Response to Written Comments

Draft Waste Discharge Requirements

Order No. R1-2019-0047

National Pollutant Discharge Elimination System (NPDES)

for the University of California Davis, Bodega Marine Laboratory

Regional Water Quality Control Board, North Coast Region

December 19, 2019

Comment Letter Received

The deadline for submittal of public comments regarding draft Waste Discharge Requirements for Order No. R1-2019-0047, National Pollutant Discharge Elimination System Permit (Draft Permit) for the University of California Davis, Bodega Marine Laboratory (Bodega Marine Lab, BML, or Facility) was October 11, 2019. University of California Davis, Bodega Marine Lab (Permittee) provided timely comments. No other comments were received during the public comment period.

Regional Water Board staff met with Bodega Marine Lab staff on October 8, 2019 to discuss the Permittee's comments. Responses to comments contained in this document are consistent with the discussion that occurred during the October 8, 2019 meeting.

In this document, the Permittee's comments are summarized, followed by the Regional Water Board staff response. Text to be added is identified by underline and text to be deleted is identified by ~~strike-through~~ in this document. The term "Draft Permit" refers to the version of the permit that was sent out for public comment. The term "Proposed Permit" refers to the version of the permit that has been modified in response to comments and is being presented to the North Coast Regional Water Quality Control Board (Regional Water Board) for consideration.

Also note that several responses refer to State Water Board Resolution No. 2007-0058. This Resolution approves an exception to allow BML to discharge to the Bodega Area of Special Biological Significance (ASBS). Note that the *Water Quality Control Plan, Ocean Waters of California, Revised 2019* (Ocean Plan) prohibits discharges to waters classified as ASBS, unless the State Water Board adopts such an exception.

Permittee Comments

Overall BML Comments:

The introductory paragraph in the Permittee's comment letter expresses concern that many of the changes made in the Draft Permit are similar to those contained in permits that apply to municipal and industrial facilities and are not applicable to a recirculating seawater facility. In addition, page 1 of the Draft Permit incorrectly states the Facility address.

Response: NPDES permit language changes over time to reflect changes in regulations, facility changes reported by a permittee, and to improve the clarity of the permit language. Most of the changes that the Permittee noted in the Draft Permit are related to one of these

three reasons. A few of the changes in the Draft Permit were specific to wastewater treatment facilities, and in such cases Regional Water Board staff propose to modify or remove that language in the Proposed Permit. The details of those changes are captured in the responses to specific comments, below.

The Facility address has been corrected on page 1 (Table 1) and page F-3 (Table F-1) of the Proposed Permit.

Comment 1:
Section V.A.1 of the Draft Permit includes language that is identical to Order No. R1-2013-0023 (previous permit) with the exception that the last sentence has been changed to require consultation with the State Water Board's Division of Drinking Water rather than the Division of Water Quality.

Response: Section V.A.1 should require consultation with the Division of Water Quality, not the Division of Drinking Water, therefore, the Proposed Permit has been changed to read as follows: "Natural water quality conditions in receiving waters, seaward of the surf zone, shall not be altered as a result of discharges from the Facility. The surf zone is defined as the area between the breaking waves and the shoreline at any one time. Natural water quality shall be defined by Regional Water Board staff in consultation with the State Water Board's Division of ~~Drinking Water (DDW)~~ Water Quality."

Comment 2:
Section V.A.2 of the Draft Permit includes bacterial receiving water limitations that are different from those included in the previous permit. BML does not conduct research on mammals or birds, but only fish and invertebrates, therefore no coliform should be present in discharges from the Facility. BML is required to take samples from the ocean near the discharge point, and there would be a possibility of coliform from wild animals in their natural habitat in a sample, but that cannot and should not be attributed to BML.

Response: The changes to the bacterial receiving water limitations reflect regulatory changes that were made when the State Water Board adopted the *Amendment to the Water Quality Control Plan for Ocean Waters of California – Bacteria Provisions and a Water Quality Standards Variance Policy* which establishes new statewide numeric water quality objectives for bacteria to protect the primary contact recreation beneficial use in ocean waters. This is explained in Section V.A of the Draft and Proposed Permit Fact Sheet. See also the Response to Comment 8, below.

In addition, Section V.A of the Permit (Draft and Proposed) states, "If monitoring indicates that natural ocean water quality is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff and seawater system effluent data that has equal or lower concentrations for the range of constituents at the applicable reference area(s)." If receiving water monitoring data were to exceed any bacterial limit, existing discharge data would be reviewed, and potentially additional data collection could be required to demonstrate that the Permittee's discharge is not contributing to the alteration of water quality. Regional Water Board staff recognize that seals and other mammals and birds live in and near Horseshoe Cove.

No changes were made to the Proposed Permit in response to this comment.

Comment 3:
Section V.A.2.ii of the Draft Permit includes a shellfish harvesting standard for total coliform. The Permittee requests removal of this language because BML does not harvest shellfish for human consumption, nor does the public, as they are not permitted access to the Reserve. BML does not control wild animals that use the Reserve, marshlands, and shoreline as part of their natural habitat, and thus results from testing for coliform would not have any connection to BML activities.

Response: The shellfish harvesting standard included as a receiving water limitation reflects water quality objectives established in the Ocean Plan, thus must be included in all NPDES permits for ocean dischargers. This language has been retained from the previous permit. There is currently no evidence that shellfish harvesting takes place in the area of the Permittee's discharge (Horseshoe Cove), and to date, the Permittee has always been in compliance with this requirement. See also the Response to Comment 2, above.

No changes were made to the Proposed Permit in response to this comment.

Comment 4:
Section V.A.2.v of the Draft Permit includes Biological Characteristic requirements. The Permittee requests removal of this language because no harvesting of fish, shellfish, or other marine resources used for human consumption occurs at BML by BML staff or the public, and BML does not conduct any operations in the ocean waters surrounding Bodega Head.

Response: The biological characteristic requirements included as receiving water limitations reflect water quality objectives established in the Ocean Plan, thus must be included in all NPDES permits for ocean dischargers. This language has been retained from the previous permit. There is currently no evidence that harvesting of fish, shellfish, or other marine resources takes place in Horseshoe Cove, and to date, the Permittee has always been in compliance with this requirement. See also Responses to Comments 2 and 3, above.

No changes were made to the Proposed Permit in response to this comment.

Comment 5.
Section V.B of the Draft Permit includes groundwater limitations that differ from the groundwater limits in the previous permit specifically because they refer to the "collection, treatment, storage, and disposal of wastewater" that would be applicable to an industrial processing plant or water treatment plant receiving sewage. BML has three storm water discharge points (one into Horseshoe Cove and two into the freshwater marsh on the property). BML does not discharge into groundwater, nor onto land or soil where the discharge could percolate into groundwater. BML's groundwater does not service any domestic or municipal supply needs, and the laboratory's operations of circulating seawater has no impact on groundwater, therefore, monitoring and regulations focused on groundwater should not apply.

Response: Regional Water Board staff agree that the wording of the groundwater limitations in the Draft Permit using the words "collection, treatment, storage, and disposal of wastewater" is not appropriate for a recirculating seawater facility. However, Regional Water Board staff believe that groundwater receiving water limitations are necessary to implement the *Water Quality Control Plan for the North Coast Region* (Basin Plan) which establishes groundwater objectives. Discharges of storm water have the potential for pollutants in the storm water to percolate to groundwater. Past monitoring data from the Facility has not raised any concerns,

but the groundwater limitations are necessary to implement the Basin Plan. The groundwater limitations in Section V.B of the Proposed Permit have been revised to be more consistent with the groundwater limitations in the previous permit. Some changes are necessary to reflect changes in the Basin Plan (addition of the groundwater toxicity objective in section V.B.5) and Title 22 citations (some Title 22 section numbers have changed since 2013).

The modified language reads as follows:

"Discharges and other activities at the Facility shall not cause exceedance/deviation from the following water quality objectives for groundwater established by the Basin Plan.

1. Groundwater shall not contain taste or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

2. Groundwater used for domestic or municipal supply shall possess a median concentration of less than 1.1 MPN/100 mL of coliform organisms over any 7-day period, or less than 1 colony per 100 mL.

3. Groundwater used for domestic or municipal supply shall not contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) secondary MCLs (SMCLs) established for these pollutants in title 22, division 4, chapter 15, article 5, sections 64442 and 64443 of the CCR.

4. Groundwater used for domestic or municipal supply shall not contain concentrations of chemical constituents in excess of the MCLs and SMCLs established for those pollutants in title 22 division 4, chapter 15, article 4, sections 64431, article 5.5; section 64444; and article 16, section 64449.

5. Groundwaters shall not contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, or that adversely affects beneficial uses. This limitation applies regardless of whether the toxicity is caused by a single substance or the synergistic effect of multiple substances."

The Draft Permit language has been deleted as follows:

1. ~~The collection, treatment, storage, and disposal of wastewater shall not cause degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements (e.g., Basin Plan) and reasonable BMPs, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.~~
2. ~~The collection, treatment, storage, and disposal of wastewater shall not cause alterations of groundwater that contain chemical concentrations in excess of the MCL and SMCL provisions established for those pollutants in title 22, division 4, chapter 15, article 4, sections 64431, article 5.5;section 64444; and article 16, section 64449.~~
3. ~~The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain radionuclides in concentrations that cause nuisance or adversely affect beneficial uses, nor in excess of the MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 5, sections 64442 and 64443 of the CCR.~~

4. ~~The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.~~

5. ~~In groundwaters used for domestic or municipal supply (MUN), the collection, treatment, storage, and disposal of wastewater shall not cause the median of the most probable number of coliform organisms over any 7-day period to exceed 1.1 MPN/100 mL or 1 colony/100 mL.~~

Comment 6:
Section VI.C.4 of the Draft Permit includes Construction, Operation and Maintenance Specifications that were not included in the previous permit. This section should be removed for being overly burdensome. The University already has requirements for BML to manage its operations and safety programs.

Response: Proper operation and maintenance (O&M), and an up-to-date O&M manual is crucial to ensuring compliance with permit requirements for any facility. During the October 8, 2019 meeting, BML staff described the documents that are used to ensure proper O&M of systems used to ensure compliance with the permit. Regional Water Board staff agreed that any documents that are the equivalent to an O&M manual (even if not called an O&M manual) are adequate to meet the O&M manual requirements in the permit. To reflect this understanding, Section VI.C.4 of the Proposed Permit has been modified as follows:

4. **"Construction, Operation and Maintenance Specifications**

   a. **Proper Operation and Maintenance.** This Order (Attachment D, Standard Provision I.D) requires that the Permittee at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures.

   b. **Operation and Maintenance Manual.** The Permittee shall maintain ~~an~~ updated Operation and Maintenance (O&M) Manual<u>(s)</u> <u>(or an equivalent document)</u> for the operational components of the Facility. The Permittee shall update the O&M Manual<u>(s)</u>, as necessary, to conform to changes in operation and maintenance of the Facility. The Permittee shall operate and maintain the Facility in accordance with the most recently updated O&M Manual<u>(s)</u>. The O&M Manual<u>(s)</u> shall be readily available to operating personnel onsite and for review by state or federal inspectors. ~~The O&M Manual shall include the following.~~

      ~~**i.** Description of the Facility's organizational structure showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc.). The description should include documentation that the personnel are knowledgeable and qualified to operate the Facility so as to achieve the required level of treatment at all times.~~

      ~~**ii.** Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.~~

      ~~**iii.** Description of laboratory and quality assurance procedures.~~

      ~~**iv.** Inspection and essential maintenance schedules for all processes and equipment.~~

~~**v.** Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittee will be able to comply with requirements of this Order.~~

~~**vi.** Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage."~~

Comment 7:
Section VI.C.6.d of the Draft Permit includes a Solids Disposal requirement that should be removed from the permit as it is overly burdensome and unnecessary. The only solids the laboratory removes from seawater are organics (chunks of kelp, small crustaceans, broken shells, etc.) that are naturally found in the ocean. The seawater system does not generate sludge or other solids beyond naturally occurring organics. These solids are removed from the seawater before the seawater is pumped to the laboratory.

Response: A streamlined version of the Solids Disposal language was included in the previous permit and would be more appropriate than the language in the Draft Permit. The Proposed Permit has been revised to read as follows:

d. **"Solids Disposal.** Screenings, sludge, and other solids removed from liquid wastes shall be disposed of at a legal point of disposal, and in accordance with the provisions of the Water Code and title 27 of the CCR. ~~By **August 1, 2020**, the Permittee shall submit a solids disposal plan to the Regional Water Board. The plan shall describe at a minimum:~~

~~**i.** Sources and amounts of solids generated annually.~~

~~**ii.** Locations of on-site storage and description of the containment area.~~

~~**iii.** Plans for ultimate disposal. For landfill disposal, include the present classification of the landfill, and the name and location of the landfill.~~"

Comment 8:
New language was added to Section VII.H, Compliance Determination for Bacteriological Limitations. These requirements were not included in the last permit and are not applicable to a seawater circulating facility such as BML.

Response: The new language added to Section VII.H of the Draft Permit is needed to describe how compliance is to be determined with the bacterial receiving water limitations included in Section V.A. Since this Facility is a marine laboratory and not a wastewater treatment facility, monitoring data has demonstrated that bacteria is a pollutant of low concern. Consequently, the Permittee is only required to sample bacterial constituents (total coliform, fecal coliform, and enterococci) once a year in storm water and receiving water to meet the minimum requirements established in State Water Board Resolution No. 2007-0058.

Section VII.H of the Order has been revised to include additional language that states that an annual sample will only be assessed against the single sample maximum receiving water limitations and to clarify this interpretation. The new language has been added as Section VII.H.1 and reads as follows: "**Single Sample Maximum.** All single sample results are compared to single sample maximum limitations. Single sample results are only compared to

the median, geometric mean, six-week rolling geometric mean, and statistical threshold value when sampling is required at the frequency required to properly assess compliance, as further stated in 2. through 5, below. Compliance with a single annual sample is determined in comparison to single sample maximum limitations only. If single sample maximums are routinely exceeded, the Regional Water Board may require additional sampling to assess whether the Permittee's discharge is the source of the exceedance in the receiving water."

Comment 9:
Attachment D, Section V.E, Twenty-Four Hour Reporting of the Draft Permit includes two paragraphs that reference sewer systems and related overflows. BML does not have any sewers, so these paragraphs do not apply and should be removed.

Response: Regional Water Board staff agree that the two paragraphs related to sewer overflows and bypasses should be removed. These paragraphs have been removed from the Proposed Permit as follows:

A. Twenty-Four Hour Reporting

5. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee 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 reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

~~For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.~~

~~As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Regional Water Board may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)~~

In addition, Fact Sheet section VII.F.9 has been modified to remove references to sanitary sewer overflows, and reads as follows: "The MRP that is part of this Order establishes requirements for reporting spills and unauthorized discharges~~, with the exception of SSOs~~

~~which must be reported in accordance with the requirements of State Water Board Order No. 2006-0003-DWQ and WQ 2013-0058-EXEC~~."

Comment 10:
Attachment D, Section V.H, Other Noncompliance of the Draft Permit includes additional text that references sewer systems and related overflows. BML does not have any sewers, so this text does not apply and should be removed.

Response: Regional Water Board staff agree that the additional text related to sewer overflows and bypasses should be removed. This text has been removed from the Proposed Permit as follows: "The Permittee shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. ~~For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7).)~~"

Comment 11:
Monitoring and Reporting Program (MRP) Section IV.A.1, Table E-4, Effluent Monitoring – Monitoring Location EFF-001 includes a table note (Table Note 8 in the Draft Permit/Table Note 11 in the Proposed Permit) that addresses chlorine and requires certification that no chlorine was used during each monitoring and reporting period. BML no longer uses chlorine and would like to cease the quarterly reporting obligation to acknowledge that the use of chlorine-containing agents did not occur. Chlorine stopped being used in 2014.

Response: BML disinfects the effluent from the pathology laboratories to prevent the discharge of any disease-causing organisms. Discharge Prohibition III.G prohibits the discharge of waste containing detectible levels of chemicals used for the treatment and control of disease. During the term of the previous permit, BML replaced its chlorine disinfection system with an ultraviolet light (UV) disinfection system.

Monitoring requirements for total chlorine residual and halomethanes have been included in the MRP because BML has retained the chlorine disinfection system infrastructure for use in case it is ever needed in an emergency if the current UV disinfection system were to fail. Although the potential use of chlorine is low, the chlorine residual monitoring requirements are included in the MRP in the event that the Permittee uses chlorine in such an emergency. Chlorine residual monitoring would be necessary to demonstrate compliance with Discharge Prohibition III.G. The table note requirement is intended to result in an affirmative statement when chlorine is not used and to provide the reason that there are no monitoring results for total chlorine residual and halomethanes. The table note requirement ensures that chlorine won't be used without the appropriate monitoring.

Fact Sheet Section II.A (second and third paragraphs) describes the UV disinfection system and states that the Permittee's system is set up to allow for batch chlorination and dechlorination in the event of a pump or UV failure. In responding to this comment, Regional Water Board staff recognized that it is necessary to make the link between the MRP requirement for chlorine residual monitoring and the permit requirement in Discharge

Prohibition III.G that prohibits the discharge of detectible levels of chemicals used for the treatment and control of disease.

Section VII.B.1.a.3 of the Fact Sheet of the Proposed Permit has been modified to provide clear justification for the chlorine residual monitoring requirements, as follows:

"Effluent monitoring frequencies and sample types for total residual chlorine and halomethanes have been retained from Order No. R1-2013-0023, as required by State Water Board Resolution No. 2007-0058. However, since the Facility completed construction of the UV disinfection system, and ceased use of the chlorination/dechlorination system in early 2015, monitoring for total residual chlorine and halomethanes, as described in the MRP, is only required in the event of planned or unplanned use of chlorine in the seawater system. This monitoring would be required to demonstrate compliance with the Discharge Prohibition III.G requirement that the discharge contain no detectible levels of chemicals used for the treatment or control of disease."

Comment 12:
MRP Section IV.A.1, Table E-4, Effluent Monitoring – Monitoring Location EFF-001 requires monitoring for parameters that are no longer included in Table 4 of the Order. The Permittee requests clarification regarding this apparent discrepancy.

Response: Table 4 of the Order identifies effluent limitations for pollutants that have reasonable potential to exceed water quality objectives in the Ocean Plan, while Table E-4 identifies pollutants that must be monitored during the term of the Proposed Permit. Permits typically include monitoring for pollutants that don't have effluent limitations established in the permit in addition to pollutants for which effluent limitations have been established. The Proposed Permit for BML includes effluent limitations based on an analysis of all data collected during the previous permit term following reasonable potential analysis procedures established in the Ocean Plan. The Proposed Permit also includes monitoring requirements (and monitoring frequencies) established in the Ocean Plan and in State Water Board Resolution No. 2007-0058.

No changes were made to the Proposed Permit in response to this comment.

Comment 13:
MRP Section IX.D includes Chemical Drug Use reporting requirements that seem overly burdensome and should be removed from the permit. Any chemicals and drugs used in the health of the animals is managed and treated with protocols by isolating the treatment water and disposing it as hazardous waste with the BML's certified waste hauler.

Response: The language in the Draft Permit was retained from the previous permit with the addition of language that requires an affirmative certification if there was no chemical or drug use. Resolution No. R1-2007-0058 prohibits the discharge of chemical additives to the seawater system, including but not limited to antibiotics. The Permit (Draft and Proposed) includes discharge prohibitions (e.g., Discharge Prohibitions III.F and III.G) based on this Resolution requirement. After discussing this requirement with BML staff, Regional Water Board staff agreed that the requirement should address the need for notification of any accidental releases to the seawater system or in an area where it discharges with storm water. Section X.E of the MRP addresses Spill Notification, therefore, MRP Sections IX.D and X.D.2.i have been removed from the Proposed Order and Section X.E of the MRP has been revised to address the need for such notification.

MRP Section IX.D has been deleted as follows:

~~D. Annually, the Permittee shall report on chemicals and drugs used for disease control, disinfection, and health maintenance at the Facility with sufficient information to determine compliance with Discharge Prohibition III.G. Reporting shall include the following information. If no chemicals or drugs are used, the annual report should state, "No chemical or drug use."~~

~~**A.** Product name, active ingredients, and reasons for use;~~

~~**B.** Duration of treatment and method of application (batch or continuous);~~

~~**C.** The location where treatment was applied (seawater or freshwater laboratories, etc.);~~

~~**D.** Application rates of products;~~

~~**E.** The amount of medicated feed used, including active medicinal ingredients; and~~

~~**F.** The fate of chemicals and drugs (e.g., discharged, transported off-site, etc.).~~

MRP Section X.D.2.i has been deleted as follows:

~~**Chemical Drug Use Reporting.** The Permittee shall submit, as part of its annual report to the Regional Water Board, a report on chemicals and drugs used for disease control, disinfection, and health maintenance at the Facility, pursuant to section IX.D of this MRP. If no chemicals or drugs are used, the report shall include the statement "No chemical or drug use."~~

MRP Section X.E has been modified as follows:

A. Spill Notification

1. **Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges that may endanger health or the environment shall be provided orally to the Regional Water Board[1] within 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances, in accordance with Section V.E of Attachment D.

   Information to be provided verbally to the Regional Water Board includes:

   a. Name and contact information of caller;

   b. Date, time, and location of spill <u>or unauthorized discharge</u> occurrence;

   c. Estimates of spill <u>or unauthorized discharge</u> volume, rate of flow, and spill <u>or unauthorized discharge</u> duration, if available and reasonably accurate;

   d. Surface water bodies impacted, if any;

   e. Cause of spill <u>or unauthorized discharge</u>, if known at the time of the notification;

   f. ~~Cleanup a~~<u>Actions</u> taken or repairs made at the time of the notification <u>to cleanup and/or address the cause of the spill or unauthorized discharge</u>; and

   g. Responding agencies.

Comment 14:
Fact Sheet Table F-1 should identify Albert Carranza, Bodega Marine Laboratory Manager as the Authorized Person to Sign and Submit Reports.

Response: Fact Sheet Table F-1 has been changed to identify Albert Carranza, Bodega Marine Laboratory Manager, (707) 875-2016 as the Authorized Person to Sign and Submit Reports.

Comment 15:
Fact Sheet Section II.A, Description of Wastewater and Biosolids Treatment and Controls has a typographical error in the 3rd paragraph, 4th sentence.

Response: The typographical error has been changed as follows: "Alarms are activated in the event of a high ~~sweater~~ seawater tank level or UV failure. As the drum filter collects debris, rising water contacts a level switch that activates the automatic drum rotation and backwash system.

Staff Initiated Changes

1. All documents posted to State websites are now required to be accessible to all users and to ADA (Americans with Disabilities Act) compliant. The Proposed Permit has been converted into an ADA compliant document. In this process, table notes needed to be converted to end notes, thus the appearance of all tables with notes has changed throughout the document. An example of this change appears in Staff Initiated Change 6, below.

2. Section V.A of the Proposed Permit has been modified to correct the title of State Water Board Resolution No. 2007-0058, and to include additional language from the Resolution, as follows: "Receiving water limitations are based on water quality objectives contained in the Ocean Plan, State Water Board Resolution No. 2007-0058 (~~Exemption~~Exception to the California Ocean Plan for the University of California, Davis Marine Laboratory) and the Basin Plan, and are a required part of this Order. Compliance with the Ocean Plan and Resolution No. 2007-0058 shall be determined from samples collected at stations representative of the area within the waste field; and for natural/background water quality, for constituents other than indicator bacteria, samples shall be collected at the reference station in the Pacific Ocean near Mussel Point. For indicator bacteria, the Ocean Plan bacteria objectives will be used. …"

3. In an email dated September 6, 2019, Regional Water Board staff requested that the Permittee submit an updated Facility Map and Facility Schematic to include in the permit which the Permittee submitted to Regional Water Board staff on October 11, 2019. The updated map and schematic have been added to the Proposed Permit as Attachments B and C, respectively, and replace the older versions of these documents that were in the Draft Permit. The revised map and schematic clearly identify all discharge points and monitoring locations identified in Table E-1 of the MRP.

4. After the Draft Permit was released for public comment, the State Water Board updated its website to include the 2019 version of the Ocean Plan.

Fact Sheet section III.C.3 of the Proposed Permit has been modified to identify the 2019 version of the Ocean Plan as follows: "The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, ~~and~~2015, and 2019." The Proposed Permit has also been modified to reference the 2019 Ocean Plan in all sections that reflected the 2015 Ocean Plan in the Draft Permit. This change has been in the following sections of the Proposed Permit: Order section III.H; MRP Section I.E, Table E-4 (End Notes 16 and 17), Table E-6 (End Note 5), Table E-8 (End Note 5), and Table E-9 (Table Note 2); Fact Sheet section IV.A.8; and Attachment F-1 (End Notes 3 and 4).

5. Fact Sheet section IV.A.6 has been modified to clarify the meaning of "cleaning activities" and why these are prohibited. This section has been changed to read as follows: "This prohibition is retained from Order No. R1-2013-0023 and is based on the Basin Plan Policy on Regulation of Fish Hatcheries, Fish Rearing Facilities, and Aquaculture Operations. This prohibition is based on the Regional Water Board's concern that cleaning and maintenance activities may produce wastes that may include cleaning chemicals, concentrate pollutants, or generate solids that should not be discharged to the seawater outfall. Storm drain inlets and filters must be maintained in accordance with the Facility storm water management plan to ensure that solids and debris are removed from the inlets and disposed of properly. Solids that are removed from any location on the Facility shall not be deposited into any manhole or other connection to the seawater discharge outfall."

6. During review of the Permittee's Comment 12, Regional Water Board staff recognized that MRP Table E-4 includes a duplicative monitoring requirement. In the Draft Permit Table E-4 included semiannual monitoring requirements for both Ocean Plan Table 1 Pollutants and for Ocean Plan Table 1 Metals. Ocean Plan Table 1 Metals is a subset of Ocean Plan Table 1 Pollutants, therefore having a separate monitoring requirement for Ocean Plan Table 1 Metals is unnecessary and has been removed from the Proposed Order. Notes that apply to Ocean Plan Table 1 Metals were relocated to the Ocean Plan Table 1 Pollutant monitoring requirement. Changing table notes to end notes resulted in the need to renumber notes because some table notes did not appear chronologically, but end notes are designed to appear chronologically. The changes to Table E-4 are as follows:

Table E-4. Effluent Monitoring – Monitoring Location EFF-001[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow[2]	mgd	Meter	Continuous	--
Total Suspended Solids (TSS)	mg/L	24-hr Composite[3,4]	Monthly[5]	Part 136 [6]
Settleable Solids	ml/L	24-hr Composite[3,4]	Monthly[5]	Part 136 [6]
pH	s.u.	Grab[3]	Monthly[5,7]	Part 136 [6]
Salinity[8]	s.u.	Grab	Monthly[7]	Part 136 [6]
Temperature	oC	Grab	Monthly[7]	Part 136 [6]
Zinc, Total Recoverable	µg/L	24-hr Composite[4]	Semiannually [5,9,10]	Part 136 [6]
Chlorine, Total Residual	mg/L	Meter	Continuous[11]	Part 136 [6]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia Nitrogen, Total (as N)	mg/L	Grab	Monthly	Part 136 [6]
Halomethanes[12]	µg/L	Grab	Monthly[11]	Part 136 [6]
Ocean Plan Table 1 Pollutants[13,14]	µg/L	24-hr Composite[15,16]	Semiannually[7,10]	Part 136 [6,17]
Chronic Toxicity	Pass or Fail, % Effect	Grab	Semiannually[18]	See Section V below

1 During the first year of this permit, the Permittee shall conduct analyses for all parameters in this table on a dry weather discharge sample containing backwash water from the seawater clarifier. The monitoring report shall clearly state that the sampling event included filter backwash water.

2 Each quarter, the Permittee shall report the average daily and average monthly flows.

3 Monitoring for TSS, settleable solids, and pH shall coincide with monitoring of the intake water at Monitoring Location INF-001. Each sample shall be split into three triplicates and analyzed for TSS, settleable solids, and pH.

4 Once per year, sample shall be collected as a grab sample rather than a composite sample.

5 Accelerated Monitoring (monthly and semiannual monitoring frequency). If a test result exceeds an effluent limitation the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance.

6 Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration).

7 In accordance with State Water Board Resolution No. 2007-0058, Ocean Plan Table 1 pollutants, pH, salinity, and temperature shall be monitored twice during the first year of the permit term, once during dry weather and once during wet weather. Based on the results from the first year of monitoring, the Regional Water Board will determine Table 1 pollutants to be monitored thereafter as well as the frequency of monitoring; however, monitoring shall be required, at a minimum, once per year during wet weather. All wet weather monitoring events for the Ocean Plan Table 1 pollutants at Monitoring Location EFF-001 shall coincide with monitoring required for Ocean Plan Table 1 pollutants at Monitoring Locations REF-001, EFF-016, and RSW-001.

8 Salinity may be measured and reported as electrical conductivity in µmhos/cm, as salinity in salinity units, or as salinity in parts per thousand.

9 Analytical results for zinc generated to meet monitoring requirements for the Ocean Plan Table 1 constituents will satisfy this semiannual monitoring requirement if the analysis is performed in the appropriate semiannual period.

[10] Monitoring requirements for zinc are identified separately in this table because the Permittee's discharge exhibited reasonable potential for zinc during the term of Order No. R1-2013-0023, therefore the zinc monitoring frequency may not be reduced below semiannual during the term of this Order.

[11] The Permittee shall conduct continuous monitoring for total residual chlorine and monthly monitoring for halomethanes when chlorine is used in the seawater system. If chlorine is not used in a monitoring period, the Permittee shall certify in the quarterly self-monitoring report (SMR) that the use of chlorine-containing agents in the seawater system did not occur during the monitoring period.

[12] Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

[13] Excluding acute toxicity.

[14] The Permittee may, at their option, monitor for total chromium instead of hexavalent chromium.

[15] Once per permit term, sample shall be collected as a grab sample rather than a composite sample.

[16] Grab samples shall be used for volatile chemicals listed in Table II-1 (Appendix II) of the Ocean Plan (2019). 24-hour composite samples shall be used for all other Ocean Plan Table 1 parameters.

[17] Metals shall be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry (ICPMS) as described in Appendix II of the Ocean Plan (2019).

[18] In accordance with State Water Board Resolution No. 2007-0058, whole effluent chronic toxicity shall be monitored twice during the first year of the permit term, once during dry weather and once during wet weather. Based on the results from the first year, the Regional Water Board will determine the frequency of monitoring thereafter, however monitoring shall be required at a minimum once per year. Whole effluent chronic toxicity shall be monitored in accordance with the requirements of section V of this Monitoring and Reporting Program.