

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2018-0004

WASTE DISCHARGE REQUIREMENTS
FOR
INGOMAR PACKING COMPANY, LLC
INGOMAR TOMATO PROCESSING FACILITY
MERCED COUNTY

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) finds that:

1. Ingomar Packing Company, LLC (Ingomar or Discharger) owns and operates two tomato processing plants identified as Plant 1 and Plant 2 at its Ingomar Tomato Processing Facility (Facility), and is responsible for compliance with these Waste Discharge Requirements (WDRs).
2. The Facility, at 9950 South Ingomar Grade, is about nine miles northwest of Los Banos in Merced County, in Sections 14 and 15 of Township 9 South, Range 9 East, MDB&M as shown in Attachment A, which is made a part of this Order by reference.
3. The Facility is currently regulated by WDRs Order 83-087, which authorizes a 30-day average daily discharge of up to 7.2 million gallons per day (mgd) during the tomato processing season to approximately 2,600 acres of pasture. Over the years, the land application area has been reduced to approximately 700 acres, part of which now includes the wastewater treatment system.
4. On 10 February 2000, the Discharger submitted a Report of Waste Discharge (RWD) to support the construction of the second tomato processing plant at the site and to construct a Wastewater Treatment System using Aquatic Macrophyte Ponds (AMPs) to treat process wastewater for reuse in the Facility as part of its water conservation effort. The RWD proposed to keep the average 30-day flow of 7.2 mgd from Order 83-087, but would recycle a portion of the treated effluent back to the Facility for reuse. In 2002, The Discharger constructed a single AMP as part of a Pilot Study to test the system design and collect data on the effectiveness of the treatment system. Additional design and operational refinements along with a second AMP were added in 2003.
5. On 24 December 2012, the Discharger submitted an addendum to its RWD with additional information in response to a letter from Central Valley Water Board staff. The Addendum contained a revised water balance to support increased flows up to 8.0 mgd and to install two additional AMPs. On 29 September 2015, the Discharger submitted a revised water balance to support increased flows up to 10 mgd to address projected future increases in production at the Facility.

6. Order 83-087 is out of date and no longer reflects current operations at the Facility or use of the Aquatic Macrophyte Wastewater Treatment System and reuse of process wastewater at the Facility. Therefore, Order 83-087 will be rescinded and replaced with this Order.

Facility and Discharge

7. The Facility occupies approximately 89 acres in Merced County, Assessor's Parcel Numbers (APNs) 070-080-066, 070-080-071, and 070-080-072, which consists of two tomato processing plants. The Plants each have separate receiving stations with flume conveyers, sorting stations, processing areas, evaporators, condensers, and boilers. The Facility also includes truck docks and loading areas for the finished product. Operations are generally the same at both Plants.
8. The Facility receives freshly picked tomatoes, which are washed, sorted, peeled, cooked, diced, packed, and shipped as either tomato paste or diced fruit. Currently, Ingomar processes up to 900 million pounds of tomatoes per month during the processing season. The processing season generally lasts for up to four months from July through October.
9. There are six supply wells on site that provide water for the Plants. Wells #1 and #2 provide process water for Plant 1, and Wells #4 and #6 provide water for the boilers at Plants 1 and 2. Well # 3 provides water for Plant 2 and acts as a backup for Plant 1. Well #5 is no longer used except in emergencies. Table 1 provides the most recent water quality data for the Facility's supply wells.

TABLE 1. Facility Water Supply Quality (26 July 2017)

Parameters	Units	Well #1	Well #2	Well #3	Well #4	Well #6
pH	std. units	7.8	7.6	8.0	7.9	7.7
EC ¹	umhos/cm ⁴	2,040	3,050	2,370	1,240	1,050
TDS ²	mg/L ⁵	1,260	1,890	1,470	707	622
NO ₃ -N ³	mg/L	<0.4	<0.4	0.4	4.3	5.2
Sodium	mg/L	300	475	334	158	125
Chloride	mg/L	518	827	613	208	154
Sulfate	mg/L	99	140	114	87	69
Calcium	mg/L	72	100	89	48	46
Alkalinity	mg/L	143	147	151	222	210

1. Electrical conductivity.
2. Total dissolved solids.
3. Nitrate as nitrogen
4. Micromhos per centimeter.
5. Milligrams per liter

10. Wastewater generated at the Plants are from the flumes, process wash water, cooling water condensate, water softener backwash, boiler blowdown, and equipment wash water. The Facility has implemented several water conservation efforts and best management practices to control salinity and reduce water use including reuse of treated effluent to provide water for the flumes and equipment wash. The Facility also uses secondary condensate from the tomatoes and cooling towers to supply water for the boilers, reducing the amount of water and the use of water softeners.
11. Chemicals that may be used at the Facility are identified in the table below:

TABLE 2. Chemicals

<u>Component</u>	<u>Chemical</u>
Cleaning	Quorum Clear V, Quorum Green II, Flor Klor, Defoamer, Sodium hydroxide, AC 55.5 Red, Glycol, Exelerate CIP, Cleaner L-130/145, Series 629/622, and Aqueous ammonia
Boiler Treatment	Boiler treatment (Series 418), Liquid catalyzed sulfite, Caustic sludge conditioner, Return line treatment (Series 205 and 217)
Water Treatment	Sodium hypochlorite, Aqua Brom 40
Miscellaneous	Ferric Chloride, Citric acid, Calcium chloride solution

12. Wastewater from the Plants is collected in gutters, which drain to a main sump. From the sump, the wastewater is pre-screened then discharged to the Wastewater Treatment System. In 2015, the Discharger added a secondary screening unit to remove fine solids from the waste stream before treatment. From the Facility, the wastewater is conveyed to the Wastewater Treatment System approximately a quarter mile east of the Plants. According to the Discharger, the open canal used to convey wastewater to the Wastewater Treatment System was closed and replaced with an underground pipeline in 2009.
13. Solids generated at the Facility consist of culls, skins, seeds, vines, leaves, pulp, and sediment. Solids removed from the wastewater and sorting areas are collected in transport bins and hauled off for use as animal feed.
14. Domestic wastewater at the Facility is discharged to on-site septic systems regulated by Merced County.

Wastewater Treatment

15. The Wastewater Treatment System consists of two sedimentation basins and four Aquatic Macrophyte Ponds (or AMPs). The AMPs are planted with aquatic macrophytes, including; common cattails (*Typha*), reeds (*Phragmites*), bulrush (*Scripus*), duckweed (*Lemna* and *Spirodela*), and water grass (*Echinochloa crus-galli*). Contaminants in the wastewater are transformed and/or removed in the AMPs through

sedimentation, filtration, microbial respiration, and plant uptake. The AMPs provide a level of treatment similar to a conventional secondary-level treatment system reducing organics by about 85% to 90%, and suspended solids by up to 97%. Monitoring shows that the AMPs also reduce nitrogen concentrations in the effluent by about 60% to 70%.

16. The perimeters of the AMPs were constructed from native clay soil and surrounded by three foot berms. Wastewater flow to the system is controlled to maintain a design depth of approximately one to two feet. Interior berms were constructed within the AMPs to direct the flow of wastewater and prevent short-circuiting of the treatment system. Wastewater enters at the southern end of the AMPs. In 2009, after the removal of the conveyance canal, the Discharger constructed two sedimentation basins from native clays upstream of the AMPs to settle out the heavier solids. According to the Discharger, the sedimentation basins will be scraped out periodically, as needed, and the solids spread within the AMPs.
17. Treated effluent from the AMPs is returned to the Plants for reuse in the transport flumes and some equipment wash down. Excess effluent not returned to the Plants may be discharged to a 200-acre pasture within the land application area, or to a private Duck Club owned by Ingomar directly north of the AMPs. According to the Discharger, the pasture is graded and regularly monitored to prevent excess ponding or runoff. A site plan showing flow through the AMPs and pasture area is included in this Order as Attachment B.
18. In the spring, prior to the start of the processing season, the Discharger brings in sheep and/or goats to graze on vegetation within the AMPs and pasture area. Grazing removes excess vegetation within the AMPs including invasive terrestrial species and the sheep and goats do not compact or disturb the soil like cattle would, which could damage the dormant aquatic vegetation. After the area has been grazed, the AMPs are re-seeded and/or hand planted with aquatic vegetation and pre-soaked with fresh irrigation water from a nearby agricultural well and some pre-season production wash water to start the growth of vegetation, generally starting in May or June. At the start of the processing season, influent wastewater levels to the AMPs are carefully controlled depending on the density of the aquatic vegetation to allow continued growth and propagation. Over time, influent levels are increased as the aquatic vegetation becomes fully developed.
19. Near the end of the season, when less water is returned to the Plants, excess effluent is discharged to the adjacent private Duck Club owned by Ingomar directly north of the AMPs. The Duck Club occupies approximately 880 acres and is completely surrounded by a berm with a drainage ditch on the outside to prevent flooding or surface water run-off. An inspection by Central Valley Water Board staff, in 2015, confirmed the presence of a berm around the Duck Club area.
20. The Wastewater Treatment System including the sedimentation basins, AMPs, pasture, and Duck Club occupy all or a portion of APNs 070-080-073, 070-089-053, 070-040-011, and 070-040-012 in Township 9 South, Range 9 East, Sections 11, 12, 13, and 14 MDB&M, as shown in Attachment A.

21. The Discharger collects samples of influent to the AMPs and effluent from the AMPs on a weekly basis during the processing season to evaluate the effectiveness of the treatment system. Results of the sampling collected in 2015 and 2016 are presented in Table 3 below. The average concentration for samples collected from all four AMPs are presented below followed by minimum and maximum concentrations presented in parentheses.

TABLE 3. Effluent Quality

	2015		2016	
	Influent	Effluent	Influent	Effluent
Flows (mgd)	7.7	7.1*	7.6	6.9*
TSS (mg/L)	130 (7 - 1370)	3.4 (nd - 30)	135 (nd - 1,310)	10.5 (nd - 44)
COD (mg/L)	775 (53 - 1,700)	53 (16 - 120)	611 (110 - 1,700)	103 (43 - 190)
pH (std. units)	6.4 (5.4 - 7.1)	7.6 (6.7 - 8.1)	6.4 (4.9 - 7.3)	7.7 (7.3 - 8.5)
EC (umhos/cm)	1,706 (1,290 - 2,110)	2,202 (1,730 - 2,820)	1,975 (1,720 - 2,410)	2,672 (2,000 - 3,970)
TDS (mg/L)	1,298 (930 - 1,700)	1,435 (1,200 - 1,800)	1,354 (1,100 - 1,800)	1,644 (1,200 - 2,600)
Sodium (mg/L)	217 (178 - 267)	290 (240 - 366)	252 (203 - 291)	375 (262 - 690)
Chloride (mg/L)	438 (378 - 491)	596 (492 - 764)	464 (368 - 566)	676 (292 - 1,180)
Potassium (mg/L)	46 (7 - 92)	60 (20 - 87)	45 (18 - 100)	66 (29 - 109)
Sulfate (mg/L)	28.6 (1.5 - 85)	24 (7 - 64)	45 (5 - 137)	46 (nd - 209)
Total Nitrogen (mg/L)	29 (2.2 - 74)	8.5 (1.2 - 20)	18.4 (5 - 42)	7.8 (nd - 23)

* Effluent flow (net discharge) = influent flow – recycled flow

mgd = million gallons per day; mg/L= milligrams per liter; umhos/cm = micromhos per centimeter

nd = not detected

TSS = Total suspended solids

COD = Chemical oxygen demand

EC = Electrical conductivity

TDS = Total dissolved solids

22. The effluent data show effective removal of organics and suspended solids, as well as nutrients such as nitrogen. There is an increase in electrical conductivity and salts in the effluent likely due to evapo-concentration and flushing of salts from the soils of the AMPs.
23. The four AMPs and the sedimentation basins cover approximately 460 acres with a design capacity of approximately 31.4 million cubic feet (or 234 million gallons). A revised water balance was submitted in September 2015 by Jeremiah Jackson with J2Environmental (RCE 43513) in support of an average daily flow increase of up to 10 mgd to handle projected production increases over the next ten years. Based on the water balance, at the projected flow of 10 mgd, the four existing AMPs will have a retention time of

approximately 23 days. This is well above the design parameters for the treatment system, which calculated a minimum retention time of 14 days to provide a sufficient level of treatment.

24. The AMPs were installed in an area with heavy clay soils which limits percolation. In 2005, the Discharger conducted percolation tests and installed a couple of lysimeters within the AMPs to collect samples of percolate. Based on the testing results the average hydraulic conductivity of the soil beneath the AMPs is approximately 1.5×10^{-6} cm/sec, and the limited volume of percolate was too small to sample even during the winter.

Other Considerations

25. When in operation, the AMPs provide a wetland environment for migratory waterfowl and other aquatic species and wildlife in the area. Surrounded by wildlife refuges such as the Los Banos State Waterfowl Area, Kesterson National Wildlife Refuge, and the San Luis Wildlife Refuge, the Facility is within the North American Flyway and provides a convenient way-station for migrating waterfowl.
26. In October 2012, at the request of Central Valley Water Board staff, the Discharger collected influent and effluent samples of the wastewater for analysis of metals. The results of the sampling along with applicable water quality objectives are presented in the table below:

TABLE 4. Wastewater Analysis for Metals

	<u>Units</u>	<u>Influent</u>	<u>Effluent</u>	<u>Water Quality Objectives</u>
Antimony	mg/L	<0.002	<0.002	0.006 ^a
Arsenic	mg/L	0.005	0.009	0.01 ^a
Barium	mg/L	0.11	0.14	1 ^a
Beryllium	mg/L	<0.001	<0.001	0.004 ^a
Boron	mg/L	1.5	2.2	- - -
Cadmium	mg/L	<0.00025	<0.00025	0.005 ^a
Chromium	mg/L	0.003	<0.0005	0.05 ^a / 0.4 ^b
Copper	mg/L	<0.0025	<0.0025	1.3 ^a / 0.02 ^b
Lead	mg/L	<0.0015	<0.0015	0.015 ^a / 0.01 ^b
Mercury	mg/L	<0.0002	<0.0002	0.002 ^a
Nickel	mg/L	0.007	0.003	0.1 ^a
Selenium	mg/L	<0.002	<0.002	0.05 ^a / 0.005 ^b
Sliver	mg/L	<0.0005	<0.0005	0.017 ^b
Zinc	mg/L	0.037	<0.025	5 ^c / 0.26 ^b

mg/L= milligrams per liter

a = Primary Maximum Contaminant Level (MCL)

b = California Toxics Criteria for Freshwater Aquatic Life using a hardness of 250 mg/L (as CaCO₃)

c = Secondary MCL

Based on the data, the wastewater entering and leaving the AMPs meets water quality objectives for heavy metals. This Order will require periodic monitoring for metals to ensure that the metal levels do not become concentrated in the wastewater affecting the beneficial use of the wetland habitat.

27. A wetland habitat can provide a breeding area for mosquitoes. The Discharger uses *Gambusia* (or mosquito fish) and works closely with the local Merced County Mosquito Abatement District to control mosquitoes within the AMPs. According to the Discharger, the Mosquito Abatement District generally comes out on an annual basis to monitor and check on mosquito controls. Insecticides may be used, if necessary, based on advice from the Mosquito Abatement District. This Order requires the Discharger to continue to work with the Mosquito Abatement District to control mosquitoes at the Facility.
28. Excessive application of high organic strength wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and metals. Such groundwater degradation can be prevented or minimized through implementation of best management practices which include planting crops to take up plant nutrients and maximizing oxidation of BOD to prevent nuisance conditions.
29. It is reasonable to expect some attenuation of various waste constituents that percolate below the root zone within the vadose (unsaturated) zone. Specifically, excess nitrogen can be mineralized and denitrified by soil microorganisms, organic constituents (measured as both BOD and volatile dissolved solids) can be oxidized, and the cation exchange capacity of the soil may immobilize some salinity constituents.
30. With regard to BOD, excessive application can deplete oxygen in the vadose zone and lead to anoxic conditions. At the ground surface, this can result in nuisance odors and fly-breeding. When insufficient oxygen is present below the ground surface, anaerobic decay of organic matter can create reducing conditions that convert metals naturally present in the soil as relatively insoluble (oxidized) forms to more soluble (reduced) forms. This condition can be exacerbated by acidic soils and/or acidic wastewater. If the reducing conditions do not reverse as the percolate travels down through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) can degrade groundwater quality.
31. The AMPs and disposal areas are planted with aquatic macrophytes and grasses, which take-up and transform nutrients and other waste constituents such as organics and nitrogen, and in turn provides a food source for animals including the sheep which graze in the area. The constant movement of water and relatively shallow water levels in the AMPs as well as proper management of the pasture area, and pre-screening of the wastewater, should minimize organic loading and prevent stagnation and development of anoxic conditions.

Site-Specific Conditions

32. The Facility is on the west side of the San Joaquin Valley. Topography in the area slopes gently to the northeast with elevations ranging from 80 to 100 feet above mean sea level across the site.
33. Federal Emergency Management Agency Flood Insurance Rate Map 0647C0575G, updated 2 December 2008, shows that the majority of the Facility and wastewater treatment and disposal areas are in Flood Zone A, within the 100-year floodplain, though no base flood level has been determined. San Luis Creek, mentioned in Order 83-087, is to the north and west of the new wastewater treatment system and the remaining disposal areas (i.e., pasture and Duck Club). The Facility as well as the wastewater treatment and disposal areas are protected from inundation from flood waters by protective berms.
34. According to the United States Department of Agriculture, National Resource Conservation Survey maps, soils within the AMPs and disposal areas are predominantly Marcuse silty clay and Pedcat clay and clay loam. These soils are moderately to strongly saline and poorly drained with low permeabilities between 0 to 0.2 inches per hour. These soils are not considered prime farmland and have a land capability classification of 4w and 7w, with severe to very severe limitations due to poor drainage.
35. Climate in the Central Valley is characterized by hot dry summers and mild winters. The rainy season generally extends from November through April. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evaporation (Class 'A' pan) for the Los Banos area are about 8.49 inches and 88 inches, respectively, according to information published by the California Department of Water Resources (DWR). The California Irrigation Management Information System (CIMIS) database reports an annual average reference evapotranspiration (ET_o) of 57 inches for the Los Banos monitoring station.
36. Land use in the area is primarily open land and pasture. A dairy is immediately south of the wastewater treatment system across Hearst Road. In addition, the San Luis Holding Reservoir and Volta State Wildlife Area are less than two miles southeast of the Facility's wastewater treatment system and disposal areas, and the San Luis National Wildlife Refuge is less than 8 miles to the northeast.

Groundwater Conditions

37. According to a report by DWR published in 1987, groundwater in the Los Banos area is divided into three zones; (a) shallow unconfined zone from the near surface to about 20 feet below ground surface (bgs); (b) an intermediate unconfined to semi-confined zone between approximately 100 and 250 to 350 feet bgs, and (c) a deep confined zone below the Corcoran Clay beginning at about 250 to 350 feet bgs.

38. A well log from a supply well, constructed in the area in 2014, depicts a series of alternating layers of clays and sandy clays intermixed with thin layers of gravel to approximately 730 feet bgs. The boring log shows the Corcoran Clay beginning at about 260 feet bgs and being approximately 100 feet thick.
39. Monitoring wells were installed at the site in 1996 to monitor first-encountered groundwater in the vicinity of the disposal area. Starting in 2005, additional monitoring wells were installed to monitor groundwater in the vicinity of the AMPs and pasture disposal area. Currently, there are 17 monitoring wells at the site.
40. Based on groundwater data from the on-site monitoring wells, first-encountered groundwater ranges from about three to 11 feet bgs depending on the season. Generally, groundwater levels are the highest in late winter and deepest in early summer at the start of the tomato processing season. Regional groundwater flow for first-encountered groundwater in the area is to the north-northeast.
41. The monitoring wells are sampled on a quarterly basis. Table 5 shows the results of groundwater monitoring of first-encountered groundwater for constituents of concern from 2013 through 2015.

TABLE 5. Monitoring Well Sampling (average 2013-2015)

Monitoring Wells	pH	EC umhos/cm	TDS mg/L	NO ₃ -N mg/L	Sodium mg/L	Chloride mg/L	Alkalinity mg/L	Sulfate mg/L	Iron mg/L	Total Organic Carbon mg/L
MW-1	7.4	3,841	2,617	14	773	698	865	436	0.04	7.1
MW-2	7.5	3,495	2,117	0.28	575	906	629	47	0.03	6
MW-3	7.6	3,826	2,367	0.34	759	1,094	675	73	0.16	6.8
MW-4	7.7	4,315	2,808	<0.1	930	1,019	832	272	0.05	5.8
MW-5	8.3	4,904	3,275	<0.1	1,207	1,232	949	118	0.20	13
MW-6	7.5	8,258	6,100	<0.1	1,672	2,815	568	1,394	0.70	5.6
MW-7	7.5	3,527	2,167	1.9	645	842	634	178	0.39	5.9
MW-8	7.6	3,374	2,417	50	745	447	843	339	0.01	21
MW-9	7.9	4,033	2,725	36	970	643	964	355	0.04	8.6
MW-10	7.6	3,521	2,242	9.9	728	700	724	303	0.03	9.5
MW-11	8.0	3,586	2,283	2.5	864	870	696	141	0.40	6.8
MW-12	7.7	4,395	2,892	0.1	966	947	878	343	7.6*	6.3
MW-13	7.5	5,882	3,975	<0.1	1,135	1,807	642	684	0.29	6.5
MW-14	7.5	7,004	4,858	<0.1	1,460	1,905	780	999	0.26	5.6
MW-15	7.5	7,713	6,067	<0.1	1,551	1,736	659	2,609	0.96	4.9
MW-16	7.3	13,839	12,857	<0.1	2,963	4,881	484	3,177	0.84	3.9
MW-17	7.1	21,629	19,143	<0.1	3,939	7,961	349	4,258	1.6	3.7

* Average includes one sample that may be an error since it was elevated and not consistent with other samples collected from that well. Concentrations shown in **bold** exceed the primary or upper secondary Maximum Contaminant Levels (MCLs) listed below.

1. Primary MCL for NO₃-N: 10 mg/L
 2. Secondary MCL for EC: 900 umhos/cm recommended; 1,600 umhos/cm upper.
 3. Secondary MCL for TDS: 500 mg/L recommended; 1,000 mg/L upper.
 4. Secondary MCL for Chloride: 250 mg/L recommended; 500 mg/L upper.
 5. Secondary MCL for Sulfate: 250 recommended; 500 mg/L upper.
 6. Secondary MCL for Iron: 0.3 mg/L.
42. Monitoring shows that first-encountered groundwater beneath the site is of very poor quality for salinity, with EC and TDS concentrations well above their respective upper secondary MCLs. In addition, groundwater shows very high concentrations of sodium, chloride, and sulfate. The highest concentrations are in monitoring wells MW-6, MW-14, MW-15, MW-16, and MW-17, which are down-gradient and to the east of the original AMPs (AMP #1 and AMP #2). However, these monitoring wells are in a low area with a high concentration of salt in the soil due to natural evaporation, and were high even before the new AMPs #3 and #4 started operation. Monitoring wells MW-1 through MW-5 around the first AMPs, AMPs #1 and #2 constructed in 2002 and 2003, show much lower concentrations for salinity.
43. Nitrate as nitrogen (or NO₃-N) is generally below the primary MCL of 10 mg/L except in up-gradient monitoring wells MW-1, MW-8, and MW-9. The elevated nitrate in these wells is likely due to discharges from a nearby dairy immediately up-gradient from the site and not the discharge from the Facility. The dairy immediately south of the AMPs and sedimentation basins can also be a source of odors in the area.
44. There is limited data on groundwater quality in the area prior to 1968. A check of the Geotracker database for the Groundwater Ambient Monitoring Program (GAMA) identified several wells with groundwater data from prior to 1968 within approximately two miles of the site. The construction of these wells is unknown, so it is not clear if the wells are screened above or below the Corcoran Clay. Table 6 presents a summary of the available water quality data obtained from these wells:

TABLE 6. Groundwater Quality (prior to 1968)

Constituent	Units	<u>09S09E 03R001M</u>	<u>09S09E 26B002M</u>	<u>09S10E 19B001M</u>	<u>09S09E 13F001M</u>	<u>USGS 370839120552001</u>	<u>USGS 370955120543001</u>
Date	Year	1952	1968	1952	1968	1952	1968
pH	std. units	na	na	na	7.5	6.4	7.5
EC	umhos/cm	3,500	1,040	2,700	1,340	na	1,760
TDS	mg/L	2,100	na	1,600	na	1,250	1,170
NO ₃ -N	mg/L	<0.1	4.1	<0.1	4.6	na	<0.1
Alkalinity	mg/L	197	185	220	226	148	131
Sodium	mg/L	500	128	410	201	230	260
Chloride	mg/L	600	178	660	216	320	320
Sulfate	mg/L	570	na	310	123	340	520

na= not analyzed

45. Groundwater prior to 1968 is of poor quality with respect to salinity, with EC and TDS concentrations above the lower recommended Maximum Contaminant Levels (MCLs) of 900 umhos/cm and 500 mg/L, respectively, and in most cases exceeding the upper secondary MCLs for EC and TDS of 1,600 umhos/cm and 1,000 mg/L, respectively. Groundwater in the area prior to 1968 also contained elevated concentrations of sodium, chloride, and sulfate.
46. While the groundwater monitoring data from 2013 to 2015 shows that first-encountered groundwater beneath the site is currently of poorer quality than that from the wells sampled prior to 1968, it is unknown if the wells from prior to 1968 only monitored first-encountered groundwater or if they were screened at deeper depths.

Basin Plan, Beneficial Uses, and Regulatory Considerations

47. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised July 2016* (Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263(a), these waste discharge requirements must implement the Basin Plan.
48. The Facility and disposal areas lie within the Los Banos Hydrologic Area (No. 541.20) of the Delta-Mendota Canal Hydrologic Unit, as depicted on interagency hydrologic maps prepared by the State Water Resources Control Board and the Department of Water Resources, revised August 1986. Local drainage is by sheet flow to the northeast toward Los Banos Creek and Mud Slough, which are tributaries to the San Joaquin River. Beneficial uses of Mud Slough (north), as stated in the Basin Plan, are: agricultural supply; stock watering; water contact and non-contact water recreation; warm freshwater habitat, warm water spawning; wildlife habitat; commercial and sports fishing; and shellfish harvesting.
49. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
50. The Basin Plan encourages water conservation and the reuse of wastewater in place of fresh water when available.
51. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater.
52. The Basin Plan's narrative water quality objectives for chemical constituents requires, at a minimum, waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than

MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

53. The narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses.
54. Quantifying a narrative water quality objective requires a site specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.
55. In the absence of specific numerical water quality limitations, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700 $\mu\text{mhos/cm}$. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops, and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000 $\mu\text{mhos/cm}$ if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

Special Considerations for Salt and Nitrate Discharges

56. Many surface waters and local groundwater supplies have been degraded with salt. In some areas, the high salinity is naturally occurring, but in many areas it is due to the acts of man. In 2006, the Central Valley Water Board, the State Water Board, and stakeholders began a joint effort to address salinity and nitrate problems in the region and adopt long-term solutions that will lead to enhanced water quality and economic sustainability.
57. The Central Valley Water Board is developing amendments to the Basin Plan to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the waters and soils of the Central Valley. Strategies currently under consideration may:
 - Alter the way the Board calculates available assimilative capacity for nitrate, which could result in new or modified requirements for nitrate management;
 - Require dischargers to implement actions identified under an interim salinity permitting approach; and/or
 - Establish alternate compliance approaches that would allow dischargers to participate in efforts to provide drinking water to local communities in consideration for longer compliance time schedules.

Should the Board adopt amendments to the Basin Plan to effectuate such strategies, these waste discharge requirements may be amended or modified to incorporate any newly-applicable requirements.

58. The stakeholder-led Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative has been coordinating efforts to implement new salt and nitrate management strategies. The Board expects dischargers that may be affected by new salt and nitrate management policies to coordinate with the CV-SALTS initiative.

Antidegradation Analysis

59. The *Statement of Policy With Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16 (Antidegradation Policy) was adopted by the State Water Board in October 1968. The Antidegradation Policy limits the Board's discretion to authorize the degradation of "high-quality waters." High-quality waters are defined as those waters where water quality is more than sufficient to support beneficial uses designated in the Board's Basin Plan. Whether or not a water is a high-quality water is established on a constituent-by-constituent basis, which means an aquifer can be considered a high-quality water with respect to one constituent but not for others (SWRCB Order WQ 91-10).
60. The Antidegradation Policy applies when an activity discharges to high-quality waters and will result in some degradation. When it applies, the Antidegradation Policy requires that WDRs reflect best practicable treatment or control (BPTC) of wastes and that any degradation of high-quality waters (a) will be consistent with the maximum benefit to the people of the state, and (b) will not result in an exceedance of water quality objectives. If the activity will not result in the degradation of high-quality waters, the Antidegradation Policy does not apply, and the Discharger need only demonstrate that it will use "best efforts" to control the discharge.
61. Constituents of concern in the discharge that have the potential to cause degradation of high quality waters include, in part, organics, nutrients, and salts.
 - a. For organics, the wastewater treatment system, consisting of the sedimentation basins and four AMPs, provides effective source control by reducing organic concentrations in the discharge by 85 to 90 percent, which is expected to prevent odor and nuisance conditions, minimize the potential for anoxic and reducing conditions and preclude the potential for groundwater degradation from organic overloading.
 - b. For nitrogen, groundwater up-gradient of the AMPs contains nitrate as nitrogen in excess of the primary MCL of 10 mg/L. This is likely due to discharges from a nearby dairy immediately up-gradient from the site and not the discharge from the Facility. The aquatic macrophytes and microorganisms in the AMPs provides uptake and removal of nutrients including nitrogen, effectively reducing nitrogen concentrations in the wastewater by almost 70 percent and, on average, reducing total nitrogen

concentrations in the effluent to less than 10 mg/L. Currently, groundwater down-gradient of the AMPs and pasture area is less than or equal to 10 mg/L nitrate as nitrogen.

This Order contains [Discharge Specifications C.1, C.4, and C.6](#), which require the Discharger to operate and maintain all treatment systems and equipment to optimize the quality of the discharge and distribute wastewater on adequate acreage to preclude the creation of nuisance conditions or unreasonable degradation of groundwater. This Order will also continue effluent and groundwater monitoring to ensure the continued discharge will not contribute to groundwater degradation for nitrates.

- c. For salinity, as discussed in [Finding 45](#), groundwater prior to 1968 was of poor quality with respect to salinity. Groundwater monitoring shows that salinity generally increases down-gradient of the site. However, the higher salinity is in part due to high concentrations of salts in the soils from evaporate deposits which have not been flushed out as you move away from existing agricultural areas. The salinity of the discharge is of better quality than current groundwater up-gradient of the site and in some cases groundwater prior to 1968 as shown in the table below:

Constituent	<u>Concentrations</u>			
	Average Influent to AMPs (2015 – 2016)	Supply Wells (2017)	Up-Gradient Monitoring Wells ¹	Groundwater prior to 1968
EC (umhos/cm)	1,840	1,050 – 3,050	3,374 – 4,033	1,040 – 3,500
TDS (mg/L)	1,326	622 – 1,890	2,417 – 2,725	1,170 – 2,100
Sodium (mg/L)	235	125 – 475	745 – 970	128 – 500
Chloride (mg/L)	451	154 – 827	447 – 698	178 – 660
Sulfate (mg/L)	37	69 - 140	339 - 436	123 – 570

¹ Shows range in concentrations from 2013 through 2015 for monitoring wells MW-1, MW-8, and MW-9

- 62. The Discharger provides, or will provide, as required by this Order, treatment and control of the discharge that incorporates:
 - a. Use of cleaning chemicals at recommended rates;
 - b. Use of flash steam, rather than chemicals, to peel tomatoes;
 - c. Reuse of condensate in boiler systems to reduce reliance on water softeners;
 - d. Pre-screening to remove excess solids from the wastewater;
 - e. Treatment to reduce BOD, nitrogen, and suspended solids;

- f. Maintenance and management of the AMPs including pre-season preparation with removal of terrestrial vegetation by grazing or other means and pre-wetting the soil to encourage growth of aquatic vegetation;
 - g. Even distribution of wastewater within the AMPs and disposal areas to preclude concentration of waste constituents;
 - h. Proper handling and off-site disposal of solids; and
 - i. Source water, influent, effluent, and groundwater monitoring.
63. This Order establishes groundwater limitations that allow some degradation, but that will not unreasonably threaten present and future anticipated beneficial uses of groundwater or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.
64. The treatment and control measures described above in [Finding 62](#), in combination with the requirements of this Order, represent BPTC for the wastes in the discharge. Adoption of this Order will result in the implementation of BPTC. In addition, this Order requires monitoring to evaluate potential groundwater impacts from the discharge and confirm that the treatment and control measures are sufficiently protective of groundwater quality.
65. The Discharger aids in the economic prosperity of the area through direct employment, provides a tax base for local and county governments, and provides a needed service for the agricultural community in the region. In addition, the treatment and reuse of process wastewater in place of fresh water is of further benefit to the people of the State. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State and, therefore, sufficient reason exists to accommodate growth and limited groundwater degradation, provided the terms of the Basin Plan are met.
66. This Order is consistent with the Antidegradation Policy since: (a) the Discharger has or will implement best management practices and BPTC to minimize degradation, (b) the limited degradation allowed by this Order will not unreasonably affect present or anticipated beneficial uses or result in water quality less than water quality objectives or background groundwater quality, and (c) the limited degradation is of maximum benefit to the people of the State.

California Environmental Quality Act (CEQA)

67. On 6 March 2000, Merced County adopted a Mitigated Negative Declaration for construction and operation of a second tomato processing plant at the Facility. The Mitigated Negative Declaration determined that the treatment, reuse, and combined discharge of process wastewater from the two Tomato Processing Plants to the existing application area would not pose a significant threat to water quality. Central Valley

Water Board staff reviewed and concurred with the findings of the Mitigated Negative Declaration.

68. This Order implements measures necessary to mitigate any adverse impacts to groundwater from the Facility to less than significant levels, including:
- a. Flow Limitation B.1, which restricts the monthly average daily flow rate to 10 mgd;
 - b. Discharge Specification C.3, which stipulates that no waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order; and
 - c. Discharge Specification C.6, which stipulates that wastewater shall be distributed on adequate acreage to preclude the creation of nuisance conditions or unreasonable degradation of groundwater and ensure proper operation of the treatment system.

Other Regulatory Considerations

69. Based on the threat and complexity of the discharge, the Facility is determined to be classified as "2B" as defined below:
- a. Category 2 threat to water quality: "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."
 - b. Category B complexity, defined as: "Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management unit."
70. California Code of Regulations, title 27 (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt wastewater. Title 27, section 20090 states in part:

The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:

(b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

- (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;

- (2) the discharge is in compliance with the applicable water quality control plan; and
- (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

- 71. The discharge of treated process wastewater authorized herein is exempt from the requirements of Title 27 in accordance with Title 27, section 20090(b) because:
 - a. The Central Valley Water Board is issuing WDRs.
 - b. The discharge is in compliance with the Basin Plan, and;
 - c. The effluent discharged to the AMPs and the disposal areas does not need to be managed as a hazardous waste.
- 72. On 1 April 2014, the State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities. Order 2014-0057-DWQ supersedes State Water Board Order 97-03-DWQ (NPDES General Permit CAS000001) and became effective on 1 July 2015. Order 2014-0057-DWQ requires all applicable industrial dischargers to apply for coverage under the new General Order by the effective date. On 27 July 2015, the Discharger submitted a Notice of Non-Applicability (or NONA) claiming that all storm water will be retained onsite. Therefore, the Discharger is not required to obtain coverage under the NPDES General Permit (CAS000001) at this time.
- 73. Water Code section 13267(b)(1) states:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region... shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.
- 74. The technical reports required by this Order and the attached Monitoring and Reporting Program [R5-2018-0004](#) are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.
- 75. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent

standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

76. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.
77. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

78. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
79. The Discharger and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.
80. All comments pertaining to this discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that Order No. 83-087 is rescinded, and, pursuant to Water Code sections 13263 and 13267, Ingomar Packing Company, LLC, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 22, section 6626.1 et seq., is prohibited.
3. Bypass or overflow of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*.

4. Discharge of waste at a location or in a manner different from that described in the Findings herein, is prohibited.
5. Discharge of toxic substances into any wastewater treatment system or land disposal area such that biological treatment mechanisms are disrupted is prohibited.
6. Discharge of domestic wastewater to the process wastewater treatment system or any surface water is prohibited.
7. Discharge of process wastewater to the domestic wastewater treatment system (septic system) is prohibited.

B. Flow Limitations

1. The discharge of wastewater to the wastewater treatment system (or AMPs) shall not exceed a monthly average daily flow rate of 10 mgd. [**Monitored at FM-001**]

C. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order.
2. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
3. The discharge shall remain within the permitted waste treatment/containment structures and disposal areas at all times.
4. The Discharger shall operate all treatment systems, equipment, and water use and recycling to optimize the quality of the discharge.
5. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
6. Wastewater shall be distributed on adequate acreage to preclude the creation of nuisance conditions or unreasonable degradation of groundwater and ensure proper operation of the treatment system.
7. Objectionable odors, as a result of the discharge, shall not be perceivable beyond the limits of the property where the waste is generated, treated, stored, and/or discharged at an intensity that creates or threatens to create nuisance conditions.

8. Pipelines used to convey process wastewater shall be flushed with fresh water, as needed, to ensure compliance with Discharge Specification C.7.
9. Any runoff of wastewater or irrigation water shall be confined to the treatment and disposal areas and shall not enter any surface water drainage course or storm water drainage system.
10. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:
 - a. Compliance with an erosion control program to ensure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Control of water depth, harvesting, and use of pesticides or other measures (e.g., mosquito fish).
 - c. Removal of excess dead algae, vegetation, and debris accumulated on the water surface.
 - d. Consultation and coordination with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.
11. The wastewater treatment and disposal areas shall be inspected as frequently as necessary to ensure compliance with the requirements of this Order.

D. Solids Disposal Specifications

Solids as used in this document includes; culls, leaves, stems, skins, seeds, pulp, and any residual solids removed from the wastewater.

1. Solids shall be removed from processing equipment, drains, sumps, and ponds as needed to improve operation and ensure compliance with this Order.
2. Solids generated at the Facility shall be hauled off-site for used as animal feed or for disposal at a permitted facility.
3. Settled solids collected in the sedimentation basins will be removed, as needed, and spread on the AMPs prior to the start of the tomato processing season.
4. Any drying, handling, and storage of solids shall be temporary, and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.
5. Any proposed change in solids use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

E. Groundwater Limitations

Release of waste constituents from any treatment unit, storage, delivery system or land application area associated with the Facility shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of natural background quality, whichever is greater:

- a. Nitrate as nitrogen of 10 mg/L.
- b. For constituents identified in Title 22 of the California Code of Regulations, the MCLs quantified therein.

F. Provisions

1. The Discharger shall comply with Monitoring and Reporting Program (MRP) [R5-2018-0004](#), which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of self-monitoring reports shall be no later than the submittal date specified in the MRP.
2. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provisions."
3. As described in the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
4. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the Facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
5. The Discharger shall properly operate and maintain all facilities and systems of treatment and control (and related appurtenances including wells) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
6. In the event of any change in control or ownership of the Facility, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

7. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.
8. The Discharger shall operate and maintain all wastewater ponds and irrigation reservoirs sufficiently to protect the integrity of containment dams and berms to prevent overtopping and/or structural failure. Unless a California registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond containing wastewater shall not be less than two feet (measured vertically from the lowest possible point of overflow).
9. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
10. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer, and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.
11. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans for investigations and studies, that describe the conduct of

investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

12. **At least 90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
13. If the Central Valley Water Board determines that the discharge has a reasonable potential to cause or contribute to an exceedance of a water quality objective, or to create a condition of nuisance or pollution, this Order may be reopened for consideration of additional requirements.
14. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plan for the Central Valley. Through this effort, the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.
15. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region on 1 February 2018.

Original Signed By

PAMELA C. CREEDON, Executive Officer

Order Attachments

- A. Site Location Map
- B. Site Plan

Monitoring and Reporting Program R5-2018-0004
Information Sheet

Standard Provisions (1 March 1991) (separate attachment to Discharger only)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2018-0004

FOR

INGOMAR PACKING COMPANY, LLC
INGOMAR TOMATO PROCESSING FACILITY
MERCED COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to Water Code section 13267.

Ingomar Packing Company, LLC, (Discharger) shall not implement any changes to this MRP unless and until the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopts, or the Executive Officer issues, a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH, temperature, dissolved oxygen, and electrical conductivity) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the State Water Resources Control Board (State Water Board), Division of Drinking Water Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

A glossary of terms used within this MRP is included on [page 9](#).

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

Monitoring Location Name	Monitoring Location Description
FM-001	Location where the volume/flow of the wastewater from the Plants to the wastewater treatment system prior to being discharged to the sedimentation basins can be measured. The volume/flow may be measured at each of the two Plants, and added to give the total volume/flow at FM-001.
INF-001	Location where a representative sample of the influent can be taken prior to entering the Aquatic Macrophyte Ponds (AMPs).
EFF-001	Location where a representative sample of the effluent discharge from AMP #1 can be obtained.
EFF-002	Location where a representative sample of the effluent discharge from AMP #2 can be obtained.
EFF-003	Location where a representative sample of the effluent discharge from AMP #3 can be obtained.
EFF-004	Location where a representative sample of the effluent discharge from AMP #4 can be obtained.
RET-001	Location where the return flow to the Plants can be monitored.
DIS-001	Location where effluent flow to the pasture area can be monitored.
DIS-002	Location where effluent flow to the Duck Club can be monitored.
SPL-001 through SPL-00X	For each supply well a location where samples of the supply water for the Plants can be obtained.
GW-01 through GW-0X	Groundwater monitoring well locations.

INFLUENT MONITORING

The Discharger shall monitor the influent to the AMPs at INF-001 for the constituents listed below. Samples shall be representative of the volume and nature of the discharge. Time of collection of the samples shall be recorded. Influent monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly ²	Flow	mgd	Measured ¹
Weekly ²	pH	pH Units	Grab

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly ²	EC	umhos/cm	Grab
Weekly ³	Biochemical Oxygen Demand (BOD)	mg/L	Grab
Weekly ³	Total Dissolved Solids (TDS)	mg/L	Grab
Weekly ³	Fixed Dissolved Solids (FDS)	mg/L	Grab
Weekly ³	Nitrate as nitrogen	mg/L	Grab
Weekly ³	Nitrite as nitrogen	mg/L	Grab
Weekly ³	Ammonia as nitrogen	mg/L	Grab
Weekly ³	Total Kjeldahl Nitrogen	mg/L	Grab
Weekly ³	Total Nitrogen	mg/L	Computed
Monthly ⁴	General Minerals ⁵	mg/L	Grab
Monthly ⁴	Total Organic Carbon (TOC)	mg/L	Grab
1/three years ⁶	Metals ⁷	ug/L	Grab

1. Using a stainless steel flow control gate or similar method approved by the Executive Officer.
2. Samples to be collected weekly when water is discharged to the AMPs this includes the pre-season wetting as well as the tomato processing season.
3. Samples to be collected weekly during the tomato processing season.
4. Samples to be collected monthly during the tomato processing season (i.e., July, August, September, and October).
5. General Minerals analysis shall include, alkalinity (as CaCO₃), bicarbonate (as CaCO₃), boron, calcium, carbonate (CaCO₃), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS.
6. Samples to be collected in September once every three years starting the year following adoption of this Order.
7. Metals analysis shall include, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc.

EFFLUENT MONITORING

The Discharger shall monitor the effluent from AMPs #1 through #4 at EFF-001, EFF-002, EFF-003, and EFF-004 for the constituents listed below. Samples shall be representative of the volume and nature of the discharge. Time of collection of the samples shall be recorded. Effluent monitoring shall include at least the following: following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly ¹	pH	pH Units	Grab
Weekly ¹	EC	umhos/cm	Grab
Weekly ¹	Biochemical Oxygen Demand (BOD)	mg/L	Grab
Weekly ¹	Total Dissolved Solids (TDS)	mg/L	Grab
Weekly ¹	Fixed Dissolved Solids (FDS)	mg/L	Grab
Weekly ¹	Nitrate as nitrogen	mg/L	Grab
Weekly ¹	Nitrite as nitrogen	mg/L	Grab
Weekly ¹	Ammonia as nitrogen	mg/L	Grab
Weekly ¹	Total Kjeldahl Nitrogen	mg/L	Grab
Weekly ¹	Total Nitrogen	mg/L	Grab
Monthly ²	General Minerals ³	mg/L	Grab
Monthly ²	Total Organic Carbon (TOC)	mg/L	Grab

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
1/three years ⁴	Metals ⁵	ug/L	Grab

1. Samples to be collected weekly during the tomato processing season and whenever effluent is discharged from the AMPs.
2. Samples to be collected monthly during the tomato processing season (i.e., July, August, September, and October).
3. General Minerals analysis shall include, alkalinity (as CaCO₃), bicarbonate (as CaCO₃), boron, calcium, carbonate (CaCO₃), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS.
4. Samples to be collected in September once every three years starting the year following adoption of this Order.
5. Metals analysis shall include, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc.

EFFLUENT FLOW AND DISPOSAL AREA MONITORING

The Discharger shall monitor return flows from the AMPs back to the Plants at RET-001 and effluent discharges from the AMPs to the pasture area and to the Duck Club at DIS-001 and DIS-002, respectively. Effluent flows from the AMPs shall be monitored and recorded weekly during the tomato processing season and be reported in tabular format. Effluent flow monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly ¹	Return Flow to the Plants	Gallons	Measured ²
Weekly ¹	Discharge to Pasture Area	Gallons	Measured ²
Weekly ¹	Discharge to Duck Club	Gallons	Measured ²

1. Flow monitoring to be recorded and reported on a weekly basis any time wastewater is discharged from the AMPs.
2. Flows to be measured using a stainless steel flow control gate or similar method approved by the Executive Officer.

In addition, the Discharger shall inspect the condition of the AMPs and disposal areas at least once per week during the tomato processing season and write visual observations in a bound logbook. Evidence of erosion, runoff, or the presence of nuisance conditions (i.e., odors, flies/mosquitoes, color of water, etc.), as well as field saturation or ponding within the pasture area shall be noted in the logs and a summary included as part of the annual monitoring report.

SOURCE WATER MONITORING

For each supply well, the Discharger shall collect samples of the source water for the Plants at SPL-001 through SPL-006, and any subsequent additional supply well, and analyze them for the constituents specified below.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
<u>Supply Water (SPL-00X)</u>			
Annually ¹	EC	mg/L	Grab
Annually ¹	TDS	mg/L	Grab

1. Sample to be collected in September.

SEDIMENTATION BASIN MONITORING

Discharges to the sedimentation basins shall be monitored at FM-001 on a daily basis and reported in the annual monitoring report. Permanent Markers (e.g., staff gauges) shall be placed in the sedimentation basins. The markers shall have calibrations indicating water level at design capacity and available operational freeboard. The Discharger shall monitor the sedimentation basins, while wastewater is in the basins, and shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily ¹	Flow	gallons	Metered ²
Weekly	Freeboard	feet	Observation

-
1. Flows to the sedimentation basins shall be measured and recorded daily at FM-001 any time wastewater is being discharged to the sedimentation basins.
 2. Using a flow meter or similar method approved by the Executive Officer.

GROUNDWATER MONITORING

After measuring water levels and prior to collecting samples, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 well casing volumes until pH, EC, and turbidity have stabilized.

The Discharger shall monitor the wells in its monitoring well network GW-001 through GW-017 and any subsequent additional monitoring wells as follows:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly ³	Depth-to-Water	Feet ¹	Measured
Quarterly ³	Groundwater Elevation	Feet ²	Calculated
Quarterly ³	pH	pH units	Grab
Quarterly ³	EC	umhos/cm	Grab
Semi-Annually ⁴	General Minerals ^{5,6}	various	Grab
Semi-Annually ⁴	Ammonia as Nitrogen	mg/L	Grab
Semi-Annually ⁴	Arsenic ⁶	mg/L	Grab
Semi-Annually ⁴	Total Organic Carbon	mg/L	Grab

-
1. To the nearest hundredth foot.
 2. Groundwater elevation shall be calculated based on depth-to-water measurements from a surveyed measuring point.
 3. Samples to be collected quarterly in January, April, July, and October.
 4. Samples to be collected semi-annually in April and October.
 5. General mineral analysis shall include, alkalinity (as CaCO₃), bicarbonate (as CaCO₃), boron, calcium, carbonate (CaCO₃), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, TDS, and cation/anion balance.
 6. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.

The Discharger shall maintain its groundwater monitoring well network. If a groundwater monitoring well(s) is dry for more than four consecutive sampling events, or is damaged, the Discharger shall submit a work plan and proposed time schedule to replace the well(s). The well(s) shall be replaced following Executive Officer approval of the work plan and time schedule.

REPORTING

All monitoring results shall be tabulated and reported in **Annual Monitoring Reports**, which shall be due by **1 February** of the year following the year samples were collected in.

The Central Valley Water Board has gone to a Paperless Office System. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disk and mailed to the appropriate regional water board office, in this case 1685 E Street, Fresno, CA, 93706.

To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15, WDID: 5C241010001, Facility Name: Ingomar Packing Company, LLC – Ingomar Tomato Processing Facility, Order: [R5-2018-0004](#)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements. In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

A. The Annual Monitoring Reports shall include the following:

Facility Information:

1. The names and telephone numbers of persons to contact regarding the discharge for emergency and routine situations.
2. A statement certifying when the flow meter and other measuring and monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
3. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.

Influent and Effluent Monitoring Reporting:

1. Tabulated results of influent and effluent monitoring specified on [pages 2 through 4](#).
2. For each month, calculation of the total flow and the monthly average daily flow to the AMPs.

Effluent Flow and Disposal Area Monitoring Reporting

1. Tabulated results of the effluent flow monitoring for RET-001, DIS-001, and DIS-002 as specified on [page 4](#).
2. A summary of the notations made in the log book during each week. The entire contents of the log do not need to be submitted.

Source Water Monitoring Reporting

1. Tabulated results of monitoring of the Plants source water as specified on [page 4](#).

Sedimentation Basin Monitoring Reporting

1. Tabulated results of monitoring of the sedimentation basins as specified on [page 5](#).
2. For each month, calculation of the total flow and monthly average daily flow to the sedimentation basins.

Groundwater Monitoring Reporting:

1. Tabulated results of groundwater monitoring specified on [pages 5 and 6](#). If there is insufficient water in the well(s) for sampling, the monitoring well(s) shall be reported as dry for that quarter.
2. For each monitoring well, a table showing groundwater depth, elevation, and flow direction for the five previous years, up through the present year.

3. A groundwater contour map based on groundwater elevations for each quarter. The maps shall show the gradient and direction of groundwater flow. The maps shall also include locations of all monitoring wells and wastewater storage and application areas.

Solids Reporting

1. Annual production totals for solids (excluding trash and recyclables) in dry tons or cubic yards.
2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.
 - a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.
 - b. For land application, include: the location of the site (field identification), and the Order number of any WDRs that regulate it.
 - c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).
 - d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.
 - e. For animal feed, include: the location of the site, and the Order number of any WDRs that regulate it.

The Discharger shall implement the above monitoring program beginning the season following adoption of this Order.

Ordered by: _____ *Original Signed By* _____
PAMELA C. CREEDON, Executive Officer
1 February 2018

(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand																
CaCO ₃	Calcium carbonate																
EC	Electrical conductivity at 25° C																
FDS	Fixed dissolved solids																
TKN	Total Kjeldahl nitrogen																
TDS	Total dissolved solids																
Continuous	The specified parameter shall be measured by a meter continuously.																
24-Hour Composite	Unless otherwise specified or approved, samples shall be a flow-proportioned composite consisting of at least eight aliquots.																
Daily	Samples shall be collected every day.																
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.																
Weekly	Samples shall be collected at least once per week.																
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.																
Monthly	Samples shall be collected at least once per month.																
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months																
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.																
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.																
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in September.																
mg/L	Milligrams per liter																
mL/L	Milliliters [of solids] per liter																
ug/L	Micrograms per liter																
umhos/cm	Micromhos per centimeter																
mgd	Million gallons per day																
General Minerals	Analysis for General Minerals shall include at least the following: <table><tr><td>Alkalinity (as CaCO₃)</td><td>Carbonate (as CaCO₃)</td><td>Magnesium</td><td>Sodium</td></tr><tr><td>Bicarbonate (as CaCO₃)</td><td>Chloride</td><td>Manganese</td><td>Sulfate</td></tr><tr><td>Boron</td><td>Hardness</td><td>Nitrate (NO₃-N)</td><td>TDS</td></tr><tr><td>Calcium</td><td>Iron</td><td>Potassium</td><td></td></tr></table>	Alkalinity (as CaCO ₃)	Carbonate (as CaCO ₃)	Magnesium	Sodium	Bicarbonate (as CaCO ₃)	Chloride	Manganese	Sulfate	Boron	Hardness	Nitrate (NO ₃ -N)	TDS	Calcium	Iron	Potassium	
Alkalinity (as CaCO ₃)	Carbonate (as CaCO ₃)	Magnesium	Sodium														
Bicarbonate (as CaCO ₃)	Chloride	Manganese	Sulfate														
Boron	Hardness	Nitrate (NO ₃ -N)	TDS														
Calcium	Iron	Potassium															
	General Minerals analyses shall be accompanied by documentation of cation/anion balance. Samples collected for dissolved metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.																

INFORMATION SHEET

ORDER R5-2018-0004
INGOMAR PACKING COMPANY, LLC
INGOMAR TOMATO PROCESSING FACILITY
MERCED COUNTY

BACKGROUND

Ingomar Packing Company, LLC (hereafter Ingomar or "Discharger") owns and operates two tomato processing plants at its Ingomar Tomato Processing Facility (or Facility) identified as Plant 1 and Plant 2. The Facility is currently regulated by Waste Discharge Requirements (WDRs) Order 83-087, which authorizes a 30-day average daily discharge of up to 7.2 million gallons per day (mgd) during the tomato processing season to approximately 2,600 acres of pasture. Over the years the land application area was reduced to approximately 700 acres, which includes the current wastewater treatment system.

The Discharger submitted a Report of Waste Discharge (RWD) on 10 February 2000 to support construction of the second tomato processing plant at the site and to construct a Wastewater Treatment System using Aquatic Macrophyte Ponds (AMPs) to treat process wastewater for reuse in the Facility as part of its water conservation effort. A single AMP was constructed in 2002 as part of a Pilot Study to test the system design and collect data on the effectiveness of the treatment system. Additional design and operational refinements along with a second AMP were added in 2003.

On 24 December 2012 and 29 September 2015, the Discharger submitted two addendums to its RWD, which included construction of two additional AMPs (proposed in the original RWD) along with a revised water balance to support increased flows up to 10 mgd to address projected future increases in production at the Facility.

Facility and Discharge

The Facility receives freshly picked tomatoes, which are washed, sorted, peeled, cooked, diced, packed, and shipped as either tomato paste or diced fruit. Currently Ingomar processes up to 900 million pounds of tomatoes a month during the processing season, which generally lasts from July through October.

Wastewater consists of water from the flumes, process wash water, cooling water condensate, water softener backwash, boiler blowdown, and equipment wash water. To reduce salinity, the Plants use flash steam rather than lye to peel the tomatoes. In addition, Ingomar also reuses condensate in the boilers at the Plants to reduce the use of water softeners.

Wastewater from the Facility is collected in a central sump and pre-screened to remove solids before being pumped out to the wastewater treatment system. In 2009, Ingomar removed the canal used to transfer wastewater to the AMPs, replaced it with a pipeline and constructed two sedimentation basins using native clays to settle out the heavier solids. From the sedimentation basins the wastewater is discharged to the AMPs. Originally the sedimentation basins were equipped with surface aerators to keep the wastewater mixed. However, the aerators were removed in 2016 and the Discharger has no plans to replace them at this time.

After treatment, the wastewater is returned to the Plants for reuse in various systems including transport flumes and equipment wash down. Excess wastewater not returned to the Plants may be discharged to the adjacent pasture (approximately 200 acres) or to the adjacent private Duck Club owned by Ingomar. The Duck Club occupies approximately 880 acres and is completely surrounded by a berm with a drainage ditch on the outside to prevent flooding or surface water run-off from the Duck Club.

Wastewater Treatment System

The Wastewater Treatment System consists of the two sedimentation basins and four AMPs. Contaminants in the wastewater are transformed and/or removed in the AMPs through sedimentation, filtration, microbial respiration, and plant uptake.

The perimeters of the AMPs were constructed from native clay soils and are surrounded by three foot berms. Wastewater flow to the system is controlled to maintain a design depth of approximately one to two feet. Interior berms were constructed to direct the wastewater and prevent short-circuiting of the treatment system.

In the spring, the Discharger brings in sheep and/or goats to graze on vegetation within the AMPs and pasture area. Grazing removes excess vegetation including invasive terrestrial species and the sheep and goats do not compact or disturb the soil like cattle would, which could damage the dormant aquatic vegetation. After the area has been grazed, the AMPs are re-seeded or hand planted with aquatic vegetation and pre-soaked with fresh irrigation water from a nearby agricultural well and some pre-season production wash water to start the growth of vegetation generally starting in May or June. At the start of the processing season, influent wastewater levels to the AMPs are carefully controlled depending on the density of the aquatic vegetation to allow continued growth and propagation. Over time, influent levels are increased as the aquatic vegetation becomes fully developed.

The four AMPs and sedimentation basins cover approximately 460 acres with a design capacity of approximately 31.4 million cubic feet (or 234 million gallons). A revised water balance was submitted in September 2015 in support of an average daily flow increase of up to 10 mgd to handle projected production increases over the next ten years. Based on the water balance, at the projected flow of 10 mgd, the four existing AMPs will have a retention time of approximately 23 days, which is well above the design parameters for the treatment system, which calculated a minimum retention time of 14 days to provide for a sufficient level of treatment.

Samples of the influent to and effluent from the AMPs are collected on a weekly basis during the processing season to evaluate the effectiveness of the treatment system. The effluent data shows effective removal of organics and suspended solids, as well as nutrients such as nitrogen. There is an increase in electrical conductivity and salts in the effluent likely due to evapo-concentration and flushing of salts from the soils of the AMPs.

Source Water

Source water is provided by six on-site wells, one of these wells Well #5 is no longer used except in emergencies due to poor water quality. In general, source water for the Facility is of poor quality with respect to salinity, the most recent sampling from 2017, reported EC ranging from 1,050 to 3,050 umhos/cm, sodium ranging from 125 to 475 mg/L, and chloride ranging from 154 to 827 mg/L. In the past, the Facility's source water EC has ranged from 940 to 4,800 umhos/cm, sodium from 110 to 680 mg/L, and chloride from 140 to 1,300 mg/L. The highest of these concentrations were from Well #5 on 11 October 2005, which is no longer in use.

Nitrate as nitrogen (NO₃-N) in the source water has ranged from below detection limits to about 5.1 mg/L, which is below the primary maximum contaminant level (MCL) of 10 mg/L.

Solids

Solids generated at the Facility consist of culls, skins, seeds, vines, leaves, pulp, and sediment. Solids removed from the wastewater and sorting areas are collected in transport bins and hauled off for use as animal feed. In addition, the sedimentation basins will be scraped out periodically, as needed, and the solids spread within the AMPs.

GROUNDWATER CONDITIONS

According to a report by DWR published in 1987, groundwater in the Los Banos area is divided into three zones; (a) shallow unconfined zone from the near surface to about 20 feet below ground surface (bgs); (b) an intermediate unconfined to semi-confined zone between approximately 100 and 250 to 350 feet bgs, and (c) a deep confined zone below the Corcoran Clay beginning at about 250 to 350 feet bgs. A well log, from 2014 depicts a series of alternating layers of clays and sandy clays intermixed with thin layers of gravel to approximately 730 feet bgs. The boring log shows the Corcoran Clay beginning at about 260 feet bgs and being approximately 100 feet thick.

Monitoring wells were first installed at the site in 1996 to monitor first-encountered groundwater in the vicinity of the disposal area. Starting in 2005, additional monitoring wells were installed to monitor groundwater in the vicinity of the AMPs and pasture disposal area. Currently there are 17 monitoring wells at the site. Based on data from the on-site monitoring wells, depth to groundwater ranges from about three to 11 feet bgs depending on the season. Generally groundwater levels are the highest in late winter and deepest in summer at the start of the tomato processing season. Regional groundwater flow for first-encountered groundwater in the area is to the north-northeast.

Groundwater Quality

Monitoring shows that first-encountered groundwater beneath the site is of very poor quality for salinity with EC and TDS concentrations well above their respective upper secondary MCLs. In addition, groundwater shows very high concentrations of sodium, chloride, and sulfate.

The monitoring wells are sampled on a quarterly basis. The table below shows the results of groundwater monitoring of first-encountered groundwater for constituents of concern from 2013 through 2015.

TABLE 1. Monitoring Well Sampling (average 2013-2015)

Monitoring Wells	pH	EC umhos/cm	TDS mg/L	NO ₃ -N mg/L	Sodium mg/L	Chloride mg/L	Alkalinity mg/L	Sulfate mg/L	Iron mg/L	Total Organic Carbon mg/L
MW-1	7.4	3,841	2,617	14	773	698	865	436	0.04	7.1
MW-2	7.5	3,495	2,117	0.28	575	906	629	47	0.03	6
MW-3	7.6	3,826	2,367	0.34	759	1,094	675	73	0.16	6.8
MW-4	7.7	4,315	2,808	<0.1	930	1,019	832	272	0.05	5.8
MW-5	8.3	4,904	3,275	<0.1	1,207	1,232	949	118	0.20	13
MW-6	7.5	8,258	6,100	<0.1	1,672	2,815	568	1,394	0.70	5.6
MW-7	7.5	3,527	2,167	1.9	645	842	634	178	0.39	5.9
MW-8	7.6	3,374	2,417	50	745	447	843	339	0.01	21
MW-9	7.9	4,033	2,725	36	970	643	964	355	0.04	8.6
MW-10	7.6	3,521	2,242	9.9	728	700	724	303	0.03	9.5
MW-11	8.0	3,586	2,283	2.5	864	870	696	141	0.40	6.8
MW-12	7.7	4,395	2,892	0.1	966	947	878	343	7.6*	6.3
MW-13	7.5	5,882	3,975	<0.1	1,135	1,807	642	684	0.29	6.5
MW-14	7.5	7,004	4,858	<0.1	1,460	1,905	780	999	0.26	5.6
MW-15	7.5	7,713	6,067	<0.1	1,551	1,736	659	2,609	0.96	4.9
MW-16	7.3	13,839	12,857	<0.1	2,963	4,881	484	3,177	0.84	3.9
MW-17	7.1	21,629	19,143	<0.1	3,939	7,961	349	4,258	1.6	3.7

* Average includes one sample that may be an error since it is elevated and not consistent with other samples collected from that well. Concentrations shown in **bold** exceed the primary or upper secondary Maximum Contaminant Levels (MCLs) listed below.

1. Primary MCL for NO₃-N: 10 mg/L
2. Secondary MCL for EC: 900 umhos/cm recommended; 1,600 umhos/cm upper.
3. Secondary MCL for TDS: 500 mg/L recommended; 1,000 mg/L upper.
4. Secondary MCL for Chloride: 250 mg/L recommended; 500 mg/L upper.
5. Secondary MCL for Sulfate: 250 recommended; 500 mg/L upper.
6. Secondary MCL for Iron: 0.3 mg/L.

Monitoring shows that first-encountered groundwater is of very poor quality for salinity with EC and TDS concentrations well above their respective upper secondary MCLs. The highest concentrations are in monitoring wells MW-6, MW-14, MW-15, MW-16, and MW-17, which are down-gradient and to the east of the original AMPs (AMP #1 and AMP #2). However, these monitoring wells are in a low area with a high concentration of salt in the soils due to natural evaporation. In addition, monitoring wells MW-4, MW-5, MW-11 and MW-12 immediately down-gradient of AMPs # 1 and #2 and the pasture area but up-gradient of these wells show much lower concentrations for EC and related salinity constituents.

There is limited data on groundwater quality in the area prior to 1968. A check of the Geotracker database for the Groundwater Ambient Monitoring Program (GAMA) identified several wells with groundwater data from prior to 1968 within approximately two miles of the site. The table below presents a summary of the available water quality data obtained from these wells prior to 1968:

TABLE 2. Groundwater Quality (prior to 1968)

Constituent	Units	<u>09S09E</u> <u>03R001M</u>	<u>09S09E</u> <u>26B002M</u>	<u>09S10E</u> <u>19B001M</u>	<u>09S09E</u> <u>13F001M</u>	<u>USGS</u> <u>370839120552001</u>	<u>USGS</u> <u>370955120543001</u>
Date	Year	1952	1968	1952	1968	1952	1968
pH	std. units	na	na	na	7.5	6.4	7.5
EC	umhos/cm	3,500	1,040	2,700	1,340	na	1,760
TDS	mg/L	2,100	na	1,600	na	1,250	1,170
NO ₃ -N	mg/L	<0.1	4.1	<0.1	4.6	na	<0.1
Alkalinity	mg/L	197	185	220	226	148	131
Sodium	mg/L	500	128	410	201	230	260
Chloride	mg/L	600	178	660	216	320	320
Sulfate	mg/L	570	na	310	123	340	520

na= not analyzed

The data shows that groundwater prior to 1968 is of poor quality with respect to salinity, with EC and TDS concentrations above the lower recommended Maximum Contaminant Levels (MCLs) of 900 umhos/cm and 500 mg/L, respectively and in most cases exceeded the upper secondary MCLs for EC and TDS of 1,600 umhos/cm and 1,000 mg/L, respectively. Groundwater in the area prior to 1968 also contained elevated concentrations of sodium, chloride, and sulfate.

While groundwater monitoring data from 2013 to 2015 shows that groundwater beneath the site is currently of poorer quality than that from the wells sampled prior to 1968, the construction of these well sampled prior to 1968 is unknown so it is unknown if the wells are screened above or below the Corcoran Clay.

REGULATORY CONSIDERATIONS

Other Considerations

When in operation, the AMPs provide a wetland environment for migratory waterfowl and other aquatic species and wildlife in the area. Surrounded by wildlife refuges, the Facility is within the North American Flyway and provides a convenient way-station for migrating waterfowl. Based on the data collected at the Facility, wastewater entering and leaving the AMPs meets water quality objectives for heavy metals. This Order will require periodic monitoring for metals to ensure that the metal levels do not become concentrated in the wastewater affecting the beneficial uses of the wetland habitat.

In addition, the wetland habitat can provide a breeding area for mosquitoes. The Discharger uses *Gambusia* (or mosquito fish) and works closely with the local Merced County Mosquito Abatement District to control mosquitoes within the AMPs. According to the Discharger, the Mosquito Abatement District generally comes out on an annual basis to monitor and check on mosquito controls. Insecticides may be used, if necessary, based on advice from the Mosquito Abatement District. This Order will require the Discharger to continue to work with the Mosquito Abatement District to control mosquitoes at the Facility.

PROPOSED ORDER TERMS AND CONDITIONS

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions

The proposed Order prohibits discharge to surface waters and drainage courses.

The proposed Order sets the following limitations and discharge specifications for the Facility:

1. The discharge of wastewater to the wastewater treatment system (or AMPs) shall not exceed a monthly average daily flow rate of 10 mgd.
2. The wastewater shall be distributed on adequate acreage to preclude the creation of nuisance conditions or unreasonable degradation of groundwater and ensure proper operation of the treatment system.
3. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:
 - a. Compliance with an erosion control program to ensure that coves and irregularities are not created around the perimeter of the water surface.
 - b. Control of water depth, harvesting, and use of pesticides or other measures (e.g., mosquito fish).
 - c. Removal of excess dead algae, vegetation, and debris accumulated on the water surface.
 - d. Consultation and coordination with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

Monitoring Requirements

Water Code section 13267 authorizes the Central Valley Water Board to require the Discharger to submit monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. Water Code section 13268 authorizes the assessment of administrative civil liability for failure to submit required monitoring and technical reports.

The Order includes monitoring requirements for influent, effluent, and groundwater. In addition, the Order requires flow monitoring from the AMPs along with routine inspections of the pasture and Duck Club disposal areas during the tomato processing season as well as periodic sampling

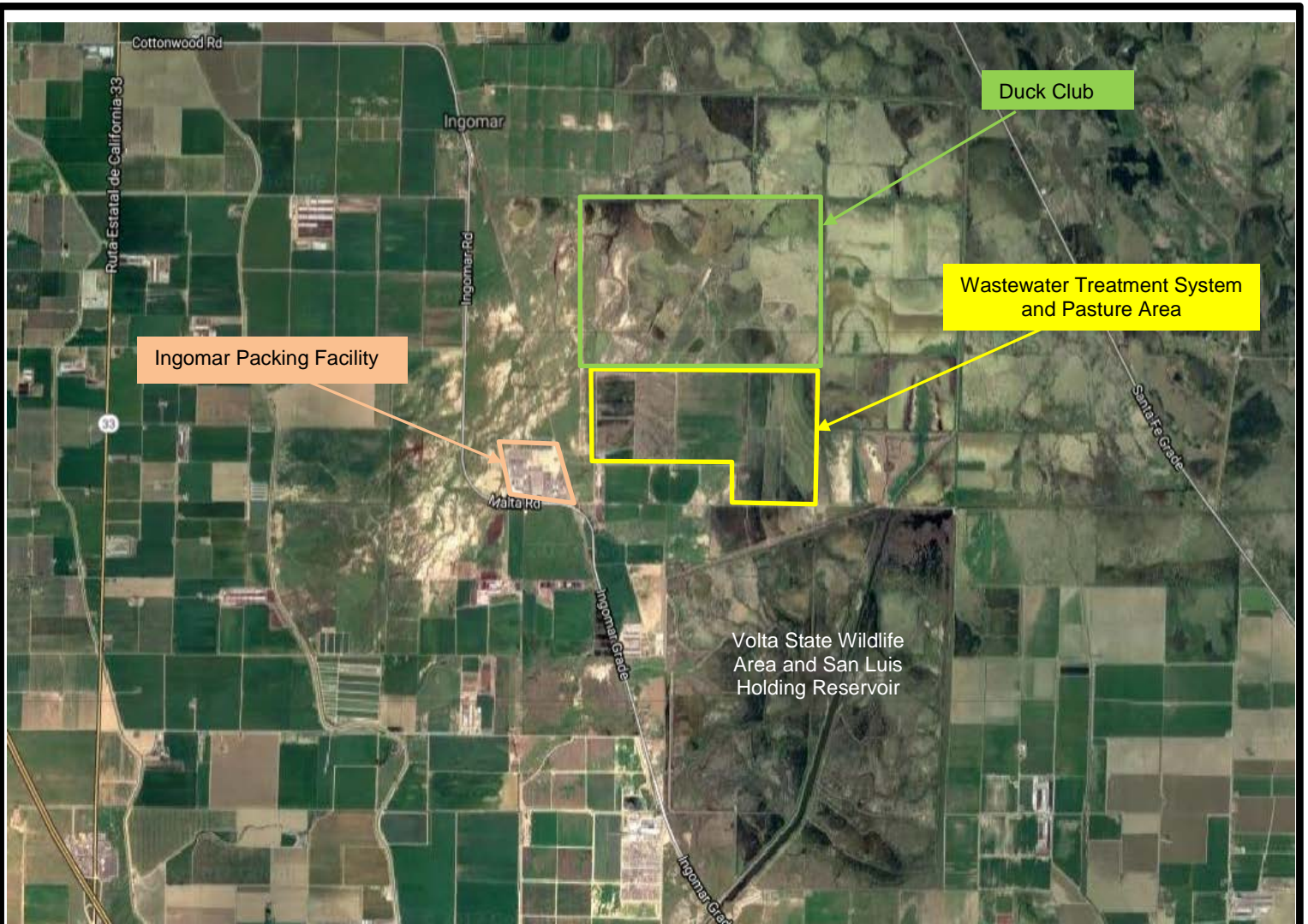
for metals in the discharge. This monitoring is necessary to characterize the discharge and evaluate compliance with effluent limitations and discharge specifications prescribed in the Order.

Legal Effect of Rescission of Prior WDRs or Orders on Existing Violations

The Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement actions to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. It may be appropriate to reopen the Order if new technical information is provided or if applicable laws and regulations change.



Drawing Reference: GOOGLE MAPS 2017

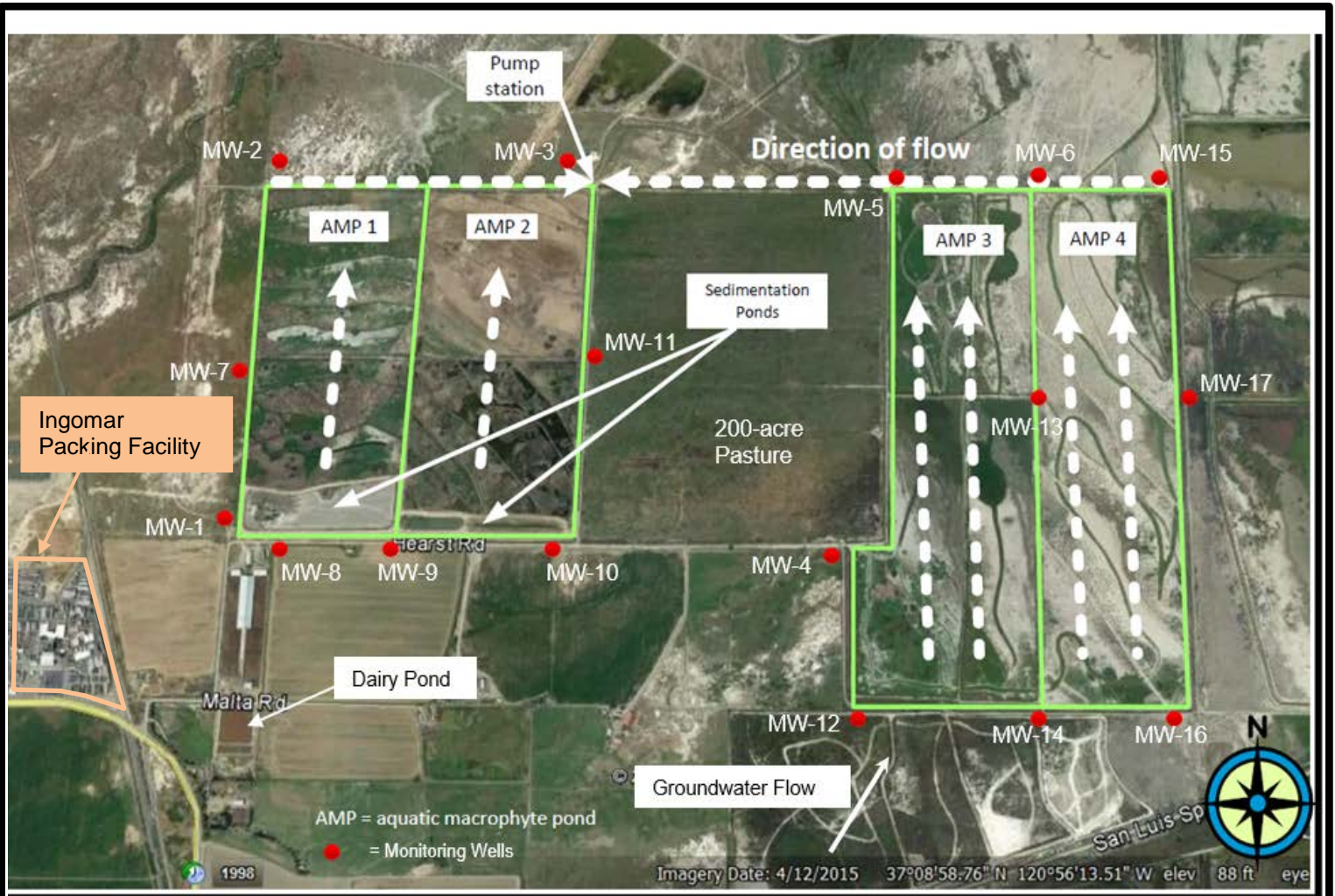
Approximate Scale 1 inch ≈ 1 mile

SITE LOCATION MAP

WASTE DISCHARGE REQUIREMENTS ORDER R5-2018-0004
FOR
INGOMAR PACKING COMPANY, LLC
INGOMAR TOMATO PROCESSING FACILITY
MERCED COUNTY



ATTACHMENT A



Drawing Reference: Ingomar Packing 2016 Annual Report

Not to Scale

SITE PLAN

WASTE DISCHARGE REQUIREMENTS ORDER R5-2018-0004
 FOR
 INGOMAR PACKING COMPANY, LLC
 INGOMAR TOMATO PROCESSING FACILITY
 MERCED COUNTY

ATTACHMENT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS
FOR
WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.
2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.
3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;
 - d. A material change in the character, location, or volume of discharge.
4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:
 - a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.
 - b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.
 - c. The addition of a major industrial, municipal or domestic waste discharge facility.
 - d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

Waste Discharge to Land

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.
6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.
7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:
 - a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,
 - b. Copy any records required to be kept under terms and conditions of this Order,
 - c. Inspect at reasonable hours, monitoring equipment required by this Order, and
 - d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.
9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.
11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.
12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** [*Note: Current phone numbers for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.*] as soon as it or its agents

Waste Discharge to Land

have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

This plan shall:

- a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.
- b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.
- c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:
 - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
 - d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;
 - (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;
 - (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.
5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Note: Current addresses for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).
2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

Waste Discharge to Land

complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

- a. the date, exact place, and time of sampling or measurements,
 - b. the individual(s) who performed the sampling of the measurements,
 - c. the date(s) analyses were performed,
 - d. the individual(s) who performed the analyses,
 - e. the laboratory which performed the analysis,
 - f. the analytical techniques or methods used, and
 - g. the results of such analyses.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.
 5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.
 6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:
 - a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.
 - b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.
2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

Waste Discharge to Land

certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.
4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.
2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:
 - a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and
 - (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or
 - b. (1) by-pass is required for essential maintenance to assure efficient operation; and
 - (2) neither effluent nor receiving water limitations are exceeded; and
 - (3) the discharger notifies the Board ten days in advance.

The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

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- a. an upset occurred and the cause(s) can be identified;
- b. the permitted facility was being properly operated at the time of the upset;
- c. the discharger submitted notice of the upset as required in paragraph B.1. above; and
- d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.
5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
6. Definitions
 - a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.
 - b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.
 - c. The monthly average concentration is the arithmetic mean of measurements made during the month.
 - d. The "daily maximum" **discharge** is the total discharge by volume during any day.

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- e. The “daily maximum” **concentration** is the highest measurement made on any single discrete sample or composite sample.
- f. A “grab” sample is any sample collected in less than 15 minutes.
- g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;
 - (1) at equal time intervals, with a maximum interval of one hour
 - (2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

- a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

Waste Discharge to Land

additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
 - (1) Complied with baseline monitoring report requirements (where applicable);
 - (2) Consistently achieved compliance;
 - (3) Inconsistently achieved compliance;
 - (4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
 - (5) Complied with schedule to achieve compliance (include the date final compliance is required);
 - (6) Did not achieve compliance and not on a compliance schedule;
 - (7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

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- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
- (1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;
 - (2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - (5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;
 - (6) Restriction of flow to the treatment plant; or
 - (7) Disconnection from discharge to the treatment plant.
- g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.
- i. A summary of public participation activities to involve and inform the public.
- j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers