



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

March 10, 2006

In Reply Refer To: WTR-7

Dermot O'Brien, Director of Operations
Dairy Farmers of America
Golden Cheese Company of California
1138 West Rincon
Corona, California 92880-9601

Re: June 22, 2005 Clean Water Act Inspection

Dear Mr. O'Brien:

Enclosed is the report for our June 22, 2005 pretreatment inspection of Golden Cheese. Please submit a short response to the findings in Sections 2 through 5 of this report, to EPA, Orange County, the Santa Ana Watershed Project Authority, and the Regional Water Quality Control Board, by **April 30, 2006**.

The main findings are summarized below:

- 1 The excellent design and capacity of the wastewater treatment in general and the deep-shaft bioreactors specifically has resulted in consistent compliance with all sewer discharge limits since mid-2001. There is no evidence that treated discharges from Golden Cheese have adversely affected the sewers and treatment works.
- 2 The wastewater treatment is also well designed to avoid emergency bypassing of treatment primarily because there are dual biological treatment trains plumbed in parallel.
- 3 The sample record for Golden Cheese is usable to determine compliance since the sampling is representative over the sampling day's operations and the reporting period.

This report brings to an end EPA's long-running involvement in the regulation of the wastewater discharges from Golden Cheese to the domestic sewers. Our involvement began during our 1998 review of the Orange County and City of Corona pretreatment programs. In that year, we first inspected Golden Cheese and issued an Administrative Order to require compliance with the local limits advanced by Orange County and applied by the Santa Ana Watershed Project Authority for discharges into the Santa Ana Regional Interceptor brine line. In response to this order and to permits subsequently issued by the Santa Ana Watershed Project Authority, Golden Cheese constructed the deep-shaft wastewater treatment plant now in operation and provided monthly self-monitoring reports of its wastewater discharges to the sewers.

This report covers our inspection last year and our final review of the self-monitoring reports submitted by Golden Cheese through 2005. In light of the findings, Golden Cheese no longer needs to report self-monitoring to EPA.

I certainly appreciate your helpfulness extended to me during this inspection and over the years, as well as your professional, thoughtful and consistent attention to compliance and reporting. I remain available to Orange County, SAWPA and to you to assist in any way. Once again, thank you for your cooperation during this inspection. Please do not hesitate to call me at (415) 972-3504 or e-mail at arthur.greg@epa.gov.

Sincerely,

Greg V. Arthur
CWA Compliance Office

Enclosure

cc: Dave Francis, OCSD
Gary DeFrese, G&D Environmental for SAWPA
Julio Lara, RWQCB-Santa Ana



U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 9

CLEAN WATER ACT COMPLIANCE OFFICE

NPDES COMPLIANCE EVALUATION INSPECTION REPORT

Industrial User: Dairy Farmers of America
Golden Cheese Company of California, Corona Facility
1138 West Rincon Street, Corona, California 92880-9601
Non-Categorical Significant Industrial User

Treatment Works: Santa Ana Regional Interceptor Brine Line
Santa Ana Watershed Project Authority

Orange County Sanitation District
Fountain Valley Wastewater Reclamation Plant No.1 and
Huntington Beach Wastewater Treatment Plant No.2
(NPDES Permit CA0110604)

Date of Inspection: June 22, 2005

Inspection Participants:

US EPA: Greg V. Arthur, Region 9, CWA Compliance Office, (415) 972-3504

RWQCB-Santa Ana: Julio Lara, Water Resources Control Engineer, (951) 782-4901
Najah Amin, Water Resources Control Engineer, (951) 320-6362

Orange County SD: Doug Francis, Source Control Inspector, (714) 593-7479

SAWPA: Gary DeFrese, G and D Environmental Compliance, (951) 588-1714

Golden Cheese: Dermot O'Brien, Director of Operations, (951) 493-4702

Report Prepared By: Greg V. Arthur, Environmental Engineer
March 9, 2006

1.0 Scope and Purpose

On June 22, 2005, EPA, the California Regional Water Quality Control Board Santa Ana Region (“RWQCB”), the Orange County Sanitation District (“OCSD”), and the Santa Ana Watershed Project Authority (“SAWPA”) conducted a compliance evaluation inspection of Dairy Farmers of America, Golden Cheese Company of California, Corona Facility (“Golden Cheese”), in Corona, California. The purpose was to ensure compliance with the Federal regulations covering the discharge of non-domestic wastewaters into the sewers. In particular, it was to ensure:

- Classification in the proper Federal categories;
- Application of the correct standards at the correct sampling points;
- Consistent compliance with the standards; and
- Fulfillment of Federal self-monitoring requirements.

Golden Cheese is a significant industrial user (“SIU”) contributing to the SAWPA Santa Ana Regional Interceptor (“SARI”) brine line which feeds into the OCSD sewer service area. Compliance with pretreatment requirements including the requirement to successfully cause the regulation of extra-jurisdictional industrial users was assessed as part of a 2005 evaluation of the OCSD pretreatment program by the RWQCB, its contractor, Tetra Tech, and EPA. The inspection participants are listed on the title page. Arthur conducted the inspection of Golden Cheese on June 22. See Appendix 1 and the photos in item 1.7 on page 4 of this report.

1.1 Process Description

Golden Cheese processes 1.8 billion pounds of milk per year to produce cheese, shredded cheese, alcohol, whey protein concentrate, whey powder, and milk-solids animal feed supplements at 1138 West Rincon Street in Corona, California. This inspection did not involve a tour of the processing operations. However, from previous inspections and from the Golden Cheese web-site, the facility operations include milk receiving by tanker truck, product storage, blending, pasteurization, cheese vat formation of curds and whey, curds and whey separation, cheddaring, milling, salting, blockforming, ageing, shredding, whey purification and drying, distillation and alcohol fermentation. Power is provided by a co-generation electrical power plant located next to Golden Cheese.

The Golden Cheese web-site:

<http://ourworld.compuserve.com/homepages/gccc/3d.htm>

1.2 Facility SIC Code

Golden Cheese is assigned the SIC codes for manufacturing natural cheese and cheese manufacturing by-products such as whey (SIC 2022), and for industrial ethyl alcohol production (SIC 2869).

1.3 Facility Wastewater Sources and Composition

This inspection did not involve a detailed determination of the facility wastewater sources, the water quality of the individual wastewater sources nor the wastewater generation schedules and variability. In general, Golden Cheese generates clean-in-place wash waters, spents, and rinses, as well as plant and equipment washdown, boiler blowdown, cooling tower blowdown, water softener regenerant, and air conditioner condensate. The various clean-in-place units provide phosphoric acid descaling, nitric acid cleaning, alkaline cleaning, and chlorinated disinfection.

1.4 Facility Process Wastewater Treatment

Golden Cheese operates two deep-shaft aerobic bioreactors to reduce the organic cheese wastes loading in the wastewaters. High-strength wastewaters from the clean-in-place units undergo screening, equalization, and cooling through a heat exchanger prior to feeding into the bioreactors. The mixed liquors leaving the bioreactors undergo polymer flocculation and dissolved air flotation ("DAF") clarification. Some DAF float splits as return activated sludge. DAF supernatant combines with the remaining low-strength wastewaters for equalization and final polishing through an induced air flotation ("IAF") unit. The reduction in organics loading average 90%, from ~30,000 to ~3,000 lbs BOD per day.

The deep-shaft bioreactors are 12 feet in diameter and 320 feet deep. Each bioreactor and attendant DAF clarifier operates as a separate treatment unit with an individual design capacity of 1.2 million gpd and rated capacity of 35,000 lbs BOD per day. The extreme depth greatly increases the dissolved air transfer rate thereby increasing the biological uptake of organics. The bioreactors and DAF clarifiers operate at a mean cell residence time of around 7 days and obtain partial nitrification. The return DAF float activated sludge and air is injected at a depth of 280 feet.

Waste activated sludge from the two DAF clarifiers and solids float from the final IAF unit are pumped to a sludge holding tank for sludge dewatering. However, until September 2005, the Golden Cheese sludges were dewatered through a dedicated filter press at the City of Corona Wastewater Treatment Plant No.1.

1.5 Sewer Discharge and Compliance Sampling

Golden Cheese discharges its non-domestic and domestic wastewaters to the SARI brine line and on to the OCSD wastewater treatment plants. Until September 2005, Golden Cheese also discharged its sludges and solids to the City of Corona wastewater treatment plant No.1 for sludge processing and filter press filtrate discharge to the SARI brine line. As a result, there are two sewer connections into the domestic sewers designated in this report as IWD-A for the permitted discharge at Golden Cheese from compliance sampling Point A, and IWD-B for the permitted discharge at the Corona WWTP No.1 from compliance sampling Point B.

1.6 POTW Legal Authorities

Orange County Sanitation District – OCSD operates an EPA-approved pretreatment program as required by the State of California in the RWQCB's Waste Discharge Requirements, No. R8-2004-0062, reissued in 2004, and serving as NPDES Permit No. CA0110604. As part of this, OCSD established sewer use Ordinance No.1 that applies to all industrial users of its sewer system. Under this authority, OCSD also entered into a multijurisdictional agreement with SAWPA to allocate capacity rights and establish interceptor limits for contributions into the OCSD sewer system from the SARI brine line.

Santa Ana Watershed Project Authority – SAWPA established sewer use Ordinance No.4 that applies to the industrial users discharging directly into the SARI brine line as well as to combined domestic/non-domestic connections from the contributing jurisdictions. Under this authority, SAWPA issued industrial user permit No. 4B-92-S13 covering the sewer discharges from Golden Cheese through IWD-A and IWD-B.

1.7 Photo Documentation

Arthur took five digital photographs to document this inspection. The file names are *goldencheese1.jpg*, *~2.jpg*, ... *~5.jpg*. Three of the photographs are depicted below. The others were duplicates or alternate views.



Top left (*goldencheese4.jpg*) shows float skimming from the surface of one of the DAF clarifiers. Top right (*goldencheese5.jpg*) shows the subnatant from the induced air flotation unit and final discharge to the brine line. Left (*goldencheese3.jpg*) shows the exposed crown of one bioreactor shaft.

Photos Taken by: Greg V. Arthur
Date: June 22, 2005

2.0 Sewer Discharge Standards and Limits

Federal categorical pretreatment standards (where they exist), national prohibitions, and the local limits (where they exist) must be applied to the sewer discharges from industrial users. (40 CFR 403.5 and 403.6).

The SAWPA permit correctly applies local limits to both discharges from Golden Cheese to the SARI brine line, thereby extending the limitations advanced by the SAWPA ordinance in agreement with the OCSD ordinance. No Federal categorical pretreatment standards apply to Golden Cheese, however the national prohibitions apply as they do to all non-domestic discharges to publicly-owned treatment works nationwide. The application of Federal categorical standards, national prohibitions, and local limits was determined through visual inspection. See Appendix 2 for the sewer discharge standards and limits.

Requirements

- None.

Recommendations

- None.

2.1 Classification by Federal Point Source Category

Golden Cheese qualifies as a significant industrial user of the SARI brine line and OCSD sewerage system because discharge flows average more than 1 million gallons per day. Golden Cheese does not qualify for regulation under any of the Federal categorical pretreatment standards set forth in 40 CFR 407-471. SAWPA correctly classified Golden Cheese and OCSD reported this classification in its annual reports to the RWQCB and EPA.

2.2 Local Limits and National Prohibitions

Local limits and the national prohibitions are meant to express the limitations on non-domestic discharges necessary to protect the sewers, treatment plants and their receiving waters from adverse impacts. In particular, they prohibit discharges that can cause the pass-through of pollutants into the receiving waters or into reuse, the operational interference of the sewage treatment works, the contamination of the sewage sludge, sewer worker health and safety risks, fire or explosive risks, and corrosive damage to the sewers. The national prohibitions apply nationwide to all non-domestic sewer discharges. The SAWPA local limits apply to non-domestic discharges into the SARI brine line.

The SAWPA permit for Golden Cheese specifically applies most of the local limits advanced in the SAWPA ordinance. The permit sets local limits and requires self-monitoring for BOD loading, discharge flow rate from IWD-A, pH, oil & grease, dissolved and total sulfides, amenable and total cyanide, total toxic organics, arsenic, cadmium, total chromium, copper,

lead, mercury, nickel silver, zinc, PCBs and pesticides. The permit does not directly reference the numerical local limits for explosivity or temperature or the narrative local prohibitions against sewer obstruction, interference, and batch dumping, although none of these parameters, except possibly temperature, would be of concern for Golden Cheese.

2.4 *Point(s) of Compliance*

Local limits and the national prohibitions apply end-of-pipe to all non-domestic flows from Golden Cheese. The sample points designated in this report as IWD-A and IWD-B are suitable end-of-pipe sample point representative of the day-to-day non-domestic wastewater discharges to the sewers. The mass-loading requirements apply to Golden Cheese as a whole, so the sum of the IWD-A and IWD-B loadings apply against the permit limits.

2.5 *Compliance Sampling*

Local concentration limits and the national prohibitions are instantaneous-maximums and are comparable to samples of any length including single grab samples. Local mass-loading limits are daily-maximums comparable to composite samples over a sampling day's discharge.

2.6 *EPA Administrative Order Requirements*

In 1998, EPA issued an administrative order to address on-going violations of the local limits for BOD, pH, and oil & grease. In response, Golden Cheese diverted a portion of its wastewaters to the Corona wastewater water treatment plant and began the designing and building of the deep-shaft bioreactors. Golden Cheese also instituted one-year of comprehensive self-monitoring as required by the order. Since then, Golden Cheese began the operation of the deep-shaft bioreactors in 2001 and continued to self-monitor as set forth in the order under the authority of a SAWPA-issued permit. EPA has continued to receive the self-monitoring.

3.0 Compliance with Local Limits and National Prohibitions

All non-domestic wastewater discharges to the sewers must comply with local limits and the national prohibitions. 40 CFR 403.5(a,b,d).

Industrial users must comply with the provision restricting the bypass of treatment necessary to comply with any pretreatment standard or requirement. 40 CFR 403.17(d).

The excellent design and capacity of the deep-shaft bioreactors as well as the other portions of on-site wastewater treatment has resulted in consistent compliance by Golden Cheese with its local limits and national prohibitions for BOD, pH, sulfides, and oil & grease since mid-2001. Consistent compliance with the local limits for metals and other toxics also can be considered as demonstrated even with limited sampling because the discharges would not be expected to contain significant levels of these locally-limited pollutants. See Appendix 3. Also see Section 4.0 of this report.

Requirements

- None.

Recommendations

- None.

3.1 National Objectives

The general pretreatment regulations were promulgated in order to fulfill the national objectives to prevent the introduction of pollutants that:

- (1) cause operational interference with sewage treatment or sludge disposal,
- (2) pass-through sewage treatment into the receiving waters or sludge,
- (3) are in any way incompatible with the sewerage works, or
- (4) do not improve the opportunities to recycle municipal wastewaters and sludge.

This inspection did not include an evaluation of whether achievement of the national objectives in 40 CFR 403.2 have been demonstrated by the OCSD wastewater treatment plants through consistent compliance with their sludge and discharge limits.

3.2 Sampling Records

The 1999-2005 sample record for Golden Cheese at IWD-A and IWD-B consists of monthly self-monitoring reports comprising daily composite sample results for BOD and TSS, and daily compilations of continuous pH and discharge flow rate measurements. The 1999-2005 sample record also contains weekly sample results for oil & grease and sulfides, and twice-per year sample results for metals and other toxics. The sample results are usable for

determining compliance since 24-hour composite samples are representative over the sampling day and the daily sampling of the pollutants of concern is representative over the Federally-required six month reporting period. See Appendix 3 for a summary of the 2005 sample record.

3.3 *Local Limits for Oxygen Demanding Pollutants and The National Prohibition Against Interference*

Since mid-2001, Golden Cheese has demonstrated consistent compliance with the local daily-maximum and monthly-average loading limits of 15,000 and 10,000 lbs/day-BOD that apply to both discharge points together, with no violations in 1,645 consecutive days of sampling over a 4½ year period. In 2005, the average, 99th% peak, and maximum loadings were calculated as 2,995, 7,720 and 14,312 lbs/day-BOD. Compliance with these local loading limits substantiates the finding that the wastewaters discharged to the sewers are not high enough in organics strength to pose a risk of interference, even though the average and statistical maximums of 296 and 769 mg/l-BOD and 520 and 1,461 mg/l-TSS are well above typical domestic levels.

3.4 *Local Limits for Toxic Metals, Cyanide, and Other Pollutants and The National Prohibition Against Pass-Through*

Toxics – The wastewaters discharged through IWD-A and IWD-B are not expected to contain significant concentrations of metals, cyanides, toxic organics, PCBs or pesticides. Limited sampling substantiates this finding with most sample maximums below detection limits and all of them orders of magnitude below the local limits.

Oil and Grease – Petroleum oil and grease is unlikely to be entrained in the wastewater discharge to the sewers. Golden Cheese demonstrated consistent compliance with the local daily-maximum limit of 100 mg/l, with average and calculated 99th% peaks of 8.9 and 26.9 mg/l in 2005.

Temperature – There were no sample results for temperature. No conclusion can be made whether the discharge from Golden Cheese could exceed the local limit of 140°F. However, excessive heat in the wastewater discharges is not be expected to measurably affect the influent temperature of at the wastewater treatment plant

3.5 *Flammability*

Flammability would not be expected because solvents and volatile organics are not present in the discharge from food processing facilities such as cheese makers.

**3.6 *Local Limits for pH and Sulfides, and
The National Prohibitions Against Safety Hazards and Corrosive Structural Damage***

Sewer collection system interferences related to the formation of hydrogen sulfide and the resulting acidic disintegration of the sewers are not expected because the wastewaters discharged to the sewers have consistently complied with the local limits for BOD, pH, and sulfides since mid-2001. In 2005, Golden Cheese demonstrated consistent compliance with the daily-maximum limits for sulfides with average and calculated 99th% peaks of 0.06 and 0.26 mg/l dissolved sulfides and 0.85 and 3.05 mg/l total sulfides. In 2005, Golden Cheese also consistently complied with the pH limits, with a median pH of 8.05, 90% of pH measurements between 7.7 and 8.2, and all pH measurements between 7.0 and 8.9. Compliance with BOD limits is documented in section 3.3 above.

3.7 *Bypass Provision*

The Federal standards in 40 CFR 403.17 prohibit the bypassing of any on-site treatment necessary to comply with standards unless the bypass was unavoidable to prevent the loss of life, injury, or property damage, and there were no feasible alternatives. This provision explicitly prohibits bypasses that are the result of a short-sighted lack of back-up equipment for normal downtimes or preventive maintenance. It also explicitly prohibits bypasses that could be prevented through wastewater retention or the procurement of auxiliary equipment. It specifically allows bypasses that do not result in violations of the standards as long as there is prior notice and approval from the sewerage agency or State.

Golden Cheese has the design capacity to avoid bypassing the treatment necessary to comply with the standards. In particular, the biological treatment involves individual dual treatment trains plumbed in parallel, each with a deep-shaft bioreactor, flocculation tank and a dissolved air flotation clarifier.

4.0 Compliance with Federal Monitoring Requirements

Significant industrial users must self-monitor for all regulated parameters at least twice per year unless the sewerage agency monitors in place of self-monitoring. 40 CFR 403.12(e) & 403.12(g).

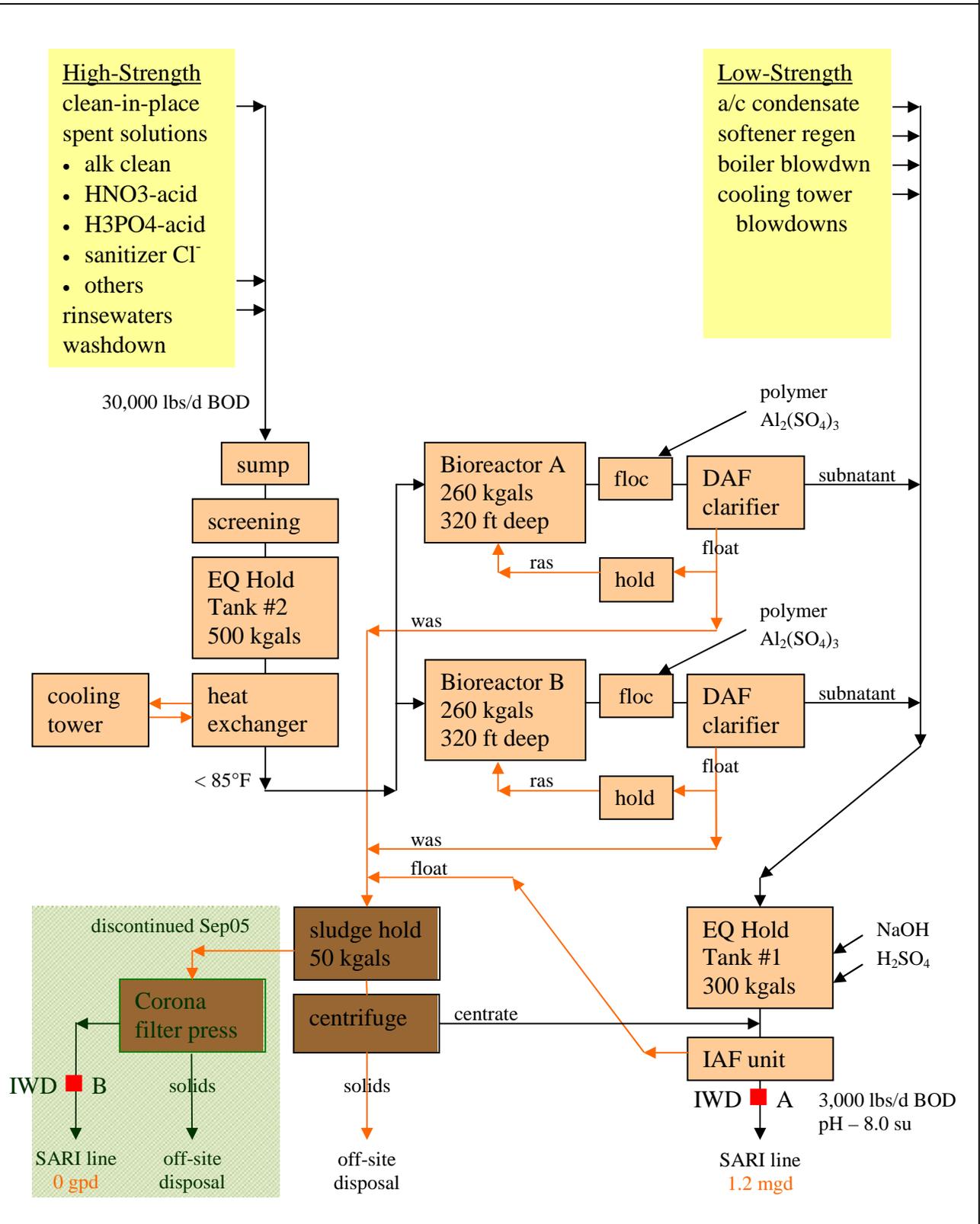
Each sample must be representative of the sampling day's operations. Sampling must be representative of the conditions occurring during the reporting period. 40 CFR 403.12(g) and 403.12(h).

The sample record for Golden Cheese is representative of the sampling day's operations and over the six-month reporting period because the pollutants of concern are monitored frequently. The BOD, pH, and discharge flow rates are monitored daily, while oil & grease and sulfides are monitored weekly. Metals and other toxics such as pesticides and PCBs would not be expected and were not detected at levels approaching the local limits. As a result, self-monitoring for toxics only once per year is appropriate to simply verify that these pollutants are not of concern. See section 3.1 on page 13.

Requirements

- See Appendix 2 for the permit self-monitoring requirements for IWD-A and IWD-B.

Appendix 1
 Golden Cheese, Corona
 Schematic of the Wastewater Collection and Treatment



Appendix 2

Sewer Discharge Standards and Limits
Golden Cheese, Corona @ IWD-A and IWD-B

Pollutants of Concern IWD-A and IWD-B	Federal standards (daily-max)	national prohibitions (inst-max)	SAWPA local limits (daily-max)	SAWPA local limits (month-avg)	permitted monitoring frequency
BOD load A+B (lbs/d)	-	-	15,000	10,000	1/day
TSS load A+B (lbs/d)	-	-	-	-	1/day
flow rate A (gpd)	-	-	①	-	1/day
flow rate B (gpd)	-	-	-	-	1/day
pH (s.u.)	-	<5.0	6.0 to 12.0	-	1/day
oil & grease-petro (mg/l)	-	-	100.0	-	1/week
sulfides-dissolved (mg/l)	-	-	0.5	-	1/week
sulfides-total (mg/l)	-	-	5.0	-	1/week
arsenic (mg/l)	-	-	2.0	-	1/year
cadmium (mg/l)	-	-	1.0	-	1/year
chromium (mg/)	-	-	2.0	-	1/year
copper (mg/)	-	-	3.0	-	1/year
lead (mg/l)	-	-	2.0	-	1/year
mercury (mg/l)	-	-	0.03	-	1/year
nickel (mg/l)	-	-	10.0	-	1/year
silver (mg/l)	-	-	5.0	-	1/year
zinc (mg/l)	-	-	10.0	-	1/year
cyanide-total (mg/l)	-	-	5.0	-	1/year
cyanide-amenable (mg/l)	-	-	0.5	-	1/year
total tox organics (mg/l)	-	-	0.58	-	1/year
pesticides (mg/l)	-	-	0.01	-	1/year
PCBs (mg/l)	-	-	0.01	-	1/year
explosivity	-	<140°F ②	-	-	-

① IWD-A limited to 950 gpm when the southside manhole on Rincon Street overflows

② Closed Cup Flashpoint

Appendix 3

Golden Cheese, Corona – Wastewater Discharge Quality @ IWD-A and IWD-B

January 2005 – December 2005 ①

pollutants	Effluent sampling results for 2005				viols rate ③	sample count
	mean ②	99th%	min	max		
IWD-A BOD d-max (mg/l)	296	769	15	1310	n/a	365
BOD mo-av (mg/l)	297	576	155	467	n/a	12
TSS d-max (mg/l)	520	1461	38	3360	n/a	365
TSS mo-avg (mg/l)	520	796	406	810	n/a	12
pH (s.u.)	8.05	-	7.0	8.9	0/365	365
flow rate (gpd)	1171900	1506100	565400	1395400	0/365	365
oil & grease (mg/l)	8.9	26.9	<1	33	0/45	45
sulfides-dissolved (mg/l)	0.06	0.26	<0.02	0.47	0/45	45
sulfides-total (mg/l)	0.85	3.05	<0.02	3.48	0/45	45
arsenic (mg/l)	-	-	-	<0.03	0/1	1
cadmium (mg/l)	-	-	-	<0.01	0/1	1
chromium (mg/l)	-	-	-	<0.1	0/1	1
copper (mg/l)	-	-	-	0.24	0/1	1
mercury (mg/l)	-	-	-	<0.003	0/1	1
lead (mg/l)	-	-	-	<0.05	0/1	1
nickel (mg/l)	-	-	-	<0.01	0/1	1
silver (mg/l)	-	-	-	<0.05	0/1	1
zinc (mg/l)	-	-	-	0.25	0/1	1
cyanide-total (mg/l)	-	-	-	<0.005	0/1	1
total tox organics (mg/l)	-	-	-	0.19	0/1	1
IWD-B BOD d-max (mg/l)	244	614	32	1010	n/a	101
(thru BOD mo-av (mg/l)	266	489	124	426	n/a	12
Sep05) TSS d-max (mg/l)	473	2458	38	4680	n/a	101
TSS mo-avg (mg/l)	467	1156	176	902	n/a	12
flow rate (gpd)	55300	191100	0	270600	n/a	-
IWD-A BOD daily-load (lbs/d)	2995	7720	107	14312	0/365	365
and BOD month-load (lbs/d)	2988	5909	1476	4926	0/12	12
IWD-B TSS daily-load (lbs/d)	5257	14809	406	35014	n/a	365
TSS month-load (lbs/d)	5266	8346	3864	8410	n/a	12

① Jan-Dec for conventional pollutants and flow; Jan-Jun for toxics, oil & grease, sulfides

② Median (not mean) for pH

③ Monthly-average violation rates based on arithmetic average of all results in calendar month