



January 11, 2010

VIA EMAIL TO: jpyle@waterboards.ca.gov

Mr. Lonnie M. Wass, Supervising Engineer
Mr. Jeff Pyle, Waste Discharge Requirement South Unit
California Regional Water Quality Control Board
Central Valley Region
1685 E Street, Fresno, California 93706

Re: Hilmar Cheese Company Tentative Waste Discharge Requirements and Time Schedule Order

Dear Mr. Wass and Mr. Pyle:

The Hilmar Cheese Company ("HCC") would like to sincerely thank Regional Water Quality Control Board ("Water Board") staff for the time and effort undertaken to create the draft Waste Discharge Requirements ("WDR"), Time Schedule Order ("TSO") and the accompanying Monitoring and Reporting Program ("MRP"). HCC provides the following comments on the first draft of these documents in order to make them more legally and factually accurate than the previous version. HCC requests that the Water Board make the changes set forth below and in the attached detailed change list and redline versions of the documents before a final WDR, MRP, and TSO are adopted at the January 2010 Central Valley Regional Water Board meeting.

1. Comments on the Tentative Order – Waste Discharge Requirements:

a. Primary and Secondary Lands effluent data.

HCC has provided updated data through its redline version and in spreadsheets accompanying this comment letter so that the WDR can reflect data collected through the end of 2009. HCC wants to ensure that the Water Board and the public have the most accurate and recent data to demonstrate the efficacy of treatment at the HCC water reclamation plant. HCC requests that this updated data be placed in the record and be used in the effluent tables in Paragraphs 19 and 20 of the final version of the WDR.

b. Groundwater Quality data.

Paragraph 42 purports to discuss data collected by Jacobsen James under the Cleanup and Abatement Order ("CAO"). However, Jacobson James cannot verify the numbers referenced in this paragraph. A review of the historical, 2008 and 2009 supply well analytical data could not find matching information; the monitoring well data was also reviewed to see if perhaps this was the source data. The following information is provided based on the review of the supply well analytical data collected during the May-June 2008 sampling event: "Samples were collected

from 42 supply wells in 2008, which included 33 domestic wells, 5 industrial wells and 4 irrigation wells. The maximum TDS result during the supply well sampling was 1,400 mg/L (EC = 2,300 μ mhos/cm). TDS concentrations in the supply wells ranged from 160 to 1,400 mg/L.”

Also, Jacobson James cannot confirm the source data used as the basis for the last sentence in this paragraph, and the reference point to which the “semi-confined and confined” aquifer data was compared to was not identified. All the supply wells are screened below 50 feet below ground surface (“bgs”) (into the semi-confined and/or confined aquifers), with the exception of one supply well (IN-4), which is screened to 20 feet bgs and is in the unconfined aquifer.

Paragraph 43 of the tentative WDR provides what has been termed “ambient/background” groundwater quality. HCC suggests that the title of the table included in this paragraph be modified to “Upgradient” since this data does not accurately characterize the background groundwater quality in the Reclamation Areas. Moreover, no technical basis was provided as to how the values presented for the six constituents were calculated by the Water Board. As such, comparison with this upgradient groundwater is not appropriate. Existing groundwater quality in Secondary Lands, not upgradient, is the point for comparison. Therefore, the values in this table in Paragraph 43 are not appropriately used for compliance purposes to set “background” groundwater quality.

c. Effluent limitations.

To provide additional operating flexibility and an understanding of effluent variability, HCC proposes that the monthly average effluent limitations for at least TDS and EC be raised slightly and that additional 12-month rolling averages be added to ensure long-term compliance with the effluent limitations of 900 μ mhos/cm for Electrical Conductivity (“EC”) and the 500 mg/L for Total Dissolved Solids (“TDS”). Since these values are not set to protect any acute effects, such flexibility will not adversely affect any beneficial uses, including municipal drinking water (“MUN”) for the Maximum Contaminant Levels (“MCLs”), which are incorporated by reference into the Basin Plan. If the requested changes are not made, HCC makes the following comments related to the water quality objectives being used by the Water Board to set the proposed effluent limitations.

i) Improper Use of Incorporated by Reference MCLs

HCC expresses its concern with the use of water quality objectives such as MCLs that are prospectively incorporated by reference from other agencies since those agencies do not follow the Water Code, or the California Environmental Quality Act (“CEQA”), when adopting those criteria. Therefore, use of these criteria by the Water Board without a Water Code section 13241 analysis and section 13242 implementation plan violates state law and amounts to an unlawful delegation of Basin Planning activities to another entity.

The tentative WDR in Paragraphs 50 and 51 relies upon the Basin Plan's Chemical Constituents objective to prospectively incorporate by reference drinking water Maximum Contaminant Levels (MCLs) contained in Title 22 of the California Code of Regulations. Such incorporation by reference of another agencies' criteria is legally invalid¹ and is currently being challenged at the First District Court of Appeals in the *City of Vacaville* case.

By including language in the Water Board's prospectively incorporating by reference MCLs from the Department of Health Services' drinking water standards to apply as water quality objectives for groundwater designated MUN without further hearings, the Water Board abdicated its responsibility to consider the factors contained in Water Code sections 13241 and to develop an implementation plan for these incorporated objectives as required under Water Code section 13242. This analysis was required when the prospective incorporation language was placed in the Basin Plan, and then each time a new or more stringent MCL is newly incorporated into Title 22.

The use of the prospective, incorporation-by-reference method of adopting water quality objectives for those water bodies designated MUN violates the requirements that affected state and local agencies must be consulted with and their concerns be considered, that the applicable public notice and participation requirements of the Water Code must be met, and that changes to a Basin Plan must be approved by the State Board before those changes become effective. *See* Water Code §§13240, 13244, and 13245.

It is very important to note that the Water Board failed to consider the Water Code 13241 factors when the MCLs used as objective was originally established because the Water Board alleged that "there would be no purpose for the Regional Board to consider the same information that has already been considered in an open, public process by DHS."² Contrary to findings made by the OAL and Regional Water Board,³ deferral of these obligations to the Department of Health

¹ On May 10, 1995, the Office of Administrative Law ("OAL") issued its Notice of Approval and Disapproval, and Reasons for Approval and Disapproval of Parts of a Rulemaking Action on the 1994 Basin Plan Amendments (OAL File No. 95-0328-01, attached as Exhibit C). This approval /disapproval decision on the 1994 Basin Plan determined that "[a] prospective incorporation-by-reference (one that automatically incorporates future changes to an incorporated document) is of dubious validity." *Id.* at pg. 10. However, the OAL conditionally approved of the Chemical Constituents language so long as the Regional Board made allegedly "nonsubstantive clarifications" that included the prospective incorporation by reference language. *Id.* at pgs. 3-4.

The Water Board included the OAL language in the next reprint of the Basin Plan without subsequent public comment or hearing on or State Board approval of these changes in violation of state law. *See* Basin Plan at pg. III-3.00; Water Code §13244 and §13245. Further, the Water Board failed to comply with Water Code sections 13241 and 13242 in relation to this expansion of the objectives contained in the Basin Plan.

² If the requested changes are not made, HCC requests that the entire record for the Basin Plan related to the adoption and/or amendment of the Chemical Constituents objective be included in the record for this permit. This record will demonstrates that the Water Board failed to consider the mandatory Water Code factors when this objective was adopted and/or amended.

³ *See* OAL File No. 95-0328-01, pg. 12 (OAL approved the prospective incorporation-by-reference of specified standards for drinking water adopted by the Department of Health Services (DHS) for waters designated by the

Service's (DHS) MCL adoption hearings was inappropriate and unlawful because DHS does not adopt MCLs with the intent and understanding that the MCLs will be used for any other purpose than drinking water standards applied to public water agencies' supply of tap water to the public. The Water Board applies the MCL values to groundwater rather than to the tap water regulated by DHS, and the two waters are not comparable. Furthermore, DHS does not notify all dischargers of potential changes to MCLs to provide them with an opportunity to review and comment on proposed changes, and DHS does not comply with the explicit Water Code or CEQA requirements for adoption of Basin Plans and water quality objectives.⁴ Therefore, the Water Board cannot delegate its Basin Planning powers to DHS,⁵ and unlawfully relied upon DHS hearings as a substitute for its own mandatory water quality objective-setting procedures.

ii) Use of a Non-Regulatory Agricultural Goal of 900 μ mhos/cm Based on Interpretation of a Narrative Objective

For the reasons provided above, the Chemical Constituents objective and the underlying MCLs prospectively incorporated by reference are of dubious legal validity and should not be used as "applicable water quality objectives" to set effluent limitations. The record contains no evidence that a non-regulatory agricultural water quality goal of 900 μ mhos/cm is reasonably required to be applied to the Hilmar area or that salt-sensitive crops grown in the area using groundwater as a supply are likely to be impacted based on the manner in which those crops are irrigated, or whether any actual adverse impacts have been registered to confirm the necessity of additional restrictions above and beyond existing levels of EC. These site specific evaluations must be made before using a water quality goal derived predominantly on prevailing conditions in the Middle East, an area with different climactic and hydrological characteristics. *See Own Motion Review of the City of Woodland State Board Order No. WQO 2004-0010 (April 22, 2004).*

In the *City of Woodland* Order, the State Board determined that when the Regional Board applies narrative objectives, the Regional Board must evaluate whether the specific numerical values used "are relevant and appropriate to the situation at hand." *Id.* Applying an EC value without further study as to its general applicability, was found by the State Board to be inappropriate. *Id.* at pg. 7. The State Board found that "the true suitability of a given water depends on the specific conditions of use and on the management capability of the user." *Id.* In the *Woodland* case, as is the case here, the specific uses of the waters in question were not studied to determine an appropriately protective EC value given the actual and probable future uses of the waters in question.

Regional Board as MUN in part because "the public has a continuing opportunity to participate in proposed changes to the drinking water standards.")

⁴ Since DHS does not adopt MCLs as water quality objectives, their CEQA analysis does not extend to potential impacts of applying these numbers as water quality objectives to all waters of the State.

⁵ The Water Board's delegation powers only allow delegation of certain activities and only to the Board's Executive Officer. *See* Water Code §13223(a). Delegation of basin planning activities to DHS is not authorized.

The State Board made it clear that guidance numbers for EC (such as the MCLs) “cannot be interpreted as an absolute value.” *Id.* Rather, the Water Board must determine whether site-specific conditions applicable to HCC’s discharge allow some relaxation in the value imposed. *Ibid.*; *see also* Water Code §13263(a). That was not done in this case.

When a regulation or other statutory interpretation by an administrative agency appears to be erroneous because of subsequent administrative or judicial decisions, it is the agency’s duty to conform to the correct interpretation. *See Pacific Motor Transport Co. v. State Board of Equalization*, 28 Cal. App. 3d 230, 242 (1972). Otherwise, the agency would be allowed to function in a manner “wholly unintended by the law.” *Id.* Furthermore, the State Board has specifically found that “the treatment of [State Board] decisions and orders as precedent helps provide greater consistency and predictability in agency decision making.” *See In the Matter of Fishery Protection and Water Right Issues of Lagunitas Creek*, State Board Order No. WR96-1 at pg. 22, n.11 (1996). For these reasons, and similar to the State Board’s *Woodland* Order, flexibility in the EC limit must be provided unless and until an analysis of the proper number is determined.

There is no reason why the effluent limit for EC could not be 1600 $\mu\text{mhos/cm}$ (i.e., the highest end of the allowable range of MCL values for EC in 22 C.C.R. Table 64449-B). This value could apply year round as a 6-month or annual average. *See City of Woodland* permit, R5-2003-0031 at pg. 21 (although EC limit was removed by the State Water Board for the reasons described above, that limit was set as a long-term average). Longer term average limits are appropriate because monthly average limitations may not be practicable or sustainable given the extraordinary treatment required to meet such limits. *See* Water Code §13263 (requiring consideration of economics and other factors set forth in Water Code §13241).

Until its studies of alternative technologies is complete, HCC contends that compliance with the proposed 900 $\mu\text{mhos/cm}$ EC monthly average effluent limitation in its permit could only be met through construction and operation of additional reverse osmosis water treatment facilities. HCC estimates that the cost of constructing would be substantial. This is in addition to the current operating cost of approximately \$20 million per year.

HCC contends that: (1) assuring compliance with the monthly average 900 $\mu\text{mhos/cm}$ EC limitation in the HCC permit would require construction and operation of additional reverse osmosis units or other technology to treat all of the wastewater at a very large cost; and (2) because of the relatively high salinity of the source water (*see* Draft WDR at Paragraph 45) and upgradient groundwater (*id.* at Paragraph 43), use of reverse osmosis or other technology would likely have relatively little effect on the ambient groundwater EC levels. For these reasons, HCC respectfully requests some flexibility in the effluent limitations as set forth in the redline version of the WDR attached hereto.

d. Groundwater monitoring well network.

Monitoring wells installed as part of the investigation work pursuant to the CAO for the Primary Lands should not automatically be incorporated into the WDR compliance monitoring well network. The addition of wells to the monthly WDR program does not in and of itself provide for an increased protection of water quality. If wells are to be added to the WDR, there must be a technical basis (*e.g.*, a physical or temporal data gap) and the tentative WDR does not currently provide this basis.

The objectives of an investigation program under the CAO are different than the objective of the WDR compliance monitoring program, which is to confirm that wastewater discharged by HCC does not cause or contribute to exceedances of groundwater limits. Conversely, the investigation program in progress under the CAO is designed to identify the lateral and vertical extent of any impact from past discharges and to provide data regarding the fate and transport of constituents of concern to support the Feasibility Study for evaluation, recommendation and implementation of possible remedial action. For example, the CAO-driven work has included the installation of downgradient offsite monitoring wells below the Corcoran Clay – clearly, the locations and screened intervals of these wells are not relevant to a WDR compliance monitoring program. The sampling constituents and frequency for the CAO investigation program need to be flexible based on the most current data, remaining data gaps, and stage in the investigation and cleanup process. In addition, following cleanup, the wells installed for investigation may no longer be necessary while the wells installed for the WDR compliance will remain necessary as long as the discharge to the Reclamation Area occurs.

The Water Board has never identified a deficiency in the HCC WDR monitoring network. If the Water Board has determined that additional compliance monitoring wells are necessary, then the basis of any deficiency should be identified. Following identification of such deficiency(ies), then the number, location, and construction details for additional compliance monitoring wells can be reviewed. HCC has suggested language in the WDR and MRP to modify the proposed requirements to reflect these comments.

e. Antidegradation

State anti-degradation policies require that the quality of the water not be *unreasonably* degraded and that beneficial uses be maintained. These policies allow some flexibility and are not intended to reflect a state policy that no increase in any constituent can occur. Such an interpretation (or the so-called “one molecule rule”) is not supported by State Water Board’s policies, administrative guidance, or case law.

HCC would like to note that the State Board’s “Statement of Policy with Respect to Maintaining High Quality of Waters in California,” Resolution 68-16, (the “Anti-Degradation Policy”), applies only where the quality of the subject waterbody is higher than the quality established and required by water quality control policies (*i.e.*, Basin Plans). In this case, the groundwater quality at issue is often higher than the Regional Board’s interpretation of its Basin Plan water

quality objectives. Thus, the Anti-Degradation Policy does not apply, and should not be used as a basis for groundwater limitations. Furthermore, no other provision of state law specifically requires or authorizes the imposition of a provision requiring background water quality to be strictly maintained, especially where beneficial uses are not unreasonably impacted.

Even if the groundwater basin at issue were deemed to be a “high quality” water, the Anti-Degradation Policy does not *prohibit* the degradation of such high quality waters. Rather, the Anti-Degradation Policy allows “high quality” water to be lowered in quality if the Water Board finds that the “change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.” *See* Anti-Degradation Policy, Res. 68-16 at Provision 1. In this case, HCC’s treatment of industrial wastewater is beyond that of others in its food processing industry, and any degradation of existing water quality is certainly consistent with the maximum benefit to the people of the State.

In *In the Matter of the Petitions of the County of Santa Clara, et al.*, State Board Order No. WQ 86-8, 1986 Cal. ENV LEXIS 10 (May 5, 1986), the State Board held that limited degradation of a high quality water is allowed as long as that change “will not unreasonably affect beneficial uses, will be consistent with the maximum benefit to the people of the State of California and [will be consistent] with the factors listed in Water Code section 13241.” *Id.* at page 47. Thus, limited degradation of a high quality water can be allowed if:

- The reduction in water quality will not unreasonably affect beneficial uses;
- The reduction in water quality is consistent with maximum public benefit; and
- The reduction in water quality will be consistent with the factors listed in Water Code section 13241.

The State Board’s Administrative Procedures Update, State Board APU 90-004, (“APU”) further explains that the Water Board should consider four factors when determining whether the discharge is necessary to accommodate social or economic development (*i.e.*, the Water Code section 13241 factors) and is consistent with maximum public benefit:

1. Past, present and probable beneficial uses of the water;
2. Economic and social costs, tangible and intangible, of the proposed discharge compared to benefits (*i.e.*, a cost-benefit analysis);
3. The environmental aspects of the proposed discharge must be evaluated; and
4. The implementation of feasible alternative control measures which might reduce, eliminate, or compensate for negative impacts of the proposed action.

APU at p. 5. In considering the economic and social costs compared to benefits, the APU states that:

The economic impacts to be considered are those incurred in order to maintain existing water quality. The financial impact analysis should focus on the ability of the facility to pay for the necessary treatment.

According to the Anti-Degradation Policy, once the Water Board makes the above-stated findings to allow some degradation to occur, the Water Board must then impose waste discharge requirements that will result in the “best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with the maximum benefit to the people of the State will be maintained.” *See* Anti-Degradation Policy 68-16 at Provision 2.

In this case, the Tentative WDR imposes the best practicable treatment or control of the discharge. *See* Paragraphs 65 and 66. Flexibility in the requirements and the time to comply are required since the cost to install further advanced treatment or storage facilities to ensure no statistical change to background groundwater quality outweighs the benefits of no degradation. For these reasons, HCC requests that the Water Board adopt HCC’s proposed changes to the effluent limits, groundwater limits, and time schedules in order to provide the requested flexibility.

f. Water recycling/Water reclamation.

HCC does not believe that the State Water Board policies and Title 22 requirements related to recycled water contemplate application to industrial wastewater. For this reason, HCC requests that all references to “recycled water” be changed to “reclaimed water” or to reference water “reuse” instead. Although this relates generally to the WDR, MRP and TSO, this comment relates specifically to Paragraphs 67-69, and HCC has provided proposed language changes to these sections in its redline comments.

g. Groundwater limitations – Title 22 constituents.

For the reasons provided above in section 1.c. related to the use of incorporated by reference MCLs, and in section 1.e. related to water recycling, HCC does not believe that all Title 22 constituents (Primary and Secondary MCLs) are appropriately applied as groundwater limitations in Provision E.a.(iv). At the very least, HCC requests that the list of applicable MCLs be narrowed to those that reflect the actual constituents of concern related to HCC’s discharge. *See accord* Paragraph 58 (specifying constituents of concern).

h. Salinity Minimization Plan.

Unlike many other Central Valley dischargers, HCC has already undertaken and implemented a number of measures designed to evaluate and reduce the impact of salinity in its discharge. Therefore, the proposed requirement in Provision F.21 for a Salinity Minimization Plan is not applicable and should be removed. Alternatively, this provision should be amended to require that: “By 15 June 2010, Hilmar Cheese shall provide a report of its salinity evaluation activities and salinity minimization programs that have been taken or are planned to be taken in order to

further reduce salinity in its discharge to the extent feasible.” This way, the Water Board will have an accurate record of the activities undertaken by HCC to date and planned for the future.

i. Submission dates:

HCC had previously provided Water Board staff with proposed dates for compliance with the increase in monthly average discharge flow. Unfortunately, the tentative WDR did not accurately reflect those requested dates. Thus, HCC is proposing slight modifications to the due dates. HCC is also proposing modifications to the dates for the installation/sampling of groundwater monitoring wells and submission of a Nutrient Management Plan. Such modifications are relatively minor in terms of delay to the Water Board, but reflect a substantial cost to HCC if this flexibility is not provided. Such costs and hardship must be taken into account by the Water Board. *See accord* Water Code §13263 and §13267.

For example, the Nutrient Management Plan (“NMP”) requires HCC to coordinate its comprehensive NMP for the Reclamation Area with the NMPs under the Dairy Waste WDRs for approximately 30 dairies. This effort will be time consuming and require a great deal of effort and expense. The additional approximately six months requested will ensure that the NMP is accurate and will be able to be implemented effectively.

2. Comments on the Draft Time Schedule Order:

As with the tentative WDR, HCC has provided a redline and detailed description of its requested modifications to the TSO. The following provides additional explanation of a few of the requested changes:

a. Remove reference to NPDES regulations.

The first draft of the TSO at Paragraph 12 referenced Water Code section 13385(j)(3), which is a code section applicable to federal NPDES permits and is not appropriate for this non-NPDES WDR. Similarly, the final sentence of this paragraph referenced language used in TSOs associated with NPDES permits whose limits are subject to Mandatory Minimum Penalties (“MMPs”). Since this WDR is not subject to MMPs, this sentence is superfluous and should be removed.

b. Limitation to Primary Lands.

HCC has proposed several changes to the TSO to reflect that the compliance schedule and interim limits imposed therein apply to the Primary Lands, as HCC intends to immediately comply with the WDR requirements for the Secondary Lands. These comments and modifications are intended to clarify this point.

c. Full compliance dates.

HCC requests that the full compliance dates be extended by two weeks. HCC proposed dates were the ones initially proposed to Water Board staff and represent the dates by which HCC believes compliance with UF/RO or an alternative technology could be fully constructed, optimized, and become operable and able to meet the final effluent limitations in the WDR. HCC hopes that the Water Board will understand that this additional technology is a substantial investment being made by HCC that will take time to install and optimize to ensure protection of local groundwater.

3. **Comments on Tentative Monitoring and Reporting Program:**

a. Influent monitoring.

HCC does not believe that influent monitoring is necessary, and the cost and burden outweighs the benefit pursuant to Water Code 13267. The water used and treated by HCC comes from source water wells and water from milk. This is substantially different from a publicly owned treatment works for which influent monitoring is required to determine if influent will cause a treatment plant upset or to determine if the percentage removal requirements are met. For these reasons, HCC recommends that the flow monitoring requirements be moved to the effluent monitoring section and that the influent monitoring requirements be removed.

b. Effluent monitoring – priority pollutants.

As in the previous comment, HCC uses water from groundwater and in milk, and given that HCC is a FDA-approved food processor, very few chemicals are used in the process that would cause the effluent to contain priority pollutants. As such, HCC believes that monitoring for an expansive list of priority pollutants is not reasonable and the costs do not bear a reasonable relationship to the benefits gained. *See accord* Water Code §13267(b). Therefore, the required list of priority pollutants should be removed, or at the very least modified to only contain constituents that have a likelihood of being found in food processing waste.

c. Groundwater monitoring.

HCC has supplied some proposed language changes in the attached redline version of the MRP to clarify the groundwater monitoring requirements. The proposed language would require that HCC provide to the Water Board for approval a monitoring well network that includes any additional downgradient wells installed, and sets forth monitoring well requirements in the interim until the final network is determined and approved. As explained in section 1.d. above, the wells utilized in the CAO are not appropriate for use in determining compliance with the WDR.

d. Source Water reporting.

The tentative MRP, in the section on source water reporting, requires “[t]he results of source water monitoring (except general minerals) specified on page 4.” Some general minerals (*i.e.*, EC, nitrate as N) are listed as separate constituents in the source water monitoring requirements on page 4 of the MRP. Therefore, this section is confusing as it is unclear whether the Water Board is requiring the quarterly reporting of the source water monitoring for EC and various forms of nitrogen. In addition, if there is no requirement for the reporting of general minerals with the quarterly reports, HCC does not understand the intent or purpose of requiring analyses of general minerals. Moreover, this section is inconsistent with Source Water Monitoring requirements in Section B, because these would require quarterly calculations of flow-weighted average concentrations. For these reasons, the Water Board should clarify its intent in the final version of the MRP using HCC’s suggested language provided in the redline version attached hereto.

e. Groundwater monitoring reports.

The current draft of the MRP requires that HCC provide the five previous years of monitoring data for each monitoring well. HCC does not understand the need for this requirement as the Water Board receives this data regularly and has all of the historic data in its files. Besides being a huge amount of paper to deliver to the Water Board each quarter, HCC does not believe the costs to compile this data quarterly bear a reasonable relationship to the benefits gained. *See accord* Water Code §13267(b). For these reasons, HCC would like this requirement removed, or at the very least, required only in electronic spreadsheet format.

f. Map Requirements

The tentative MRP contains a map requirement in the Fourth Quarter Monitoring requirements that is repetitive of quarterly requirements. As such, HCC suggests deleting this duplicative requirement.

g. Transmittal letter requirements.

The tentative MRP discusses a transmittal letter that HCC must submit along with its monitoring reports. HCC objects to the use of the word “violations” in this section as a “violation” cannot be determined except by the Water Board in the context of an enforcement action after considering any possible legal defenses. For this reason, HCC requests that the word “exceedances” replace the word “violations” both times that word is used in this section.

h. MRP implementation date.

Gearing up to implement the new monitoring and reporting requirements will take time and HCC suggests that the MRP implementation date be modified to the first day of the third month in order to more closely match the quarterly monitoring requirements.

4. **Other Comments:**

a. Information Sheet.

Given the short comment time frame, HCC was unable to prepare a redline version of the Information Sheet that would match the changes requested in the WDR. Therefore, because an information sheet is not required, and unless the Water Board is able to make all the changes needed to ensure that the Information Sheet is entirely consistent with the final version of the WDR, HCC requests that the Information Sheet not be incorporated by reference into the WDR. HCC has proposed an amendment to the WDR at Paragraph 81 to implement this request.

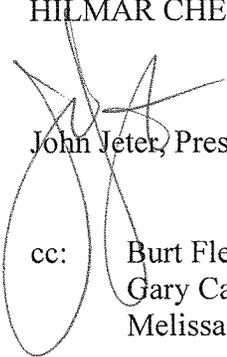
b. Board hearing – time allocation for presentation.

This WDR and TSO are of the utmost importance to HCC. For this reason, HCC requests more than the standard time period for its presentation since there are two items, a WDR and TSO, on the agenda for the Board's consideration. HCC requests that at least 30 minutes be allocated to its presentation, and that additional time be provided for rebuttal, as necessary, to address issues raised by interested parties.

Again, HCC thanks the Water Board for working toward an achievable and protective discharge permit and compliance order.

Very truly yours,

HILMAR CHEESE COMPANY



John Jeter, President & CEO

cc: Burt Fleischer, HCC
Gary Carlton, Kennedy/Jenks Consultants
Melissa Thorne, Downey Brand LLP

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2010-_____

WASTE DISCHARGE REQUIREMENTS
FOR
HILMAR CHEESE COMPANY, INC.
AND
RECLAMATION AREA OWNERS
HILMAR CHEESE PROCESSING PLANT
MERCED COUNTY

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

1. Hilmar Cheese Company, Inc. (Hilmar Cheese), a California corporation, owns and operates a Cheese Processing Plant (Plant) about one-half mile north of the unincorporated community of Hilmar. The Plant is at the northwest corner of Lander Avenue and August Road, within Section 10 of T6E, R10E, MDB&M, as shown on Attachment A, which is attached hereto and made part of this Order by reference. The Assessor Parcel Numbers (APNs) of parcels that comprise the Plant site are: 045-014-054 and 045-014-066. Hilmar Cheese discharges wastewater to two areas known as the Primary and Secondary Lands as shown on Attachment B, which is attached hereto and made part of this Order by reference. The Primary and Secondary Lands are collectively referred to as Reclamation Areas. Hilmar Cheese owns some of the Primary Lands and leases the rest from others (Primary Land Owners). All of the Secondary Lands are owned by others (Secondary Land Owners). The Primary and Secondary Land Owners are collectively referred to as Reclamation Area Owners. The parcels and Reclamation Area Owners for this Order are shown in Attachment C and listed in Attachment D, which are attached hereto and made part of this Order by reference. Hilmar Cheese and the Reclamation Area Owners are collectively referred to as Discharger. Hilmar Cheese is the primary discharger responsible for compliance with this Order. Each Reclamation Area Owner is responsible for compliance with the requirements of this Order concerning discharge to its respective parcels that are included within the Reclamation Area.
2. Hilmar Cheese manufactures various cheese products (white and yellow cheddar, Monterey and pepper jack, Colby and Colby jack, Muenster, some Hispanic cheeses, etc). The Plant currently receives over 11 million pounds of milk each day from more than 150,000 cows housed in over 260 dairies. It produces over one million pounds of cheese, and over 325,000 pounds of whey protein and lactose powder each day. The Plant operates continuously year round and employs about 700 people.
3. The Plant is composed of a milk-receiving area, three cheese processing plants, a protein plant, a lactose plant, a visitor's center, a delicatessen restaurant, banquet facilities for up to 300 people, and a wastewater treatment facility (WWTF). The Plant's domestic wastewater is discharged to septic tanks and leachfields regulated separately.

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4. Waste Discharge Requirements (WDRs) Order 97-206 formerly regulated the discharge of cheese processing wastewater to a 102-acre area near the Plant referred to as the Primary Lands. Order 97-206 authorized Hilmar Cheese to discharge a monthly average daily flow of up to 0.75 million gallons per day (mgd) of wastewater treated to have electrical conductivity (EC) of no greater than 900 micromhos per centimeter ($\mu\text{mhos/cm}$). In 1998, Hilmar Cheese installed salinity reduction treatment technology and began treating a portion of its Plant's wastewater flow, and initiated a discharge of wastewater treated to reduce EC to levels in compliance with the EC limit to 920 acres of agricultural land west of the Plant referred to as the Secondary Lands. Because the treatment technology did not have sufficient capacity to treat the entire wastewater flow, Hilmar Cheese continued to discharge to the Primary Lands wastewater not treated to fully reduce EC.
5. The Executive Officer of the Central Valley Water Board issued Cleanup and Abatement Order R5-2004-0772 (CAO) to Hilmar Cheese Company; Hilmar Whey Protein; and Kathy and Delton Nyman in December 2004 due to nuisance conditions and impacts to groundwater from Hilmar Cheese's disposal of wastewater to land. The CAO directs Hilmar Cheese to abate nuisance and address impacts to groundwater caused by its discharge in violation of Order 97-206. Work to address the tasks of the CAO is ongoing.
6. On 26 January 2005, the Executive Officer issued Administrative Civil Liability Complaint R5-2005-0501 to Hilmar Cheese in the amount of \$4,000,000 for chronic violations of the effluent EC limitation prescribed in Order 97-206. On 16 March 2006, the Central Valley Water Board adopted Order R5-2006-0025, which ratified a Revised Settlement Agreement with Hilmar Cheese. Order R5-2006-0025 settled Administrative Civil Liability Complaint R5-2005-0501; required Hilmar Cheese to submit a Report of Waste Discharge (RWD) by 31 October 2006; and prescribed Interim Operating Limits for discharge flow and effluent EC that would be in effect until the Central Valley Water Board issued revised WDRs for the discharge.
7. The Revised Settlement Agreement included Interim Operating Limits (Order R5-2006-0025) that prescribed discharge requirements until Hilmar Cheese could complete improvements to the WWTF. Hilmar Cheese has been operating within those limits since adoption of the Revised Settlement Agreement in March 2006 which became effective in April of 2006. The Interim Operating Limits allow for the discharge of up to 1.2 mgd of partially-treated wastewater with an EC of up to 3,700 $\mu\text{mhos/cm}$ to the Primary Lands. In 2008, the monthly average flow of partially-treated wastewater to the Primary Lands was about 0.65 mgd, with an average EC of about 3,500 $\mu\text{mhos/cm}$. In 2009, the discharge of partially-treated wastewater to the Primary Lands was about 0.57 mgd, with an average EC of about 3,300 $\mu\text{mhos/cm}$.
8. The Discharger submitted a RWD in October of 2006, but also indicated that it needed additional time to complete its evaluation of WWTF improvements and effluent disposal options. Central Valley Water Board staff concurred with the Discharger's determination

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that additional time was necessary to allow it to submit a RWD of sufficient detail for staff to prepare revised WDRs. The Discharger submitted two additional RWDs in November 2007 and June 2008, followed by an *Addendum to Report of Waste Discharge* (Addendum) dated 13 November 2008 prepared by Kennedy/Jenks Consultants.

9. The Addendum proposed to increase the discharge flow from 1.9 to 2.5 mgd; to fully treat all the Plant's cheese processing wastewater flow by December 2009; and provide reclaimed water for use as an irrigation supply to owners of about 1,200 acres of agricultural land situated generally west/northwest of the Plant. In July 2009, Hilmar Cheese reported that costs associated with its Ultrafiltration (UF) and Reverse Osmosis (RO) units may not be sustainable and that it was evaluating a new salinity-removal technology, Electrodialysis Reversal (EDR), an electrochemical separation process that removes ions and other charged species from water and other fluids. Hilmar Cheese reported the EDR system may function more effectively than UF/RO treatment and its associated costs in labor, chemicals, maintenance, and equipment would be considerably less. EDR treatment technology has been successfully employed to treat brackish water for use as drinking water, but has not been tested on industrial wastes such as those from a cheese processing plant.
10. Hilmar Cheese has incorporated several treatment and control measures to reduce the salinity of its discharge, including source control and UF/RO treatment. Because Hilmar Cheese will not immediately be able to comply with the effluent limits of this Order, a separate Time Schedule Order is appropriate to address compliance while Hilmar Cheese evaluates an EDR treatment system and installs either EDR or further UF/RO treatment systems.

Existing Wastewater Treatment Facility and Reclamation

11. Wastewater is generated from sanitizing equipment and tanks, general facility wash down, assorted sources of equipment blow down, and truck washing. Wastewater is temporarily contained in three collection basins prior to the Plant's WWTF. A collection basin designated the "Cheese Basin" accepts wastewater from the milk receiving area, the three Plants, and the protein plant (about 60 percent of the discharge). Wastewater from the lactose plant is discharged to the "Lactose Basin" (about 35 percent of the discharge), and a third sump, designated the "Wastewater Basin" accepts truck wash wastewater (about 5 percent of the discharge).
12. The WWTF consists of the collection basins; three 350,000-gallon equalization tanks with one equalization tank designated for wastewater resulting from abnormal operational conditions; two 55,000-gallon physio-chemical Dissolved Air Flotation (DAF) tanks; a heat exchanger; a granular sludge bed anaerobic digester; a 1,000,000-gallon pre-aeration tank; two 1,000,000-gallon sequencing batch reactors (SBRs); a 1,000,000-gallon surge tank; three DAF tanks, two with a capacity of 10,000 gallons and one with a capacity of 11,000 gallons, a UF membrane separation system; a two-stage RO system; and an evaporator.

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13. The UF membrane system consists of a Zenon-supplied 1,000-gallon-per-minute (gpm) submerged hollow fiber UF membrane unit and four 330-gpm submerged hollow fiber UF membrane units. Permeate from the UF system is sent to the two-stage RO system for further salinity reduction, while concentrate from the UF system is currently recycled to the DAF system.
14. The RO system consists of three high-pressure primary RO units followed by two high-pressure secondary units. Permeate from the secondary RO units is discharged to the storage ponds prior to discharge to the Secondary Lands for crop irrigation. Concentrate from the secondary RO is sent to the deep well injection system regulated by the United States Environmental Protection Agency (USEPA). Excess concentrate that cannot be discharged to the deep well is shipped offsite. In 2008, approximately 40,000 gallons per day of concentrate was sent to the East Bay Municipal Utility District (EBMUD).
15. Hilmar Cheese has a wastewater storage and application system consisting of two lined effluent storage ponds to store UF/RO treated wastewater prior to discharge to the Secondary Lands (Attachment B). The effluent storage ponds have approximately 44 million gallons of storage capacity and were constructed just north of the Plant in September 2000. The two ponds are clay lined (minimum 8-inch thickness).
16. The Primary Lands currently consist of about 95 acres that are directly adjacent to the Plant and receive partially-treated wastewater (Attachment B). The APNs of parcels that comprise the Primary Lands are: 045-180-018, 045-140-030, 045-140-041, and 045-140-077.
17. The Secondary Lands consist of several interconnected individual parcels generally to the west of the Plant as shown on Attachment B. The Secondary Lands receive wastewater that has been treated by UF and RO. The acreage was listed as about 736 acres in the 2006 RWD and currently consists of about 750 acres. Hilmar Cheese notifies the Central Valley Water Board in writing when new parcels are added to the Secondary Lands and assigns a specific number to discrete parcels (e.g., S-39) for identification.
18. Hilmar Cheese was issued Class I Underground Injection Control Permit No. CA1050001 by the USEPA for the installation of up to four deep injection wells. Currently, two wells have been installed. The first, WD-2, was installed in June 2006 to a depth of 4,100 feet below ground surface (bgs). The second, WD-1P, was completed to a depth of 4,125 feet bgs in January 2009. These deep injection wells are used to dispose of the concentrate from the secondary RO units.

Existing Wastewater Discharge

19. Data from Hilmar Cheese's self-monitoring reports indicates that the wastewater applied to the Primary Lands from April 2006 through 2008 had the following average characteristics.

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Primary Lands Effluent Data

Flow (mgd ¹)	BOD ² (mg/L ³)	Total N ⁴ (mg/L)	TDS ⁵ (mg/L)	EC ⁶ (µmhos/cm ⁷)	Cl ⁸ (mg/L)	Na ⁹ (mg/L)
0.73	362	147	2,217	3,532	327	631

1. million gallons per day (mgd)
2. 5-day biochemical oxygen demand (BOD)
3. milligrams per liter (mg/L)
4. Total nitrogen (Total N), equals TKN + Nitrate, as N
5. Total Dissolved Solids
6. Electrical Conductivity (EC)
7. Micromhos per centimeter (µmhos/cm)
8. Chloride (Cl)
9. Sodium (Na)

In 2009, the wastewater applied to the Primary Lands had the following average characteristics.

2009 Primary Lands Effluent Data

Flow (mgd)	BOD (mg/L)	Total N (mg/L)	TDS (mg/L)	EC (µmhos/cm)	Cl (mg/L)	Na (mg/L)
0.57	119	68	2,112	3,334	391	621

20. Data from Hilmar Cheese's self-monitoring reports indicates that the wastewater applied to the Secondary Lands from April 2006 through 2009 had the following average characteristics.

Secondary Lands Effluent Data

Flow (mgd ¹)	BOD ² (mg/L ³)	Total N ⁴ (mg/L)	TDS ⁵ (mg/L)	EC ⁶ (µmhos/cm ⁷)	Cl ⁸ (mg/L)	Na ⁹ (mg/L)
1.06	42	18	452	817	68	145

1. million gallons per day (mgd)
2. 5-day biochemical oxygen demand (BOD)
3. milligrams per liter (mg/L)
4. Total nitrogen (Total N), equals TKN + Nitrate, as N
5. Total Dissolved Solids
6. Electrical Conductivity (EC)
7. Micromhos per centimeter (µmhos/cm)
8. Chloride (Cl)
9. Sodium (Na)

21. Comparison of the values presented in the previous tables indicates the WWTF is effective in treating the portion of wastewater that is fully treated. From April 2006 through 2009, the full treatment system removed about 88 percent of 5-day biochemical

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oxygen demand (BOD), 79 percent of total dissolved solids (TDS), 80 percent of chloride, 78 percent of sodium, and reduced EC by 77 percent.

WWTF Expansion Project

22. In order to treat all of the wastewater using the UF/RO systems or alternate treatment systems to the meet the Effluent Limitations contained in provision B.1 of this Order, various improvements to the WWTF and to the current disposal activities have been completed or are underway.
23. Improvements to the WWTF include: installation of a second DAF system (consisting of three DAF units) to improve the ability to remove minerals and excess biomass; conversion of the existing 1-million-gallon pre-aeration tank to a third SBR providing additional SBR retention time and to improved activated sludge performance; installation of an additional UF system (consisting of four units, each rated at 350 gpm) to provide UF treatment for all of the wastewater. RO concentrate from the 2nd stage RO units will continue to be disposed of in the deep injection well system, permitted by the USEPA. Solids generated by the first and second DAF systems are dewatered and trucked offsite to the East Bay Municipal Utility District.
24. In case of short-term operational issues or equipment failures, Hilmar Cheese will construct a wastewater blending system to ensure that effluent discharged to the two storage ponds and the Reclamation Areas meets the effluent limits.
25. Secondary Lands will receive the discharge of the fully-treated effluent, with a total of approximately 1,200 acres being required to accommodate the total effluent flow authorized by this Order.
26. Hilmar Cheese provides treated wastewater to farmers to irrigate crops grown on the Secondary Lands. Secondary Lands crop irrigation is supplemented with Turlock Irrigation District (TID) canal water. Historically, irrigation has also been supplemented with up to 20 percent of its crop irrigation demand with dairy wastewater.
27. Most existing milk cow dairies in the Central Valley Region are regulated by General WDRs Order R5-2007-0035, *General Order for Existing Milk Cow Dairies* (General Order), which requires dairy waste that is blended with waste generated off-site to be regulated by a separate order. This Order authorizes Plant effluent and dairy wastewater to be applied to Secondary Lands, providing the Discharger accounts for both in its loading calculations and the facility meets the requirements for nutrient management plans, monitoring and reporting, and runoff contained in the General Order. The General Order will continue to regulate dairy operations and discharges of dairy waste to lands identified in Attachments C and D, as well as lands that do not receive Plant effluent. In the event of any inconsistency between this Order and the General Order, the more stringent requirement shall apply.

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28. The current rated treatment capacity of the WWTF is 1.9 mgd. The proposed treatment improvements will increase its rated treatment capacity to 2.5 mgd. This Order authorizes Hilmar Cheese to increase discharge flow to 2.5 mgd following satisfaction of Provisions F.19 and F.22 which require the Discharger to certify sufficient wastewater treatment, storage, and disposal capacity and submit Nutrient Management Plans for each parcel receiving Plant effluent.

Water Reclamation

29. Order 97-206 incorporated specifications to allow Hilmar Cheese to implement water reclamation to flood irrigate crops grown on 138 acres adjacent to the Plant (i.e., the original Primary Lands).

30. The Secondary Lands are generally cropped using a furrow and ridge irrigation system planted with silage corn in the summer and wheat, oats, or winter forage mix in the winter. Each parcel is typically planted and harvested individually to accommodate field drying cycles as well as other field activities. Values of the annual plant available nitrogen demand of alfalfa, wheat, oats, and silage corn are 480, 175, 115, and 250 lbs/acre, respectively, according to *Western Fertilizer Handbook*. Studies in the Hilmar area by University of California staff indicate that the corn uptake value is correct but the values for winter crops are low. 2002 field studies of wheat and oat cropping for dairies show that oats require 294-342 lbs/acre and wheat requires 263-329 lbs/acre (Matthews, 2003, *Using Winter Forages for Dairy Nitrogen Management, California Alfalfa and Forage Symposium*). In a separate study of winter forage nitrogen uptake at eight dairy land application sites, the crop removed 202 lbs/acre (Pettygrove et. al. 2003, *Integrating Forage Production with Dairy Manure Management in the San Joaquin Valley, Sustainable Agriculture Research Education Program Grant Final Report, University of California, Davis, CA*). Accordingly, the nitrogen demand of double-cropped parcels or alfalfa ranges from 439 lbs/acre for winter forage/silage corn to over 500 lbs/acre if the cropping methods tested by Matthews for winter crops are used.

Site-Specific Conditions

31. The Hilmar area is characterized by warm, dry summers and cool, wet winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evapotranspiration in the discharge area are approximately 12 and 53 inches, respectively, according to information published by the California Department of Water Resources (DWR). The maximum precipitation for a 100-year rainfall return period is estimated to be 21 inches.

32. Soils in the discharge area are classified as the Delhi sands and the Hilmar loamy sands, according to the United States Department of Agriculture Natural Resources Conservation Service (USDA/NRCS) *Soil Survey of Merced Area, 2007*. The Delhi Series is described by the USDA/NRCS as somewhat excessively drained with negligible

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to slow runoff and rapid permeability. The Delhi sands are reportedly used to grow grapes, peaches, truck crops, almonds and alfalfa. The USDA/NRCS describes the Hilmar Series as "somewhat poorly and poorly drained with a fluctuating water table that rises to within a foot or so of the surface during the rainy season and during the periods of heavy irrigation either on the soil or on nearby areas" and the surface soil is described as "rapidly permeable and the IIC horizon is slowly permeable." The Hilmar Series is reportedly used to grow alfalfa, grapes, row crops, almonds and irrigated pasture.

33. The Plant and the Secondary Lands are not within a 100-year floodplain according to Federal Emergency Management Agency Map 06047C0175G. Hilmar Cheese has experienced problems with standing wastewater in the Primary Lands due to poor drainage, shallow groundwater, and preferential flow of wastewater to portions of the Primary Lands where wastewater collects in areas of lower elevation. Surface water drains typically to the west/southwest in the Reclamation Areas.
34. Hilmar Cheese is not required to obtain coverage under a National Pollutant Discharge Elimination System general industrial storm water permit for the WWTF because all storm water runoff is retained onsite and does not discharge to a water of the United States. A storm water retention basin with an approximately 3.3 million gallon capacity is present north of the Plant that, in addition to storm water, collects non-storm water discharges such as landscape irrigation water.
35. The land use in the vicinity of the Plant is primarily agricultural with a mixture of pasture and orchard crops. Additional uses include confined livestock (there are at least six dairies within a one-mile radius of the Plant) residential (the unincorporated community of Hilmar is located about one half mile south of the Plant), and light industrial.

Groundwater Considerations

36. The Plant and Reclamation Areas are within the Turlock groundwater subbasin that forms a part of the San Joaquin Valley Groundwater Basin. This Basin is reported to contain three general primary water bearing zones: an uppermost unconfined aquifer (Modesto Formation); a semi-confined aquifer (Turlock Lake Formation); and a confined aquifer that is beneath the Corcoran Clay layer.
37. Jacobson James & Associates, Inc. (Jacobson James) completed an evaluation of these zones in June 2008 and further defined them as follows:

<u>Zone</u>	<u>Units</u>	<u>Depth Intervals (feet bgs)</u>
Modesto Formation	A Zone	~5 to 125
	A Zone Aquitard	~105 to 125
Turlock Lake Formation	B Zone	~125 to 150
	B Zone Aquitard (Corcoran Clay)	~150 to 200
Below Corcoran Clay	C Zone	~175 to 200

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C Zone Aquitard ~190 to 210
D Zone ~210 to 250

The Corcoran Clay and units below the Corcoran Clay have been found to be associated with the Turlock Lake Formation. (Jacobson James 2008)

38. The direction of groundwater flow in the unconfined aquifer is generally to the west/southwest, but the direction is influenced by nearby pumping of wells and the discharge of wastewater and irrigation water. The overall direction of the flow is to the southwest. The depth to first-encountered groundwater is shallow, ranging from about 5 to 15 feet bgs. During wet periods, water can be at the ground surface. Area groundwater depth is controlled in various areas in the discharge vicinity by the operation of agricultural tile drain systems that discharge to TID canals (e.g., Lateral No. 6 north of the Plant). Tile drains under the Primary Lands were sealed off and no longer discharge to the TID canals.

39. Hilmar Cheese has a groundwater monitoring well network consisting of 23 groundwater monitoring wells. Of the 23 wells, 19 were installed to depths of 26 feet bgs or less and monitor groundwater in the Upper A Zone; two (MW-18 and MW-19) were installed to depths of about 60 feet bgs and monitor the Lower A Zone; MW-22 was installed to 125 feet bgs and monitors the B Zone; and MW-23 was installed to 195 feet bgs and monitors the C Zone.

40. A monitoring well network will be monitored as part of the Monitoring and Reporting Program for this Order. Additional groundwater monitoring wells are required as part of the Plant expansion downgradient of the Plant and the Reclamation Areas.

41. Groundwater quality in the Hilmar area is highly variable and, in general, the concentration of mineral constituents increases from east (upgradient) to west (downgradient). Water quality appears to have been degraded by past and current land uses (the Plant and its discharges, dairies, farming, industry, etc.) and irrigation with water of varying quality.

42. As detailed in the CAO, the discharge has unreasonably degraded groundwater beneath the Plant's storage ponds and Primary Lands. In May and June 2008, Jacobson James collected samples from about 33 domestic wells, 5 industrial supply wells, and 4 irrigation wells. The maximum TDS concentration recorded during the May and June 2008 investigations by Jacobson James was 1,400 mg/L (which corresponds to an EC of about 2,300 μ mhos/cm). TDS concentrations in the supply wells ranged from 160 to 1,400 mg/L.

43. In an effort to establish water quality conditions upgradient (east) of the Plant, Jacobson James collected groundwater samples over the last several years from 11 direct push technology borings and a monitoring well to provide preliminary data for the evaluation of ambient conditions in the Upper Aquifer (above the Corcoran Clay) upgradient (east) of

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the Plant. Using this data, the Regional Board determined that the values characterizing ambient background groundwater quality for several constituents of concern are as presented in the following table.

Upgradient Groundwater Quality

<u>EC¹</u> (µmhos/cm ²)	<u>TDS³</u> (mg/L ⁴)	<u>NO₃ as N⁵</u> (mg/L)	<u>Cl⁶</u> (mg/L)	<u>Na⁷</u> (mg/L)	<u>SO₄⁸</u> (mg/L)
847	570	27	77	92	54

1. Electrical Conductivity (EC)
2. Micromhos per centimeter (µmhos/cm)
3. Total Dissolved Solids (TDS)
4. Milligrams per liter (mg/L)
5. Nitrate as nitrogen (NO₃ as N)
6. Chloride (Cl)
7. Sodium (Na)
8. Sulfate (SO₄)

Nitrates are above the primary maximum contaminant level of 10 mg/L for nitrate as nitrogen. Nitrates in groundwater are a regional concern in the Hilmar area and likely influenced by local agricultural land uses such as nearby dairies and farmland including almond orchards. Sodium is above the lowest typical agriculture limit of 69 mg/L and likely influenced by local agricultural land uses such as nearby dairies. The remaining constituents are within water quality objectives.

44. Historical groundwater data is limited. The oldest data available is from 1989 when monitoring wells MW-1 and MW-2 were installed. EC values in samples collected from MW-1 in 1989 and 1990 ranged from 150 to 700 µmhos/cm, while values in MW-2 ranged from about 284 to 578 µmhos/cm. In 2008, EC values in samples from MW-1 ranged from 2,470 to 4,530 µmhos/cm, while samples from MW-2 ranged from 1,640 to 3,690 µmhos/cm.

Source Water Quality

45. Source water is supplied to the Plant by three groundwater wells (IN-1, IN-2, and IN-7). Wells IN-1 and IN-2 are pumped into a storage tank and designated Water Supply No. 1, (WS-1), while water from well IN-7 is pumped into a second storage tank and designated Water Supply No. 2 (WS-2). Wells IN-1 and IN-2 are within the Plant and IN-7 is northwest of the Plant. Water quality averages for samples collected from April 2006 through 2008 are shown on the following table.

<u>Source</u>	<u>Supply Well Data</u>				
	<u>TDS¹</u> (mg/L) ²	<u>EC³</u> (µmhos/cm ⁴)	<u>NO₃ as N⁵</u> (mg/L) ²	<u>Cl⁶</u> (mg/L) ²	<u>Na⁷</u> (mg/L) ²
WS-1	555	855	12	79	84
WS-2	887	1429	7	195	159

1. Total Dissolved Solids (TDS)
2. Milligrams per liter (mg/L)

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No measured background value exists for the Secondary Lands, so this was estimated through use of modeling to be 700 mg/L. See Finding 63.

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3. Electrical Conductivity (EC)
4. Micromhos per centimeter (µmhos/cm)
5. Nitrate as nitrogen (NO₃ as N)
6. Chloride (Cl)
7. Sodium (Na)

46. Jacobson James prepared an August 2008 *Supply Well Evaluation Technical Report* that reported both IN-1 and IN-2 had been degraded by discharges of waste from the Plant. The report found that IN-7 was degraded in quality, but it was not likely that Hilmar Cheese had caused the impact. IN-7 appears to be downgradient of a dairy. Hilmar Cheese indicates IN-7 is its primary source for water. IN-1 is used as a supplemental supply and IN-2 is non-operational.

Basin Plan, Beneficial Uses, and Water Quality Objectives

47. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, 4th Edition, revised February 2007* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting all waters of the basin, and incorporates by reference plans and policies of the State Water Resources Control Board (State Water Board). Pursuant to Section 13263(a) of the California Water Code (CWC), WDRs must implement the Basin Plan.

48. The Plant and the Primary and Secondary Lands lie within the San Joaquin Basin, specifically the Turlock Hydrologic Area (No. 535.5), as depicted on interagency hydrologic maps prepared by DWR in 1986. The Basin Plan designates the beneficial uses of groundwater as municipal and domestic supply, agricultural supply, industrial process and service supply, water contact recreation supply, and wildlife habitat supply.

49. [Comment: There is no discharge to the San Joaquin River. Therefore, this finding is not applicable.]

50. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, require waters designated as municipal and municipal supply to meet the State drinking water maximum contaminant levels (MCLs) specified in Title 22, California Code of Regulations (CCR). 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.

51. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, 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. 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.

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Deleted: <#>The Basin Plan designates the following beneficial uses for the San Joaquin River: municipal and domestic supply, agricultural supply, industrial process supply, water contact recreation, non-contact water recreation, warm freshwater habitat, migration of warm and cold water fishes, spawning for warm and cold water fishes, and wildlife habitat.¶

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52. 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.
53. In the absence of specific numerical water quality limits, 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 irrigating with water having 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 should be reviewed 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.
54. The list of crops in Finding 32 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but is representative. Discharge has degraded the quality of groundwater beneath the Plant to levels that could affect plant growth if used for irrigation of crops such as almonds. However, agricultural operations in the area typically irrigate with TID irrigation water, which has excellent mineral water quality. Groundwater impacted by the Plant discharge is being addressed by the CAO, and the effluent concentrations for the discharge permitted by this Order are consistent with water quality objectives and will not limit use for irrigation on all but the most salt-sensitive crops.

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Antidegradation Analysis

55. State Water Board Resolution No. 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:
- The degradation is consistent with the maximum benefit to the people of the State;
 - The degradation will not unreasonably affect present and anticipated future beneficial uses;
 - 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
 - The Discharger employs best practicable treatment or control (BPTC) to minimize degradation.
56. 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 around the Plant, provided that the terms of the Basin Plan are met. Degradation of groundwater by some of the typical waste

constituents released with discharge from a food processing plant after effective source reduction, treatment, and control, and considering the best efforts of the Discharger and magnitude of degradation, is of maximum benefit to the people of the State. Hilmar Cheese aids in the economic prosperity of the region by directly employing over 700 workers, it provides incomes for numerous surrounding dairies and associated trucking firms, and provides a tax base for local and county governments. The proposed Order requires treatment that constitutes best practicable treatment or control.

57. Historically, Hilmar Cheese's disposal of partially-treated wastewater degraded groundwater in the vicinity of the Primary Lands and affected beneficial uses. The cleanup of this is regulated by the CAO and groundwater investigations are ongoing. An accompanying Time Schedule Order requires Hilmar Cheese to fully treat all of its wastewater to the effluent limits of this Order by no later than July 15, 2011. The CAO is assessing the need for development of remedial actions to clean up groundwater from past discharges, which will address future use of the Primary Lands.

58. Constituents of concern that have the potential to degrade groundwater include organic material, nitrogen, and salts (TDS, EC, chloride, and sodium).

59. Regarding organics, the estimated instantaneous and cycle average BOD loading rates to the Reclamation Areas are below the USEPA maximum recommended rate of 100 pounds per acre per day (lbs/acre/day) according to USEPA Publication No. 625/3-77-007, *Pollution Abatement in the Fruit and Vegetable Industry*. Therefore, no degradation due to organic loading is expected to occur.

60. The ponds used to store treated effluent are clay-lined and the effluent is used to irrigate crops that use the available nitrogen. Application of the wastewater at agronomic rates of irrigation will allow crop uptake of the majority of the nitrogen in wastewater and reduce the amount reaching groundwater in the Reclamation Areas. The amount of nitrogen reaching groundwater through the clay-lined storage ponds will be minimal. Therefore the discharge would not cause degradation of groundwater above background, nor above the MCL for nitrate.

61. Regarding sodium, the lowest typical agricultural limit is 69 mg/L, which is based on protection of sprinkler-irrigated, salt-sensitive crops. Review of Ayers and Westcott, *Water Quality for Agriculture*; Asano, *Wastewater Reclamation and Reuse* and land use maps showing crops grown in the region, indicates crops highly sensitive to salt are currently not grown in the discharge area.

Ayers and Westcott indicate sodium concentrations up to 70 mg/L have no restrictions for salt-sensitive crops and concentrations from 70 to 210 mg/L have only slight to moderate restrictions. The average sodium concentration in effluent from the Plant since April 2006 has been about 145 mg/L. The discharge could cause degradation of groundwater above ambient, but would not restrict usage for the types of crops grown in the area or as a drinking water source.

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62. Regarding salinity in general, average TDS concentrations in the fully-treated wastewater are, since April 2006, less than 450 mg/L, which is less than the ambient concentration upgradient of the Plant. EC values in the effluent average about 825 µmhos/cm, which is less than the Recommended Secondary MCL of 900 µmhos/cm.

63. Kennedy/Jenks prepared a technical report to estimate the potential degradation to groundwater from the discharge and the amount of land needed for disposal. The report's model indicated that up to 1,200 acres will be required. The model predicted the concentration of TDS in the vicinity of the proposed Secondary Lands would be approximately 700 mg/L, with or without the discharge. This value (700 mg/L) is the groundwater limitation used to reflect background water quality in the vicinity of the proposed Secondary Lands discharge. The conclusion of the report was that there would be no degradation from the discharge as it is of comparable quality to the existing downgradient water quality. The model considered a combination of precipitation, Turlock Irrigation District water used for irrigation in the area, irrigation with wastewater from local dairies, and discharge of Hilmar Cheese's treated wastewater.

64. This Order establishes groundwater limits that are performance based and 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. This Order contains requirements for a groundwater assessment for assuring that the highest water quality consistent with the maximum benefit to the people of the State will be achieved. The groundwater limits reflect relevant, applicable and appropriate information and achievable by implementing the BPTC measure currently being implemented and proposed to be implemented by the Discharger. The limits established in this Order may be revised based on additional monitoring data submitted by the Discharger from monitoring wells in the Secondary Lands that will be installed and monitored in accordance with the requirements of this Order.

Treatment and Control Practices

65. The WWTF Expansion Project described in Findings 22 through 28 provides, or will provide, treatment and control of the discharge that incorporates:
- Physical and biological treatment for BOD reduction;
 - UF and RO treatment, with proposed expansion of RO, or addition of EDR treatment or other applicable technology;
 - Storage of effluent in lined ponds;
 - Application of wastewater (alone or blended with TID water and dairy wastewater) on crops at rates not exceeding reasonable agronomic demand;
 - Application of wastewater at rates that will not allow wastewater to stand for more than 48 hours;
 - At least daily inspection of the Reclamation Area during times of discharge;

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- g. Preparation of a Nutrient Management Plan; and
- h. Appropriate solids disposal practices.

66. These Treatment and Control Practices are reflective of BPTC of the discharge.

Water Reuse

67. [Comment: Hilmar Cheese does not meet the State's technical definition of recycled water and should not be subject to the applicable requirements.]

68. The Basin Plan and this Order encourages the reuse of wastewater and identifies crop irrigation as a reuse option where the opportunity exists to replace an existing use or proposed use of fresh water with recycled or reclaimed water.

69. [Comment: See comment for #67.]

Designated Waste and Title 27

70. CWC Section 13173 defines designated waste as either:

- a. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code.
- b. Non-hazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or could reasonably be expected to affect beneficial uses of the waters of the State contained in the appropriate water quality control plan.

71. Unless exempt, release of designated waste is subject to full containment pursuant to the requirements of Title 27, CCR, Section 20005 et seq. (hereafter Title 27). Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards and other Title 27 requirements provided the following conditions are met:

- a. The applicable regional water board has issued WDRs, or waived such issuance;
- b. The discharge is in compliance with the applicable basin plan; and
- c. The waste is not hazardous waste and need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

The discharge of effluent and the operation of treatment or storage facilities associated with a food processing facility is exempt from Title 27, provided any resulting degradation of groundwater is in accordance with the Basin Plan and the waste need not be managed as a hazardous waste. None of the waste regulated by the proposed Order is hazardous

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waste nor required to be treated as hazardous waste. With treatment to remove organics and salinity, lined storage ponds, and application at agronomic rates, the discharge authorized by the proposed WDRs will not cause exceedance of groundwater quality objectives and complies with the Antidegradation Policy and is therefore exempt from Title 27. In addition, effluent applied to Secondary Lands is a reuse that is also exempt under Title 27, Section 20090(h).

CEQA

72. On 2 January 2009, Merced County, as Lead Agency, circulated a draft Mitigated Negative Declaration for Hilmar Cheese's proposed Plant expansion. Central Valley Water Board staff reviewed and commented on the draft Mitigated Negative Declaration, and on 11 February 2009 the Merced County Planning Commission adopted it. Mitigation measures include a condition that construction of the WWTF is completed and that all wastewater is treated prior to an increase in flows, and a requirement for a Nutrient Management Plan.

73. This Order includes requirements to protect water quality, including:

- a. Effluent Limitations B.1 which establishes numerical effluent limitations that are reflective of best practicable treatment for this discharge.
- b. Discharge Specification C.2, which stipulates waste constituents cannot be released or discharged in a concentration that causes violation of this Order's groundwater limitations.
- c. Provision F.22, which requires that Hilmar Cheese submit a Nutrient Management Plan by 15 December 2010.

74. The Central Valley Regional Water Board has reviewed the Mitigated Negative Declaration and concurs that all potential water quality and related nuisance impacts have been mitigated to a less-than-significant level.

General Findings

75. Based on the threat to water quality and complexity of the discharge, the facility is determined to be classified as 1-A. Section 2200 of Title 23, CCR, defines these categories to include any of the following:

- a. Category 1 threat to water quality: "Those discharges of waste that could cause the long-term loss of a designated beneficial use of the receiving water. Examples of long-term loss of a beneficial use include the loss of drinking water supply, the closure of an area used for water contact recreation, or the posting of an area used for spawning or growth of aquatic resources, including shellfish and migratory fish."

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b. Category A complexity: "Any discharge of toxic wastes, any small volume discharge containing toxic waste or having numerous discharge points or ground water monitoring, or any Class 1 waste management unit."

76. Pursuant to CWC 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.

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

78. CWC Section 13267(b) states 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 having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters 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."

79. The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2010-____ are necessary to assure compliance with these WDRs. Hilmar Cheese operates the facility that discharges the waste subject to this Order.

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80. DWR sets standards for the construction and destruction of groundwater wells, as described in the *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 CWC Section 13801, apply to all monitoring wells.

Public Notice

81. All the above and the supplemental information and details in the attached Information Sheet were considered in establishing the following conditions of discharge.

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

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

IT IS HEREBY ORDERED that, Waste Discharge Requirements Order No. 97-206 is rescinded and that, pursuant to Sections 13263 and 13267 of the CWC, Hilmar Cheese Company, Inc., Reclamation Area Owners, and their respective agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Direct discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass of untreated wastes, except as allowed by Provision E.2 of Standard Provisions and Reporting Requirements, is prohibited.
3. Discharge of waste classified as "hazardous", as defined in Section 2521(a) of Title 23, California Code of Regulations, Section 2510 et seq., is prohibited. Discharge of waste classified as "designated," as defined in CWC Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Application of wastewater in a manner or location other than that described herein is prohibited.

B. Effluent Limitations

1. The discharge from the WWTF to the effluent storage ponds shall not exceed the following monthly averages for the constituents listed:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Value</u>
Electrical Conductivity	µmhos/cm ¹	1000
Total Dissolved Solids	mg/L ²	600
5-day Biochemical Oxygen Demand	mg/L ²	50
Chloride	mg/L ²	85
Total Nitrogen ³	mg/L ²	20

1. micromhos per centimeter (µmhos/cm)
2. milligrams per liter (mg/L)
3. Equals total of TKN + Nitrate (as N)

2. The discharge from the WWTF to the effluent storage ponds shall not exceed the following 12-month rolling average for the constituents listed:

<u>Constituent/ Parameter</u>	<u>Units</u>	<u>Value</u>
Electrical Conductivity	µmhos/cm	900
Total Dissolved Solids	mg/L	500

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C. Discharge Specifications

1. The monthly average discharge flow shall not exceed 1.9 mgd until the Discharger has satisfied Provisions F.19 and F.22, after which the monthly average flow shall not exceed 2.5 mgd.
2. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration that causes violation of groundwater limitations.
3. Unless determined by the Executive Officer or the Discharger to be significant sources of pollutants, only the following non-storm waters may be discharged to the storm water retention basin:
 - a. potable water line flushing;
 - b. irrigation and landscape drainage;
 - c. spring, groundwater, or foundation/footing drainage;
 - d. potable water; and
 - e. air conditioning, refrigeration, or compressor condensate.
4. Objectionable odors shall not be perceivable beyond the limits of the WWTF, storage pond, or Reclamation Area properties at an intensity that creates or threatens to create nuisance conditions.
5. Application of wastewater to the Reclamation Areas shall be at reasonable agronomic rates to preclude degradation of groundwater, considering the crop, soil, climate, and irrigation management system, consistent with the Nutrient Management Plan required by Provision F.22. The annual hydraulic and nutritive loadings to the Reclamation Area, including the nutritive value of organic and chemical fertilizers and of the wastewater shall not exceed the annual crop demand.
6. Wastewater shall not be discharged to the Reclamation Area in a manner that causes wastewater to stand for greater than 48 hours.
7. No physical connection shall exist between wastewater and any domestic water supply or domestic well, or between wastewater piping and any irrigation well that does not have an air gap or reduce pressure principle device.

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D. Solids Specifications

1. Any handling and storage of solids and 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 groundwater limitations of this Order.

2. Collected screenings, sludge, and other solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid WDRs issued by a regional water quality control board will satisfy this specification. The deep well injection system regulated by the United States Environmental Protection Agency will also satisfy this specification.
3. Any proposed change in solids disposal practices unless regulated by the USEPA, shall be reported to the Executive Officer in writing at least 90 days in advance of the change.

E. Groundwater Limitations

Release of waste constituents from any wastewater or storm water collection, treatment, or storage component, or release of waste constituents from discharges to the Reclamation Area, shall not cause groundwater:

- a. Containing concentrations of constituents in excess of those as identified below, or background quality, whichever is greater.
 - (i) Nitrate as nitrogen of 10 mg/L.
 - (ii) TDS of 700 mg/L.
 - (iii) Total Coliform Organisms of 2.2 MPN/100 mL.
 - (iv) For constituents identified in Paragraph 58, the Primary and Secondary MCLs included in Title 22.
- b. Containing taste- or odor-producing constituents, toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

F. Provisions

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provisions(s).
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) No. R5-2010-____, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program self-monitoring reports.
3. Hilmar Cheese shall keep at the Plant, and each other Reclamation Area Owner shall keep at its business office or residence, a copy of this Order including its MRP,

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Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.

4. ~~[Comment: Inflow and infiltration protection requirements are not appropriate for this Order].~~
5. The Discharger must 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 Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include 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 the Order.
6. All technical reports and work plans required herein 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. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
7. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter 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.
8. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall 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.
9. To assume operation 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

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Deleted: Hilmar Cheese shall not allow pollutant-free wastewater to be discharged into the WWTF collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means storm water (i.e., inflow), groundwater (i.e., infiltration or periodic discharges of groundwater from the Plant's supply wells during well maintenance operations), cooling waters, and condensates that are essentially free of pollutants.

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corporation, the 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 California 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.

10. Effluent storage ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter. 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.
11. On or about **1 October** of each year, available storage capacity in the effluent storage ponds shall at least equal the volume necessary to comply with Provision F.10.
12. All ponds (i.e., effluent storage ponds, storm water ponds) shall be managed to prevent breeding of mosquitoes. In particular,
 - a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, and herbicides.
 - c. Dead algae, vegetation and other debris shall not accumulate on the water surface.
 - d. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but **not during**, the April 1 to June 30 bird nesting season.
13. The Reclamation Area parcels shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties.
14. Reclamation Area parcels shall be managed to prevent breeding of mosquitoes. In particular:
 - a. All applied irrigation water must infiltrate completely within a 48-hour period;
 - b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store reclaimed water.

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15. As a means of discerning compliance with Discharge Specification C.4, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond (i.e., effluent storage ponds or storm water basins) shall not be less than 1.0 mg/L for three consecutive days. Should the DO be below 1.0 mg/L during a weekly sampling event, the Discharger shall take all reasonable steps to correct the problem and commence daily DO monitoring in all affected ponds until the problem has been resolved. If objectionable odors originating from affected ponds are noticed in developed areas, or if the Discharger receives one or more odor complaints, the Discharger shall report the findings in writing within 5 days of that date and shall submit a specific plan to resolve the low DO results to the Central Valley Water Board within 10 days of that date.
16. The pH of the discharge to effluent storage ponds shall not be less than 6.0 or greater than 9.0 pH units for more than three consecutive 24-hour composite sampling events. In the event that the pH of the discharge is outside of this range for more than three consecutive sampling events, the Discharger shall submit a technical evaluation in its quarterly self-monitoring reports documenting the pH of the discharge to the Reclamation Area.
17. Hilmar Cheese shall maintain and operate all storage ponds sufficient to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California 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). As a means of management and to discern compliance with this Provision, Hilmar Cheese shall install and maintain in each pond permanent markers with calibration that indicates the water level at design capacity and enables determination of available operational freeboard.
18. The Discharger shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Discharger shall proceed with all work required by the following provisions by the due dates specified.
19. Upon completion of the proposed WWTF Expansion Project described in Findings 22 through 28 and **at least 60 days prior** to initiating an increase in the monthly average discharge flow to greater than 1.90 mgd, Hilmar Cheese shall submit an engineering certification that it has sufficient treatment, storage, and disposal capacity to comply with the other terms and conditions of this Order. This Provision will be considered satisfied following written acknowledgement from the Executive Officer that this Provision's criteria have been met.

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20. **By 15 June 2010**, the Hilmar Cheese shall submit a report documenting the installation and sampling of the additional groundwater monitoring wells described in Finding 40.

21. [Comment: Hilmar Cheese has undertaken and implemented a number of measures designed to evaluate and reduce the impact of salinity in the discharge. Therefore, this requirement is not applicable. Alternatively, this should require that: "By 15 June 2010, Hilmar Cheese shall provide a summary report of its salinity evaluation activities and salinity minimization programs that have been taken or are planned to be taken in order to further reduce salinity in its discharge to the extent feasible."].

22. **By 15 December 2010**, the Discharger shall, for each separately-owned parcel where wastewater is applied for irrigation purposes, develop and implement management practices that control nutrient losses and describe these in a Nutrient Management Plan. The Nutrient Management Plan must be certified, maintained at the Plant, submitted to the Executive Officer upon request, and must ultimately describe wastewater crop irrigation practices that provide for protection of both surface water and groundwater. The Nutrient Management Plan shall account for all nutrient inputs from all sources (i.e., the discharge, manure, chemical fertilizers, etc.) and shall be reviewed and updated as necessary. The Nutrient Management Plan shall be consistent with General WDRs Order R5-2007-0035, *General Order for Existing Milk Cow Dairies*, for all Reclamation Area parcels that are regulated by Order R5-2007-0035. Groundwater monitoring will be used to determine if implementation of the Nutrient Management Plan is protective of groundwater quality.

23. Each Reclamation Area Owner is responsible for all water quality or nuisance impacts of wastewater discharged at their Reclamation Area parcels. Each Reclamation Area Owner shall be responsible for compliance with General WDRs Order R5-2007-0035, *General Order for Existing Milk Cow Dairies*, for all Reclamation Area parcels that are regulated by Order R5-2007-0035. A failure by Hilmar Cheese to comply with this Order or other legal requirements shall not be a defense to any action by the Central Valley Water Board to enforce any law, regulation, or other requirement against a Reclamation Area Owner.

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 _____.

PAMELA C. CREEDON, Executive Officer

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Order Attachments:

Monitoring and Reporting Program

A Vicinity Map

B Site Map and existing Reclamation Area

C Reclamation Area Parcel Map

D Reclamation Area Owner Table

Information Sheet

Standard Provisions (1 March 1991)

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER NO. R5-2010-_____

REQUIRING
HILMAR CHEESE COMPANY, INC.
HILMAR CHEESE PROCESSING PLANT
MERCED COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R5-2010-_____

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

1. On __ January 2010, the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order R5-2010-_____ prescribing waste discharge requirements for Hilmar Cheese Company, Inc. (hereafter Discharger) at its Cheese Processing Plant's wastewater treatment facility (WWTF), Merced County. The Discharger discharges wastewater to two Reclamation Areas known as the Primary and Secondary Lands as described in Order R5-2010-_____.
2. The Central Valley Water Board issued Cleanup and Abatement Order R5-2004-0772 (CAO) in December 2004 due to nuisance conditions and impacts to groundwater from the Discharger's disposal of wastewater to land. The CAO directs the Discharger to abate nuisance and address impacts to groundwater caused by its discharge in violation of Order 97-206. Work to address the tasks of the CAO is ongoing.
3. On 26 January 2005, the Executive Officer issued Administrative Civil Liability Complaint R5-2005-0501 to the Discharger in the amount of \$4,000,000 for chronic violations of the effluent electrical conductivity (EC) limitation prescribed in Order 97-206. On 16 March 2006, the Central Valley Water Board adopted Order R5-2006-0025, which ratified a Revised Settlement Agreement with the Discharger. Order R5-2006-0025 settled Administrative Civil Liability Complaint R5-2005-0501; required the Discharger to submit a Report of Waste Discharge (RWD) by 31 October 2006; and prescribed Interim Operating Limits for discharge flow and effluent EC that would be in effect until the Central Valley Water Board issued revised waste discharge requirements for the discharge.
4. The Revised Settlement Agreement included Interim Operating Limits (Order R5-2006-0025) that prescribed discharge requirements until Hilmar Cheese could complete improvements to the WWTF. Hilmar Cheese has been operating within those limits since adoption of the Revised Settlement Agreement in March 2006, which became effective in April of 2006. The Interim Operating Limits allow for the discharge of up to 1.2 mgd of partially-treated wastewater with an EC of up to 3,700 umhos/cm to the Primary Lands. In 2008, the monthly average flow of partially-treated wastewater to the Primary Lands was about 0.65 mgd, with an average EC of about 3,500 umhos/cm. In 2009 (through November 2009), the discharge of partially-treated wastewater to the Primary Lands was about 0.60 mgd, with an average EC of about 3,300 umhos/cm.

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5. The Discharger submitted a RWD in 2006, but also indicated that it needed additional time to complete its evaluation of WWTF improvements and effluent disposal options. Central Valley Water Board staff concurred with the Discharger's determination that additional time was necessary to allow it to submit a RWD of sufficient detail for staff to prepared revised WDRs. The Discharger submitted two additional RWDs in November 2007 and June 2008, followed by an *Addendum to Report of Waste Discharge* (Addendum) dated 13 November 2008 prepared by Kennedy/Jenks Consultants.
6. The Addendum proposed to increase the discharge flow from 1.9 to 2.5 mgd; to fully treat all the Plant's cheese processing wastewater flow by December 2009; and provide recycled water for use as an irrigation supply to owners of about 1,200 acres of agricultural land situated generally west/northwest of the Plant. In July 2009, the Discharger reported that costs associated with ultrafiltration (UF) and reverse osmosis (RO) units may not be sustainable and that it was evaluating a new salinity-removal technology, Electrodialysis Reversal (EDR), an electrochemical separation process that removes ions and other charged species from water and other fluids. The Discharger indicated the EDR system could potentially function more effectively than UF/RO treatment and its associated costs in labor, maintenance, and equipment would be considerably less. EDR treatment technology has been successfully employed to treat brackish water for use as drinking water, but has not been tested on industrial wastes such as from a cheese processing plant.
7. The Discharger indicated it would need until 1 May 2010 to complete a testing program to evaluate the EDR technology. If testing indicates EDR is effective, the Discharger proposed a date of 15 July 2011 to have the equipment installed and operating. Should testing indicate EDR is not applicable, the previously proposed UF/RO system would be in place by 15 February 2011.
8. The average discharge flow rate to the Primary Lands from April 2006 through 2008 has been about 0.73 mgd. Even with flows considerably less than the 1.2 mgd limit in the Interim Operating Limits, Central Valley Water Board issued three NOVs because of standing wastewater that had caused or threatened to cause objectionable odors and potential nuisance conditions. In the latter part of 2009, the Discharger modified the means for discharge to the Primary Lands in an effort to further reduce the potential for objectionable odors and potential nuisance conditions.
9. WDR Order No. R5-2010-_____ contains Effluent Limitation B.1, which reads:
 1. The discharge shall not exceed the following monthly averages for the constituents listed:

Parameter	Effluent Limit ¹
Electrical Conductivity (EC)	<u>1000</u> μ mhos/cm
Total Dissolved Solids (TDS)	<u>600</u> mg/L
5-Day Biochemical Oxygen Demand (BOD)	50 mg/L
Chloride	85 mg/L
Total Nitrogen (TKN + NO _x as N)	20 mg/L

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1. Micromhos/centimeter (μ mhos/cm), milligrams per liter (mg/L), million gallons per day (mgd).

2. The discharge from the WWTF to the effluent storage ponds shall not exceed the following 12-month rolling average for the constituents listed:

Parameter	Effluent Limit ¹
Electrical Conductivity (EC)	900 μ mhos/cm
Total Dissolved Solids (TDS)	500 mg/L

10. Immediate compliance with Effluent Limitation B.1 for the portion of the flows currently discharging to the Primary Lands is not practicable. The California Water Code authorizes time schedules for achieving compliance.

11. California Water Code (CWC) section 13300 states: "Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements."

12. In accordance with CWC section 13300 the Central Valley Water Board finds that there is a discharge of waste threatening to take place that will violate requirements prescribed by the Central Valley Water Board, and that the Discharger may not be able to immediately comply with Effluent Limitation B.1 on the Primary Lands for EC, TDS, BOD, chloride, and total nitrogen. Therefore, the Central Valley Water Board finds that a Time Schedule Order is appropriate.

13. CWC Section 13267(b) states that: "In conducting an investigation specified in subdivision (a), the Central Valley Water 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, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Central Valley Water 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 Central Valley Water Board shall provide

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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.”

14. The technical reports required by this Order are necessary to assure compliance with the Order and applicable provisions of the California Water Code. The Discharger operates the facility that discharges the waste subject to this Order.

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15. On ____ January 2010, in Sacramento, California, after due notice to the Discharger and all other affected persons, the Regional Water Board conducted a public hearing at which evidence was received to consider a Time Schedule Order under CWC section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.

16. The issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), in accordance with because it is an enforcement order exempted under 15321(a)(2), Title 14, California Code of Regulations. This Order is also exempt under Section 15061(b)(3) because it implements the Effluent Limitations imposed by another Order, and because it will result in improvement of the quality of ongoing discharges that are part of the CEQA “baseline.”

17. Any person adversely affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action. The petition must be received by the State Water Board Office of the Chief Counsel, P.O. Box 100, Sacramento, California 95812-0100, within 30 days of the date on which the action was taken. Copies of the law and regulations applicable to filing petitions may be found on the Internet at www.waterboards.ca.gov/centralvalley or will be provided upon request.

IT IS HEREBY ORDERED that, pursuant to sections 13300 and 13267 of the California Water Code, Hilmar Cheese Company, Inc. and its agents, successors, and assigns, shall comply with the following:

1. The Discharger shall comply with the following time schedule to ensure compliance with Effluent Limitation B.1 on the Primary Lands contained in WDR Order No. R5-2010-____ as described in the above findings.

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<u>Task</u>	<u>Date Due</u>
Submit a Work Plan indicating what treatment system will be used to treat wastewater to the numerical limits listed in Effluent Limitation B.1.	1 May 2010
Submit progress reports ¹	Quarterly, from 1 July 2010 until final compliance

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Full Compliance if UF/RO technology is implemented² **15 February 2011**

Full Compliance if anything other than UF/RO technology is implemented² **15 July 2011**

1 The progress reports shall report the monthly average flow volume discharged to the Primary Lands and detail what steps have been implemented towards completing the expansion project, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to cease discharge of partially-treated wastewater to the Primary Lands.

2 Full compliance shall be demonstrated by ceasing the discharge of partially treated wastewater to the Primary Lands by the final compliance date.

2. The following interim effluent limitations for discharge to the Primary Lands, as defined in Order R5-2010-____, shall be effective immediately:

a. The discharge flow shall be limited to whatever is necessary to preclude wastewater from standing in the Primary Lands portion of the Reclamation Area for greater than 48 hours and to preclude the creation of nuisance conditions.

b. The monthly average discharge flow shall not exceed 0.500 mgd.

c. The EC of the discharge shall not exceed 3,600 μ mhos/cm.

3. If, in the opinion of the Executive Officer, the Discharger violates this Order, the Executive Officer may refer the matter to the Attorney General for judicial enforcement or alternately issue a formal complaint for Administrative Civil Liability

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 _____.

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PAMELA C. CREEDON, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2010-_____

FOR
HILMAR CHEESE COMPANY, INC.,
AND
RECLAMATION AREA OWNERS
HILMAR CHEESE PROCESSING PLANT
MERCED COUNTY

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

The Discharger shall not implement any changes to this MRP unless and until the 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) 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 California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

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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 11.

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EFFLUENT MONITORING

Effluent samples shall be collected just prior to discharge to the effluent storage ponds or to the Reclamation Areas. Effluent monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Twice Weekly	pH	pH Units	Grab
Weekly	EC	µmhos/cm	Grab
Weekly	TDS	mg/L	24-hour composite
Weekly	BOD ₅	mg/L	24-hour composite
Weekly	Nitrate as N	mg/L	24-hour composite
Weekly	TKN	mg/L	24-hour composite
Weekly	Ammonia as N	mg/L	24-hour composite
Weekly	Total Nitrogen ¹	mg/L	Calculated
Weekly	Chloride	mg/L	24-hour composite
Weekly	Sodium	mg/L	24-hour composite
Quarterly	General Minerals, <u>except TDS</u>	mg/L	24-hour composite

¹ Equals TKN + Nitrate (as N)

POND MONITORING

Effluent storage ponds monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	DO	mg/L	Grab
Weekly	Freeboard	Feet ¹	Calculated

¹To nearest tenth of a foot

Permanent markers (e.g., staff gauges) shall be placed in the effluent storage ponds. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard. The Discharger shall inspect the condition of the effluent storage ponds once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the effluent storage pond surface and their location; whether burrowing animals or insects are present; and the color of the pond water (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.).

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Influent samples shall be collected prior to discharge from the equalization tanks to the dissolved air floatation tanks. Influent monitoring shall include at least the following:¹
¹ Frequency ... [1]

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GROUNDWATER MONITORING

The existing groundwater monitoring network currently consists of 23 monitoring wells (MW-1 through MW-23). Upon completion of proposed additional downgradient wells, the Discharger shall submit to the Central Valley Water Board for approval by the Executive Officer a monitoring well network for demonstrating ongoing compliance with WDR R5-2010-_____. Pending approval of the proposed monitoring well network, the existing monitoring well network shall be used to demonstrate compliance. The constituents monitored for and the frequencies listed below pertain only to this MRP.

Prior to collecting samples, water levels will be measured in all monitoring wells. 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 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

The Discharger shall monitor all wells listed above and any additional wells installed pursuant to this MRP, for the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Depth to groundwater	Feet ¹	Measured
Quarterly	Groundwater Elevation	Feet ²	Calculated
Quarterly	pH	pH Units	Grab
Quarterly	EC	umhos/cm	Grab
Quarterly	Nitrate as N	mg/L	Grab
Quarterly	TKN	mg/L	Grab
Quarterly	Total Nitrogen ³	mg/L	Calculated
Quarterly	Total Organic Carbon	mg/L	Grab
Quarterly	Arsenic	ug/L	Grab
Quarterly	Iron	ug/L	Grab
Quarterly	Manganese	ug/L	Grab
Quarterly	General Minerals	mg/L	Grab

¹To nearest hundredth of a foot.

²To nearest hundredth of a foot above mean sea level.

³Total Nitrogen equals TKN + Nitrate (as N).

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Deleted: Additional upgradient and downgradient wells are proposed and will be added to this MRP when completed.

Deleted: The wells that comprise the monitoring well network are also subject to Cleanup and Abatement Order R5-2004-0772, which has its own sampling requirements that are to be followed independent of the monitoring requirements presented herein.¶

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SOURCE WATER MONITORING

For each source (wells - namely WS1 - WS2), the Discharger shall calculate the flow-weighted average concentrations for the specified constituents utilizing flow data for the most recent twelve

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months and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements.

Frequency	Constituent/Parameter	Units	Sample Type
Quarterly	EC	$\mu\text{mhos/cm}$	Grab
Quarterly	Nitrate as N	mg/L	Grab
Quarterly	TKN	mg/L	Grab
Quarterly	Total Nitrogen ¹	mg/L	Calculated
Quarterly	General Minerals	mg/L	Grab

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¹Total Nitrogen equals TKN + Nitrate (as N).

RECLAMATION AREA MONITORING

The Discharger shall monitor the reclaimed water (effluent) and irrigation water applied to each Reclamation Area parcel, as well as soil in each Reclamation Area parcel, for the constituents and at the frequency as specified below. This information will be used to evaluate the hydraulic, nutrient, and salt loadings to each individual Reclamation Area parcel, and must be used to develop and implement the Nutrient Management Plan required by Provision F.22. The Discharger is encouraged to collect and use additional data, as necessary, to refine nutrient management.

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Hydraulic and Waste Constituent Loading Monitoring

Reclamation Area parcels receiving deliveries of reclaimed water, dairy wastewater, and/or freshwater (i.e., groundwater or canal water) shall be monitored for the following:

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1. Crop Information
 - a. Crop type (e.g., silage corn, wheat, oats).
 - b. Crop planting or harvesting information (e.g., harvested tonnage in tons/acre).
2. Hydraulic Loading
 - a. Individual estimated monthly volumes (in million gallons) of reclaimed water, freshwater, and dairy wastewater applied.
 - b. Combined estimated monthly volume (in million gallons) of reclaimed water, freshwater, and dairy wastewater applied.
 - c. Monthly hydraulic loading rate (in inches) based on the combined estimated volume of reclaimed water, freshwater, and dairy wastewater applied.

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d. Monthly total precipitation (in inches) from either an onsite precipitation gage station or through published sources (cite data source(s)).

3. BOD₅ Loading

- a. Quantity of BOD₅ (in lbs) applied based on the total volume of reclaimed water from any source applied to the parcel and the monthly average value for effluent BOD₅.
- b. Monthly average daily BOD₅ loading rate (lbs/acre-day) based on the quantity of BOD₅ applied during the month and number of days in the month.

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4. Nitrogen Loading

- a. Monthly quantity of Total Nitrogen¹ (in lbs) from reclaimed water applied based on the total volume of reclaimed water applied to the parcel and the monthly average value for effluent total nitrogen.
- b. Monthly quantity of Total Nitrogen (in lbs) from dairy wastewater applied based on the total volume of dairy wastewater applied to the parcel and the estimated value for dairy wastewater Total Nitrogen concentration.
- c. Monthly quantity of Total Nitrogen (in lbs) from dairy manure applied based on the total volume of manure applied to the parcel and the estimated value for manure Total Nitrogen concentration.
- d. Monthly quantity of Total Nitrogen (in lbs) from fertilizer applied based on the total volume of fertilizer applied to the parcel and the estimated value for fertilizer Total Nitrogen concentration.
- e. Monthly quantity of Total Nitrogen (in lbs) applied from all sources of nitrogen.
- f. Monthly Total Nitrogen loading rate (in lbs/acre-month) based on all sources of applied nitrogen.
- g. Annual Cumulative Total Nitrogen loading rate (in lbs/acre-year) on a calendar year basis.

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¹Total Nitrogen equals TKN + Nitrate (as N).

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5. TDS Loading

- a. Monthly quantity of TDS (in lbs) from reclaimed water applied based on the total volume of reclaimed water applied to the parcel and the monthly average value for effluent TDS.
- b. Monthly quantity of TDS (in lbs) from dairy wastewater applied based on the total volume of dairy wastewater applied to the parcel and the estimated value for dairy wastewater TDS concentration.
- c. Monthly quantity of TDS (in lbs) from dairy manure applied based on the total volume of manure applied to the parcel and the estimated value for manure TDS concentration.

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- d. Monthly quantity of TDS (in lbs) applied from reclaimed water, dairy wastewater, and manure.
- e. Monthly Total TDS loading rate (in lbs/acre-month) based on TDS loadings from reclaimed water, dairy wastewater, and manure.
- f. Annual Cumulative TDS loading rate (in lbs/acre-year) on a calendar year basis.

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At least daily, the Discharger shall make visual observations regarding offsite discharge, standing water (indicate approximate depth), presence or absence of objectionable odors or vectors, and general compliance with Discharge Prohibitions and Recycling Specifications.

Soil Monitoring

The Discharger shall establish, with Central Valley Water Board staff concurrence, monitoring locations within at least seven representative parcels in the Reclamation Area and at least two locations to represent background conditions in areas that are cropped in a manner similar to Reclamation Area parcels but do not receive applications of reclaimed water. The samples shall be collected and analyzed for the following constituents.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Soil Profile</u>
Annually	Total Organic Carbon	mg/kg	4 feet ¹
Annually	EC	umhos/cm	4 feet ¹
Annually	Soil pH	pH Units	4 feet ¹
Annually	Phosphorus	mg/kg	4 feet ¹
Annually	Nitrate as N	mg/kg	4 feet ¹
Annually	TKN	mg/kg	4 feet ¹
Annually	Total Nitrogen ²	mg/kg	4 feet ¹

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T E N T A T I V E R E C O R D E R

¹Samples to be collected at 6 inches, 2 feet, and 4 feet.
²Total Nitrogen equals TKN + Nitrate (as N).

Soil monitoring data shall be analyzed to determine the Plant Available Nitrogen in the upper four feet of the soil profile in monitored parcels and the background location. This information shall be used by the Discharger in its development and implementation of the Nutrient Management Plan required by Provision F.22.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports**, which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report **1 May**

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Second Quarter Monitoring Report **1 August**
Third Quarter Monitoring Report **1 November**
Fourth Quarter Monitoring Report **1 February.**

Results of annual monitoring shall be reported in the next quarterly report after the sampling has occurred. The required 12-month rolling average values should reflect an average of the monthly averages reported for that 12-month period.

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A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any exceedances that occurred during the reporting period and all actions taken or planned for correcting exceedances, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

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The following information is to be included in all monitoring reports, as well as report transmittal letters:

Hilmar Cheese Company

Cheese Processing Plant.

MRP R5-2010-####

Contact Information (telephone and e-mail)

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.

At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

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.

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All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. Monitoring data or discussions submitted concerning WWTF performance must also be signed and certified by the chief plant operator. If the chief plant operator is not in direct line of supervision of the laboratory function 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. All Quarterly Monitoring Reports shall include the following:

Wastewater reporting:

1. The results of effluent and effluent storage pond monitoring specified on pages 2 and 3.
2. For each month of the quarter, calculation of the maximum daily and monthly average daily discharge flow to the effluent storage ponds.
3. For each month of the quarter, the volume of RO concentrate generated and the method of disposal.
4. A summary of the notations made in the effluent storage pond monitoring log during each quarter. The entire contents of the log do not need to be submitted.

Groundwater reporting:

1. The results of groundwater monitoring specified on pages 3 and 4.
2. A groundwater contour map based on groundwater elevations for that quarter. The map shall show the gradient and direction of groundwater flow under/around the facility and/or effluent disposal area(s). The map shall also depict the locations of monitoring wells, effluent storage ponds, storm water ponds, Reclamation Area parcels, and subsurface tile drainage networks and associated pumping stations.

Source water reporting:

1. The results of source water monitoring (except general minerals) specified on page 4. General minerals besides those expressly specified in the table on page 4 (e.g. EC and nitrogen species) are only required to be reported annually in the Fourth Quarter Report. See section B. below.

Reclamation Area reporting:

1. For each Quarter, the names and parcel numbers of the Reclamation Area that received wastewater including the volume applied and the dates it was applied.

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2. The names and parcel numbers of any parcels added or removed from the Reclamation Area during the Quarter.

B. Fourth Quarter Monitoring Reports, in addition to above, shall include:

Wastewater treatment facility information:

1. The names and general responsibilities of all persons in charge of wastewater treatment and disposal.
2. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations.
3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A statement whether the current operation and maintenance manual, sampling plan, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.
5. A statement certifying when wastewater collection sumps were last inspected for containment integrity, including identification of who performed the inspection.

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Source Water reporting:

1. The results of source water monitoring for general minerals.

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Reclamation Area reporting:

1. The results of reclamation area monitoring specified on pages 4 through 7.
2. A summary of an evaluation of the effectiveness of the Nutrient Management Plan in minimizing groundwater degradation for nitrogen constituents.
3. Water balances for the annual reporting period based on a calendar year and presented monthly in spreadsheet form. The water balances shall evaluate the following:
 - a. Monthly volume of reclaimed water discharged to the effluent storage ponds
 - b. Monthly volume of reclaimed water, dairy wastewater, and fresh water discharged to individual Reclamation Area parcels
 - c. Area (in acres) of individual Reclamation Area parcels receiving discharges each month of reclaimed water, dairy wastewater, and/or freshwater

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- d. Monthly average ET_o (observed evapotranspiration) - Information sources include California Irrigation Management Information System (CIMIS)
<http://www.cimis.water.ca.gov/>
 - e. Monthly crop uptake for individual Reclamation Area parcels for each type of crop grown (cite references for irrigation efficiencies and crop coefficients).
4. Annual BOD, nitrogen, and TDS loading calculations.

The Discharger shall implement the above monitoring program on the first day of the third month following adoption of this Order.

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Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(Date)

JSP/DKP: 12/08/2009

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GLOSSARY

BOD ₅	Five-day biochemical oxygen demand		
CBOD	Carbonaceous BOD		
DO	Dissolved oxygen		
EC	Electrical conductivity at 25° C		
FDS	Fixed dissolved solids		
NTU	Nephelometric turbidity unit		
TKN	Total Kjeldahl nitrogen		
TDS	Total dissolved solids		
TSS	Total suspended solids		
Total Nitrogen	Defined as sum of TKN and Nitrate as N.		
Continuous	The specified parameter shall be measured by a meter continuously.		
24-Hour Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.		
Daily	Samples shall be collected every day except weekends or holidays.		
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	Sample shall be collected at least twice per month during nonconsecutive weeks.		
Monthly	Samples shall be collected at least once per month.		
Bi Monthly	Samples shall be collected once every two (i.e., six times per year) during non-consecutive months.		
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise approved, samples shall be collected in January, April, July, and October.		
Semiannually	Samples shall be collected 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, in October, unless another month is specified.		
mg/kg	Milligrams per kilogram		
mg/L	Milligrams per liter		
mL/L	Milliliters [of solids] per liter		
µg/L	Micrograms per liter		
µmhos/cm	Micromhos per centimeter		
mgd	Million gallons per day		
MPN/100 mL	Most probable number [of organisms] per 100 milliliters		
General Minerals	Analysis for General Minerals shall include at least the following:		
	Alkalinity	Chloride	Sodium
	Bicarbonate	Hardness	Sulfate
	Calcium	Magnesium	TDS
	Carbonate	Potassium	

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General Minerals analyses shall be accompanied by documentation of cation/anion balance.

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Table 1. Priority Pollutant Scan¶
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Inorganics¹ ... [2]

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INFLUENT MONITORING

Influent samples shall be collected prior to discharge from the equalization tanks to the dissolved air floatation tanks. Influent monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Twice Weekly	pH	pH Units	Grab
Twice Weekly	EC	µmhos/cm	Grab
Weekly	BOD ₅	mg/L	24-hour composite
Monthly	Monthly Average Flow	mgd	Computed

Table 1. Priority Pollutant Scan

<u><i>Inorganics</i></u> ¹	<u><i>Organics</i></u> ²		
Antimony	Acrolein	3-Methyl-4-Chlorophenol	Hexachlorobenzene
Arsenic	Acrylonitrile	Pentachlorophenol	Hexachlorobutadiene
Beryllium	Benzene	Phenol	Hexachlorocyclopentadiene
Cadmium	Bromoform	2,4,6-Trichlorophenol	Hexachloroethane
Chromium (III)	Carbon tetrachloride	Acenaphthene	Indeno(1,2,3-c,d)pyrene
Chromium (VI)	Chlorobenzene	Acenaphthylene	Isophorone
Copper	Chlorodibromomethane	Anthracene	Naphthalene
Lead	Chloroethane	Benzidine	Nitrobenzene
Mercury	2-Chloroethylvinyl Ether	Benzo(a)Anthracene	N-Nitrosodimethylamine
Nickel	Chloroform	Benzo(a)pyrene	N-Nitrosodi-n-Propylamine
Selenium	Dichlorobromomethane	Benzo(b)fluoranthene	N-Nitrosodiphenylamine
Silver	1,1-Dichloroethane	Benzo(g,h,i)perylene	Phenanthrene
Thallium	1,2-Dichloroethane	Benzo(k)fluoranthene	Pyrene
Zinc	1,1-Dichloroethylene	Bis(2-chloroethoxy) methane	1,2,4-Trichlorobenzene
Cyanide	1,2-Dichloropropane	Bis(2-chloroethyl) ether	
Asbestos	1,3-Dichloropropylene	Bis(2-chloroisopropyl) ether	<u><i>Pesticides</i></u>
	Ethylbenzene	Bis(2-Ethylhexyl)phthalate	Aldrin
	Methyl Bromide	4-Bromophenyl phenyl ether	alpha-BHC
<u><i>Dioxin Congeners</i></u>	Methyl Chloride	Butylbenzyl Phthalate	beta-BHC
2,3,7,8-TCDD	Methylene Chloride	2-Chloronaphthalene	gamma-BHC (Lindane)
1,2,3,7,8-PentaCDD	1,1,2,2-Tetrachloroethane	4-Chlorophenyl Phenyl Ether	delta-BHC
1,2,3,4,7,8-HexaCDD	Tetrachloroethylene (PCE)	Chrysene	Chlordane
1,2,3,6,7,8-HexaCDD	Toluene	Dibenzo(a,h)Anthracene	4,4'-DDT
1,2,3,7,8,9-HexaCDD	1,2-Trans-Dichloroethylene	1,2-Dichlorobenzene	4,4'-DDE
1,2,3,4,6,7,8-HeptaCDD	1,1,1-Trichloroethane	1,3-Dichlorobenzene	4,4'-DDD
OctaCDD	1,1,2-Trichloroethane	1,4-Dichlorobenzene	Dieldrin
2,3,7,8-TetraCDF	Trichloroethylene (TCE)	3,3'-Dichlorobenzidine	alpha-Endosulfan
1,2,3,7,8-PentaCDF	Vinyl chloride	Diethyl phthalate	beta-Endosulfan
2,3,4,7,8-PentaCDF	2-Chlorophenol	Dimethyl phthalate	Endosulfan Sulfate
1,2,3,4,7,8-HexaCDF	2,4-Dichlorophenol	Di-n-Butyl Phthalate	Endrin
1,2,3,6,7,8-HexaCDF	2,4-Dimethylphenol	2,4-Dinitrotoluene	Endrin Aldehyde
1,2,3,7,8,9-HexaCDF	2-Methyl-4,6-Dinitrophenol	2,6-Dinitrotoluene	Heptachlor
2,3,4,6,7,8-HexaCDF	2,4-Dinitrophenol	Di-n-Octyl Phthalate	Heptachlor epoxide
1,2,3,4,6,7,8-HeptaCDF	2-Nitrophenol	1,2-Diphenylhydrazine	Polychlorinated biphenyls
1,2,3,4,7,8,9-HeptaCDF	4-Nitrophenol	Fluoranthene	Toxaphene
OctaCDF		Fluorene	

With the exception of wastewater samples, samples placed in an acid-preserved bottle for metals analysis must first be filtered. If filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on a custody form) to immediately filter then preserve the sample.

Samples to be analyzed for volatile organic compounds and phthalate esters shall be grab samples, the remainder shall be 24-hour composite samples.

Average Daily Monthly Wastewater Discharge (gallons)				
Month	Primary Lands		Secondary Lands	
	Flow	EC	Flow	EC
04/06	0.582	3,500	1.102	863
05/06	0.396	3,454	1.218	790
06/06	0.405	3,520	1.204	776
07/06	0.599	3,638	1.069	890
08/06	0.581	3,380	1.129	900
09/06	0.794	3,375	0.940	795
10/06	0.861	3,540	0.932	834
11/06	0.843	3,575	1.004	800
12/06	0.891	3,575	0.933	795
01/07	0.880	3,520	0.995	828
02/07	0.634	3,575	1.107	855
03/07	0.806	3,579	0.973	847
04/07	0.796	3,450	0.991	802
05/07	0.854	3,685	0.993	825
06/07	0.896	3,540	0.922	841
07/07	0.852	3,603	0.933	857
08/07	0.917	3,565	0.880	788
09/07	0.885	3,593	0.934	814
10/07	0.812	3,478	1.021	822
11/07	0.812	3,525	1.043	823
12/07	1.180	3,622	0.612	845
01/08	0.930	3,610	0.859	822
02/08	0.783	3,610	1.031	885
03/08	0.802	3,672	1.056	810
04/08	0.692	3,550	1.198	820
05/08	0.468	3,428	1.335	832
06/08	0.528	3,348	1.340	788
07/08	0.464	3,454	1.417	846
08/08	0.505	3,640	1.377	835
09/08	0.687	3,504	1.167	794
10/08	0.675	3,615	1.075	850
11/08	0.652	3,523	1.109	851
12/08	0.644	3,302	1.023	754
01/09	0.697	3,253	0.963	807
02/09	0.724	3,470	0.871	815
03/09	0.903	3,420	0.869	726
04/09	0.987	3,656	0.797	563
05/09	0.796	3,170	0.856	762
06/09	0.765	3,610	0.852	814
07/09	0.513	3,383	1.058	848
08/09	0.386	3,233	1.058	869
09/09	0.389	3,174	1.210	777
10/09	0.273	3,250	1.375	853

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1. Page 1, #2, line 2 – delete “blended Mexican” and insert “some Hispanic”.
2. Page 1, #2, line 5 – delete “350,000” and insert “325,000”.
3. Page 1, #2, line 5 – insert “each day” after “powder”
4. Page 1, #2, line 6 – delete “600” and insert “700”.
5. Page 1, #3, line 3 – delete “plant’s” and insert “Plant’s”.
6. Page 2, #4, line 10 – delete “it” and insert “Hilmar Cheese”.
7. Page 2, #7, line 4 – insert “, which became effective in April of 2006,” after “March 2006”.
8. Page 2, #7, lines 6-8 – revise last sentence to read “In 2008, the monthly average flow of partially-treated wastewater to the Primary Lands was about 0.65 mgd, with an average EC of about 3,500 μ mhos/cm”.
9. Page 2, #7 – add the following sentences: “In 2009 (through November 2009), the discharge of partially-treated wastewater to the Primary Lands was about 0.60 mgd, with an average EC of about 3,300 μ mhos/cm. “
10. Page 2, #8, line 1 – insert “October of” after “in” and before “2006”.
11. Page 3, #9, line 3 – delete “recycled” and insert “reclaimed”.
12. Page 3, #9, line 5 – – capitalize “Ultra-Filtration” and “Reverse Osmosis”.
13. Page 3, #9, line 6 – delete “were excessive” and insert “may not be sustainable”.
14. Page 3, #9, line 9 – delete “perform better” and insert “function more effectively”.
15. Page 3, #9, line 10 – insert “chemicals” after “labor” and before “maintenance”.
16. Page 3, #9, line 12, add “those” between “as” and “from”.
17. Page 3, #11, line 5 – delete “50” and insert “60”.
18. Page 3, #11, line 8 – delete “15” and insert “5”.
19. Page 3, #12, line 1 – delete “two” and insert “three”.
20. Page 3, #12, line 1 – insert “, with one equalization tank designated for wastewater resulting from abnormal operational conditions,” following “tanks”.
21. Page 3, #12, line 4 – insert “; three DAF tanks, two with a capacity of 10,000 gallons and one with a capacity of 11,000 gallons;” following “surge tank”
22. Page 3, #13, line 2 – delete “500” and insert “four, 330 gpm”.
23. Page 3, #13, line 5 – delete “discharged to the Primary Lands” and insert “recycled to the DAF system”.
24. Page 4, #14, revise 3rd sentence to read: “Concentrate from the secondary RO is sent to the deep well injection system regulated by the United States Environmental Protection Agency.”
25. Page 4, #16, line 1 – add “to” between “adjacent” and “the”.
26. Page 4, #17, line 3 – delete “The acreage of the Secondary Lands has increased since 2006.”
27. Page 4, #17, line 5 – delete “, about 920 acres in the Addendum,”
28. Page 4, #17, line 5 – delete “1,200” and insert “750”.
29. Page 4, 5, #19 – revise “Primary Lands Effluent Data” table as follows:
 - a. BOD – change value from 439 to 362;
 - b. Total N – change value from 183 to 187;
 - c. TDS – change value from 2,178 to 2,217;
 - d. EC – change value from 3,504 to 3,532;
 - e. Cl – change value from 302 to 327; and
 - f. Na – change value from 620 to 631.
30. Page 4, 5, #19 – add the following after the table “Primary Lands Effluent Data”: “In 2009, the discharge of partially-treated wastewater to the Primary Lands was about 0.57 mgd, with an average EC of about 3,334 μ mhos/cm”.

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2009 Primary Lands Effluent Data

Flow (mgd)	BOD (mg/L)	Total N (mg/L)	TDS (mg/L)	EC (µmhos/cm)	Cl (mg/L)	Na (mg/L)
0.566	119	68	2,112	3,334	391	621

31. Page 5, #19, add the following to footnote 4. "; equals TKN + Nitrate, as N".
32. Page 5, #20, line 2 – delete "in 2007" and insert "from April 2006".
33. Page 5, #20, line 2 – delete "2008" and insert "2009".
34. Page 5, #20 – revise the "Secondary Lands Effluent Data" table as follows:
 - a. BOD – change value from 45 to 42;
 - b. TDS – change value from 458 to 452; and
 - c. EC – change value from 818 to 817.
35. Page 5, #20, add the following to footnote 4. "; equals TKN + Nitrate, as N".
36. Page 5, #21, line 2 – delete "During 2007 and" and insert "From April 2006 through".
37. Page 5, #21, line 3 – delete "2008" and insert "2009".
38. Page 5, #21, line 4 – delete "81" and "77" and insert "79" and "78".
39. Page 5, #22, line 2 – delete "effluent quality characterized in Finding 20" and insert "Effluent Limitations contained in B.1 of this Order".
40. Page 5, #22, line 3 – after "activities", add "have been completed or".
41. Page 5, #23 – revise to read as follows: "Improvements to the WWTF include: installation of a second DAF system (consisting of three DAF units) to improve the ability to remove minerals and excess biomass; conversion of the existing pre-aeration tank to a third SBR providing additional SBR retention time and improved activated sludge performance; installation of an additional UF system (consisting of four units, each rated at 350 gpm) to provide UF treatment for all of the wastewater. RO concentrate from the 2nd stage RO units will continue to be injected into the deep well injection system permitted by the USEPA. Solids generated by the first and second DAF systems are dewatered and trucked offsite to East Bay Municipal Utility District."
42. Page 6, #25 – revise to read as follows; "Secondary Lands will be used to receive the discharge of the fully-treated effluent, with a total of approximately 1,200 acres being required to accommodate the increase in flow."
43. Page 6, #26, line 1 – delete "primarily".
44. Page 6, #26, line 2 – delete "but occasionally" and insert "with". Delete "is".
45. Page 6, #26, line 3 – replace "In addition" with "Historically" and replace "is" with "has also been".
46. Page 6 – revise section title by deleting "Recycle" and inserting "Reclamation".
47. Page 6, #29, line 2 – delete "recycle" and insert "reclamation".
48. Page 6, #30, revise to read as follows: "The Secondary Lands are generally cropped using a furrow and ridge irrigation system planted with silage corn in the summer and wheat, oats, or winter forage mix in the winter. Each parcel is typically planted and harvested individually to accommodate field drying cycles as well as other field activities. Values of the annual plant available nitrogen demand of alfalfa, wheat, oats, and silage corn are 480,175, 115, and 250 lbs/acre, respectively, according to *Western Fertilizer Handbook*. Studies in the Hilmar area by University of California staff indicate that the corn uptake value is correct but the values for winter crops are low. 2002 field studies of wheat and oat cropping for dairies show that oats require 294-342 lbs/acre and wheat requires 263-329 lbs/acre (Matthews. 2003. Using Winter Forages for Dairy Nitrogen Management. California Alfalfa and Forage Symposium). In a separate study of winter forage nitrogen uptake at eight dairy land application sites, the crop

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removed 202 lbs/acre (Pettygrove et. al. 2003. Integrating Forage Production with Dairy Manure Management in the San Joaquin Valley. Sustainable Agriculture Research Education Program Grant Final Report, University of California, Davis, CA). Accordingly, the nitrogen demand of double-cropped parcels or alfalfa ranges from 439 lbs/acre for winter forage/silage corn to over 500 lbs/acre if the cropping methods tested by Matthews for winter crops are used."

49. Page 7, #32, line 11 – insert "used" between "reportedly" and "to".
50. Page 7, #34, line 2 – insert "the" between "for" and "WWTF".
51. Page 8, #37 - add the following sentence: "The Corcoran Clay and units below the Corcoran Clay have been found to be associated with the Turlock Lake Formation (Jacobson James 2008)."
52. Page 8, #37, line 10 – delete "245" and insert "250".
53. Page 9, #40, line 1 – insert "A portion of the existing" before "monitoring".
54. Page 8, #40, lines 2, 3 – delete "and the CAO". Monitoring wells installed as part of the investigation work pursuant to the Cleanup and Abatement Order (CAO) should not automatically be incorporated into the WDR compliance monitoring well network. The addition of wells to the monthly WDR program does not in of itself provide for an increased protection of water quality. If wells are to be added to the WDR, there needs to be a technical basis (e.g., a physical or temporal data gap) and the tentative WDR does not provide this basis.

The objectives of an investigation program are different than the WDR compliance monitoring program. The objective of the WDR monitoring is to confirm that discharge limits are being met and provide for early detection of releases. Conversely, the investigation program in progress is designed to identify the lateral and vertical extent of impact from past discharges and to provide data regarding the fate and transport of constituents of concern to support the Feasibility Study for evaluation, recommendation and implementation of a remedial action. For example, the CAO driven work has included the installation of down gradient offsite monitoring wells below the Corcoran Clay – clearly, the locations and screened intervals of these wells are not relevant to a WDR compliance monitoring program. The sampling constituents and frequency for the CAO investigation program need to be flexible based on the most current data, remaining data gaps and stage in the investigation and cleanup process. In addition, following cleanup, the wells installed for investigation may no longer be necessary while the wells installed for the WDR compliance remain necessary as long as the discharge occurs.

The RWQCB has never identified a deficiency in the HCC WDR monitoring network. If the RWQCB has determined that additional compliance monitoring wells are necessary, then the basis of the deficiency should be identified. Following identification of such deficiency(ies), then the number, location and construction details for additional compliance monitoring wells can be reviewed to provide for protection of water quality.

55. Page 8, 9, #41 - The first sentence states that concentrations of constituents of concern increase to the west, consistent with the groundwater gradient direction. The second sentence appears to be in conflict with this as it states that "degradation of groundwater quality is common along the axis of its flow" which would imply that concentrations decrease to the west. Note that investigations to date indicate that the concentrations of constituents of concern beneath the HCC site decrease off-site to the west and southwest in the Upper Aquifer (above the Corcoran Clay).
56. Page 9, #41 – line 1 – delete "Degradation of groundwater is common along the axis of its flow."
57. Page 9, #42 – Jacobson James cannot verify the numbers referenced in this section. A review of the historical, 2008 and 2009 supply well analytical data could not find matching information; the monitoring well data was also reviewed to see if perhaps this was the source data. The

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following information is provided based on the review of the supply well analytical data collected during the May-June 2008 sampling event: "Samples were collected from 42 supply wells in 2008, which included 33 domestic wells, 5 industrial wells and 4 irrigation wells. The maximum TDS result during the supply well sampling was 1,400 mg/L (EC = 2,300 μ mhos/cm). TDS concentrations in the supply wells ranged from 160 to 1,400 mg/L. "

Also, Jacobson James cannot confirm the source data used as the basis for the last sentence in this paragraph, and the reference point to which the "semi-confined and confined" aquifer data was compared to was not identified. All the supply wells are screened below 50 feet bgs (into the semi-confined and/or confined aquifers), with the exception of one supply well (IN-4) which is screened to 20 feet bgs and is in the unconfined aquifer.

58. Page 9, #43 – revise title by inserting "Upgradient" before "Ambient".
59. Page 9, #43 – The language used for this paragraph is not consistent with the work performed by Jacobson James and the values presented for the six constituents of concern are not the values proposed by Jacobson James. The following is recommended as a more accurate representation of the work performed: "Jacobson James collected groundwater samples over the last several years from 11 direct push technology borings and a monitoring well to provide preliminary data for the evaluation of ambient conditions in the Upper Aquifer (above the Corcoran Clay) upgradient (east) of the Plant. Jacobson James performed a statistical evaluation of the data and proposed the 95% Upper Tolerance Limit as a preliminary ambient screening threshold for certain constituents in the Upper Aquifer. Jacobson James is collecting additional data from Upper Aquifer ambient locations to supplement the ambient data set for further evaluation and definition of ambient screening thresholds. The ambient screening thresholds will be defined through this ongoing work."
60. Page 9, #43 - No technical basis was provided as to how the values presented for the six constituents were calculated by the RWQCB.
61. Page 9, #43, line 3 – remove "The" and replace with "Using this data, the Regional Board determined that the".
62. Page 9, #43, line 6 – delete "ambient background" and insert "upgradient".
63. Page 9, #43, line 4 – place period after "concern" and delete "based on this investigation and are presented in the following table."
64. Page 9, #43, delete "Ambient/Background" from the table title.
65. Page 9, #44, line 3 – delete "440" and insert "700".
66. Page 9, #44, line 4 – delete "280" and "580" and insert "284" and "578", respectively.
67. Page 10, #45, line 5 – delete "in 2007 and" and insert "from April 2006 through".
68. Page 10, #45 – revise "Supply Well Data" table as follows:
 - a. TDS – change WS-1 value from 606 to 555;
 - b. TDS – change WS-2 value from 929 to 887;
 - c. EC – change WS-1 value from 934 to 855;
 - d. EC – change WS-2 value from 1478 to 1429;
 - e. Cl – change WS-1 value from 96 to 79;
 - f. Na – change WS-1 value from 95 to 84; and
 - g. Na – change WS-2 value from 165 to 159.
69. Page 10, #46, last sentence, revise to read: "Hilmar Cheese indicates IN-7 is its primary source for water, IN-1 is used as a supplemental supply and IN-2 is non-operational."
70. Page 11, #49 – Delete. There is no discharge to the San Joaquin River. Therefore, this finding is not applicable.

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71. Page 11, #53, line 6 – insert “and the appropriate salinity values to protect agriculture in the Central Valley should be reviewed on a case-by-case basis” after “crops” and before “It”.
72. Page 11, #54, line 6 – delete “Cleanup of”.
73. Page 11, #54, line 7 – delete “addressed” and insert “assessed”.
74. Page 12, #56, line 8 – delete “600” and insert “700”.
75. Page 12, #57, line 5 – delete “July 2011” and insert “July 15, 2011”; insert “is assessing the need for” after “CAO” and before “development”.
76. Page 13, #60 – delete the 1st sentence.
77. Page 13, #60, line 2 – delete “Additionally,”.
78. Page 13, #61, line 3 – delete “2007” and insert “April 2006”.
79. Page 13, #61, line 9 – delete “would” and insert “could” after “discharge” and before “degradation”.
80. Page 13, #62, line 2 – insert “less than” between “is” and “the”.
81. Page 13, #62, line 2 – insert “, since April 2006,” after “are”.
82. Page 13, #62, line 2 – delete “570” and insert “450”.
83. Page 13, #62, line 3 – delete “820” and insert “825”.
84. Page 13, #63, line 5 – insert the following sentence after “discharge.”: “This value (700 mg/L) is the groundwater limitation used to reflect background water quality in the vicinity of the proposed Secondary Lands discharge.”
85. Page 13, #63, line 5 – add new sentence after “discharge.” which reads: “This value (700 mg/L) is the established value for background water quality in the area of the proposed Secondary Land discharge.”
86. Page 13, #63, - revised the sentence that starts “The conclusion of the report....” as follows: “The conclusion of the report was that there would be no degradation from the discharge as it is of comparable quality to the existing downgradient water quality.” Revise the next sentence to read: “The model considered a combination of precipitation, Turlock Irrigation District water used for irrigation in the area, irrigation with wastewater from local dairies, and discharge of Hilmar Cheese’s treated wastewater.”
87. Page 13, #64, line 6 – remove “for TDS” since this sentence would apply to all groundwater limits.
88. Page 14, #65b., insert “or other applicable technology” following “EDR treatment”.
89. Page 14, #54d., insert “TID water” after “with” and before “and”.
90. Page 14, #66, insert “of” after “reflective” and before “BPTC”.
91. Page 14 – revise title to read “Water Reuse”.
92. Page 14, #67 – delete. Hilmar Cheese does not meet the State’s technical definition of recycled water and should not be subject to the applicable requirements.
93. Page 14, #68, line 1 – insert “and this Order” after “Plan” and before “encourages”.
94. Page 14, #69 – delete. See comment for #67.
95. Page 15, #71, last sentence – replace with “In addition, effluent applied to Secondary Lands is a reuse that is also exempt under Title 27, Section 20090(h).”
96. Page 16, #73a., line 1 – delete “Limit” and insert “Limitations”.
97. Page 16, #73b., line 1 – delete “C.2” and insert “C.4”.
98. Page 16, #73b., line 2 – delete “or mass”.
99. Page 16, #73c., line 1 – delete “Provisions” and insert “Provision”; delete “F.21 and”.
100. Page 16, #73c., line 2 – delete “1 June 2010” and insert “15 December 2010”.
101. Page 17, #81, line 2 – delete “, which is incorporated by reference herein,”.

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B. Effluent Limitations:

1. Page 18, B.1, Electrical Conductivity – delete “900” and insert “1000”.
2. Page 18, B.1, Total Dissolved Solids – delete “500” and insert “600”
3. Page 18, Total Nitrogen – add footnote: “Total Nitrogen equals the sum of TKN + Nitrate (as N)”.
4. Page 18 – add new B.2 as follows:
“2. The discharge from the WWTF to the effluent storage ponds shall not exceed the following 12-month rolling average for the constituents listed:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Value</u>
Electrical Conductivity	µmhos/cm	900
Total Dissolved Solids	Mg/L	500

C. Discharge Specifications:

1. Page 18, C.2, line 2 – delete “or in a mass”.
2. Page 19, C.6, delete the 2nd sentence.

D. Solids Specifications:

1. Page 19, D.2, line 5 – add the following sentence: “The deep well injection system regulated by the United States Environmental Protection Agency will also satisfy this specification.”
2. Page 19, D.3, line 1 – insert “, unless regulated by the USEPA,” after “practices”.

E. Groundwater Limitations:

1. Page 19, E., line 3 – delete “”or contribute to”
2. Page 19, E.a., line 1 – insert “in excess of those as” after “constituents” and before “identified”.
3. Page 19, E.a.(ii), insert “mg/L” after “700”.
4. Page 19, E.a.(iv), line 1 – insert “Paragraph 58” after “in” and before “the”.
5. Page 19, E.a.(iv), line 2 – insert “included in Title 22” after “MCLs”.
6. Page 20, E.b. – add before period “as defined in Cal. Water Code §13050(m).”

F. Provisions:

1. Page 20, #4 – Delete this provision. Inflow and infiltration protection requirements are not appropriate for this Order.
2. Page 22, #14.c., line 2 – delete “recycled” and insert “reclaimed”.
3. Page 22, #15, line 7 – replace “unpleasant” with “objectionable” to use same terminology as in Provision C.4.
4. Page 22, #16, line 1 – delete “6.5” and insert “6.0”.
5. Page 22, #16, line 2 – delete “8.3” and insert “9.0”.
6. Page 23, #19, line 2 – delete “140” and insert “60”.
7. Page 23, #20 – line 1 – delete “1 April 2010” and insert “15 June 2010”. The additional time is necessary to schedule and install the additional monitoring wells. The revised date will provide for collection of groundwater samples during the Spring, Summer, Fall and Winter seasons to allow for adequate determination of groundwater background concentrations.

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8. Page 23, #21 – revise to read “By 15 June 2010, Hilmar Cheese shall provide a summary report of its salinity evaluation activities and salinity minimization programs that have been taken or are planned to be taken in order to further reduce salinity in its discharge to the extent feasible.”
9. Page 23, #22, line 1 – delete “1 June 2010” and insert “15 December 2010”. The requirement for development of these plans by 1 June 2010 is arbitrary and does not consider the fact that full implementation of WWTF modifications/additions are required by either 2/11 or 7/11. Development of these plans by 15 December 2010 is more than sufficient to provide for discharge to the additional Reclamation Areas by either 2/15/11 or 7/15/11.
10. Page 24, #23, line 3 – add “separately” after “shall be” and replace “with” with “under”.

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1. Title page, delete “2009” and insert “2010”.
2. Header page, delete “2009” and insert “2010”.
3. Page 2, **Influent Monitoring**, delete. This requirement goes beyond the intent of the Order and serves no useful purpose. On a routine basis, Hilmar Cheese performs a number of internal sampling and analyses of parameters and constituents to assess the on-going performance of the WWTF. However, this is done to ensure that the system is operating as designed and that the effluent limitations and other requirements of the Order are attained as stipulated by the Order. In summary, there is no basis or rationale for the RWQCB requiring sampling and analysis of the discharge from the equalization tanks to the DAF tanks.
4. Page 2, **Effluent Monitoring**, delete “Twice” under frequency for pH and EC; delete “Computed” under Sample Type for Total Nitrogen and insert “Calculated”; add a footnote to the bottom of the table as follows: “Total Nitrogen equals TKN + Nitrate (as N)”.
5. Page 2, **Effluent Monitoring**, delete requirement for annual analysis of Priority Pollutants. The requirement for annual priority pollutant analysis is not necessary in view of the fact that the discharge has been adequately characterized. In addition, based on process knowledge, many of the listed priority pollutants (i.e., dioxin congeners, organics and pesticides) are not present in any of the raw materials and/or intermediates used in the production processes.
6. Page 2, **Effluent Monitoring**, General Minerals, insert “except TDS” after “General Minerals” under “Constituent/Parameter”.
7. Page 2, **Effluent Monitoring**, under “Frequency”, insert “Continuous”; under “Constituent/Parameter”, insert “Flow”; under “Units”, insert “mgd”; under “Sample Type”, insert “Meter”.
8. Page 2, **Effluent Monitoring**, delete “Twice” under “Frequency” for “pH”.
9. Page 2, **Pond Monitoring**, delete “Grab” under “Sample Type” for “Freeboard” and insert “Calculated”; add footnote 1 after “Feet” under “Units” for “Freeboard”.
10. Page 3, **Groundwater Monitoring**, line 1 – insert “existing” after “The” and before “groundwater”.
11. Page 3, **Groundwater Monitoring**, revise the 2nd sentence as follows: “Upon completion of proposed additional downgradient wells, the Discharger shall submit to the Central Valley Water Board for approval by the Executive Officer a monitoring well network for demonstrating ongoing compliance with WDR R5-2010-____. Pending approval of the proposed monitoring well network, the existing monitoring well network shall be used to demonstrate compliance.”
12. Page 3, **Groundwater Monitoring**, 1st paragraph, delete 4th sentence.
13. Page 3, **Groundwater Monitoring**, add footnote to “Total Nitrogen” as follows “Total Nitrogen equals TKN + Nitrate (as N)”; under “Sample Type for “Total Nitrogen” delete “grab” and insert “Calculated”.
14. Page 4, **Source Water Monitoring**, line 1 – insert “wells – namely WS1 – WS2” after “source” and before “the”.
15. Page 4, **Source Water Monitoring**, delete “mg/L” under “Units” for “EC” and insert “µmhos/cm”.
16. Page 4, **Source Water Monitoring**, add a footnote to “Total Nitrogen” as follows “Total Nitrogen equals TKN + Nitrate (as N)”.
17. Page 4, **Reclamation Area Monitoring**, line 1 – delete “recycled” and insert “reclaimed”.
18. Page 4, **Reclamation Area Monitoring**, 2.c., line 2 – delete “recycled” and insert “reclaimed”.
19. Page 5, **Reclamation Area Monitoring**, 3.a., line 1 – delete “recycled” and insert “reclaimed” after “of” and before “water”.
20. Page 5, **Reclamation Area Monitoring**, 3.a., line 1 – insert “from any source” after “water” and before “applied”.

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21. Page 5, **Reclamation Area Monitoring**, 4.a., line 1 – delete “Montlly” and insert “Monthly”; delete “recycled” and insert “reclaimed”; add footnote to “Total Nitrogen” as follows “Total Nitrogen equals TKN + Nitrate (as N)”.
22. Page 5, **Reclamation Area Monitoring**, 5.a., lines 1, 2 – delete “recycled” and insert “reclaimed”.
23. Page 5, **Reclamation Area Monitoring**, line 1 – insert “Monthly” before “Quantity”.
24. Page 5, **Reclamation Area Monitoring**, 5.d., line 1 – delete “recycled” and insert “reclaimed”.
25. Page 6, **Reclamation Area Monitoring**, 5.e., line 1 – delete “recycled” and insert “reclaimed”.
26. Page 6, **Soil Monitoring**, line 4 – delete “recycled” and insert “reclaimed”.
27. Page 6, **Soil Monitoring**, under “Units”, delete “mg/L” and insert “mg/kg”.
28. Page 6, **Soil Monitoring**, add footnote to “Total Nitrogen” as follows “Total Nitrogen equals TKN + Nitrate (as N)”.
29. Page 6, **Reporting**, line 9 – add the following sentence after “occurred”: “The required 12-month rolling average values should reflect an average of the monthly averages reported for that 12-month period”.
30. Page 6, **Reporting**, lines 11, 12 – delete “violations” and insert “exceedences”.
31. Page 8, **Reporting**, A. All Quarterly Monitoring Reports, Wastewater 1. – delete “influent”.
32. Page 8, **Reporting**, A. All Quarterly Monitoring Reports, Groundwater 2. – delete. The requirement to submit at least five years of groundwater monitoring data for each monitoring well is onerous and time consuming without any apparent benefit. Since the data will be supplied to the RWQCB on a quarterly basis for each monthly period within the quarter, the RWQCB will have the capability of developing the monitoring well data information, if warranted.
33. Page 8, **Reporting**, A. Source water reporting 1. – insert 2nd and 3rd sentences as follows: “General minerals besides those expressly specified in the table on page 4 (e.g., EC and nitrogen species) are only required to be reported annually in the Fourth Quarter Report. See section B. below”.
34. Page 8, **Reporting**, B. Fourth Quarter Monitoring Reports, Wastewater reporting 1. – delete “certificate grades”. This is not applicable.
35. Page 9, **Reporting**, B. Fourth Quarter Monitoring Reports, Source Water reporting 1. – This requirement is inconsistent with Source Water Monitoring requirements. These require quarterly calculations of flow-weighted average concentrations.
36. Page 9, **Reporting**, B. Fourth Quarter Monitoring Reports, Reclamation Area reporting 2. – delete this requirement. This information is required to be submitted with each quarterly report.
37. Page 9, **Reporting**, B. Fourth Quarter Monitoring Reports, Reclamation Area reporting 5.a., 5.b., 5.c. – delete “recycled” and insert “reclaimed”.
38. Page 9, **Reporting**, B. Fourth Quarter Monitoring Reports, Reclamation Area reporting, revise numbering.
39. Due to the anticipated date for the Board hearing on the draft Order (late January 2010), implementation of the monitoring program (assuming Board adoption of the Order) by February 1, 2010 will be difficult. It is recommended that the date for implementation of the monitoring program be April 1, 2010 – the start of the 1st full quarter following adoption of the Order.

Draft Time Schedule Order

1. Page 1, #4 – revise to be consistent with #7 of the Tentative Order as follows: “The Revised Settlement Agreement included Interim Operating Limits (Order R5-2006-0025) that prescribed discharge requirements until Hilmar Cheese could complete improvements to the WWTF. Hilmar Cheese has been operating within those limits since adoption of the Revised Settlement Agreement in March 2006, which became effective in April of 2006. The Interim Operating Limits allow for the discharge of up to 1.2 mgd of partially-treated wastewater with an EC of up to 3,700 µmhos/cm to the Primary Lands. In 2008, the monthly average flow of partially-treated wastewater to the Primary Lands was about 0.65 mgd, with an average EC of about 3,500 µmhos/cm. In 2009 (through November 2009), the discharge of partially-treated wastewater to the Primary Lands was about 0.60 mgd, with an average EC of about 3,300 µmhos/cm.”
2. Page 2, #6, line 6 – insert “may not be sustainable” after “units” and before “and”.
3. Page 2, #6, line 9 – insert “could potentially function more effectively” after “system” and before “than”.
4. Page 2, #7, line 1 – insert “1” after “until” and before “May”; line 3 – insert “15” after “of” and before “July”; insert, line 5 – insert “15” after “by” and before “February”.
5. Page 2, #8, line 1 – insert “from April” after “Lands” and before “2006”; insert “through 2008” after “2006” and before “has”.
6. Page 2, #8 – insert the following as the last sentence “In the latter part of 2009, the Discharger modified the means for discharge to the Primary Lands in an effort to further reduce the potential for objectionable odors and potential nuisance conditions.”
7. Page 2, #9, 1., Electrical Conductivity (EC) – delete “900” and insert “1000”.
8. Page 2, #9, 1., Total Dissolved Solids (TDS) – delete “500” and insert “600”.
9. Page 2, #9 – add 2. as follows: “2. The discharge from the WWTF to the effluent storage ponds shall not exceed the following 12-month rolling average for the constituents listed:

<u>Constituent/ Parameter</u>	<u>Effluent Limit</u>
Electrical Conductivity (EC)	900 µmhos/cm
Total Dissolved Solids (TDS)	500 mg/L

10. Page 3, #10, line 1 – insert “for the portion of the flows currently discharging to the Primary Lands” after “B.1” and before “is”.
11. Page 3, #12, line 1 – delete “and 13385(j)(3)”.
12. Page 3, #12, line 4 – insert “on the Primary Lands” after “B.1” and before “for”.
13. Page 3, #12, delete 2nd sentence and insert: “Therefore, the Central Valley Water Board finds that a Time Schedule Order is appropriate.”
14. Page 4, 1., line 2 – insert “on the Primary Lands” after “B.1” and before “contained”.
15. Page 4, 1. Task – delete “1 February 2011” and insert “15 February 2011”.
16. Page 4, 1. Task – delete “1 July 2011” and insert “15 July 2011”.
17. Page 5, 2.a., line 2 – insert “Primary Lands portion of the” after “the” and before “Reclamation”.