) and Department of Public Health regulations at title 22, sections 60301 – 60357 of the California Code of Regulations (Water Recycling Criteria).

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Shoreline Bacteria Monitoring (Triggered) – Monitoring Locations SRF-K4, SRF-K5, and SRF-K6

Shoreline bacteria monitoring shall be implemented within 24-hours of receipt of effluent data showing effluent total coliform concentrations exceeded 2,400 MPN/100mL three or more times in a 30-day period. Bacteria monitoring shall be conducted in accordance with the following table. Latitude and Longitude shall be provided for all stations when reporting.

Table E-7. Triggered Shoreline Bacteria Monitoring Schedule

Parameter	Units	Sampling Station	Sampling Frequency
Total Coliform Bacteria [1], [2], [4]	MPN/100ml	SRF-K4, SRF-K5, and SRF-K6	Weekly [6]
Fecal Coliform Bacteria [1], [2], [4]	MPN/100ml	SRF-K4, SRF-K5, and SRF-K6	Weekly [6]
Enterococcus Bacteria [1], [3], [4]	MPN/100ml	SRF-K4, SRF-K5, and SRF-K6	Weekly [6]
Visual Monitoring [5]	Narrative	SRF-K4, SRF-K5, and SRF-K6	Weekly [6]

[1] For all bacterial analyses, sample dilutions shall be performed so the range of values extends from 2 to 16,000 MPN/100ml. The detection methods used for each analysis shall be reported with the results of the analysis.

[2] Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 C.F.R. PART 136, unless alternate methods have been approved in advance by US EPA pursuant to 40 C.F.R. PART 136.

[3] Detection methods used for enterococcus shall be those presented in EPA publication EPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure, or any improved method determined by the Central Coast Regional Board (and approved by EPA) to be appropriate.

[4] If a single sample exceeds any of the bacteriological single sample maximum (SSM) standards contained within section IV.A.1 of the Order, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued daily until the sample result is less than the SSM standard or until a sanitary survey is conducted to determine the source of the high bacterial densities. When repeat sampling is required because of an exceedance of any one single sample density, values from all samples collected during that 30-day period will be used to calculate the geometric mean. Shore

stations (immediately inshore of 30-foot contour sites) shall be sampled concurrent with 30-foot contour repeat sampling.

[5] Visual monitoring shall include observations of wind (direction and speed), weather (e.g., cloudy, sunny, rainy), antecedent rainfall (7-day), sea state, and tidal conditions (e.g., high, slack, or low tide). Observations of water discoloration, floating oil and grease, turbidity, odor, material of sewage origin in the water or on the beach, and temperature (°C) shall be recorded and reported.

[6] Until the Executive Officer agrees that normal sampling can resume.

IX. OTHER MONITORING REQUIREMENTS

A. Central Coast Long-Term Environmental Assessment Network (CCLEAN)

1. The Discharger shall participate in the implementation of the CCLEAN Regional Monitoring Program in order to fulfill receiving water compliance monitoring requirements and support the following CCLEAN Program objectives.

    a. Obtain high-quality data describing the status and long-term trends in the quality of nearshore waters, sediments, and associated beneficial uses.

    b. Determine whether nearshore waters and sediments are in compliance with the Ocean Plan.

    c. Determine sources of contaminants to nearshore waters.

    d. Provide legally defensible data on the effects of wastewater discharges in nearshore waters.

    e. Develop a long-term database on trends in the quality of nearshore waters, sediments, and associated beneficial uses.

    f. Ensure that the nearshore component database is compatible with other regional monitoring efforts and regulatory requirements.

    g. Ensure that nearshore component data are presented in ways that are understandable and relevant to the needs of stakeholders.

2. General discharger components of the first phase of the CCLEAN Program are outlined in the following table. The CCLEAN Quality Assurance Project Plan (QAPP) will be revised as necessary each year to reflect any program adjustments and submitted to the Water Board Quality Assurance Officer for approval prior to initiation of CCLEAN sampling. A detailed technical study design description, including specific location of sampling sites and a description of the specific contents of the CCLEAN Annual Report, shall be provided as a component of the CCLEAN QAPP. Any year-to-year modifications to the program (including implementation of subsequent program phases) shall be identified in this document. The QAPP will also include program components funded by other participant agencies and organizations.

Table E-8. CCLEAN Monitoring Requirements

Sampling Sites	Parameters Sampled at Each Site	Frequency of Sampling	Applicable Water-Quality Stressors	Program Objectives
Water Sampling				
Four outfall sites (Santa Cruz, Watsonville, Monterey, Carmel) in effluent.	1) 30-day flow proportioned samples using automated pumping equipment, solid-phase-extraction techniques for persistent organic pollutants including PBDE, and 2) grab sampling for Perfluorinated compounds (PFCs). and weekly grab samples of effluent for 2) ammonia, silica, orthophosphate, urea, and nitrate, 3) turbidity and suspended sediment, 4) temperature, conductivity, and ph.	Twice per year (wet season and dry season)	Persistent Organic Pollutants	d
Four outfall sites (Santa Cruz, Watsonville, Monterey, Carmel) in effluent.	Grab samples for ammonia, silica, orthophosphate, urea, nitrate, turbidity, suspended sediment, temperature, conductivity, and ph.	Monthly	Nutrients Suspended Sediments	d
Four outfall sites (Santa Cruz, Watsonville, Monterey, Carmel) in effluent.	Integrative biological assessment of endocrine disrupting compounds.	Every other year	Endocrine disrupting compounds	d
Two ambient sites in Monterey Bay	1) 30-day time-integrated samples using automated pumping equipment, high volume water sampling techniques for persistent organic pollutants including PBDEs, 2) grab sampling for PFCs, 3) duplicated grabs of ammonia, silica, orthophosphate, urea, nitrate, turbidity, suspended sediment, fecal coliform, total coliform, enterococcus, temperature and pH at both deployment and pickup.	Twice per year (wet season and dry season)	Persistent Organic Pollutants Nutrients Suspended Sediments Pathogen Indicators PFCs	a, b, e
30-foot contour sites for each major discharge and sites sampled for	Grab samples for total and fecal coliform, enterococcus[1]	Monthly	Pathogens	a, b, c, d

[1] If a single sample exceeds any of the bacteriological single sample maximum (SSM) standards contained within section IV.A.1 of the Order, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued daily until the sample result is less than the SSM standard or until a sanitary survey is conducted to determine the source of the high bacterial densities. When repeat sampling is required because of

AB411				
Sediment Sampling				
Four depositional sites and four background sites along 80-m contour	Single samples for benthic infauna, persistent organic pollutants including PBDE, total organic carbon and grain size	Annually	Persistent Organic Pollutants (and effects of)	a,b
Mussel Sampling				
5 rocky intertidal sites	One composite of 30-40 mussels for persistent organic pollutants including PBDE, total and fecal coliform, and enterococcus	Annually (wet season)	Persistent Organic Pollutants Pathogens	a,b,c

B. Solids/Biosolids Monitoring, Notification, and Reporting

1. Biosolids Monitoring

a. Biosolids shall be tested for the metals required in 40 C.F.R. 503.16 (for land application) or Section 503.26 (for surface disposal), using the methods in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), as required in 503.8(b)(4), at the following minimum frequencies:

Volume (dry metric tons) [1]	Sampling and Analysis Frequency [2]
0-290	Once per year
290-1500	Once per quarter
1500-15000	Once per 60 days
> 15000	Once per month

[1] For accumulated, previously untested biosolids, the Permittee shall develop a representative sampling plan, including number and location of sampling points, and collect representative samples.

[2] Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis. Biosolids to be land applied shall be tested for organic-N, ammonium-N, and nitrate-N at the frequencies required above.

b. Prior to land application, the Permittee shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 40 C.F.R. 503.32. Prior to disposal in a surface disposal site, the Permittee shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a “Process to Significantly/Further Reduce Pathogens”, the Permittee shall maintain daily records of the operating parameters used to achieve this reduction. If pathogen reduction is demonstrated by testing for fecal coliforms and/or pathogens, samples must be drawn at the frequency in 11(a) above. For fecal coliform, at least seven grab samples must be drawn during each monitoring event and a geometric mean calculated from these seven samples.

an exceedance of any one single sample density, values from all samples collected during that 30-day period will be used to calculate the geometric mean. Shore stations (immediately inshore of 30-foot contour sites) shall be sampled concurrent with 30-foot contour repeat sampling. Note: this is not a CCLEAN requirement, but a requirement of the Order per Ocean Plan Section VI.D, paragraph b.

c. For biosolids that are land applied or placed in a surface disposal site, the Permittee shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 C.F.R. 503.33(b).

d. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the Regional Administrator) and Federal facilities with greater than five million gallons per day (MGD) influent flow shall sample biosolids for pollutants listed under Section 307(a) of the Clean Water Act (as required in the pretreatment section of the permit for POTW's with pretreatment programs). Class 1 facilities and Federal facilities greater than five MGD shall test dioxins/dibenzofurans using a detection limit of less than one pg/g at the time of their next priority pollutant scan if they have not done so within the past five years, and once per five years thereafter.

e. The biosolids shall be tested annually, or more frequently if necessary, to determine hazardousness in accordance 40 C.F.R. 261.

f. If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.

g. Biosolids placed in a municipal landfill shall be tested by the Paint Filter Liquids Test (EPA Method 9095) at the frequency in 11 (a) above or more often if necessary to demonstrate that there are no free liquids.

2. Solids/Biosolids Monitoring

The Permittee, either directly or through contractual arrangements with their biosolids management contractors, shall comply with the following notification requirements:

a. Notification of non-compliance: The Permittee shall notify USEPA Region 9, the Central Coast Regional Board, and the Regional Board located in the region where the biosolids are used or disposed, of any non-compliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Permittee shall notify USEPA Region 9 and the affected Regional Boards of the non-compliance in writing within five working days of becoming aware of the non-compliance. The Permittee shall require their biosolids management contractors to notify USEPA Region 9 and the affected Regional Boards of any non-compliance within the same timeframes. See Attachment C for Regional Board contact information.

b. If biosolids are shipped to another State or to Indian Lands, the Permittee must send 60 days prior notice of the shipment to the permitting authorities in the receiving State or Indian Land (the USEPA Regional Office for that area and the State/Indian authorities).

c. For land application: Prior to reuse of any biosolids from this facility to a new or previously unreported site, the Permittee shall notify USEPA and Regional Board. The notification shall include a description and topographic map of the proposed site(s), names and addresses of the applier, and site owner and a listing of any state or local permits which must be obtained. The plan shall include a description of the crops or vegetation to be grown, proposed loading rates and determination of agronomic rates. If any biosolids within a given monitoring period do not meet 40 C.F.R. 503.13 metals concentration limits, the Permittee (or its contractor) must pre-notify USEPA, and determine the cumulative metals loading at that site to date, as required in Section 503.12.

d. The Permittee shall notify the applier of all the applier's requirements under 40 C.F.R. 503, including the requirement that the applier certify that the management practices, site restrictions, and any applicable vector attraction reduction requirements have been met. The Permittee shall require the applier to certify at the end of 38 months following application of Class B biosolids that the harvesting restrictions in effect for up to 38 months have been met.

e. For surface disposal: Prior to disposal to a new or previously unreported site, the Permittee shall notify USEPA and the Regional Board. The notice shall include description and topographic map of the proposed site, depth to groundwater, whether the site is lined or unlined, site operator, site owner, and any state or local permits. The notice shall describe procedures for ensuring public access and grazing restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.

3. Biosolids Reporting

The Permittee shall submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator and Regional Board by February 1 of each year for the period covering the previous calendar year. The report shall include:

a. The amount of biosolids generated during the reporting period, in dry metric tons, and the amount accumulated from previous years;

b. Results of all pollutant and pathogen monitoring required in Item 12 above and the Monitoring and Reporting Program of this Order. Results must be reported on a 100% dry weight basis for comparison with 40 C.F.R. 503 limits;

c. Descriptions of pathogen reduction methods and vector attraction reduction methods, including supporting time and temperature data, and certifications, as required in 40 C.F.R. 503.17 and 503.27;

d. Names, mailing addresses, and street addresses of persons who received biosolids for storage, further treatment, disposal in a municipal waste landfill, or for other use or disposal methods not covered above, and volumes delivered to each.

e. For land application sites, the following information must be submitted by the Permittee, unless the Permittee requires its biosolids management contractors to report this information directly to the USEPA Region 9 Biosolids Coordinator:

   1) Locations of land application sites (with field names and numbers) used that calendar year, size of each field applied to, applier, and site owner.
   2) Volumes applied to each filed (in wet tons and dry metric tons), nitrogen applied, calculated plant available nitrogen;
   3) Crop planted, dates of planting and harvesting;
   4) For any biosolids exceeding 40 C.F.R. 503.13 Table 3 metals concentrations: the locations of sites where applied and cumulative metals loading at that site to date;
   5) Certifications of management practices in Section 503.14; and
   6) Certifications of site restrictions in Section 503(b)(5).

f. For surface disposal sites:

   1) Locations of sites, site operator, site owner, size of parcel on which disposed;
   2) Results of any required groundwater monitoring;
   3) Certifications of management practices in Section 503.24; and
   4) For closed sites, date of site closure and certifications of management practices for the three years following site closure.

g. For all biosolids used or disposed at the Permittee's facilities, the site and management practice information and certification required in Sections 503.17 and 503.27; and

h. For all biosolids temporarily stored, the information required in Section 503.20 required to demonstrate temporary storage.

   Reports shall be submitted to:

   Regional Biosolids Coordinator
   USEPA (WTR-7)
   75 Hawthorne Street
   San Francisco, CA 94105-3901

   Executive Officer
   Central Coast Regional Water Quality Control Board
   centralcoast@waterboards.ca.gov

i. All the requirements of 40 C.F.R. 503 and 23 CCR 15 are enforceable by the USEPA and this Regional Board whether or not the requirements are stated in an NPDES permit or any other permit issued to the discharger.

C. Outfall Inspection

At least one time per year, the Discharger shall visually inspect the outfall structure and report in the Annual Report, regarding its physical integrity. The inspection shall note leaks and potential leaks using dye studies, if necessary.

D. MBNMS Spill Reporting

The Discharger shall report any sewage spills under its control that are likely to enter ocean waters directly to Monterey Bay National Marine Sanctuary (MBNMS) office at 831-236-6797.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

B. Self-Monitoring Reports (SMRs)

1. The Discharger must electronically submit Self-Monitoring Reports (SMR's) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. SMR's are to include all new monitoring results obtained since the last SMR was submitted. 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.

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

Table E-9. Monitoring Periods and Reporting Schedule

SMR Name	Permit Section for Monitoring & Sampling Data Included in Report	SMR Submittal Frequencies	SMR Due Date
NPDES Monitoring Report - Monthly	MRP Sections III (Influent) and IV (Effluent)	Monthly	First day of second calendar month following period of sampling
NPDES Monitoring Report - Quarterly	MRP Section IV (Effluent) – DDT	Quarterly	December 1, March 1, June 1, and September 1st following period of sampling
NPDES Monitoring Report - Semi-Annual	MRP Section IV (Effluent) – Toxicity, Total Dissolved Solids, and Ocean Plan Table 1	Semi-annually	May 1st and November 1st following period of sampling
NPDES Monitoring Report – 3x/Permit	MRP Section IV (Effluent) – Remaining Priority Pollutants	3x/ Permit Term	February 1st following calendar year of sampling
Biosolids Annual Report	MRP Section IX.B.3 and Order Section V.C.5.a	Annually	February 1st following calendar year of sampling
Annual Summary and Ocean Outfall Report	Attachment D, Standard Provision VIII.D.8 and MRP Section IX.C	Annually	February 1st following calendar year of sampling

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of

the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

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

a. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. If CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. In the SMR, the Discharger shall clearly identify violations of the WDRs and 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.

c. An Annual Self-Monitoring Report shall be due on February 1 following each calendar year and shall include:

- All data required by this MRP for the corresponding monitoring period, including appropriate calculations to verify compliance with effluent limitations.

- A discussion of any incident of non-compliance and corrective actions taken.

C. Discharge Monitoring Reports (DMRs)

1. At any time during the term of this permit, the State or Central Coast Water Board may notify the Discharger to electronically submit DMR's. Until such notification is given specifically for the submittal of DMR's, the Discharger shall submit DMR's in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below.

Standard Mail	Fedex/UPS/Other Private Carriers
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1) or on self-generated forms that follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. Unless otherwise noted, with the next SMR, the Discharger shall report the results of any special monitoring, TREs, or other data or information that results from the Special Provisions, section VI.C, of the Order.