PRELIMINARY DRAFT
ATTACHMENT C. TECHNICAL REPORT FOR REPORT OF WASTE DISCHARGE

Pursuant to Water Code, section 13267, Dischargers may be required to furnish, under penalty of perjury, technical or monitoring program reports as a condition of the General Order. The information presented in the technical report is required by Water Code, section 13267 and is relied upon by water board staff to determine applicability of coverage under the General Order and prepare the Notice of Applicability (NOA). The applicant shall ensure that the information presented in the technical report is complete and accurate as possible. Misstatements, errors, or omissions that exist in the technical report may be included in the NOA and become enforceable.

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 and should be tailored to a facility's site-specific conditions as appropriate. Submitting a technical report consistent with this format will help ensure that Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff receive all necessary information, which will expedite review of the technical report and the permitting process. Applicants are encouraged to contact Central Valley Water Board staff to discuss the project prior to preparing the technical report.

1. FACILITY AND GENERAL INFORMATION

1.1 Facility Description

a. Describe the facility and any previous uses at the site

b. Describe in detail major facility operations (e.g., hulling, processing such as roasting and seasoning, storage, and packing of nuts) and months of operation.

c. Provide a list of associated Assessor Parcel Numbers (APNs), ownership, acreage, and use for the facility and all land application areas (LAA). Include latitude and longitude, and township, range, and section.

d. Describe all the water supply sources (e.g., onsite groundwater well, municipal connection). Describe water sources used for supplemental irrigation (e.g., irrigation canal, agricultural well).

e. 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.

f. Describe how storm water are managed at the facility and specify regulating agency, if applicable.

g. Describe how domestic wastewater is managed (e.g., community sewer connection, portable toilets, septic system) and specify regulating agency, if applicable.

h. For facilities with existing permit coverage (e.g., waste discharge requirements, county permit, irrigated land regulatory program (ILRP), industrial stormwater permit (IGP), etc.), provide the permit or order number, issuing agency, date of issuance, area covered, etc.

1.2 Facility Maps

a. Provide a location map showing the property boundaries of the facility and disposal areas relative to key features (e.g., surface water bodies, drainage features, parcel boundaries, city or county boundaries, etc.).

b. Provide a site plan (a scaled and labeled plan view drawing) showing key site features (e.g., processing areas, storage areas, storage tanks, loading areas, ponds, land application areas, disposal areas, water supply wells, monitoring wells). Identify sample locations and flowmeter locations.

1.3 California Environmental Quality Act (CEQA)

a. 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.).

2. TIER AND PROCESS WATER FLOW

Dischargers authorized under this General Order are classified into regulatory tiers based, in part, on the permitted annual process water discharge volume and pond criteria. The annual process water volume is process water generated from indoor and outdoor processing areas (including comingled stormwater from

outdoor storage and processing areas) that is discharged from the facility. The total annual process water discharge shall not exceed the permitted design flow specified in the facility's Notice of Applicability (NOA).

2.1 For "existing" facilities not proposing an expansion, 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 discharger over the last five years. In tabular format, provide at least five years of historical data including production volumes (in tons or pounds of product processed) and annual process waters discharged (in gallons per year). The table shall include production volume, days of operation, and process water flows (in gallons) for each month. In addition, description of how flows were determined (e.g., flowmeter, storage tank water balance, etc.) or provide an accurate alternative calculation. Include a water balance to demonstrate sufficient disposal and/or storage capacity to manage the discharge at the proposed flow rate.

2.2. For "new" or "expanding" facilities, provide the estimated average and maximum production volumes and annual process water discharge flows 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 to demonstrate sufficient storage and/or disposal capacity to manage the discharge at the proposed flow rate

2.3. Identify the General Order tier that is most appropriate for the facility and the rationale (e.g., tier determination based on process water generated and pond criteria).

3. PROCESS WATER GENERATION, TREATMENT, REUSE AND DISPOSAL

3.1 Describe the nut processing operations and identify activities and areas that generate process water. Identify the activities (e.g., hulling, roasting, packaging) that occur for both in-season and off-season, if applicable.

3.2 Process Water Management

a. Describe the process water collection, treatment, reuse, and disposal systems, including use of ponds and land application. If multiple ponds and land application sites are used, describe how, and the proportion of, process water that is directed to each.

b. Provide a list of chemicals used during processing and cleaning that may enter the waste stream. Include the chemical name, active ingredient, and annual volume used.

c. Describe any chemicals disposed of separately (i.e., water softener brine, RO waste, caustic cleaners, etc.) and include disposal method.

d. Identify any salinity control measures implemented at the facility (i.e., segregating high salinity waste streams, employee training, capture and reuse, etc.).

3.3 Facilities proposing to use process wastewater for dust control specifically on internal farm roads located within orchards that may also receive wastewater, include a detailed management plan, that shall include at a minimum the following:

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.

3.4 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, all flow meter locations, and components related to process solids generation, storage, and reuse or disposal.

3.5 Process Water Ponds (if applicable)

a. Identify any ponds used for treatment, storage, and/or disposal of process water and types of ponds (e.g., treatment or disposal), Provide the pond size, dimensions, and water storage capacity, including supporting calculations.

b. Provide a normal year and wet year water balance to demonstrate that the process water ponds have sufficient capacity and meet the storm design standard. If proposing a smaller storm design, submit a *Pond Evaluation* report that describes safety features and operational

procedures and controls to prevent overflow considering a 25-year, 24-hour peak storm.

c. Provide pond characteristics (e.g., age, liner material and thickness, condition) and describe significant repairs or modifications made since the pond or pond liner was installed.

d. **For Tiers 1b, 2, and 3 with unlined ponds**, include a *Groundwater Evaluation* as outlined in the Groundwater Characterization Section below.

e. **For Tiers 1b, 2, and 3 with existing pond**s that do not currently meet the capacity requirements of this Order, submit a *Pond Evaluation* that describes how the process wastewater system will be managed and operated to prevent overtopping or unauthorized runoff.

3.6 Land Application Area

a. Describe how process water and supplemental irrigation water (if applicable) is delivered from the facility to the land application area.

b. Describe the land application area (e.g., APNs, total and usable acreage, how it is subdivided), irrigation method, and runoff controls (.i.e., berms, tailwater return system).

c. Identify types of crop grown and harvested, typical growing season, field rotation, fertilizers used, organic and inorganic soil amendments used.

d. 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.

4. WATER QUALITY

4.1 Source Water

a. Identify water supply source and provide water quality data in tabular format characterizing the source water, including the constituents listed in the Source Water Monitoring section of the Monitoring and Reporting Program (MRP) template (specifically EC, TDS, total nitrogen, and general minerals)

4.2 Process Wastewater

a. Provide water quality data in tabular format characterizing the facility's discharge, including the constituents listed in the Process Wastewater Monitoring section of the MRP.

b. Provide water quality data in tabular format characterizing the facility's discharge to the land application area, including the constituents listed in the Effluent to Land Application Area Monitoring section of the MRP.

4.3 Groundwater (facilities with existing groundwater monitoring networks)

a. 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.

5. SOLIDS MANAGEMENT

5.1 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.

5.2 Describe how process solids are generated, stored, reused, and disposed. If multiple disposal methods are used, identify the amount or proportion directed to each.

5.3. Describe how the process solids (storage containers and stockpiles) are managed to contain the material and prevent leachate. Describe how leachate is treated and disposed of.

5.4 If applied to the LAAs, provide process solids characterization data, including moisture and nitrogen content, details on frequency and method of application.

6. GROUNDWATER CHARACTERIZATION

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 this evaluation shall include:

6.1 Historical data in tabular format on groundwater elevation, depth to first groundwater, and flow direction using site specific or regional data. Identify the well name and well type (i.e., domestic, irrigation, groundwater monitoring, etc.).

6.2 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).

6.2. Identify any confining clay units (i.e., aquitards) that might affect the vertical migration of waste constituents.

6.3 Characterize the underlying groundwater for constituents and parameters listed in Groundwater Monitoring section of the MRP 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).

6.4 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.

7. TECHNICAL REPORTS

7.1 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.

a. 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.

b. Provide details including supporting calculations, references, and assumptions used in the water balance.

7.2 Pond Groundwater Monitoring Exemption Request:

Provide pond information including the number and locations of all ponds, individual pond design capacities, average and maximum operating volumes, spill compliance history, and pond characteristics and operational procedures demonstrating that the ponds are unlikely to spill or overflow. Include any relevant design, liner, construction and maintenance information, as well as separation from groundwater (e.g. depth to groundwater, berm integrity, infiltration controls), to demonstrate that each pond is protective of groundwater for exemption from groundwater monitoring.

7.3 LAA Groundwater Monitoring Exemption Request:

Provide information demonstrating that the groundwater monitoring exemption is appropriate, including groundwater elevation data, locations of nearby drinking water well and surface water bodies, and hydraulic loading rates and/or groundwater quality data showing that land application activities does not impact groundwater quality. For facilities that may not have sufficient operational data to determine loading rates, the Discharger may request a temporary postponement of the groundwater monitoring requirements to allow for collection of appropriate data. Any postponement request must include a proposed time schedule for collecting the necessary operational and groundwater data not to exceed two years from issuance of a NOA, along with a description of the methods, sampling approach, and reporting that will be used to generate the information needed to reassess the exemption.

7.4 Pond Evaluation:

To operate an existing pond that does not currently meet the capacity requirements of this Order, submit a *Pond Evaluation* that describes how the process wastewater system will be managed and operated to prevent overtopping or unauthorized runoff. The evaluation should address, at a minimum anticipated rainfall, pond water levels throughout the year, site drainage, runoff and erosion controls, available storage capacity, pond freeboard, contingency measures for extended wet weather, and any operational practices that ensures the pond can safely contain both process wastewater and stormwater under the proposed design storm.

7.5 *Nutrient Management Plan*, at a minimum, must include the following:

a. Identify each nutrient source (e.g., process water, solids or semi-solid waste). Description of receiving areas/LAAs, including useable acreage and a map identifying application units for tracking annual waste applications and nutrient loadings.

b. Procedures for monitoring facility operations and discharge.

c. Practicable measures to ensure uniform waste application, including adjustments for significant precipitation events.

d. An action plan for preventing and mitigating objectionable odors or nuisance conditions.

e. Supporting data tables and calculations that will be used to monitor monthly nitrogen and salt loading from process water, supplemental irrigation water, solids applications, and organic and synthetic fertilizers: and

f. Management practices including routine maintenance procedures, timing for planting and harvesting of crops, irrigation controls to prevent runoff, and forecasting wastewater applications based on constituent load data (e.g., soil available nutrients or plant tissue sampling), where available.

7.6 If requesting a higher BOD loading rate, submit an *Organic Loading Study Technical Report*. The report shall demonstrate that a higher BOD concentration will not impact on odor/nuisance conditions or a measurable change in organic loading and concentration of constituents of concern in the percolate reaching the underlying groundwater. Evaluation shall incorporate groundwater monitoring data and potential for eliminating reducing conditions at the LAAs.

8. SALT AND NITRATE CONTROL PROGRAMS

8.1 For the Salt Control Program:

a. Provide a copy of the Salt Program 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.).

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

b. In addition, provide the following:

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.

8.2 The Nitrate Control Program 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)

a. To determine whether a facility is located in a priority management basin/sub-basin (e.g., Priority 1 and 2 basins), dischargers can use the CV Salts Interactive Management Zone Map at following link:

https://www.cvsalinity.org//nitrate-program/find-your-management-zone/

For questions regarding the appropriate groundwater basin/sub-basin, contact Central Valley Water Board staff:

b. 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.).

c. **Tier 1a and 1b only**: Alternatively, for existing facilities (previously regulated and unregulated) that only discharge wastewater to land application areas regulated by the Irrigated Lands Regulatory Program (ILRP), the discharger may demonstrate compliance with the Nitrate Control Program by confirming that all land application areas receiving facility wastewater and solids are in good standing with ILRP, which includes providing confirmation of the following:

1) The Member(s) have paid their ILRP Coalition fees and any associated Management Zone fees;

2) The Member(s) have turned in all required Farm Evaluation and Irrigation Nitrogen Management Plan Summary Reports on time; and

3) The Member(s) must complete all domestic well monitoring as required by the ILRP program.

d. 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.

e. 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.

f. 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.).

g. 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.