ATTACHMENT C
TECHNICAL REQUIREMENTS FOR REPORT OF WASTE DISCHARGE

A technical report is required as a part of the Notice of Intent (NOI) to comply with the terms of this General Order. The information presented in the technical report is relied upon by staff to determine applicability of coverage under the General Order and prepare the Notice of Applicability (NOA). The applicant(s) shall ensure that the information presented in the technical report is as complete and accurate as possible. The applicant(s) shall familiarize themselves with the entire contents of the General Order prior to preparation of this technical report.

Business and Professions Code sections 6735, 7835, and 7835.1 require that all engineering and geologic evaluations and judgements be performed by or under the direction of licensed professionals. Any plan or report submitted in compliance with the requirements of this General Order, which requires technical interpretation, or process design that might affect containment features (i.e., storage/disposal ponds, treatment systems, water balances, groundwater evaluation, etc.), or monitoring systems (i.e., groundwater monitoring wells) must be prepared by, or under the direction of, appropriately licensed professionals (e.g., registered civil engineer, professional geologist, or other appropriate registered professional) by the State of California. In addition, the licensee must sign and provide his or her registration number and stamp on the submitted plan or report.

The outline below is intended to provide general guidance for applicants and their consultants. Submitting a technical report consistent with this format will help to ensure the NOI will have the information Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff will need and will expedite review of the document and the permitting process. Contacting Central Valley Water Board staff to discuss the project prior to preparing the NOI is recommended.

A. General Information

1. Describe the facility and any previous uses at the site.
2. Describe in detail major facility operations (e.g., product receiving, rinsing, sorting, storage, etc.) and months of operation.
3. Provide a list of associated Assessor Parcel Numbers (APNs), ownership, acreage, and use for the facility and all land application areas (LAA). Also include latitude and longitude, and township, range, and section.
4. Describe any water treatment systems in use at the facility (e.g., reverse osmosis, water softener, sand filter, disinfection, etc.) and how waste streams from these treatment processes (i.e., backwash) are handled and disposed of.
5. For facilities with existing permits (e.g., waste discharge requirements (WDRs), irrigated land regulatory program (ILRP), industrial stormwater permit, Dairy General Order, etc.). Provide details including issuing agency, date of issuance, permit/ID number, area covered, etc.

6. Describe how stormwater and domestic wastewater are managed at the facility (e.g., community sewer, septic, portable toilets, etc.) and specify the regulating agency.

B. Facility Maps

1. Provide a location map showing property boundaries for the facility and land application area (LAA) relative to key features (e.g., surface water bodies, parcel boundaries, water supply wells, residential structures, etc.).
2. Provide a site plan detailing key site features (e.g., loading and unloading areas, processing areas, solids storage areas, product storage areas, ponds, application areas, water supply wells, monitoring wells, etc.).
3. Provide a process flow diagram or schematic depicting all waste streams (liquid and solid) and treatment components (if applicable) from source water to final reuse or disposal. Include pre-treatment (e.g., screening), chemical addition, sampling locations, and all flow meter locations. Also include components related to process solids generation, storage, and reuse or disposal.

C. California Environmental Quality Act (CEQA)

1. Provide copies of any CEQA documents for the facility identified in the associated Form 200 such as a notice of determination, negative declaration, categorical exemption, etc. Include any supporting documentation (e.g., initial study, conditional use permit (CUP), environmental impact report (EIR), etc.).

D. Facility Tier and Process Wastewater Flow

Dischargers authorized under this General Order are classified into regulatory tiers, in part, based on the permitted annual discharge, which is the total volume of process wastewater that may be discharged from the facility including comingled stormwater from outdoor storage and processing areas. The total annual process wastewater discharge shall not exceed the permitted design flow stipulated in the facility's NOA.

1. For "existing" facilities not proposing an expansion, the NOI shall establish the facility's discharge limit using either: (a) the flow limit specified in existing WDRs, (b) applicable CEQA document, or (c) calculated based on existing operational data using the maximum production volume and discharge over the last five years. The technical report shall provide a table with the last five years of historical production volumes (in tons or pounds of product processed) and annual process wastewater flows discharged (in gallons per year), and a description of how flows were determined (i.e., flow meter, production volume, tank capacity, etc.). The table shall include production volume, days of operation, and process wastewater flows (in gallons) for each month. Include a water balance and loading calculations (as described later) to demonstrate there is sufficient disposal and/or storage capacity to manage the discharge at the proposed flow rate.

2. For “new” or “expanding” facilities, provide the estimated average and maximum production volumes and annual discharge flow based on a similar facility or as described in the accompanying CEQA document, or other similar regulatory document that has gone through an equivalent review process. Include a water balance and loading calculations (as described later) to demonstrate there is sufficient storage and/or disposal capacity to manage the discharge at the proposed flow rate.

E. Process Wastewater Generation, Treatment, Reuse, and Disposal

1. Describe facility operations and identify activities and areas that generate process wastewater contributing to the discharge, accounting for both in-season, and off-season flows (if applicable).
2. Describe in detail, process wastewater collection, treatment, storage, reuse and disposal systems, including sumps, tanks, ponds and land application areas.
3. Provide a list of chemicals and additives used during processing and cleaning operations that may enter the waste stream. Include the chemical name, active ingredient, and annual volume used.
4. Describe any chemicals disposed of separately (i.e., water softener brine, RO waste, caustic cleaners, etc.) include disposal method.
5. Identify any salinity control measures implemented at the facility (i.e., segregating high salinity waste streams, employee training, capture and reuse, etc.).
6. Facilities proposing to use process wastewater for dust control, include a detailed management plan. At a minimum, the management plan shall include:
    a. Data characterizing the quality of the process wastewater;
    b. Proposed application/use methods, including application rates and frequency;
    c. Scaled map with the proposed application areas,
    d. List of management practices and controls to prevent ponding or runoff from the application areas (i.e., training, setbacks, spray rate, etc.); and
    e. A demonstration that the proposed applications will be consistent with the hydraulic needs for dust control (i.e., volume, timing, frequency, etc.) and that the discharge will be protective of water quality and beneficial uses (For example, average annual wastewater 5-day biochemical oxygen demand [BOD_5]) concentration of less than 300 mg/L; average total nitrogen concentration of less than 10 mg/L or 125 percent over source water, whichever is greater; and an average FDS concentration not to exceed 125 percent over source water.)

F. Water Quality

1. Source Water – Provide water quality data, in tabular format, characterizing the source water for the facility that includes the constituents listed in the source water section of the MRP Template (specifically; pH, electrical conductivity (EC), fixed dissolved solids (FDS), nitrate as N, and general minerals).
2. Wastewater – Provide wastewater quality data in tabular format characterizing the facility's discharge that includes constituents listed in the Wastewater Monitoring section of the MRP Template (specifically; pH, EC, total and fixed dissolved solids, nitrate as N, total Kjeldahl nitrogen (TKN), total nitrogen, BOD_5, general minerals, and include trihalomethanes (if discharge is to an unlined pond).
3. If the facility has an existing groundwater monitoring well network, provide a summary of groundwater quality data for the last five years. Include a description of the monitoring wells with Well IDs, construction details (e.g., total depth, screened interval, installation date, and location [lat/long]), and a map showing the location of the monitoring wells relative to the facility and land application area. Include the groundwater gradient for the monitoring well network based on the most recent groundwater elevation measurements collected.

G. Solids Management

1. Estimate the amount of process solids (in tons or pounds) generated annually. If solids are generated from multiple sources (e.g., pre-cleaning, screening, pond/sump dredging, etc.) identify the amount or proportion from each source.
2. Describe how process solids are generated, stored, reused, and disposed (e.g., composting, land application, livestock feed, landfill, etc.). If multiple disposal methods are used, identify the amount directed to each.
3. Describe how solids generated from processing operations are managed and stored to contain the material and prevent leachate or runoff.
4. If applied to the land application area, provide process solids characterization including moisture and nitrogen content and details on frequency and method of application.

H. Land Application Management

1. Describe the land application area, include APNs, total and usable acreage, irrigation methods, and runoff controls (i.e., berms, tailwater return system, etc.).
2. Discuss types of crops grown, typical growing season, harvesting, and crop rotation.
3. Describe how process wastewater and supplemental irrigation water will be delivered to the land application area and discuss backflow prevention (if applicable).

4. Provide estimated loading rates for BOD, total nitrogen, and salts (or fixed dissolved solids [FDS]) considering process wastewater, supplemental irrigation water, fertilizers, and process solids (if land applied). Include estimated crop uptake analysis based on estimated crop yields and referenced data or crop tissue analysis.

I. Water Balance

The water balance needs to demonstrate that the facility has adequate disposal and/or storage capacity to manage the process wastewater flows proposed in the NOI.

1. The water balance shall evaluate baseline process wastewater flows along with monthly local precipitation data on both an average year and a 100-year wet year. It shall incorporate area-specific evaporation and evapotranspiration rates, projected long-term percolation rates, and hydraulic loading rates considering soil conditions, climate, crop requirements, and leaching fractions.
2. Provide details including supporting calculations, references, and assumptions used in the water balance.

J. Process Wastewater Ponds (if applicable)

1. Identify any ponds used for treatment, storage, and/or disposal of process wastewater (e.g., number of ponds, relative use, liner, etc.).
2. Provide the pond size, dimensions, and storage capacity, including supporting calculations.
3. Provide a water balance for a normal year and wet year with a 100-year return annual precipitation total distributed monthly to demonstrate that the process wastewater pond(s) have sufficient capacity to meet the storm design standard as specified in the General Order. To request approval to operate a smaller existing pond, include a Pond Evaluation report that describes safety features, and operational procedures and controls to prevent overflow considering a 25-year, 24-hour peak storm.
4. For lined pond(s), provide pond liner characteristics (e.g., age, liner material and thickness, condition, leachate monitoring, Action Leak Rate (ALR), etc.) and describe any significant repairs or modifications made since the liner was installed.
5. For unlined ponds, include a Groundwater Evaluation considering soil conditions, percolation rates, depth to highest groundwater below the bottom of the pond (i.e., the lowest point on the pond bottom that will contain water), and proximity to sensitive receptors (i.e., downgradient domestic supply wells). A Decision Tree Matrix with general guidance on determining if groundwater monitoring or lining a pond will be required at Tier 3 and Tier 4 Facilities is provided at the end of this attachment.

K. Groundwater Monitoring (Tiers 2, 3, and 4)

Facilities covered under the General Order may be required to install groundwater monitoring wells to monitor groundwater based on site-specific conditions, particularly if using unlined ponds for storage and/or disposal of process wastewater or in areas with shallow groundwater (i.e., less than 25 feet below site grade). If seeking an exemption from groundwater monitoring, the Discharger shall provide a Groundwater Evaluation, prepared and signed by a licensed professional, evaluating the potential impact the discharge may have on underlying groundwater quality and down-gradient users. At a minimum the Groundwater Evaluation shall include:

1. Historical data on groundwater elevation, depth-to-groundwater, and flow direction using site specific or regional data.
2. Identify any water supply wells (e.g., domestic, municipal, irrigation, etc.) within a half mile of an unlined pond or the boundary of the LAA. Identify whether the wells are downgradient, up-gradient, or cross-gradient relative to the facility and LAA. Include construction details, and sampling data (if available).
3. Identify any confining clay units (i.e., aquitards) that might affect the vertical migration of waste constituents.
4. Characterize underlying groundwater for the constituents and parameters listed in the Groundwater Monitoring section of the MRP Template using available published data (i.e., Geotracker Groundwater Ambient Monitoring Program [GAMA])

   https://waterboards.ca.gov/gama/online_tools.html or similar database), similar reference databases, or site-specific monitoring data (if available).
5. Evaluate the potential impact the discharge may have on underlying groundwater considering soil conditions, depth to groundwater, waste constituent loading, crop uptake, leaching fractions, existing groundwater quality, and proximity to downgradient supply wells.

L. Salt and Nitrate Control Programs

1. For the Salt Control Program:
   a. Provide a copy of the Notice of Intent form identifying the selected path and include supporting documentation to demonstrate compliance with program requirements (i.e., most recent fee payment, signed participation agreement, etc.). In addition:
      i. For Path 1 include an evaluation of salinity EC with the conservative effluent limit; or
      ii. For Path 2 evaluate salinity loading and salinity concentrations in the discharge (i.e., EC, TDS, and/or FDS) for the most recent five-year period. Include details of any salinity control measures existing or planned for use in the facility.

2. The Nitrate Control Program (NCP) is a prioritized program. Requirements for the NOI are dependent on the priority of the groundwater basin/sub-basin where the facility and discharge occur (see Resolution R5-2020-0057, Figure N-1 to determine the appropriate groundwater basin/sub-basin).

   https://waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf

   For questions regarding the appropriate groundwater basin/sub-basin, refer to the map of prioritized zones in Appendix A of the Order's Information Sheet, Figure N-1 linked above, or contact Central Valley Water Board staff:

   a. For existing facilities in a prioritized groundwater basin/sub-basin that are already enrolled in the NCP, or which have received a Notice to Comply, provide a copy of the Notice of Intent form identifying the selected path (Path A or Path B) and supporting documentation to demonstrate compliance with program requirements (i.e., most recent fee payment, signed participation agreement, conditional approval letter, etc.).

   b. For expanding facilities within a prioritized groundwater basin/sub-basin under Path A or Path B, provide an assessment on potential increased nitrogen loading and compliance with existing path requirements. If no change in nitrogen loading is anticipated, provide calculations to support the claim.

   c. For new facilities within a prioritized groundwater basin/sub-basin not currently enrolled in the NCP provide a copy of the Notice of Intent form identifying the selected path and documentation to demonstrate compliance with program requirements (i.e., fee payment and signed participation agreement, etc.):

      i. For Path A include an initial nitrate assessment report consistent with the Nitrate Guidance Document identifying the appropriate discharge category, area of contribution over a 20-year planning horizon, and include an early action plan, and alternative compliance project as required.

         https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/forms_temps_guide/nitrate_guidance.pdf

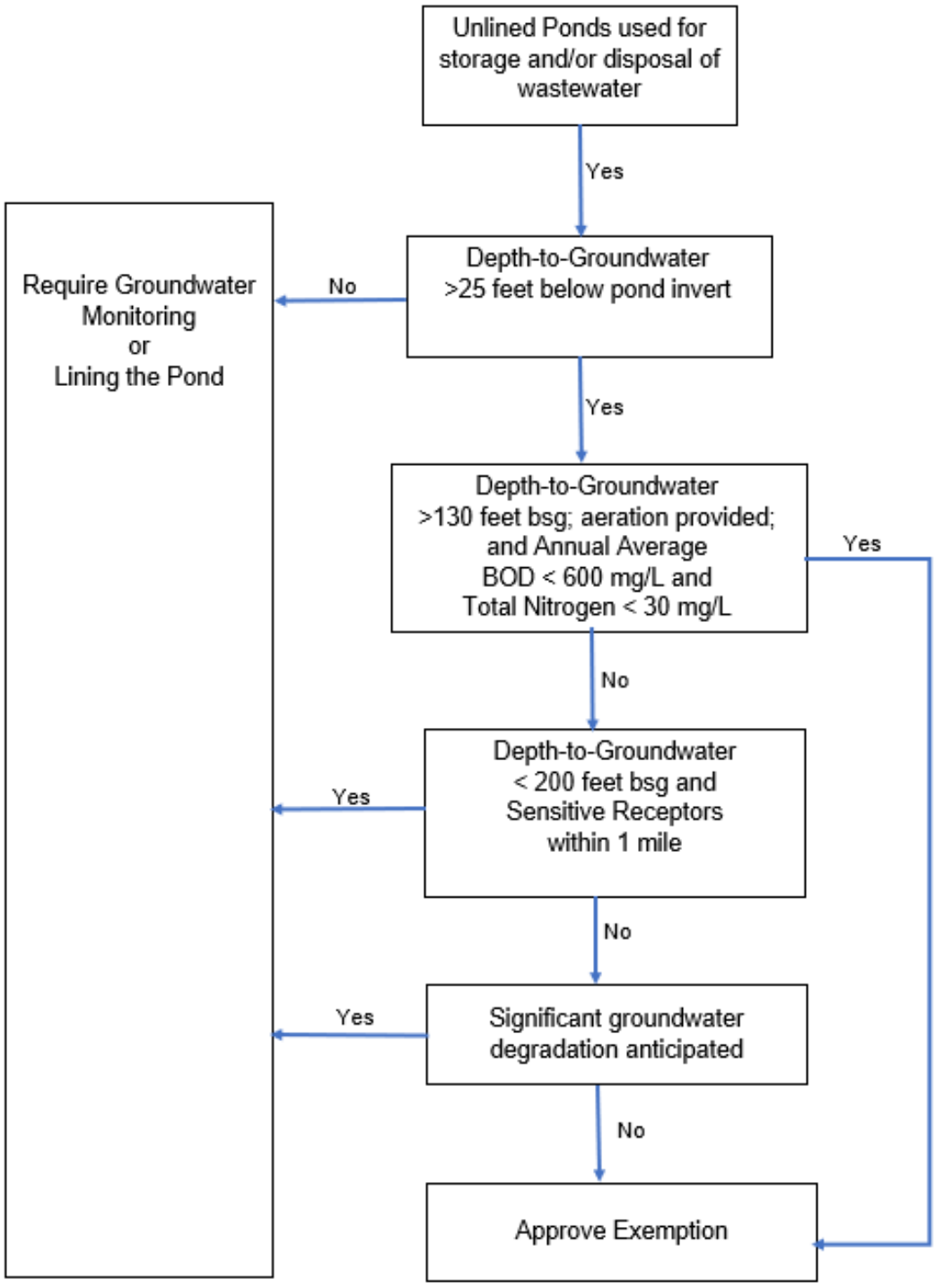
      ii. For Path B include an initial nitrate assessment detailing estimated nitrogen loading from the discharge. If the facility is in an area with an approved Management Zone Implementation Plan (MZIP) include a work plan with time schedule, not to exceed ten years, to come into compliance with requirements for your management zone.

d. For new or expanding facilities in a non-prioritized basin/sub-basin provide copies of the Notice of Intent form identifying selected pathway:

   i. For Path A, provide an initial nitrate assessment report consistent with the Nitrate Guidance Document identifying the appropriate discharge category, area of contribution over a 20-year planning horizon, and include an early action plan, and alternative compliance project as required.

      (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/forms_temps_guide/nitrate_guidance.pdf)

   ii. For Path B, confirm on the Notice of Intent form the intent to join a local Management Zone Group once it has been formed. Include an initial nitrate assessment detailing estimated nitrogen loading from the discharge and area of contribution over a 20-year planning horizon, survey of nearby domestic and municipal water supply wells, and an initial assessment of shallow groundwater quality utilizing available groundwater data (i.e., monitoring wells, nearby supply wells, regional groundwater data, etc.).

e. For existing facilities in a non-prioritized groundwater basin/sub-basin that are not expanding and are not increasing nitrogen loading, compliance with the NCP is not required until a Notice to Comply is issued.

Teir 3 and Tier 4
Decision Tree Matrix for Groundwater Monitoring or Pond Lining Exemption