CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2012-0105

WASTE DISCHARGE REQUIREMENTS

FOR
DIAMOND PET FOOD PROCESSORS OF RIPON, LLC AND
RIPON COGENERATION, LLC
DIAMOND PET FOOD RIPON FACILITY
SAN JOAQUIN COUNTY

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

1. On 12 July 2011, Diamond Pet Food Processors of Ripon, LLC (hereafter Diamond) submitted a Report of Waste Discharge (RWD) to apply for revised Waste Discharge Requirements (WDRs) for an industrial wastewater discharge to land. Supplemental information was received in February, May and June 2012.
2. Diamond owns and operates the pet food processing facility and the associated wastewater treatment and disposal facility. Veresen, Inc. owns Ripon Cogeneration, LLC, whose neighboring power plant has historically discharged industrial wastewater to Diamond's wastewater treatment and disposal facility. Diamond and Ripon Cogeneration, LLC are hereafter jointly referred to as "Dischargers" and are responsible for compliance with these WDRs.
3. The Diamond pet food processing plant and the associated wastewater treatment/disposal facility is located at 942 South Stockton Avenue, Ripon in San Joaquin County, in Section 29, T2S, R8E, MDB&M. The Assessor's Parcel Numbers (APNs) are 259-340-09 and 259-340-10. The facility location is shown on Attachment A, which is attached hereto and made part of this Order by reference.
4. For the purposes of this Order, the term "Wastewater Treatment Facility" (WWTF) shall mean the wastewater collection system, the wastewater treatment system, and the land application areas (LAAs).
5. The Diamond plant was formerly a paper mill, which was owned and operated by the Neenah Paper Fox River, LLC (hereafter Neenah). The paper mill was closed in May 2009 and there has been no discharge of process wastes from the paper mill since then. However, Ripon Cogeneration, LLC has continued to discharge industrial process waste to the WWTF. In October 2010, Diamond purchased the site and has refitted the industrial paper mill plant to manufacture pet food.
6. WDRs Order 5- 01-148, adopted by the Central Valley Water Board on 14 June 2001, prescribes requirements for the Neenah Paper Fox River LLC paper mill. The Order describes an average dry weather flow limit of 60 million gallons per month and a maximum daily flow limit of 2.5 million gallons per day (mgd). The purpose of this revision is to prescribe requirements for Diamond and Ripon Cogeneration, LLC and reduce the influent flow limit to 0.29 mgd as a monthly average. Therefore, Order 5-01-148 will be rescinded and replaced with this Order.

Previous Facility and Discharge

7. Neenah manufactured several grades of fine papers from purchased pulps including virgin bleached pulp, deinked post-consumer waste, and waste paper. The paper mill's maximum daily production rate was 200 tons of paper. The wastewater generated from paper processing was applied to land on the mill property. Wastewater flows to the clarifier from Neenah and Ripon Cogeneration, LLC averaged 1.0 to 2.0 mgd.

8. Prior to 2001, waste discharged to percolation areas by Neenah had TDS concentrations up to 2500 mg/L, which resulted in groundwater degradation with salinity constituents beneath the land application areas, and the Central Valley Water Board found that the past waste discharges were classified as "designated wastes" under California Code of Regulations title 27, division 3. Prior to 2001 Neenah reduced effluent TDS by:

   a. Reducing alum usage in the paper-making process;

   b. Installing a brine concentrator at the cogeneration plant and hauling the concentrated brine off-site for reuse by another company; and

   c. Replacing three water supply wells that were screened in the upper, intermediate and lower zones with five new water supply wells to reduce the TDS of the paper mill source water and eliminate the cross-contamination of the deeper aquifer zones.

9. The Central Valley Water Board also found that the paper mill sludge is an inert waste. Neenah completed in-place closure of the inactive sludge impoundments in accordance with an approved workplan by consolidating and dewatering the sludge and covering the areas with a one foot thick soil layer to serve as a final vegetative layer. The areas were regraded to divert storm water drainage away from the closed impoundments. Because the former sludge impoundments do not pose a threat to water quality, it is appropriate that this Order does not regulate them.

10. Ripon Cogeneration, LLC has historically discharged its cooling tower blowdown and reverse osmosis (RO) reject brine to the paper mill's wastewater treatment system under a long-term agreement with Neenah. Ripon Cogeneration, LLC's wastewater flows recently ranged between 0.2 and 0.3 mgd with an average TDS concentration of 1,000 mg/L. In the past, Ripon Cogeneration, LLC's wastewater was blended with paper mill wastewater in the clarifier before land application. The overall blended and treated wastewater had an average TDS concentration of 812 mg/L in 2008 with a range between 682 mg/L and 928 mg/L. Since the paper mill closed in May 2009, Ripon Cogeneration, LLC's cooling tower blowdown and RO reject brine have been diluted with low TDS groundwater before being discharged to the LAAs; and the effluent had an average TDS concentration of 526 mg/L from May 2010 through June 2011.

11. The wastewater treatment facility consists of a solids separation system, a clarifier, two aeration stabilization basins (ASB-1 and ASB-2) operated in series, and 86 acres of percolation fields and orchards (Land Application Areas, "LAAs"). In addition, unlined Ponds 1 through 4 are used only to contain excess wastewater in case of treatment system upset or to store storm water runoff during the wet seasons. Storm water collected in the ponds is applied to the LAAs and no storm water runoff is discharged to surface waters. There are two closed paper mill sludge disposal units onsite. A site map

is shown on Attachment B, which is attached hereto and made part of this Order by reference.

12. ASB-1 is lined with 60-mil high density polyethylene and ASB-2 is unlined. Ponds 1 through 4 are unlined. Design data for the ASB-1 and ASB-2 and storage ponds are summarized below.

Pond	Surface Area (acres)	Depth (feet) [1]	Volume (acre-feet) [1]
ASB-1	2.0	14	20.2
ASB-2	4.1	5	17.8
Pond 1	0.9	7	6.4
Pond 2	3.3	7	16.2
Pond 3	1.4	9	9.1
Pond 4	1.3	10	8.8

[1.] Based on two feet of freeboard.

13. The LAAs consist of the east, and upper west and west percolation fields (43 acres), and the east, west and north orchards (43 acres). There are no crops on the three percolation fields, but there are eucalyptus and redwood trees on the orchards. The wastewater in ASB-2 is applied to the LAAs via flood irrigation for disposal by percolation.

Changes in the Discharge

14. Diamond uses dry ingredients, oils, fats and fresh meat to manufacture 250,000 tons of pet food each year. Diamond proposed to start manufacture in April 2012 and to discharge wastewater into the onsite wastewater treatment system, and is currently operating at approximately 60 percent of production capacity.

15. With the exception of the wastewater facilities, the paper mill manufacturing facilities have been removed and restructured for pet food manufacture. Diamond does not propose to improve the existing wastewater treatment facility. However, the projected wastewater flow rates and quality are different from the previous paper mill's discharge.

16. The chemicals used in Diamond's processes and sanitation are listed below.

Trade Name	Hazardous Constituents	Annual Usage (gallons)
BJ-55	Trisodium nitrilotriacetate Nonylphenoxypolyethoxyethanol Ethylene glycol monobutyl ether	200
Nalco 1720	Sodium bisulfate Potassium bisulfate Cobalt bisulfate	180
NexGuard 22310	No hazardous ingredients	180

Trade Name	Hazardous Constituents	Annual Usage (gallons)
Perasah A	Peroxyacetic acid Hydrogen peroxide Acetic acid	20
Sanitime	n-Alkyl dimethyl benzyl ammonium chloride n-Alkyl dimethyl ethyl benzyl ammonium chloride Ethanol	220
Tri-Act 1820	Cyclohexylamine Diethylethanolamine Morpholine	120

17. Diamond uses RO systems to improve the quality of the groundwater supply that is used for its processes. Diamond has two RO systems that are operated independently. Each RO system operates at 80 gallons per minute input, and generates 40 gallons of reject brine per minute. Diamond's wastewater consists of the RO reject brine, and process and sanitation wastewater. In addition, Diamond will continue to accept Ripon Cogeneration, LLC's cooling tower blowdown and RO reject brine.

18. Diamond's process and sanitation wastewater is collected into a solids separation collection system and then the supernatant is pumped into the clarifier. The solids are hauled offsite to a permitted landfill.

19. The wastewater from Ripon Cogeneration, LLC and Diamond is mixed in the circular clarifier, where wastewater is diluted with low TDS groundwater from the onsite production wells and distilled water purchased from Ripon Cogeneration, LLC. The wastewater flows into two ASBs in series from the clarifier and then is applied to the LAAs via flood percolation. ASB-1 and ABS-2 are equipped with mechanical aerators. The wastewater treatment process schematic is shown on Attachment C, which is attached hereto and made part of this Order by reference.

20. The RWD predicts influent flow rates as follows:

	Source	Maximum Flow Rate (gpd)	Average Flow Rate (gpd)
Wastewater	Projected Diamond RO Reject	75,000	56,250
	Projected Diamond Process/Sanitation	12,000	9,000
	Ripon Cogeneration, LLC Blowdown and RO Reject	304,416	217,440
Dilution Water	Groundwater for Dilution	512,064	365,760
	Distilled Water Purchased from Ripon Cogeneration, LLC for Dilution	52,650	52,650
Total Influent	Wastewater from Diamond and Ripon Cogeneration, LLC, Groundwater and Distilled Water for Dilution	956,130	701,100

The overall influent flow rate will average approximately 700,000 gallons per day (gpd), which includes wastewater generated from Diamond and Ripon Cogeneration, LLC, and dilution water. The wastewater generated by Diamond and Ripon Cogeneration, LLC will average approximately 283,000 gpd, which is approximately 40 percent of the total flow.

21. Diamond predicted the character of the untreated pet food processing wastewater based on influent data for another Diamond plant at Lathrop. The following table summarizes projected overall wastewater quality based on Diamond's estimates and historical wastewater quality for Ripon Cogeneration, LLC and the dilution water. LAA loading rates based on the projected overall influent quality are also presented.

Predicted Influent quality and loading rates

Parameter	Units	Ripon Cogeneration	Diamond	Groundwater for Dilution [1]	Ripon Cogeneration Distilled Water	Flow Weighted Concentration	Annual Loading (lb/ac/yr)
BOD	mg/L	<0.5	207	0	-	3	66
Nitrate as N	mg/L	28	<0.5	4.8	-	11	178
Total nitrogen	mg/L	29	50	4.8 [2]	-	16	256
Chloride	mg/L	86	69	41	-	54	864
TDS	mg/L	1,154	1,100	430	-	684	20,008

[1] Based on 2011 groundwater monitoring data for process supply well PW-6.
[2] Assuming total nitrogen concentration equals nitrate nitrogen concentration.

22. To compare the predicted discharge with the previous paper mill's discharge, the TDS loading rates for the LAAs were calculated as summarized below.

	Source of Wastewater	Average Flow (gpd)	Average TDS (mg/L)	Annual TDS Loading Rate (lb/acre/year)
Past (Neenah)	Paper Mill Wastewater and Ripon Cogeneration, LLC Brine in 2008	1,136,828	812 [1]	32,608
Present (Ripon Cogeneration, LLC Only)	Ripon Cogeneration, LLC Brine with Groundwater Dilution During 5/10-6/11 (after paper mill closed)	322,587	526 [1]	5,992
Near Future	Proposed Diamond and Ripon Cogeneration, LLC with Groundwater and Distilled Water Dilution	701,100	684 [2]	20,008

1. Based on the monitoring data in ABS#2.
2. Based on the projected influent TDS.

The projected overall influent TDS concentration of 684 mg/L for Diamond and Ripon Cogeneration, LLC is less than the 2008 average TDS concentration of 812 mg/L. In addition, the proposed TDS loading rate is approximately 61 percent of the paper mill/cogeneration plant discharge. To address the sources of salinity discharged to the wastewater treatment system and the LAAs, this Order requires the Dischargers to submit a *Salinity and Nutrient Evaluation and Minimization Plan*.

23. Diamond will continue to manage the LAAs as Neenah did: the LAAs will be flood irrigated as needed to dispose of the treated wastewater by percolation. The RWD did not specify how the LAAs will be operated or how wastewater will be contained within the LAAs. This Order requires the Dischargers to appropriately operate the LAAs to prevent nuisance or wastewater runoff.

24. The RWD indicates that the WWTF has enough storage and disposal capacity for the storm water collected at the facility and approximately 700,000 gpd of the treated wastewater including dilution water. The application of 700,000 gpd of water over the 86 acres of LAAs equates to a daily application depth of 0.3 inches. Therefore, the flow limitations of this Order are based on the daily wastewater influent flows only (dilution water is not included) provided in the RWD as described in Finding No. 20.

Site-Specific Conditions

25. Diamond obtains its source water from groundwater supply wells PW-6 through PW-8. Based on the 2010 Annual Monitoring Reports, the chemical character of the groundwater supply is summarized below.

	Groundwater Supply						
Supply Well	TDS (mg/L)	EC (µmhos/cm)	Calcium (mg/L)	Chloride (mg/L)	Sodium (mg/L)	Nitrate as N (mg/L)	pH (Std.)
PW-6	480	698	44	53	89	3.7	7.7
PW-7	370	520	29	41	67	1.4	7.6
PW-8	380	553	25	54	77	2.4	8.0

EC = Electrical Conductivity.

26. Domestic wastewater from Diamond and Ripon Cogeneration, LLC is discharged to the City of Ripon's sewer system.

27. The facility site is in the Manteca Hydrologic Area (535.10) of the San Joaquin Valley Floor Hydrologic Unit, as depicted on the interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

28. The site is located in the East San Joaquin groundwater Basin and is underlain by a sequence of Tertiary and Quaternary-aged continental deposits of the Tulare Formation. The deposits consist of interbedded sands/gravels and silts/clays or mixtures.

29. The nearest surface-water body is the Stanislaus River, which forms the southern boundary of the site. The site is relatively flat and level, with local topographic variations associated with the series of ponds and irrigation ditches. In general, the site slopes gently to the south (toward the Stanislaus River), with a steep slope at the southern edge of the site adjacent to the river.

30. The northern part of the Site is within the 500-year flood plain, and the southern edge along the Stanislaus River is within the 100-year floodplain, based on the Federal Emergency Management Agency's Flood Insurance.

31. The average annual precipitation is 13.09 inches per year and the 100-year, 365-day precipitation event is 23.67 inches. The mean reference evapotranspiration rate is approximately 51 inches per year.

32. Surrounding land uses are industry, commercial, residential and agriculture.

Groundwater Considerations

33. WDRs Order 5- 01-148 required that Neenah determine background groundwater quality to establish Water Quality Protection Standards (WQPSs). The WQPSs for the shallow zone were established based on the groundwater monitoring data in the wells OB-10, OB-14, OB-16, OB-17, OB-21 and OB-22, which are adjacent to the Stanislaus River. The WQPSs were approved in August 2006.

34. The discharges from Neenah and Ripon Cogeneration, LLC degraded groundwater quality, primarily with salinity constituents. In order to comply with the WDRs Order 5-01-148, Neenah planted the current orchard in a failed attempt to reduce the degradation by phytoremediation. In 2007 and 2009, Neenah applied low salinity fresh water to the percolation fields in order to improve groundwater quality and to meet the WQPSs. When the paper mill was closed in May 2009, the groundwater under portions of the paper mill site had not met these standards.

35. Groundwater quality at the site has been monitored since January 1992. Four aquifer zones beneath the site have been identified. Diamond has 36 active monitoring wells and five groundwater production wells. In addition, Diamond monitors six other monitoring wells that are located at the Diamond site but owned by Nestlé USA, Inc.[1]. Therefore, Diamond is monitoring a total 47 monitoring and supply wells. The numbers of wells in each aquifer zone are listed below:

Groundwater Aquifer Zones				
Zone	Depth (feet bgs)	Aquifer	Production Wells	Numbers of Monitoring Wells
First Zone	35-60	Unconfined		27
Second Zone	85-110	Semi-confined to Confined		7
Third Zone	140-225		PW4 Through PW8	7
Forth Zone	240-300			1

36. Shallow groundwater is typically encountered approximately 35 feet below ground surface (bgs) and the shallow groundwater flow direction is variable. The July 2010 groundwater elevation data show that mounding occurred in the vicinity of the Discharger's west percolation field and offsite north of the City of Ripon's WWTF ponds, which are immediately west of the Diamond site; however, the July 2011 groundwater elevation data show that the groundwater flow was away from the Stanislaus River and towards the northwest. In general, mounding occurs onsite and offsite in the vicinity of the City of

[1] Nestlé USA, Inc. operated a manufacturing plant approximately 2,000 feet north of the Diamond site, and discharged wastewater from 1948 through 1986. The solvents used in the decaffeination process and solvent breakdown products (trichloroethene, dichloroethene and vinyl chloride) in the wastewater have degraded groundwater in the Ripon area. Nestle currently operates a groundwater treatment system in the area to remediate the contaminant plumes under the Central Valley Water Board's Site Assessment & Cleanup Program.

Ripon's WWTF ponds. The City's WWTF treats up to 2.0 mgd and disposes of wastewater via percolation/evaporation ponds and land application area.

37. In general, the shallow groundwater flow direction is away from the mounding and then generally towards the north or northwest. The gradient in the first aquifer zone ranged between 0.001 and 0.003 feet/foot.

38. Shallow groundwater quality has been characterized by monitoring wells in the first aquifer zone since January 1992 (see Attachment B). Recent shallow zone groundwater monitoring data for key waste constituents from February 2007 through October 2011are tabulated below.

Groundwater Quality

Shallow Monitoring Wells (Potentially Applicable Water Quality Objective)	Average TDS (mg/L) 500,1000, 1500 [1]	Average EC (µmhos/cm) 900,1600, 2200 [1]	Average Chloride (mg/L) 250, 500, 600 [1]	Average Sodium (mg/L) 69 [3]	Average Nitrate as N (mg/L) 10 [2]
OB-1	993	1,600	172	209	7.1
OB-2	1,214	1,853	221	201	5.2
OB-4	1,449	2,145	293	278	0.2
OB-5	894	1,368	186	181	11.1
OB-7	1,165	1,779	240	207	10.2
OB-8	1,041	1,599	164	212	6.8
OB-11	1,009	1,649	240	179	0.2
OB-17 (background well)	151	228	4.6	16.5	<0.1
OB-19	800	1,230	140	143	3.5
OB-21	796	1,226	161	174	4.7
OB-22	680	1,047	133	168	0.1
OB-24	919	1,388	197	84	5.0
OB-25	1,066	1,596	252	112	3.7
OB-26	630	909	18.7	129	17.3
OB-28	1,199	1,787	152	118	41.4

1. Secondary MCL stated as a recommended level, upper level, and a short-term maximum level.
2. Primary MCL.
3. Most stringent potentially applicable agricultural Water Quality Goal.

Based on the data presented above and the background groundwater quality WQPSs established in the 2006, the previous discharge degraded groundwater quality with respect to TDS, sodium, chloride, and nitrate. Specifically, the highest average TDS was measured in Well OB-4, which is in the eucalyptus grove in the northeast quadrant of the site. Elevated TDS levels were also measured in wells located around ASB-1 and wells

located along the western property boundary near the City of Ripon's WWTF. The area of lowest TDS (background well OB-17) was in the southeastern corner of the site along the Stanislaus River.

The average EC and TDS concentrations in all shallow zone wells except Well OB-17 are greater than the recommended Secondary Maximum Contaminant Levels (MCLs) of 900 µmhos/cm for EC and 500 mg/L for TDS, respectively. The elevated TDS levels in the northeastern quadrant of the site are likely caused by the eucalyptus trees' concentrating effect on TDS. The elevated TDS levels observed along the western portion of the site, particularly in the southwest corner, probably reflect the infiltration of higher TDS water originating at the City of Ripon's WWTF encroaching onto the Diamond site.

39. After the paper mill was closed in May 2009, Ripon Cogeneration, LLC continued to discharge and dilute the discharge with lower salinity fresh water. Since then, the groundwater TDS concentrations in wells OB-2, OB-08, OB-10, OB-18, OB-19 and OB-20 have slightly decreased. However, the TDS concentrations in other shallow zone wells have not changed significantly.

40. The predicted wastewater TDS concentration of 684 mg/L is less than the TDS concentrations in the shallow zone groundwater monitoring wells at the site, except for the wells near the river (Wells OB-17 and OB-22). Based on the projected effluent quality, the method of disposal and existing groundwater quality, it is unlikely that the proposed discharge will significantly degrade the groundwater quality for TDS.

41. The groundwater monitoring network should be designed to yield samples representative of the upper most portion of the first aquifer underlying the site. Therefore, this Order requires the Dischargers to monitor certain monitoring wells in the first aquifer zone. Those unused monitoring wells, which are not required to be monitored in this Order and are not monitored by Nestle for remediation, can be destroyed with the approval of the Central Valley Water Board. This Order requires the Dischargers to submit a *Groundwater Monitoring Well Destruction Plan*.

Basin Plan, Beneficial Uses, and Regulatory Considerations

42. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition (hereafter "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 Board. Pursuant to Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.

43. The site is immediately adjacent to the Stanislaus River, which is the southern property boundary of the facility. Local drainage is to the Stanislaus River. The designated beneficial uses of the Stanislaus River, as specified in the Basin Plan, are municipal and domestic supply; agricultural supply; industrial process and service supply; hydropower generation; water contact recreation; non-contact water recreation; warm and cold fresh water habitat; cold water migration of aquatic organisms; spawning, reproduction, and /or early development; and wildlife habitat.

44. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

45. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.

46. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum, requires 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.

47. In summary, the narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses. 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.

Antidegradation Analysis

48. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter "Resolution 68-16") prohibits degradation of groundwater unless it has been shown that:

    a. The degradation is consistent with the maximum benefit to the people of the State.

    b. The degradation will not unreasonably affect present and anticipated future beneficial uses.

    c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives, and

    d. The Dischargers employ best practicable treatment or control (BPTC) to minimize degradation.

49. Constituents of concern that have the potential to degrade groundwater include salts (primarily TDS, sodium, and chloride), and nutrients, as discussed below:

    a. Some degradation occurred as a result of the former paper mill/cogeneration plant discharge. The Secondary MCL for TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum. Based on the groundwater monitoring data, the current (pre-Diamond) groundwater TDS concentrations exceed the recommended Secondary MCL of 500 mg/L.

       The projected TDS concentration of 684 mg/L for the untreated wastewater is less than the former paper mill/cogeneration plant discharge and is less than the TDS concentrations in the onsite compliance monitoring wells. The predicted TDS loading rate is approximately 61 percent of the former discharge. Therefore, the proposed discharge is not likely to degrade groundwater quality any further for TDS. This Order

does not allow degradation beyond that which may already exist. This Order includes a performance-based effluent limitation of 800 mg/L for TDS as an annual average, which is subject to review and revision depending on the outcome of the Dischargers' salinity reduction efforts. To address the sources of salinity discharged to the wastewater treatment system and the LAAs, this Order requires the Discharger to submit a *Salinity and Nutrient Evaluation and Minimization Plan.*

Although the WQPS (background groundwater quality) of 713 mg/L for TDS was established for this site, the current (pre-Diamond) groundwater TDS concentrations exceed this limit and shallow groundwater quality at the site exhibits high spatial variability. Therefore, it is not appropriate to set a numerical TDS limitation for groundwater. The Groundwater Limitations of this Order prohibit any statistically significant TDS increase in the groundwater monitoring wells and require the Dischargers to evaluate groundwater TDS annually using intra-well statistical analysis methods.

b. For nutrients such as nitrate, the potential for unreasonable degradation depends not only on the quality of the treated effluent, but the ability of the vadose zone below the effluent storage/disposal ponds to provide an environment conducive to nitrification and denitrification to convert the effluent nitrogen to nitrate and the nitrate to nitrogen gas before it reaches the water table. The predicted untreated wastewater has a nitrate nitrogen concentration of 11 mg/L, which is greater than the MCL of 10 mg/L for nitrate nitrogen. Although the nitrate concentrations of treated wastewater are expected to be reduced after treatment, there is some threat that the discharge could cause a violation of the MCL for nitrate. It is therefore appropriate to adopt a total nitrogen numerical limitation of 10 mg/L for effluent, to protect the municipal and domestic use of groundwater. The estimated loading rate of 256 lb/ac/year for total nitrogen for the untreated wastewater is significant, but the RWD did not include an estimate of the nitrogen reduction that could be achieved in the treatment system. Therefore, this Order requires the Dischargers to submit and implement a *Salinity and Nutrient Evaluation and Minimization Plan* within one year of adoption of the WDRs.

50. This Order establishes effluent and groundwater limitations that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. Current groundwater monitoring data indicate that groundwater has been degraded by previous discharges at the site, and that the discharge as proposed does not pose a threat of further degradation. The requirements of this Order do not allow any further degradation to occur.

51. The Dischargers currently provide treatment and control of the discharge that incorporates:

    a. Solids collection system to remove solids from the raw wastewater; and

    b. A lined aeration stabilization basin.

    Although some treatment and control has been implemented at the facility, the Dischargers may need to propose and implement additional treatment or control in order to ensure compliance with the Basin Plan.

Other Regulatory Considerations

52. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt domestic sewage, wastewater, and reuse. 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.

53. The discharge authorized herein, and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27 as follows:

    a. Ponds 1 through 4, aeration stabilization basins and the LAAs are exempt pursuant to Title 27, section 20090(b) because:

        i. The Central Valley Water Board is issuing WDRs;

        ii. Based on the projected wastewater salinity, the discharge will not degrade the existing groundwater and will be in compliance with the Basin Plan; and

        iii. The treated effluent discharged to the LAAs does not need to be managed according to Chapter 11, Division 4.5, Title 22 as a hazardous waste managed as hazardous waste.

54. Although the facility is exempt from Title 27, the statistical data analysis methods of Title 27, section 20415(e) are appropriate for determining whether the discharge complies with Groundwater Limitations specified in this Order.

55. The State Water Board adopted Order 97-03-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. All storm water collected from the process areas is discharged into ponds and then is applied to the LAAs. The Dischargers are therefore not required to obtain coverage under NPDES General Permit CAS000001.

56. Water Code section 13267(b) provides that:

    In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this

state who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports 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.

The technical reports required by this Order and the attached Monitoring and Reporting Program (MRP) are necessary to assure compliance with these waste discharge requirements. The Dischargers own and operate the facilities that discharge the waste subject to this Order.

57. 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 94-81* (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.

58. The action to adopt waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality (CEQA), in accordance with the California Code of Regulations, title 14, section 15301.

59. On 15 September 2010, City of Ripon adopted a Negative Declaration for Diamond Pet Food Processors, LLC pursuant to the California Environment Quality Act. The Negative Declaration states that remodeling the heavy industrial paper mill facility into a pet food manufacturing plant will not result in significant effect on water quality for adjoining areas and will not involve the possibility of contaminating a public water supply system or adversely affect groundwater.

60. Compliance with these waste discharge requirements will mitigate or avoid significant impacts to water quality.

61. 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

62. 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.

63. The Dischargers and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

64. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that Order 5-01-148 is rescinded except for the purpose of enforcement and, pursuant to Water Code sections 13263 and 13267, Diamond Pet Food Processors of Ripon, LLC and Ripon Cogeneration, LLC, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Discharge of waste classified as "hazardous" under California Code of Regulations, title 23, section 2510 et seq., is prohibited.
3. Discharge of waste classified as 'designated', as defined in CWC Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Treatment system bypass 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*.
5. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
6. Discharge of toxic substances into the wastewater treatment system or land application areas such that biological treatment mechanisms are disrupted is prohibited.
7. Application of residual solids to the land application areas is prohibited.
8. Discharge of domestic wastewater to the industrial wastewater treatment system is prohibited.

B. Flow Limitations

1. Wastewater influent flows to the clarifier shall not exceed the following limits:

Influent Flow Measurement	Influent Flow Limit
Diamond	
Monthly Average Flow [1]	66,000 gpd
Daily Maximum Flow	87,000 gpd
Ripon Cogeneration, LLC	
Monthly Average Flow [1]	220,000 gpd
Daily Maximum Flow	310,000 gpd

[1] As determined by the total influent flow for the calendar month divided by the number of days in that month.

C. Effluent Limitations

1. Treated wastewater blended with supplemental water discharged to the LAAs from ASB-2 shall not exceed the following limits:

Constituent	Units	Monthly Maximum	Annual Average [3]
BOD_5 [1]	mg/L	40	--
Total Nitrogen	mg/L	10 [2]	--
Total Dissolved Solids	mg/L	--	800
Chloride	mg/L	--	106
pH	Std.	6.5 to 8.5	

[1] 5-day biochemical oxygen demand at 20° C.
[2] Effective beginning 12 months after the adoption date of this Order.
[3] As a flow-weighted average for the calendar year.

Compliance shall be determined based on analytical results for blended effluent samples obtained from the monitoring point immediately downstream of ASB-2 as shown on Attachment C.

D. Groundwater Limitations:

1. Release of waste constituents from any portion of the treatment and disposal system shall not cause groundwater in any compliance well defined in the attached MRP to:
   a. Contain waste constituents in concentrations statistically greater than current groundwater quality.
   b. Exceed a total coliform organism level of 2.2 MPN/100mL.
   c. Exhibit a pH of less than 6.5 or greater than 8.5 pH units.
   d. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

   Compliance with these limitations shall be determined annually based on comparison of data for each well with the groundwater limitations using approved intra-well statistical methods.

E. 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. The discharge shall not cause degradation of any water supply.
3. Wastewater treatment, storage, and disposal shall not cause a pollution or nuisance as defined by the Porter-Cologne Water Quality Control Act, section 13050.

4. Storm water collected from paved areas and roof down-spouts may be discharged into the ASBs or Ponds 1 through 4.
5. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.
6. The Dischargers shall operate all systems and equipment to optimize the quality of the discharge.
7. Objectionable odors originating at the facility shall not be perceivable beyond the limits of the property at an intensity that creates or threatens to create nuisance conditions.
8. As a means of discerning compliance with Discharge Specification B.7, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive weekly sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Dischargers shall report the findings to the Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.
9. The wastewater ponds/basins shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
10. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and 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 shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
11. The wastewater treatment, storage and land application system shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
12. On or about **1 October** of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.10 and B.11.
13. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:
    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

14. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

15. Wastewater contained in any unlined pond shall not have a pH less than 6.5 or greater than 9.0.

F. Land Application Area Specifications

1. The discharge shall be distributed uniformly on the LAAs in compliance with the Discharge Specifications and Effluent Limitations.

2. Discharge of treated wastewater shall not occur outside the boundaries of the LAAs. Treated wastewater application using sprinklers, flood, or drip irrigation is acceptable if the discharge complies with all requirements of this Order.

3. A berm or other means of containment shall be maintained around the perimeter of the LAAs to prevent the runoff of treated wastewater or storm water. Discharge of storm water runoff from the LAAs to surface water drainage courses is prohibited.

4. The LAAs shall be managed to prevent breeding of mosquitoes. More specifically:

   a. All applied irrigation water must infiltrate completely within 24 hours.

   b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.

   c. Low pressure pipelines, unpressurized pipelines, and ditches that are accessible to mosquitoes shall not be used to store wastewater.

5. Application of treated wastewater shall comply with the following setback requirements:

Setback Definition[1]	Minimum Irrigation Setback (feet)
Edge of LAAs to irrigation well	100
Edge of LAAs to domestic well	150
Edge of LAAs to manmade or natural surface water drainage course [2] or spring	50

[1] As defined by the wetted area produced during irrigation.

[2] Excluding ditches used exclusively for tailwater return and drainages that do not discharge to surface waters.

G. Sludge Disposal Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes.

1. Sludge shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal treatment system operation.

2. Any handling and storage of residual sludge 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.

3. Residual sludge shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTFs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Board will satisfy this specification.

4. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

H. Provisions:

1. The following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared as described in Provision H.2.

   a. By **1 January 2013**, the Discharger shall submit a *Groundwater Limitations Compliance Assessment Plan*. The plan shall describe and justify the statistical methods used to compliance for the constituents listed in the Monitoring and Reporting Program. Compliance shall be determined annually based on an intra-well statistical analysis prescribed in Title 27, section 20415(e)(10) to compare monitoring data collected at each compliance well.

   b. By **1 May 2013**, the Dischargers shall submit a *Groundwater Monitoring Well Destruction Plan* for the wells that are not used for the Diamond and Nestle sites. The workplan shall describe the proposed abandonment procedures, which shall comply with *California Well Standards Bulletin 74-90* (June 1991); *State of California Bulletin 94-81* (December 1981); and any more stringent standards adopted by the state or county pursuant to Water Code section 13801. At a minimum, the workplan shall specifically address the monitoring wells listed in Attachment D. For each well that will not be destroyed, provide an explanation of the need to maintain the well for monitoring purpose.

   c. By **30 December 2013**, a *Well Destruction Report* shall be submitted to the Central Valley Water Board that describes in detail the methods used to abandon each well and includes copies of the well abandonment permits issued by the San Joaquin County Environmental Health Department.

d. By **1 December 2013**, the Discharger shall submit and implement a *Salinity and Nutrient Evaluation and Minimization Plan* to address the sources of salinity and nitrogen discharged to the wastewater treatment system and LAAs. At a minimum, the plan shall meet the following requirements outlined in CWC Section 13263.3(d)(3):

i. An estimate of all of the sources of pollutants contributing, or potentially contributing, to the loadings of salinity and nitrogen in the treatment plant influent including water supply, water softeners, and other salinity sources.

ii. An analysis of the methods that could be used to reduce the salinity and nitrogen of the discharge. The analysis shall identify sources, or potential sources, not within the ability or authority of the Dischargers to control.

iii. An estimate of salinity and nitrogen load reductions that may be identified through the methods identified in CWC Section 13263.3(d)(3)(ii).

iv. A plan for monitoring the results of the salinity and nitrogen pollution prevention program.

v. A description of the tasks, costs, and time required to investigate and implement various elements in the salinity and nutrient pollution prevention plan.

vi. A statement of the Discharger's salinity and nutrient pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.

vii. A description of the Discharger's existing salinity and nitrogen pollution prevention programs.

viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.

ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.

x. Progress to date in reducing the concentration and/or mass of salinity in the discharge.

xi. If this report is required, progress in implementation of the plan shall be reported each year in the Annual Monitoring Report required pursuant to Monitoring and Reporting Program R5-2012-0105.

2. If groundwater monitoring results show that the discharge of waste is causing groundwater to contain any waste constituents in concentrations statistically greater than the Groundwater Limitations of this Order, within **120 days** of the request of the Executive Officer, the Dischargers shall submit a BPTC Evaluation Workplan that sets forth the scope and schedule for a systematic and comprehensive technical evaluation of each component of the facility’s waste treatment and disposal system to determine

best practicable treatment or control for each waste constituent that exceeds a Groundwater Limitation. The workplan shall contain a preliminary evaluation of each component of the WWTF and effluent disposal system and propose a time schedule for completing the comprehensive technical evaluation. The schedule to complete the evaluation shall be as short as practicable, and shall not exceed one year from the date of workplan approval. The Dischargers may include an anti-degradation analysis for any waste constituent (s) determined to require a BPTC Evaluation Workplan with the comprehensive technical evaluation. The Central Valley Water Board may, after evaluation of the BPTC technical report and anti-degradation analysis, reopen this Order for modification of Groundwater Limitation D. 1. a.

3. At least **180 days** prior to any sludge removal and disposal, the Dischargers shall submit a *Sludge Cleanout Plan*. The plan shall include a detailed plan for sludge removal, drying, and disposal. The plan shall specifically describe the phasing of the project, measures to be used to control runoff or percolate from the sludge as it is drying, and a schedule that shows how all dried sludge will be removed from the site prior to the onset of the rainy season **(1 October)**.

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 Central Valley Water Board by **31 January**.

5. 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 workplans 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 Dischargers shall bear the professional's signature and stamp.

6. The Dischargers 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 Dischargers shall proceed with all work required by the foregoing provisions by the due dates specified.

7. The Dischargers shall comply with the Monitoring and Reporting Program R5-2012-0105, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

8. The Dischargers shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are

attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

9. The Dischargers shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Dischargers 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 Dischargers shall state the reasons for such noncompliance and provide an estimate of the date when the Dischargers will be in compliance. The Dischargers 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 Dischargers shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Dischargers 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 Dischargers when the operation is necessary to achieve compliance with the conditions of this Order.
11. The Dischargers shall use the best practicable cost-effective control techniques, including proper operation and maintenance, to comply with this Order.
12. As described in the Standard Provisions, the Dischargers shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
13. The Dischargers shall report to the Central Valley Water Board any toxic chemical release data reported to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
14. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or reclamation areas, used to justify the capacity authorized herein and assure compliance with this Order, the Dischargers shall notify the Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
15. In the event of any change in control or ownership of the facility, the Dischargers 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.
16. To assume operation as Dischargers 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 CWC. 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.

17. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

18. If, in the opinion of the Executive Officer, the Dischargers fail 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 or with the WDRs 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.

19. The Central Valley Water Board will review this Order periodically and may revise requirements when necessary.

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

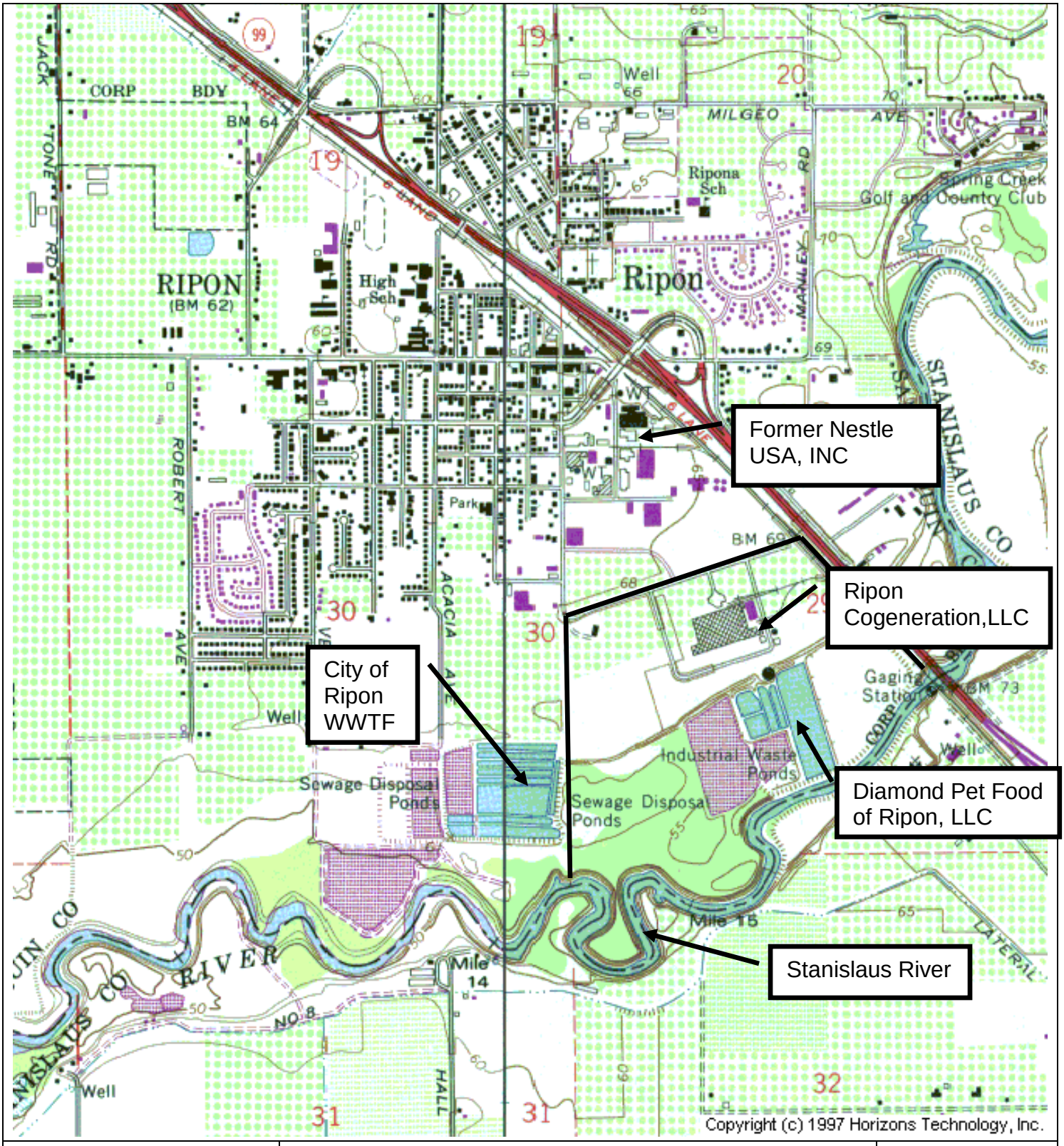
or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify 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 4 October 2012.

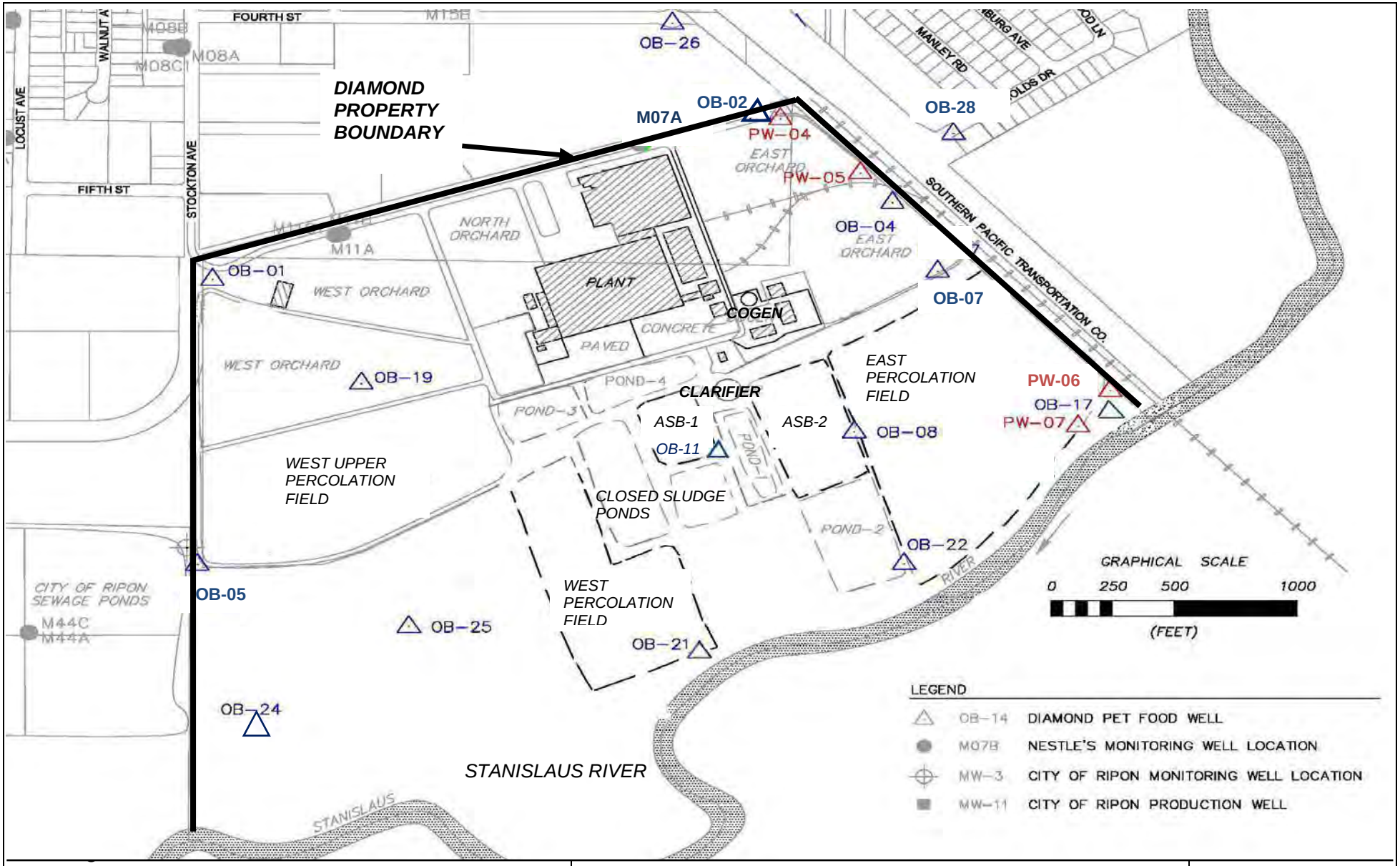
Original signed by

PAMELA C. CREEDON, Executive Officer

LF:8/31/12



Drawing Reference: USGS 7.5' Quadrangle Ripon, CA	**SITE LOCATION MAP** DIAMOND PET FOOD PROCESSORS OF RIPON, LLC AND RIPON COGENERATION, LLC DIAMOND PET FOOD RIPON FACILITY SAN JOAQUIN COUNTY	N W E S 1 in =1500 ft



Diamond Pet Food Processors of Ripon, LLC
Report of Waste Discharge
July 2011

SITE PLAN
DIAMOND PET FOOD PROCESSORS OF RIPON, LLC
AND RIPON COGENERATION, LLC
DIAMOND PET FOOD RIPON FACILITY
SAN JOAQUIN COUNTY

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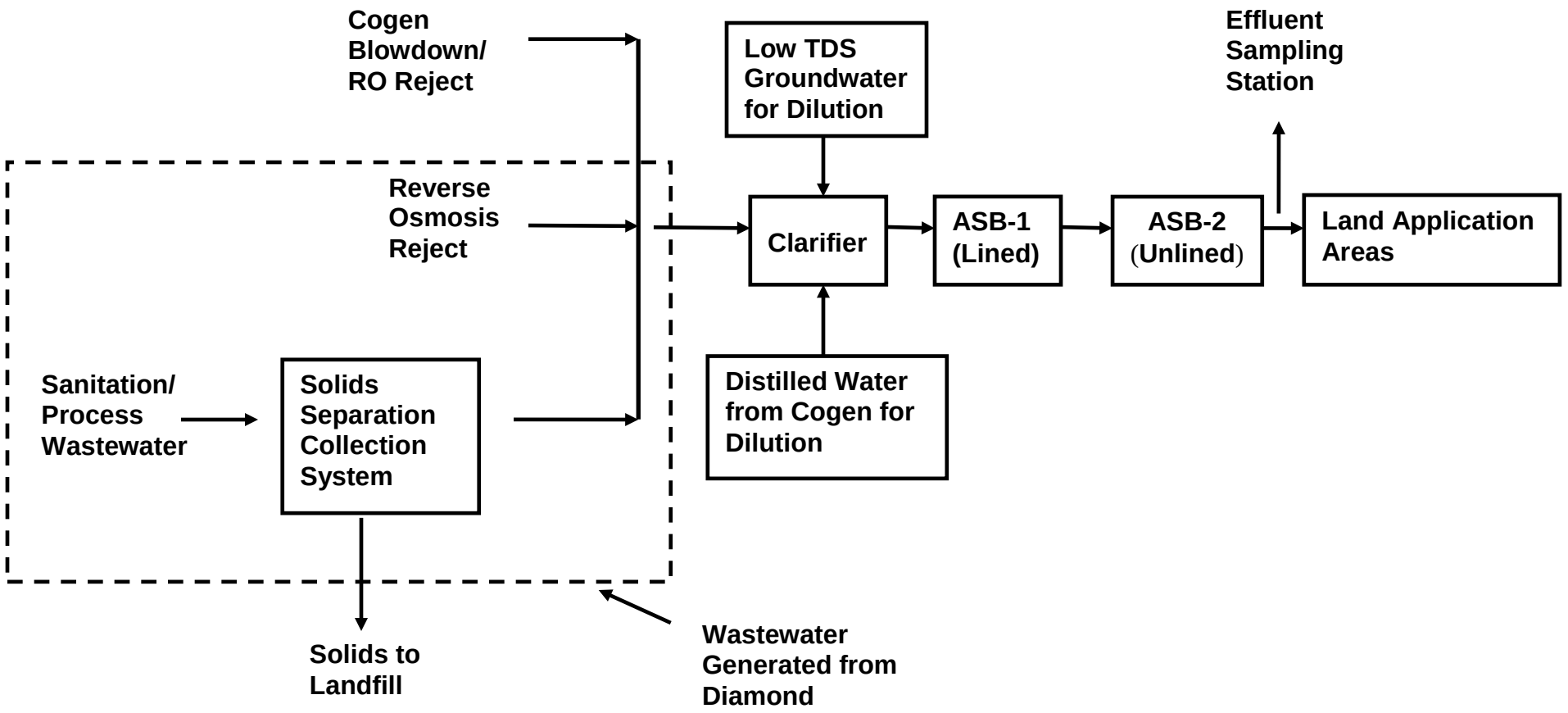

Drawing Reference: Diamond Pet Food Processors of Ripon, LLC Report of Waste Discharge Supplemental February 2012	PROCESS SCHEMATIC DIAMOND PET FOOD PROCESSORS OF RIPON, LLC AND RIPON COGENERATION, LLC DIAMOND PET FOOD RIPON FACILITY SAN JOAQUIN COUNTY	

ORDER R5-2012-0105
ATTACHMENT D

DIAMOND PET FOOD PROCESSORS OF RIPON, LLC
AND RIPON COGENERATION, LLC
DIAMOND PET FOOD RIPON FACILITY
SAN JOAQUIN COUNTY

List of Groundwater Monitoring Wells to be Considered for Potential Destruction

Zone	Wells
First Zone	OB-3, OB-6, OB-10, OB-12, OB-13, OB-14, OB-15, OB-16, OB-18, OB-19, OB-20, OB-27, M-7-B, and M-11-B
Second Zone	TH-2, TH-4, TH-5, TH-7, TH-9, M-7-A and M-11-A
Third Zone	TH-3, TH-6, TH-8, TH-10, TH-11, M-11-C and M-19-C
Forth Zone	TH-1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-0105

FOR
DIAMOND PET FOOD PROCESSORS OF RIPON, LLC AND
RIPON COGENERATION, LLC
DIAMOND PET FOOD RIPON FACILITY
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) presents requirements for monitoring of wastewater flow, influent, aeration stabilization basins, effluent, land application areas (LAAs), groundwater, and sludge. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

Central Valley Water Board staff shall approve specific sampling locations prior to any sampling activities. All samples shall be representative of the volume and nature of the discharge. The time, date, and location of each sample shall be recorded on the sample chain of custody form.

Field testing instruments (such as those used to test pH and dissolved oxygen) may be used provided that:

1 The operator is trained in proper use and maintenance of the instruments;

2 The instruments are calibrated prior to each monitoring event;

3 The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency;

4 Field calibration reports are submitted as described in the "Reporting" section of this MRP.

FLOW MONITORING

Wastewater and dilution water flow rates shall be monitored as follows:

Flow	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Wastewater generated by Diamond	gpd	Meter Observation	Daily	Monthly
Wastewater generated by Ripon Cogeneration, LLC	gpd	Meter Observation	Daily	Monthly
Groundwater for dilution	gpd	Meter Observation	Daily	Monthly
Distilled water for dilution	gpd	Meter Observation	Daily	Monthly

INFLUENT MONITORING

Influent samples shall be collected in the clarifier after the wastewater is diluted with low TDS groundwater and distilled water. Grab samples will be considered to be representative of the overall influent. Influent monitoring shall include, at a minimum the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
BOD_5 [1]	mg/L	Grab	Monthly	Monthly
pH	Standard Units	Grab	Monthly	Monthly
Total Nitrogen	mg/L	Composite	Monthly	Monthly
Total Dissolved Solids	mg/L	Composite	Monthly	Monthly
Electrical Conductivity	µmhos/cm	Composite	Monthly	Monthly

[1] 5-day biochemical oxygen demand.

AERATION STABILIZATION BASIN MONITORING

Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the wastewater in the Aeration Stabilization Basins (ASBs). Freeboard shall be measured vertically from the surface of the basin water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet. Monitoring of basins shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
pH	Standard Units	Grab	Weekly	Monthly
Dissolved Oxygen [1]	mg/L	Grab	Weekly	Monthly
Freeboard [2]	0.1 feet	Measurement	Weekly	Monthly
Odors [2]	--	Observation	Weekly	Monthly
Berm condition [2, 3]	--	Observation	Weekly	Monthly

[1] Samples shall be collected at a depth of one foot, opposite the inlet.
[2] For each basin.
[3] Containment berms shall be observed for signs of seepage or surfacing water along the exterior toe of the berms.

EFFLUENT MONITORING

Effluent samples shall be representative of the treated wastewater blended with dilution water prior to discharge to the LAAs. The effluent samples shall be obtained from the effluent monitoring point immediately downstream of the ASB-2. At a minimum, effluent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Electrical Conductivity	µmhos/cm	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Chloride	mg/L	Grab	Monthly	Monthly
Total Nitrogen	mg/L	Grab	Monthly	Monthly
BOD_5	mg/L	Grab	Monthly	Monthly
pH	pH units	Grab	Monthly	Monthly
Standard Minerals [1]	mg/L	Grab	Annually	Annually

[1] Standard minerals shall include, at a minimum, the following elements/compounds: boron, calcium, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

LAND APPLICATION AREA MONITORING

Monitoring shall be conducted daily when the LAAs are used. Evidence of erosion, irrigation runoff, or the presence of nuisance conditions shall be noted in the report. Effluent monitoring results shall be used in calculations to determine loading rates at the LAAs. Monitoring of the LAAs shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow to each LAA	gpd	Meter Observation	Daily	Monthly
Acreage Applied	Acres	Calculated	Daily	Monthly
Water Application Rate [1]	Inches/day	Calculated	Daily	Monthly
Rainfall [2]	Inches	Observation	Daily	Monthly
Total Nitrogen Loading Rate	lbs/ac/month	Calculated	Monthly	Monthly
LAA Containment Condition	NA	Observation	Weekly	Monthly

[1] Average calculated for each LAA.
[2] Rainfall data collected from the weather station that is nearest to the LAAs or a properly maintained on-site rain gauge.

At least **once per week** when the LAAs are being used, the LAAs shall be inspected to identify any equipment malfunction or other circumstances that might allow tailwater or storm water runoff to leave the irrigation area and/or create ponding conditions that violate the Waste Discharge Requirements. A daily log of each inspection shall be kept at the facility and be submitted with the monthly monitoring reports. Photocopies of entries into an operator's field log are acceptable. The monthly report shall clearly states whether or not the LAAs were used during that month.

GROUNDWATER MONITORING

The groundwater monitoring program applies to groundwater monitoring wells listed as follows and any wells subsequently installed under direction of the Central Valley Water Board.

Monitoring Wells

OB-1 [1]	OB-2	OB-4	OB-5 [1]	OB-7
OB-8	OB-11	OB-17 [1]	OB-19	OB-21 [1]
OB-22 [1]	OB-24 [1]	OB-25 [1]	OB-26	OB-28

[1] Indicates wells not used for compliance monitoring.

Prior to sampling, groundwater elevations shall be measured. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. Samples shall be collected and analyzed using approved EPA methods or other methods approved by the Central Valley Water Board. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Groundwater Elevation [1]	0.01 Feet	Calculated	Quarterly
Depth to Groundwater	0.01 Feet	Measurement	Quarterly
Gradient	Feet/Foot	Calculated	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly
pH	Standard Units	Grab	Quarterly
Electrical Conductivity	µmhos/cm	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Nitrate as N	mg/L	Grab	Quarterly
Standard Minerals [2]	mg/L	Grab	Annually

[1] Groundwater elevation shall be based on depth-to-water using a surveyed measuring point elevation on the well and a surveyed reference elevation.

[2] Standard minerals shall include, at a minimum, the following elements and compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

WATER SUPPLY MONITORING

Diamond and Ripon Cogeneration, LLC shall monitor the two industrial water supply sources separately. Sampling stations shall be established where representative samples of each water supply can be obtained. Water supply monitoring should include all operable production wells in use. Water supply monitoring shall include, at a minimum, the following:

Constituents	Units	Sampling and Reporting Frequency
Standard Minerals [1]	mg/L	Annually
Electrical Conductivity	µmhos/cm	Annually
Total Dissolved Solids	mg/L	Annually

[1] Standard minerals shall include, at a minimum, the following elements and compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

SOLIDS MONITORING

The Discharger shall record and report monthly the quantity, disposal location, and method of disposal of any wastewater treatment sludge. If sludge is shipped offsite during the reporting period, then an estimated amount and location of disposal shall be reported in the monthly report and the hauler shall be identified.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the Business and Professions Code sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). At a minimum, the reports shall include:

1. Results of the flow, influent, effluent, aeration stabilization basin, and LAA monitoring;
2. Average monthly influent flows (wastewater generated by Diamond and wastewater generated by Ripon Cogeneration, LLC) for the month, the maximum daily influent flows and the monthly total flows to the clarifier including influent flows, distilled water and groundwater for dilution;
3. Copies of inspection logs;
4. A comparison of the monitoring data to the discharge specifications and an explanation of any violation of those requirements;
5. Copies of laboratory analytical report(s); and
6. Copies of current calibration logs for all field test instruments.

B. Quarterly Monitoring Report

Quarterly monitoring reports shall be submitted to the Central Valley Water Board by the **1st day of the second month after the quarter (i.e. the January-March quarterly report is due by May 1st).** The Quarterly Monitoring Reports shall include the following:

1. Results of groundwater monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to

verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;

3. For each monitoring event:
   a. Calculation of groundwater elevations, determination of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any; and
   b. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
4. Summary data tables and graphs of historical and current water table elevations and analytical results;
5. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and
6. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

In addition to the monthly and quarterly monitoring reports, an Annual Report shall be prepared. The Annual Report shall be submitted to the Central Valley Water Board by **1 February** each year. The Annual Report shall include the following:

1. The results from annual monitoring of the effluent, groundwater, and water supply;
2. The maximum monthly influent flows and the annual total flows to the clarifier including influent flows, distilled water and groundwater for dilution;
3. Tabular summaries of monitoring data collected during the year;
4. A digital database file (Microsoft Excel) containing historic groundwater and effluent data;
5. An evaluation of the performance of the WWTF, including discussion of capacity issues, nuisance conditions, and a forecast of the flows anticipated in the next year;
6. Progress in implementation of the *Salinity and Nutrient Evaluation and Minimization Plan*, including a comparison of total salinity and nutrient loading to each LAA for the current and previous years;
7. A statistical evaluation of groundwater quality and compliance with the Groundwater Limitations of the WDRs in accordance with the approved *Groundwater Limitations Compliance Assessment Plan* submitted pursuant to Provision1.a. of the WDRs. Statistical analyses shall be presented for the following constituents in the compliance wells: electrical conductivity, total dissolved solids, chloride, and nitrate nitrogen. The compliance wells are: OB-2, OB-4, OB-7, OB-8, OB-11, OB-19, OB-26, and OB-28;
8. All groundwater evaluations shall be prepared under the direct supervision of a registered Professional Engineer or Geologist and signed by the registered professional;

9. A description of salinity source control methods that have been implemented in the calendar year;
10. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
11. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
12. A forecast of influent flows, as described in Standard Provision No. E.4; and

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: Original signed by
PAMELA C. CREEDON, Executive Officer

4 October 2012
(Date)

LF: 8/24/12

INFORMATION SHEET

WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-0105
DIAMOND PET FOOD PROCESSORS OF RIPON, LLC AND
RIPON COGENERATION, LLC
DIAMOND PET FOOD RIPON FACILITY
SAN JOAQUIN COUNTY

Background

Diamond Pet Food Processors of Ripon, LLC (hereafter Diamond) owns and operates the pet food processing facility and the associated wastewater treatment and disposal facility, as shown on Attachment A. Veresen, Inc. owns Ripon Cogeneration, LLC, whose neighboring power plant has historically discharged industrial wastewater to Diamond's wastewater treatment facility (WWTF). Diamond and Ripon Cogeneration, LLC are hereafter jointly referred to as "Dischargers" and are responsible for compliance with these WDRs.

The Diamond plant site was formerly a paper mill, which was owned and operated by the Neenah Paper Fox River, LLC. The paper mill was closed in May 2009 and there has been no discharge of process wastes from the paper mill since then. However, Ripon Cogeneration, LLC continued to discharge industrial process waste to the wastewater treatment facility. In October 2010, Diamond purchased the site and has refitted the industrial paper mill plant to manufacture pet food.

WDRs Order 5- 01-148, adopted by the Central Valley Water Board on 14 June 2001, prescribes requirements for the Neenah Paper Fox River LLC paper mill. The Order describes an average dry weather flow limit of 60 million gallons per month and a maximum daily flow limit of 2.5 million gallons per day (mgd). The purpose of this revision is to prescribe requirements for Diamond and Ripon Cogeneration, LLC and reduce the influent flow limit to 0.29 mgd as a monthly average. Therefore, Order 5- 01-148 will be rescinded and replaced with this Order.

Previous Facility and Discharge

Neenah manufactured several grades of fine papers from purchased pulps including virgin bleached pulp, deinked post-consumer waste, and waste paper. The paper mill's maximum daily production rate was 200 tons of paper. The wastewater generated from paper processing was applied to land on the mill property. Wastewater flows to the clarifier from Neenah and Ripon Cogeneration, LLC averaged 1.0 to 2.0 mgd.

Ripon Cogeneration, LLC has historically discharged cooling tower blowdown and reverse osmosis (RO) reject brine from the neighboring cogeneration plant to the paper mill's wastewater treatment system under a long-term agreement with Neenah Paper Fox River, LLC. Ripon Cogeneration, LLC's wastewater flows recently ranged between 0.2 and 0.3 mgd with an average TDS concentration of 1,000 mg/L. In the past, Ripon Cogeneration, LLC's wastewater was blended with paper mill wastewater in the clarifier before land application. The overall blended and treated wastewater had an average total dissolved solids (TDS) concentration of 812 mg/L in 2008 with a range between 682 mg/L and 928 mg/L. Since the paper mill closed in May 2009, Ripon Cogeneration, LLC's cooling tower blowdown/RO reject

brine has been diluted with low TDS groundwater before being discharged to the LAAs; the effluent had an average TDS concentration of 526 mg/L from May 2010 through June 2011.

The wastewater treatment facility consists of a solids separation system, a clarifier, two aeration stabilization basins (ASB-1 and ASB-2) operated in series, and 86 acres of percolation fields and orchards (Land Application Areas, "LAAs"). ASB-1 and ASB-2 are equipped with mechanical aerators. In addition, Ponds 1 through 4 are used only to contain excess wastewater in case of treatment system upset or to store storm water runoff during the wet seasons. Storm water collected in the ponds is applied to the LAAs and no storm water runoff is discharged to surface waters. There are two closed paper mill sludge disposal units onsite, which have inert paper sludge and are covered with a minimum of one foot thick vegetative soil graded for draining purposes. A site map is shown on Attachment B.

The LAAs consist of the east, and upper west and west percolation fields (43 acres), and east, west and north orchards (43 acres). There are no crops on the three percolation fields, but there are eucalyptus and redwood trees on the orchards. The wastewater in ASB-2 is applied to the LAAs via flood irrigation for disposal by percolation.

Changes in the Discharge

Diamond uses dry ingredients, oils, fats and fresh meat to manufacture 250,000 tons of pet food each year. Diamond proposed to start manufacture in April 2012 and to discharge wastewater into the onsite wastewater treatment system, and is currently operating at approximately 60 percent of production capacity. With the exception of the wastewater facilities, the paper mill manufacturing facilities have been removed and restructured for pet food manufacture. Diamond does not propose to improve the existing wastewater treatment facility. However, the projected wastewater flow rates and quality are different from the previous paper mill's discharge.

Diamond uses RO systems to improve the quality of the groundwater supply that is used for its processes. Diamond's wastewater consists of the RO reject brine, and process and sanitation wastewater. In addition, Diamond will continue to accept Ripon Cogeneration, LLC's cooling tower blowdown and RO reject brine. Diamond's process and sanitation wastewater is collected into a solids separation collection system and then the supernatant is pumped into a clarifier. The solids are hauled offsite to a permitted landfill.

The wastewater from both Ripon Cogeneration, LLC and Diamond is mixed in the circular clarifier, where wastewater is diluted with low TDS groundwater from the onsite production wells and distilled water purchased from Ripon Cogeneration, LLC. The wastewater flows into two ASBs in series from the clarifier and then is applied to the LAAs via flood irrigation. The wastewater treatment process schematic is shown on Attachment C.

The overall influent flow rate will average approximately 700,000 gallons per day (gpd), which includes wastewater generated from Diamond and Ripon Cogeneration, LLC, and dilution water. The wastewater generated by Diamond and Ripon Cogeneration, LLC will average approximately 283,000 gpd, which is approximately 40 percent of the total flow.

The projected overall influent TDS concentration of 684 mg/L for Diamond and Ripon Cogeneration, LLC is less than the paper mill's effluent average TDS concentration of 812 mg/L in 2008. In addition, the proposed TDS loading rate is approximately 61 percent of the paper mill's discharge. To address the sources of salinity discharged to the wastewater treatment system and the LAAs, this Order requires the Dischargers to submit a *Salinity and Nutrient Evaluation and Minimization Plan*.

Diamond will continue to manage the LAAs as Neenah did: the LAAs will be flood irrigated as needed to dispose of the treated wastewater by percolation. The RWD did not specify how the LAAs will be operated or how wastewater will be contained within the LAAs. This Order requires the Dischargers to appropriately operate the LAAs to prevent nuisance or wastewater runoff.

The RWD indicates that the WWTF has enough storage and disposal capacity for the storm water collected at the facility and approximately 700,000 gpd of the treated wastewater including dilution water. The application of 700,000 gpd of water over the 86-acre LAAs equates to a daily application depth of 0.3 inches. Therefore, the flow limitations of this Order are based on the daily influent flows excluding the dilution water provided in the RWD.

Groundwater Conditions

WDRs Order 5- 01-148 required that Neenah determine background groundwater quality to establish Water Quality Protection Standards (WQPSs). The WQPSs for the shallow zone were established based on the groundwater monitoring data in the wells OB-10, OB-14, OB-16, OB-17, OB-21 and OB-22, which are adjacent to the Stanislaus River. The WQPSs were approved in August 2006.

The discharges from Neenah and Ripon Cogeneration, LLC degraded groundwater quality, primarily with salinity constituents. In order to comply with the WDRs Order 5-01-148, Neenah planted the current orchard in a failed attempt to reduce the degradation by phytoremediation. In 2007 and 2009, Neenah applied low salinity fresh water to the percolation fields in order to improve groundwater quality and to meet the WQPSs. When the paper mill was closed in May 2009, the groundwater under portions of the paper mill site had not met these standards.

Groundwater quality at the site has been monitored since January 1992. Four aquifer zones beneath the site have been identified. Diamond has 36 active monitoring wells and five groundwater production wells. In addition, Diamond monitors six other monitoring wells that

are located at the Diamond site but owned by Nestlé USA, Inc. Therefore, Diamond is monitoring a total 47 monitoring and supply wells. .

Shallow groundwater is typically encountered approximately 35 feet below ground surface and the shallow groundwater flow direction is variable. The July 2010 groundwater elevation data show that mounding occurred in the vicinity of the Discharger's west percolation field and offsite north of the City of Ripon's WWTF ponds, which are immediately west of the Diamond site; however, the July 2011 groundwater elevation data show that the groundwater flow was away from the Stanislaus River and towards the northwest. In general, mounding occurs onsite and offsite in the vicinity of the City of Ripon's WWTF ponds. The City's WWTF treats up to 2.0 mgd and disposes of wastewater via percolation/evaporation ponds and land application area.

Shallow groundwater quality has been characterized by monitoring wells in the first aquifer zone since January 1992. Based on recent shallow zone groundwater monitoring data from February 2007 through October 2011, the groundwater average TDS concentrations ranged between 630 mg/L and 1,449 mg/L in the compliance wells. After the paper mill was closed in May 2009, Ripon Cogeneration, LLC continued to discharge and dilute the discharge with lower salinity fresh water. Since then, the groundwater TDS concentrations in wells OB-2, OB-08, OB-10, OB-18, OB-19 and OB-20 have slightly decreased. However, the TDS concentrations in other shallow zone wells have not changed significantly.

The predicted wastewater TDS concentration of 684 mg/L is less than the TDS concentrations in the groundwater monitoring wells at the site, except for the wells near the river (Wells OB-17 and OB-22). Based on the projected effluent quality, the method of disposal and existing groundwater quality, it is unlikely that the proposed discharge will significantly degrade the groundwater quality for TDS.

This Order requires the Dischargers to monitor certain monitoring wells in the first aquifer zone. Unused monitoring wells that are not required to be monitored in this Order and are not monitored by Nestle for remediation can be destroyed with the approval of the Central Valley Water Board. This Order requires the Dischargers to submit a *Groundwater Monitoring Well Destruction Plan*.

Discharge Prohibitions, Specifications and Provisions

Influent flows to the clarifier shall not exceed the following limits:

Influent Flow Measurement	Influent Flow Limit
Diamond	
Monthly Average Flow [1]	66,000 gpd
Daily Maximum Flow	87,000 gpd
Ripon Cogeneration, LLC	
Monthly Average Flow [1]	220,000 gpd
Daily Maximum Flow	310,000 gpd

[1] As determined by the total influent flow for the calendar month divided by the number of days in that month.

This Order prescribes groundwater limitations that implement water quality objectives for groundwater from the Basin Plan.

In addition, this Order prescribes effluent limitations for BOD, total nitrogen, TDS, chloride and pH.

The Provisions require submittal of the following technical reports: *Groundwater Limitations Compliance Assessment Plan, Groundwater Monitoring Well Destruction Plan, and Salinity and Nutrient Evaluation and Minimization Plan*.

The Monitoring and Reporting Program is designed to verify compliance with effluent limitations, groundwater limitations, and operational requirements of the WDRs.

LF: 8/24/12