CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0019
FOR
ARDAGH GLASS INC.
AIR LIQUIDE INDUSTRIAL U.S. LIMITED PARTNERSHIP AND
STRATEGIC MATERIALS INC.
GLASS FACILITY
MADERA COUNTY

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

Background

1. Ball-Foster owned and operated a glass manufacturing facility (Glass Facility) at 24441 Avenue 12 in Madera, California. The discharge is regulated under Waste Discharge Requirements (WDRs) Order 85-314 that authorize the discharge of domestic and industrial wastewater to three evaporation/percolation ponds. Domestic wastewater is generated from an onsite package treatment facility. Industrial wastewater is generated from the quenching operation in the glass manufacturing process along with contact and non-contact cooling water. Order 85-314 allows a monthly average flow of 0.39 million gallons per day (mgd). On 26 January 2001, the Central Valley Water Board adopted Order 5-01-011 for an ownership change from Ball-Foster Glass to Saint-Gobain Containers, LLC. On 6 June 2014, the Central Valley Water Board adopted Order R5-2014-0092 for a name change from Saint-Gobain Containers, LLC to Ardagh Glass Inc. (Ardagh Glass).

2. On 4 February 2014, Environmental Resources Management (Consultant) submitted a Report of Waste Discharge (RWD) and supplemental information received on 17 November 2014, 18 September 2015, 7 January 2016, 8 January 2016, and 4 March 2016 for updated WDRs to reflect changes Ardagh Glass has made to its operation since WDRs Order 85-314 were adopted.

3. Ardagh Glass leases a portion of its property to Air Liquide Industrial U.S. Limited Partnership (Air Liquide), a gas manufacturing company, and Strategic Materials Inc. (Strategic Materials), a cullet processing company.

4. Air Liquide operates a compressor cooling system that generates cooling tower blowdown that comingles with cooling tower blowdown generated by Ardagh Glass prior to being discharged to the three evaporation/percolation ponds.

5. Strategic Materials mechanically processes recycled glass, no process wastewater is generated from this process. Storm water is the only waste stream generated from Strategic Materials and it collects in storm water drain inlets that are connected to Ardagh Glass storm

drain system, prior to being discharged to the three evaporation/percolation ponds and the unlined southwest holding pond.

6. Ardagh Glass Inc., Air Liquide Industrial U.S. Limited Partnership, and Strategic Materials Inc., (hereafter Dischargers) are responsible for compliance with these Waste Discharge Requirements (WDRs).

7. The Glass Facility occupies the south west corner of section 34 in Township 11 South, Range 17 East, MDB&M. The Glass Facility is shown on Attachment A, which is incorporated by reference and considered a part of this Order.

8. WDRs Order 85-314 need to be updated to ensure the discharge is consistent with Central Valley Water Board plans and policies and to prescribe requirements that reflect changes Ardagh Glass has made to its operation. WDRs Order 85-314 will be rescinded and replaced with this Order.

Existing Facility and Discharge

9. Ardagh Glass manufactures glass bottles primarily for wine customers. Operations include: batch handling, melting, forming, annealing, inspecting, packaging, warehousing, and shipping. Ardagh Glass operates 24 hours per day, year round.

10. In 1990, an oil skimmer/recirculating water system was installed. Contact wastewater from the cullet quench process passes through the oil skimmer and is then recirculated for reuse. This system is completely a closed-loop system with no discharge to the three evaporation/percolation ponds. Currently, well water from an onsite well is used to supplement the oil skimmer/recirculating water system as water evaporates.

11. Waste streams generated at the Glass Facility include: domestic wastewater from an onsite package plant, water softener regenerate, non-contact cooling water blowdown, and storm water. Non-contact cooling water blowdown is generated from Ardagh Glass two-tower compressor cooling system, Air Liquide compressor cooling system, and the electrode evaporation cooling water system. Currently, all of the blowdowns comingle in floor drains and are pumped through a pipe to comingle with domestic wastewater and storm water collected in storm water drain inlets before being discharged to the three evaporation/percolation ponds.

12. Monitoring and Reporting Program 85-314 requires Ardagh Glass to monitor its effluent for flow (in gallons per day (gpd)), settleable matter, dissolved oxygen, and total chromium. Ardagh Glass collects its wastewater sample at the weir where comingled blowdown wastewater and domestic wastewater comingle before going to the three evaporation/percolation ponds. The monthly average quality of the wastewater, with the exception of pH, based on data from 2013 through 2015 is tabulated in Table 1.

Table 1. Comingled Blowdown Wastewater and Domestic Wastewater

	Month	Flow (gpd) Ave	Chromium (mg/L) Ave	DO (mg/L) Ave	Settleable Matter (ml/L) Ave	pH (pH units) Min	pH (pH units) Max
2013	Jan	35,849	---	7.8	0.1	8.2	8.5
	Feb	32,478	---	7.2	0.1	8.2	8.4
	Mar	58,419	---	4.7	0.5	8.1	8.5
	Apr	54,934	---	3.2	0.1	8.1	9.5
	May	52,619	---	4.0	0.1	8.1	8.4
	Jun	73,726	---	4.6	0.1	7.8	8.4
	Jul	81,481	---	4.0	0.1	8.2	8.4
	Aug	69,304	---	4.0	0.1	8.1	8.5
	Sep	57,181	---	4.7	0.1	8.1	8.4
	Oct	52,603	---	5.2	0.1	8.0	8.4
	Nov	38,647	---	5.6	0.1	8.0	8.3
	Dec	49,769	---	7.1	0.1	8.1	8.2
2014	Jan	38,861	---	6.4	---	8.0	8.7
	Feb	52,856	---	8.1	0.1	8.1	8.9
	Mar	49,326	---	6.0	0.1	8.1	9.1
	Apr	65,274	---	5.9	0.1	8.1	8.4
	May	64,205	---	5.7	0.1	8.1	8.4
	Jun	78,250	---	5.2	0.1	8.2	8.5
	Jul	99,838	---	4.7	0.1	7.8	8.4
	Aug	76,160	<0.010	5.3	0.1	8.2	8.4
	Sep	67,240	---	5.8	0.1	---	---
	Oct	67,966	<0.010	5.3	0.1	---	---
	Nov	31,071	<0.010	5.3	0.1	---	---
	Dec	24,818	---	5.7	0.1	---	---
2015	Jan	13,213	---	6.0	0.1	---	---
	Feb	42,225	---	6.8	0.1	---	---
	Mar	66,342	---	6.8	0.1	---	---
	Apr	90,134	---	6.2	0.1	---	---
	May	59,527	<0.010	7.3	0.1	---	---
	Jun	---	---	---	---	---	---
	Jul	44,441	---	4.5	0.1	---	---
	Aug	47,686	<0.010	4.0	0.1	---	---
	Sep	47,583	---	2.8	0.1	---	---
	Oct	---	---	---	---	---	---
	Nov	---	---	---	---	---	---
	Dec	---	---	---	---	---	---

13. Currently, storm water at the Glass Facility is collected in storm water drain inlets and comingles with domestic and comingled blowdown wastewater before being discharged to the three evaporation/percolation ponds.

Proposed Facility and Discharge

14. Ardagh Glass is proposing to use its comingled blowdown wastewater to: 1) supplement its concrete-lined "Fire Water Pond", 2) supplement the oil skimmer/recirculation system, and 3) discharge directly to the three evaporation/percolation ponds and the unlined southwest holding pond.

15. Currently, Ardagh Glass has a concrete-lined "Fire Water Pond" that is filled with supply water from onsite wells and is for emergency purposes in case a fire breaks out at the Glass Facility. Ardagh Glass is proposing to use a portion of the comingled blowdown wastewater to supplement the "Fire Water Pond" instead of using well water. The "Fire Water Pond" has an overflow weir. When water in the "Fire Water Pond" overflows, it will comingle with treated domestic wastewater and eventually be discharged to the three evaporation/percolation ponds and the unlined southwest holding pond.

16. Ardagh Glass is also proposing to eliminate the use of well water that supplements the oil skimmer/recirculation water system and instead use comingled blowdown wastewater.

17. According to the 4 March 2016 supplemental information, the unlined southwest holding pond has a two-way connection with the three evaporation/percolation ponds. Wastewater can be diverted either way between the three evaporation/percolation ponds and the unlined southwest holding pond. A process flow schematic is shown in Attachment B, which is incorporated by reference and is part of this Order.

18. On 17 November 2014, Ardagh Glass submitted supplemental information that included analytical data for one sampling event on 14 July 2014 (see Table 2). The cooling tower blowdown does not include Air Liquide compressor cooling system blowdown.

Table 2. 14 July 2014 Data

Constituent/Parameter	Units	Cooling Tower	Fire Water Pond	Domestic Wastewater	Sample Weir (comingled blowdown wastewater & domestic wastewater)
Alkalinity as $CaCO_3$	mg/L	230	290	230	240
Arsenic	mg/L	ND	ND	ND	ND
Bicarbonate as $CaCO_3$	mg/L	200	290	230	230
Biochemical Oxygen Demand	mg/L	ND	3	27	3
Bromide	mg/L	3	0.85	0.098	0.37
Calcium	mg/L	82	63	19	74
Carbonate as $CaCO_3$	mg/L	30	ND	ND	6.6
Chloride	mg/L	56	130	43	66
Copper	mg/L	0.023	ND	0.0059	0.013
Dichloroacetate	mg/L	12.9	2.5	2.51	2.52
Electrical Conductivity	umhos/cm	770	1,100	640	760
Fluoride	mg/L	0.1	ND	ND	0.11
Hardness as $CaCO_3$	mg/L	300	400	71	270
Hydroxide as $CaCO_3$	mg/L	ND	ND	ND	ND
Iron	mg/L	ND	0.038	0.66	0.062
Magnesium	mg/L	24	58	5.8	21
Manganese	mg/L	ND	ND	0.023	ND
Molybdenum	mg/L	ND	ND	ND	ND
Nitrate as NO_3	mg/L	38	7.9	ND	32
Nitrite as Nitrogen	mg/L	ND	ND	ND	0.28
pH	pH units	8.6	8.1	7.7	8.3
Temperature	°C	24.1	24.1	24.1	24
Potassium	mg/L	7.5	17	14	7.9
Sodium	mg/L	49	86	35	52
Sulfate as SO_4	mg/L	54	160	12	48
Total Dissolved Solids	mg/L	590	730	270	530
Total Fixed Dissolved Solids	mg/L	490	550	210	420
Total Kjeldahl Nitrogen	mg/L	ND	6	48	2.8
Total Nitrogen	mg/L	7.3	7.3	49	8.7
Total Oxidizable Nitrogen as Nitrogen	mg/L	7.3	1.4	0.23	6.4
Total Suspended Solids	mg/L	5	5.5	48	6
Zinc	mg/L	ND	ND	ND	ND

19. On 18 September 2015, Ardagh Glass submitted supplemental information that included analytical data of Air Liquide's compressor cooling system taken on 14 May 2015 (see Table 3).

Table 3. 14 May 2015 Data

Constituent/Parameter	Units	Air Liquide
Alkalinity as $CaCO_3$	mg/L	91
Bicarbonate as $CaCO_3$	mg/L	91
Carbonate as $CaCO_3$	mg/L	<0.3
Hydroxide as $CaCO_3$	mg/L	<0.3
Biochemical Oxygen Demand	mg/L	<0.1
Bromide	mg/L	0.1
Chloride	mg/L	29
Electrical Conductivity	umhos/cm	290
Fluoride	mg/L	0.15
Nitrate as NO_3	mg/L	2.5
Nitrite as Nitrogen	mg/L	<0.050
pH	pH Units	8.1
Sulfate as SO_4	mg/L	7.2
Total Dissolved Solids	mg/L	330
Total Fixed Dissolved Solids	mg/L	280
Total Kjeldahl Nitrogen	mg/L	<1.0
Total Nitrogen	mg/L	<1.0
Total Oxidizable Nitrogen as Nitrogen	mg/L	0.59
Total Suspended Solids	mg/L	<5.0
Arsenic	mg/L	<0.002
Calcium	mg/L	20
Copper	mg/L	<0.005
Hardness as $CaCO_3$	mg/L	75
Iron	mg/L	0.046
Magnesium	mg/L	6.1
Manganese	mg/L	<0.010
Molybdenum	mg/L	<0.010
Potassium	mg/L	3
Sodium	mg/L	29
Zinc	mg/L	0.53

20. On 28 October 2015, Central Valley Water Board staff conducted an inspection of the Glass Facility and collected two wastewater samples, see Table 4.

Table 4. 28 October 2015 Data

Constituent/Parameter	Units	DMS151028-1 Comingled Blowdown Wastewaters	DMS151028-2 Comingled Blowdown Wastewaters & Domestic Wastewater
pH	pH Units	8.89	7.85
Biochemical Oxygen Demand	mg/L	15	18
Specific Conductivity	umhos/cm	722	<5
Total Dissolved Solids	mg/L	559	2140
Total Suspended Solids	mg/L	<15	<15
Nitrate as Nitrogen	mg/L	3.53	2.02
Nitrate as NO_3	mg/L	15.6	8.93
Nitrite as Nitrogen	mg/L	<0.15	<0.15
Nitrite as NO_2	mg/L	<0.5	<0.5
Ammonia as Nitrogen	mg/L	<0.1	6.16
Total Kjeldahl Nitrogen	mg/L	0.5	9.3
Total Alkalinity	mg/L	188	134
Total Hardness	mg/L	142	252
Sulfate as SO_4	mg/L	17.6	27.5
Fluoride	mg/L	0.3	0.2
Hexavalent Chromium	mg/L	0.006	0.0036
Methylene Blue Active Substance Assay	mg/L	<0.1	<0.1
Chloride	mg/L	67.7	961
<u>Metals:</u>			
Aluminum	mg/L	0.329	0.124
Calcium	mg/L	35	62.6
Antimony	mg/L	<0.01	<0.01
Arsenic	mg/L	<0.01	<0.01
Barium	mg/L	0.107	0.193
Beryllium	mg/L	<0.005	<0.005
Cadmium	mg/L	<0.005	<0.005
Chromium	mg/L	0.0067	<0.005
Cobalt	mg/L	<0.005	<0.005
Copper	mg/L	0.0094	0.0084
Lead	mg/L	<0.005	<0.005
Molybdenum	mg/L	0.0071	0.0068
Nickel	mg/L	<0.005	0.0067
Selenium	mg/L	<0.02	<0.02
Silver	mg/L	<0.005	<0.005
Thallium	mg/L	<0.02	<0.02
Vanadium	mg/L	0.0759	0.0421
Zinc	mg/L	0.127	0.136

Constituent/Parameter	Units	DMS151028-1 Comingled Blowdown Wastewaters	DMS151028-2 Comingled Blowdown Wastewaters & Domestic Wastewater
Iron	mg/L	0.397	0.222
Magnesium	mg/L	10.8	19.3
Manganese	mg/L	0.0154	0.0196
Mercury	mg/L	<0.0002	<0.0002
Sodium	mg/L	58.6	599

21. On 7 January 2016, Ardagh Glass submitted supplemental information that included analytical data of the all comingled blowdowns and comingled blowdown wastewater with domestic wastewater (Sample Weir) collected during November and December 2015, see Table 5 below. For comparison purposes, State drinking water primary and secondary maximum contaminant levels (MCLs) are listed at the far right of the table, where bold, constituent concentrations are greater than listed MCLs.

Table 5. Comingled Blowdown and Sample Weir Data

Constituent/Parameter	Units	Comingled Blowdown				Sample Weir				MCLs
		Ave	Min	Max	Sampling Events	Ave	Min	Max	Sampling Events	
Alkalinity as $CaCO_3$	mg/L	113	95	130	2	97	96	98	2	N/A
Bicarbonate as $CaCO_3$	mg/L	93	91	95	2	97	96	98	2	N/A
Carbonate as $CaCO_3$	mg/L	43	43	43	2	<3.0	<3.0	<3.0	2	N/A
Hydroxide as $CaCO_3$	mg/L	<3.0	<3.0	<3.0	2	<3.0	<3.0	<3.0	2	N/A
Ammonia a Nitrogen	mg/L	0.88	0.10	2.20	9	3.75	1.70	7.70	9	N/A
Biochemical Oxygen Demand	mg/L	12	1	60	9	8	2	12	9	N/A
Chloride	mg/L	55	50	60	2	74	62	85	2	250/500
Electrical Conductivity	umhos/cm	522	260	**1,000**	9	810	420	**1,900**	9	900/1,600
Methylene Blue Active Substance Assay	mg/L	0.08	0.07	0.10	2	0.06	0.06	0.06	2	0.5
Nitrate as Nitrogen	mg/L	2	1	4	9	2	1	5	9	10
Nitrite as Nitrogen	mg/L	0.41	0.06	1.40	9	0.88	0.19	2.00	9	N/A
pH	pH Units	---	7.9	8.9	9	---	7.7	8.8	9	N/A
Sulfate as SO_4	mg/L	59	50	68	2	57	14	100	2	N/A
Total Dissolved Solids	mg/L	409	230	**620**	9	**528**	300	**1,000**	9	500/1,000
Total Kjeldahl Nitrogen	mg/L	2	1	3	9	4	2	8	9	N/A
Total Nitrogen	mg/L	3	1	6	9	6	1	**12**	9	N/A
Total Suspended Solids	mg/L	31	10	120	9	32	5	150	9	N/A
Metals:										
Aluminum	mg/L	0.14	0.12	0.15	2	0.67	0.67	0.67	2	1
Antimony	mg/L	<0.002	<0.002	<0.002	2	<0.002	<0.002	<0.002	2	0.006
Arsenic	mg/L	0.0022	0.0022	0.0022	2	0.0028	0.0023	0.0032	2	0.01

Constituent/Parameter	Units	Comingled Blowdown				Sample Weir				MCLs
		Ave	Min	Max	Sampling Events	Ave	Min	Max	Sampling Events	
Barium	mg/L	0.07	0.06	0.09	2	0.09	0.06	0.12	2	1
Beryllium	mg/L	<0.001	<0.001	<0.001	2	<0.001	<0.001	<0.001	2	0.004
Cadmium	mg/L	<0.001	<0.001	<0.001	2	<0.001	<0.001	<0.001	2	0.005
Calcium	mg/L	26	25	27	2	33	22	44	2	N/A
Chromium	mg/L	<0.010	<0.010	<0.010	2	<0.010	<0.010	<0.010	2	0.05
Copper	mg/L	0.0070	0.0063	0.0076	2	0.0110	0.0110	0.0110	2	1
Hardness as $CaCO_3$	mg/L	98	96	100	2	123	85	160	2	N/A
Iron	mg/L	0.20	0.19	0.21	2	**0.43**	0.05	**0.82**	2	0.3
Lead	mg/L	<0.005	<0.005	<0.005	2	0.0079	0.0079	0.0079	2	N/A
Magnesium	mg/L	8.1	8.0	8.1	2	10	7	13	2	N/A
Manganese	mg/L	0.01	0.01	0.01	2	0.03	0.03	0.03	2	0.05
Mercury	mg/L	<0.0002	<0.0002	<0.0002	2	<0.0002	<0.0002	<0.0002	2	0.002
Nickel	mg/L	<0.010	<0.010	<0.010	2	<0.010	<0.010	<0.010	2	0.1
Potassium	mg/L	5.9	4.8	6.9	2	6.8	5.1	8.4	2	N/A
Selenium	mg/L	0.0041	0.0029	0.0053	2	0.0166	0.0042	0.0290	2	0.05
Silver	mg/L	<0.010	<0.010	<0.010	2	<0.010	<0.010	<0.010	2	0.1
Sodium	mg/L	46	41	51	2	73	47	98	2	N/A
Thallium	mg/L	<0.001	<0.001	<0.001	2	<0.001	<0.001	<0.001	2	0.002
Zinc	mg/L	0.13	0.12	0.14	2	0.10	0.08	0.11	2	5

22. Chemicals used at the Glass Facility include: sulfuric acid 93 percent (31,000 lbs/year), CHEMTREAT CL-49 (fungicide, algaecide) (310 gal/year – Ardagh Glass & 455 gal/year – Air Liquide), CHEMTREAT CL-5755 (corrosion inhibitor) (9,000 lbs/year), CHEMTREAT CL-2250 (biocide) (0.455 lbs/year – Air Liquide), and CHEMTREAT CL-5531 (corrosion inhibitor) (0.234 lbs/year – Air Liquide).

Source Water

23. The Glass Facility receives its supply water from three on-site wells (North Well, South Well, and New South Well). The North Well is approximately 500 feet deep, South Well is approximately 418 feet deep, and New South Well is approximately 800 feet deep. The quality of supply water based on one sample taken on 14 July 2014 is shown in Table 6.

Table 6. Quality of Source Water

Constituent/Parameter	Units	New South Well	North Well	South Well
Alkalinity as $CaCO_3$	mg/L	69	400	410
Arsenic	mg/L	ND	ND	ND
Bicarbonate as $CaCO_3$	mg/L	69	400	410
Biochemical Oxygen Demand	mg/L	ND	ND	ND
Bromide	mg/L	0.046	0.66	0.63

Constituent/Parameter	Units	New South Well	North Well	South Well
Calcium	mg/L	14	150	150
Carbonate as $CaCO_3$	mg/L	ND	ND	ND
Chloride	mg/L	21	76	73
Copper	mg/L	ND	ND	ND
Dichloroacetate	mg/L	0.512	2.51	2.5
Electrical Conductivity	umhos/cm	200	1,300	1,200
Fluoride	mg/L	ND	ND	ND
Hardness as $CaCO_3$	mg/L	53	550	550
Hydroxide as $CaCO_3$	mg/L	ND	ND	ND
Iron	mg/L	ND	0.053	0.049
Magnesium	mg/L	4.4	42	41
Manganese	mg/L	ND	0.013	ND
Molybdenum	mg/L	ND	ND	ND
Nitrate as NO_3	mg/L	1.6	81	72
Nitrite as Nitrogen	mg/L	ND	ND	ND
pH	pH units	7.7	7.3	7.5
Temperature	°C	24	24	24
Potassium	mg/L	2.1	11	11
Sodium	mg/L	20	53	55
Sulfate as SO_4	mg/L	3.6	120	110
Total Dissolved Solids	mg/L	170	820	840
Total Fixed Dissolved Solids	mg/L	130	650	640
Total Kjeldahl Nitrogen	mg/L	ND	ND	ND
Total Nitrogen	mg/L	ND	15	15
Total Oxidizable Nitrogen as Nitrogen	mg/L	0.34	15	15
Total Suspended Solids	mg/L	ND	ND	ND
Zinc	mg/L	ND	ND	ND

Site-Specific Conditions

24. Land uses in the vicinity of the Glass Facility are primarily agricultural and industrial. Crops grown in the vicinity of the Glass Facility are vineyards, almonds, and nectarines, according to the Madera County 2011 Land Use Map published by the Department of Water Resources. Constellation Wines, U.S., Inc. (Constellation) owns and operates the Mission Bell Winery, regulated under WDRs Order 95-164 immediately north of the Glass Facility with its land application areas to the east and west of the Glass Facility. Quady Winery, Inc., owns and operates the Quady Winery, regulated by WDRs R5-2012-0108 and about a half mile north of the Glass Facility.

25. The Glass Facility is in an arid climate characterized by dry summers and mild winters. The rainy season generally extends from November through April. Average annual pan evaporation is about 85 inches according to data in the *National Oceanic and Atmospheric Administration Technical Report NWS 34, Mean Monthly, Seasonal, and Annual Pan*

Evaporation for the United States, published by the U.S. Department of Commerce National Oceanic and Atmospheric Administration. The average annual precipitation is about 11 inches according to data obtained from the Western Regional Climate Center.

26. Soils below the Glass Facility are predominantly Grangeville Fine Sandy Loam and Tujunga Loamy Sand, according to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service. Grangeville Fine Sandy Loam and Tujunga Loamy Sand have a land capacity classification of 2w and 3e, respectively. Soils with "Class 2" have moderate limitations that restrict the choice of plants or require moderate conservation practices. Soils with "Class 3" have severe limitation that restrict the choice of plants or require special conservation practices, or both. The subclass "w" shows that water in or on the soil interferes with plant growth or cultivation. In some soils the wetness can be partly corrected by artificial drainage. Ponding, a high water table, and/or flooding affect the soils that are assigned this subclass letter. The subclass "e" shows that the main problem is the hazard of erosion unless close-growing plant cover is maintained. The susceptibility to erosion and past erosion damage are the major soil-related factors affecting the soils that are assigned this subclass letter.

27. According to the Federal Emergency Management Agency maps (Map Number 06039C1165E) the Glass Facility is in Zone X. This area is outside the 500-year floodplain.

Basin Plan, Beneficial Uses, and Water Quality Objectives

28. The *Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin, Fourth Edition, revised June 2015* ("Basin Plan") designates beneficial uses, establishes narrative and numerical 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 Board. In accordance with Water Code section 13263(a), these waste discharge requirements implement the Basin Plan.

29. The Glass Facility is in the Madera Hydrologic Area (No. 545.20) of the San Joaquin Valley Floor Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resource Control Board.

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

31. The Basin Plan includes narrative water quality objectives for chemical constituents that, at a minimum, require water designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

32. The Basin Plan establishes narrative water quality objectives for chemical constituents, taste and odors, and toxicity in groundwater. The narrative 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.

Groundwater Considerations

33. Ardagh Glass does not have a groundwater monitoring well network on-site and is not required to conduct groundwater monitoring at this time. Groundwater in the area is approximately 130 feet below ground surface and flows in the northeast direction, according to the *Lines of Equal Depth to Water in Wells* map published by the Department of Water Resources (DWR) in 2010.

34. Based on limited data available found in the DWR's Water Data Library and the United States Geological Survey, National Water Information System: Mapper, the quality of groundwater in the area from nearby wells is shown in Table 7. For comparison purposes, State drinking water primary and secondary MCLs are listed at the end of the table.

Table 7. Quality of Groundwater

	Well Depth (Feet)	Date Sampled	Electrical Conductivity (umhos/cm)	Calcium (mg/L)	Chloride (mg/L)	Total Alkalinity (mg/L)	Total Hardness (mg/L)	Nitrate as Nitrogen (mg/L)
12S17E02C001M	---	5/26/1966	310	27	27	104	94	---
11S17E35M001M	---	5/25/1966	483	48	36	161	180	---
11S17E34L001M	592	4/14/2008	485	48.7	25.2	185	186	3.88
12S17E03A001M	---	5/26/1966	425	41	18	155	154	---
Maximum Contaminant Levels			900/1600	n/a	250	n/a	n/a	10

35. Constellation Mission Bell Winery and its land application areas are immediately adjacent to the Glass Facility. Constellation has a groundwater monitoring well network of nineteen wells. Over the years fifteen wells have gone dry. Currently, MW-4R, MW-15R, MW-18, and MW-19 are operational. According to Constellation's groundwater monitoring well network, groundwater in the area flows in the west/northwest direction. Monitoring wells MW-4R and MW-18 are upgradient of Constellation and Ardagh Glass. The quality of groundwater based on Constellation's groundwater monitoring well network is tabulated in Table 8 below.

Table 8. Constellation Mission Bell Winery Groundwater Quality

Constituent/Parameters	Units	MW-4R			MW-15R			MW-18			MW-19		
		5 Sampling Events			4 Sampling Events			6 Sampling Events			5 Sampling Events		
		Ave	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave	Min	Max
Nitrate as Nitrogen	mg/L	7	6	10	14	14	15	13	11	14	8	7	9
Total Nitrogen	mg/L	7	6	10	14	14	15	13	11	14	8	7	9
TKN	mg/L	0.058	0.058	0.058	0.072	0.072	0.072	0.120	0.120	0.120	0.560	0.540	0.580
Calcium	mg/L	90	83	95	60	60	61	87	82	90	152	110	180
Magnesium	mg/L	26	25	28	18	17	18	24	22	25	37	29	44
Sodium	mg/L	68	55	76	39	38	41	56	50	60	63	49	69
Potassium	mg/L	12	11	13	7	7	7	11	10	12	11	9	12
Carbonate	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarbonate	mg/L	342	310	370	195	190	200	307	300	310	602	430	700
Chloride	mg/L	83	34	100	49	47	51	64	57	70	50	41	55
Sulfate	mg/L	70	59	85	34	33	35	61	56	69	81	56	92
Iron	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoride	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phosphorus	mg/L	0.072	0.072	0.072	0.068	0.068	0.068	0.056	0.056	0.056	0.050	0.050	0.050
Electrical Conductivity	umhos/cm	966	900	1,000	668	660	680	890	830	930	1,216	980	1,400
Total Dissolved Solids	mg/L	640	570	690	443	420	460	603	580	630	770	570	980
pH	pH Units	---	7.4	7.8	---	7.6	7.8	---	7.5	7.7	---	7.4	7.6

Antidegradation Analysis

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

    a. The degradation will not result in water quality less than that prescribed in State and regional policies, including violation of one or more water quality objectives;

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

    c. The discharger will employ Best Practicable Treatment or Control (BPTC) to minimize degradation; and

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

37. Constituents of concern that have the potential to degrade and pollute groundwater include organics, nutrients, and salts. However, the discharge is not expected to cause groundwater to exceed water quality objectives because:

a. The proposed discharge is not anticipated to degrade groundwater due to organic loading. With respect to organics in the three evaporation/percolation ponds and the unlined southwest holding pond, this Order requires Pond Monitoring for dissolved oxygen as well as a dissolved oxygen content of greater than 1.0 mg/L for three consecutive sampling events in the ponds as described in Provision E.6.

b. For salinity, the effluent quality of 810 umhos/cm (average comingled blowdown wastewater with domestic wastewater - Sample Weir) is less than the average groundwater EC of 890 umhos/cm from upgradient well MW-18. This Order contains Groundwater Limitations that limit groundwater EC degradation to natural background quality or the numerical MCLs in Title 22, whichever is greater.

c. For nitrogen, the "Fire Water Pond" at the Glass Facility is concrete lined and is not expected to cause significant groundwater degradation with respect to nitrogen. Further, nitrogen is minimal, averaging 6 mg/L. Based on this, discharge of wastewater to the three evaporation/percolation ponds and the unlined southwest holding pond will not cause exceedances of water quality objectives nor impair beneficial uses.

38. The Discharger provides control of the discharge as required by this Order, control of the discharge that incorporates:

a. Wastewater treatment for nitrogen reduction;

b. Concrete lined "Fire Water Pond", and

c. Source water, discharge, and pond monitoring.

These control practices are reflective of BPTC of the discharge.

39. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State. The Discharger aids in the economic prosperity of the region by the direct employment and provides a tax base for local and state governments. Provided the discharge complies with State and Central Valley Water Board plans and policies, there is sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order. In addition, the reuse of process wastewater for irrigation in place of fresh water is of further benefit to people of the State.

40. This Order establishes terms and conditions to ensure that the discharge does not unreasonably effect present and anticipated future beneficial uses of groundwater or result in groundwater quality worse than background or the water quality objectives set forth in the Basin Plan.

41. This Order is consistent with the Anti-Degradation Policy since: (a) the Discharger has or will implement BPTC to minimize degradation, (b) the limited degradation allowed by this Order will not unreasonably affect present and anticipated future beneficial uses of groundwater, or

result in water quality less than water quality objectives, and (c) the limited degradation is of maximum benefit to the people of the State.

Other Regulatory Considerations

42. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

43. Based on the threat and complexity of the discharge, the Facility is determined to be classified as 2B as defined below:

    a. Category 2 threat to water quality: "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."

    b. Category B complexity: "Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units."

44. California Code of Regulations, Title 27 ("Title 27") contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. Domestic wastewater, cooling tower blowdown, and storm water are regulated by this Order and exempt from Title 27 pursuant to provisions that exempt wastewater discharges. The exemption, found at Title 27, section 20090, is described below:

> The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:
>
> ***
>
> (b) Wastewater – Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:
>
> (1) The applicable regional water quality control board has issued WDRs, reclamation requirements, or waived such issuance;
>
> (2) The discharge is in compliance with applicable water quality control plan; and

(3) The wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

***

45. The discharge of domestic wastewater, cooling tower blowdown, and storm water are authorized herein and exempt from the requirements of Title 27 in accordance with Title 27, section 20090(b) because:

    a. The Central Valley Water Board is issuing WDRs;

    b. The discharge authorized herein will comply with the Basin Plan; and

    c. The wastewater discharged to the three evaporation/percolation ponds and unlined southwest holding pond does not need to be managed as hazardous waste.

46. On 1 April 2014, the State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities. Order 2014-0057-DWQ supersedes State Water Board Order 97-03-DWQ (NPDES General Permit CAS000001) and became effective 1 July 2015. Order 2014-0057-DWQ requires all applicable industrial dischargers to apply for coverage under the new General Order by the effective date. The Discharger is not enrolled under Order 2014-0057-DWQ. However, all storm water at the Glass Facility is captured and contained on-site and/or comingled with cooling tower blowdown and domestic wastewater before being discharged to the three evaporation/percolation ponds and unlined southwest holding pond in accordance with these WDRs, which prohibit the discharge from leaving the Glass Facility and entering water of the United States. Therefore, the Discharger is not required to obtain coverage under Order 2014-0057-DWQ.

47. Water Code section 13267(b)(1) 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…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.

48. The technical reports required by this Order and monitoring reports required by the attached MRP R5-2016-0019 are necessary to assure compliance with these waste discharge

requirements. The Discharger owns and operates the Glass Facility that discharges the waste subject to this Order.

49. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

50. The issuance of this Order is exempt from the provisions of California Environmental Quality Act ("CEQA") (Pub. Resources Code, §21000 et seq.) in accordance with California Code of Regulations, title 14, section 15301, which exempts the "operation, repair, maintenance, [and] permitting…of existing public or private structures, facilities, mechanical equipment, or topographical features" from environmental review. This action may also be considered exempt because it is an action by a regulatory agency for the protection of natural resources (Cal. Code Regs., tit.14, §15307.) and an action by a regulatory agency for the protection of the environment (Cal. Code Regs., tit. 14, §15308.).

51. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

52. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the conditions of discharge of this Order.

53. The Discharger(s) and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

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

IT IS HEREBY ORDERED that Waste Discharge Requirements Order 85-314 is rescinded and that pursuant to Water Code sections 13263 and 13267, Ardagh Glass Inc., Air Liquide Industrial U.S Limited Partnership, Strategic Materials, Inc., and their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of waste to surface waters or surface water drainage courses is prohibited.

2. Discharge of waste classified as 'hazardous', as defined in California Code of Regulations, title 23, section 2521(a), is prohibited.

3. Discharge of waste classified as 'designated', as defined in Water Code section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

4. Treatment system bypass or overflow of untreated wastes is prohibited, except as allowed by Standard Provisions E.2 in *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991.

5. Discharge of wastewater in a manner or location other than that described herein or in the RWD is prohibited.

6. Discharge of domestic wastewater to any surface water is prohibited.

B. Effluent Limitations

1. The monthly average daily discharge flow **[Compliance shall be determined at EFF-001[1]]** shall not exceed 0.39 mgd.

C. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this Order.

2. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.

3. The discharge shall remain within the permitted waste treatment/containment structures at all times.

4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.

5. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

6. Objectionable odors shall not be perceivable beyond the limits of the Glass Facility where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.

[1] Monitoring location EFF-001 is described in Monitoring and Reporting Program R5-2016-0019

7. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.

8. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

9. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Effluent Limitation B.1.

10. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:

    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

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

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

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

12. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.

13. The Discharger shall periodically monitor sludge accumulation in the wastewater/storage ponds and shall remove sludge as necessary to maintain adequate treatment and storage capacity.

D. Groundwater Limitations

Release of waste constituents from any treatment, reuse, or storage component associated with the Glass Facility shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or natural background quality, whichever is greater:

1. Nitrate as Nitrogen of 10 mg/L

2. For constituents identified in Title 22, the MCLs quantified therein.

E. Provisions

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements,* dated 1 March 1991 (Standard Provisions), which are part of this Order.

2. The Discharger shall comply with MRP R5-2016-0019, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.

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

4. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified documents to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

5. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the 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 this Order.

6. As a means of discerning compliance with Discharge Specification C.6, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO issues within 30 days.

7. As described in the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.

8. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

9. In the event of any change in control or ownership of the Facility, 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.

10. To assume operation as a Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

11. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer, and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified

12. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields

pertinent to the required activities. All technical reports specified herein that contain work plans for investigations and studies, that describe the conduct of investigations and studies or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

13. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plan for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations are different that those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.

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

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

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

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

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 21 April 2016.

Original Signed by:

PAMELA C. CREEDON, Executive Officer

Order Attachments:

A. Facility Map
B. Flow Schematic

Monitoring and Reporting Program R5-2016-0019
Information Sheet
Standard Provisions (1 March 1991)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2016-0019
FOR
ARDAGH GLASS INC.
AIR LIQUIDE INDUSTRIAL U.S. LIMITED PARTNERSHIP AND
STRATEGIC MATERIALS INC.
GLASS FACILITY
MADERA COUNTY

This monitoring and Reporting Program (MRP) is required pursuant to Water Code 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 and in accordance with manufacturer instructions.

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

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

A glossary of terms used within this MRP is included on page 7.

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

Monitoring Location Name	Monitoring Location Description
EFF-001	Sampling Weir before the evaporation/percolation ponds.
PND-001 through PND-004	Evaporation/Percolation Ponds (PND-001 through PND-003), and Unlined Southwest Holding Pond (PND-004).
SPL-001 through SPL-003	North Well (SPL-001), South Well (SPL-002), and New South Well (SPL-003).

EFFLUENT MONITORING

Effluent samples shall be collected at the EFF-001 when discharge is occurring. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Total Effluent Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	Electrical Conductivity	umhos/cm	Grab
Twice Monthly	Biochemical Oxygen Demand	mg/L	Grab
Monthly	Total Suspended Solids	mg/L	Grab
Monthly	Total Dissolved Solids	mg/L	Grab
Monthly	Total Kjeldahl Nitrogen	mg/L	Grab
Monthly	Nitrate as Nitrogen	mg/L	Grab
Monthly	Nitrite as Nitrogen	mg/L	Grab
Monthly	Ammonia as Nitrogen	mg/L	Grab
Monthly	Total Nitrogen	mg/L	Computed
Quarterly	General Minerals[1,2]	mg/L	Grab
Annually	Metals[3]	mg/L	Grab

[1] With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

[2] See glossary on page 7 for list of general mineral constituents.

[3] Metals include: aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, hardness as $CaCO_3$, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, and zinc.

POND MONITORING

A permanent marker (e.g., staff gages) shall be placed in the storage ponds. The marker shall have calibrations indicating water level at the design capacity and available operational freeboard. Pond monitoring at PND-001 through PND-004 shall include at least the following:

Frequency	Constituent/Parameter	Units	Sample Type
Weekly	DO[1]	mg/L	Grab[2]
Weekly	Freeboard	feet	Grab

[1] DO in the upper one foot of any wastewater pond or irrigation reservoir containing wastewater shall not be less than 1.0 mg/L for three consecutive sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the discharger shall report the finding to the Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO issues within 30 days.

[2] DO shall be measured between 8:00 am and 10:00 am and shall be taken opposite the pond inlet at a depth of approximately one-foot.

The Discharger shall inspect the condition of the storage ponds weekly and record 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 grease, dead algae, vegetation, scum, or debris are accumulating on the storage pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark green, dull green, yellow, gray, tan, brown, etc.). A summary of the entries made in the log shall be included in the subsequent monitoring report.

SOURCE WATER MONITORING

The Discharger shall monitor supply well SPL-001 through SPL-003. For each source (either well or surface water supply), the Discharger shall calculate the flow-weighted average concentrations for the specified constituents utilizing monthly flow data and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements.

Frequency	Constituent/Parameter	Units	Sample Type
Quarterly	Flow-Weighted EC	umhos/cm	Grab
Annually	General Minerals[1,2]	mg/L	Grab

[1] With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

[2] See glossary on page 7 for list of general mineral constituents.

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

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

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

Program: Non-15, WDID: 5C202009001, Facility Name: Glass Facility, Order: R5-2016-0019

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, and shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, 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.

In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

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

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3.

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.

In the future, the State or Central Valley Water Board may notify the District to electronically submit and upload monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site http://www.waterboards.ca.gov/ciwqs/index.html or similar system.

A. All Quarterly Monitoring Reports shall include the following:

Wastewater Reporting

1. Tabulated results of Effluent Monitoring specified on page 2.

2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flow.

Pond Monitoring

1. The results of Pond Monitoring specified on page 3.

2. A summary of the notations made in the pond monitoring log during each quarter. Copies of log pages covering the quarterly reporting period shall not be submitted unless requested by Central Valley Water Board staff.

Source Water

1. The results of Source Water Monitoring specified on page 3.

2. For each month of the quarter, calculation of the flow-weighted 12-month rolling average EC of the source water using monthly flow data and source water EC values for the most recent four quarters.

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

Facility Information

1. The names and general responsibilities of all persons in charge of wastewater management.

2. The names and telephone numbers of persons to contact regarding the facility for emergency and routine situations.

3. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.

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

Original Signed by:

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

_____
(Date)

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
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 at least every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months.
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	milliliters [of solids] per liter
ug/L	Micrograms per liter
umhos/cm	Micromhos per centimeter
mgd	Million gallons per day
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	Nitrate

General Minerals analyses shall be accompanied by documentation of cation/anion balance. With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

INFORMATION SHEET

INFORMATION SHEET - ORDER R5-2016-0019
ARDAGH GLASS INC.
AIR LIQUIDE INDUSTRIAL U.S. LIMITED PARTNERSHIP AND
STRATEGIC MATERIALS INC.
GLASS FACILITY
MADERA COUNTY

Background

Waste Discharge Requirements (WDRs) Order 85-314, adopted 6 December 1985 authorized Ball-Foster owner and operator of a a glass manufacturing facility (Glass Facility) at 24441 Avenue 12 in Madera, California to discharge 0.39 million gallons per day (mgd) of domestic and industrial wastewater from the Glass Facility to three evaporation/percolation ponds. On 26 January 2001, the Central Valley Water Board adopted Order 5-01-011 for an ownership change from Ball-Foster Glass to Saint-Gobain Containers, LLC (Saint-Gobain). On 6 June 2014, the Central Valley Water Board adopted Order R5-2014-0092 for a name change from Saint-Gobain Containers, LLC to Ardagh Glass Inc.

On 12 November 2009, Saint-Gobain submitted a Report of Waste Discharge (RWD) for replacement of their onsite wastewater treatment system. By letter dated 16 December 2009, the Central Valley Water Board notified Saint-Gobain the RWD was incomplete. On 30 August 2010, Saint-Gobain submitted an updated RWD with technical information regarding the proposed wastewater treatment system. On 9 September 2010, Central Valley Water Board approved the replacement of the onsite wastewater system.

On 4 February 2014, Environmental Resources Management (ERM), the Discharger's consultant submitted a RWD and supplemental information received on 17 November 2014, 18 September 2015, 7 January 2016, 8 January 2016, and 4 March 2016 for updated WDRs to reflect changes Ardagh Glass Inc. (formally Saint-Gobain) has made to its operation since WDRs Order 85-314 were adopted.

On 6 June 2014, the Central Valley Water Board adopted Order R5-2014-0092 for a name change from Saint-Gobain Containers, LLC to Ardagh Glass Inc. (Ardagh Glass).

Ardagh Glass leases a portion of its property to Air Liquide Industrial U.S. Limited Partnership (Air Liquide) a gas manufacturing company, and Strategic Materials Inc., (Strategic Material) a cullet processing company. Air Liquide operates a compressor cooling system that generates cooling tower blowdown that comingles with cooling tower blowdown generated by Ardagh Glass prior to being discharged to Ardagh Glass three evaporation/percolation ponds. Strategic Materials mechanically processes recycled glass, no process wastewater is generated from this process. Storm water is the only waste stream generated from Strategic Materials. Storm water collects in storm water drain inlets that are connected to Ardagh Glass storm drain system and is eventually discharged to the three evaporation/percolation ponds and the unlined southwest holding pond.

Existing Facility and Discharge

Ardagh Glass operates 24 hours per day, year round. Waste streams generated at the Glass Facility include: 1) the onsite domestic wastewater treatment facility (domestic wastewater); 2) Ardagh Glass two-tower compressor cooling system, Air Liquide compressor cooling system, the electrode evaporation cooling water system, and water softener regenerate (comingled blowdown wastewater); and 3) storm water.

Currently, comingled blowdown wastewater is piped directly to comingle with treated domestic wastewater and storm water before passing through the sampling weir and sent to the evaporation/percolation ponds. Table 1 summarizes monthly average wastewater flows measured at the sampling weir.

Table 1. Monthly Average Wastewater Flows

	2013	2014	2015
	(gpd)	(gpd)	(gpd)
January	35,849	38,861	13,213
February	32,478	52,856	42,225
March	58,419	49,326	66,342
April	54,934	65,274	90,134
May	52,619	64,205	59,527
June	73,726	78,250	---
July	81,481	99,383	44,441
August	69,304	76,160	47,686
September	57,181	67,240	47,583
October	52,603	67,966	45,103
November	38,647	31,071	34,806
December	49,769	24,818	---
Minimum	32,478	24,818	13,213
Maximum	81,481	99,838	90,134

Proposed Changes
According to the RWD, approximately 3,000 gallons per day of comingeld blowdown wastewater will be used to landscape irrigate 30 acres of land application area. The Discharger now proposes to use its comingled blowdown wastewater to: 1) supplement its “Fire Water Pond”, 2) supplement the oil skimmer/recirculation system, and 3) discharge to the three evaporation/percolation ponds and the southwest holding pond with no discharge to the land application area originally proposed. Ardagh Glass is proposing to use the comingled blowdown wastewater as a supplement in its operation in order to minimize the use of fresh well water. The proposed project will not increase flow nor change the character of the wastewater generated at Ardagh Glass. ERM submitted additional information on 4 March 2016.

Ardagh Glass has collected wastewater samples from two effluent sampling locations. The first sampling location is at a point where all the different blowdowns comingle before being sent to the “Fire Water Pond”. The second sampling location is at the sampling weir where a representative sample of domestic wastewater, comingle blowdown wastewater, and storm water can be taken. Table 2 shows the quality of the wastewater for the two sampling locations.

Table 2. Quality of Comingled Blowdown and Sample Weir Wastewater

Constituent/Parameter	Units	Comingled Blowdown (Location #1)				Sample Weir (Location 2)				MCLs
		Ave	Min	Max	Sampling Events	Ave	Min	Max	Sampling Events	
Alkalinity as $CaCO_3$	mg/L	113	95	130	2	97	96	98	2	N/A
Bicarbonate as $CaCO_3$	mg/L	93	91	95	2	97	96	98	2	N/A
Carbonate as $CaCO_3$	mg/L	43	43	43	2	ND	ND	ND	2	N/A
Hydroxide as $CaCO_3$	mg/L	ND	ND	ND	2	ND	ND	ND	2	N/A
Ammonia a Nitrogen	mg/L	0.88	0.10	2.20	9	3.75	1.70	7.70	9	N/A
Biochemical Oxygen Demand	mg/L	12	1	60	9	8	2	12	9	N/A
Chloride	mg/L	55	50	60	2	74	62	85	2	250/500
Electrical Conductivity	umhos/cm	522	260	**1,000**	9	810	420	**1,900**	9	900/1600
Methylene Blue Active Substance Assay	mg/L	0.08	0.07	0.10	2	0.06	0.06	0.06	2	0.5
Nitrate as Nitrogen	mg/L	2	1	4	9	2	1	5	9	N/A
Nitrite as Nitrogen	mg/L	0.41	0.06	1.40	9	0.88	0.19	2.00	9	N/A
pH	pH Units	---	7.9	8.9	9	---	7.7	8.8	9	N/A
Sulfate as SO_4	mg/L	59	50	68	2	57	14	100	2	N/A
Total Dissolved Solids	mg/L	409	230	**620**	9	**528**	300	**1,000**	9	500/1,000
Total Kjeldahl Nitrogen	mg/L	2	1	3	9	4	2	8	9	N/A
Total Nitrogen	mg/L	3	1	6	9	6	1	**12**	9	10
Total Suspended Solids	mg/L	31	10	120	9	32	5	150	9	N/A
Aluminum	mg/L	0.14	0.12	0.15	2	0.67	0.67	0.67	2	1
Antimony	mg/L	ND	ND	ND	2	ND	ND	ND	2	0.006
Arsenic	mg/L	0.0022	0.0022	0.0022	2	0.0028	0.002	0.003	2	0.01
Barium	mg/L	0.07	0.06	0.09	2	0.09	0.06	0.12	2	1
Beryllium	mg/L	ND	ND	ND	2	ND	ND	ND	2	0.004
Cadmium	mg/L	ND	ND	ND	2	ND	ND	ND	2	0.005
Calcium	mg/L	26	25	27	2	33	22	44	2	N/A
Chromium	mg/L	ND	ND	ND	2	ND	ND	ND	2	0.05
Copper	mg/L	0.0070	0.0063	0.0076	2	0.0110	0.0110	0.0110	2	1
Hardness as $CaCO_3$	mg/L	98	96	100	2	123	85	160	2	N/A
Iron	mg/L	0.20	0.19	0.21	2	**0.43**	0.05	**0.82**	2	0.3
Lead	mg/L	ND	ND	ND	2	0.0079	0.008	0.008	2	N/A
Magnesium	mg/L	8.1	8.0	8.1	2	10	7	13	2	N/A
Manganese	mg/L	0.01	0.01	0.01	2	0.03	0.03	0.03	2	0.05
Mercury	mg/L	ND	ND	ND	2	ND	ND	ND	2	0.002
Nickel	mg/L	ND	ND	ND	2	ND	ND	ND	2	0.1
Potassium	mg/L	5.9	4.8	6.9	2	6.8	5.1	8.4	2	N/A
Selenium	mg/L	0.0041	0.0029	0.0053	2	0.0166	0.004	0.0290	2	0.05
Silver	mg/L	ND	ND	ND	2	ND	ND	ND	2	0.1
Sodium	mg/L	46	41	51	2	73	47	98	2	N/A
Thallium	mg/L	ND	ND	ND	2	ND	ND	ND	2	0.002

Constituent/Parameter	Units	Comingled Blowdown (Location #1)				Sample Weir (Location 2)				MCLs
		Ave	Min	Max	Sampling Events	Ave	Min	Max	Sampling Events	
Zinc	mg/L	0.13	0.12	0.14	2	0.10	0.08	0.11	2	5

Soil and Groundwater Conditions

Soils below the Glass Facility, the three evaporation/percolation ponds and the unlined southwest holding pond are Grangeville Fine Sandy Loam and Tujunga Loamy Sand. The Facility does not have a groundwater monitoring well network. Groundwater is approximate 130 feet below ground surface (bgs) and flows in the northeast direction, according to the *Lines of Equal Depth of Water in Wells* map published by the Department of Water Resources in 2010.

The quality of groundwater in the area based on monitoring wells from Constellation Wines, U.S., Inc. Mission Bell Winery, adjacent to the Glass Facility is shown below.

Table 4. Groundwater Quality

Constituent/Parameters	Units	MW-4R			MW-15R			MW-18			MW-19		
		5 Sampling Events			4 Sampling Events			6 Sampling Events			5 Sampling Events		
		Ave	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave	Min	Max
Nitrate as Nitrogen	mg/L	7	6	10	14	14	15	13	11	14	8	7	9
Total Nitrogen	mg/L	7	6	10	14	14	15	13	11	14	8	7	9
TKN	mg/L	0.058	0.058	0.058	0.072	0.072	0.072	0.120	0.120	0.120	0.560	0.540	0.580
Calcium	mg/L	90	83	95	60	60	61	87	82	90	152	110	180
Magnesium	mg/L	26	25	28	18	17	18	24	22	25	37	29	44
Sodium	mg/L	68	55	76	39	38	41	56	50	60	63	49	69
Potassium	mg/L	12	11	13	7	7	7	11	10	12	11	9	12
Carbonate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bicarbonate	mg/L	342	310	370	195	190	200	307	300	310	602	430	700
Chloride	mg/L	83	34	100	49	47	51	64	57	70	50	41	55
Sulfate	mg/L	70	59	85	34	33	35	61	56	69	81	56	92
Iron	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phosphorus	mg/L	0.072	0.072	0.072	0.068	0.068	0.068	0.056	0.056	0.056	0.050	0.050	0.050
Electrical Conductivity	umhos/cm	966	900	1,000	668	660	680	890	830	930	1,216	980	1,400
Total Dissolved Solids	mg/L	640	570	690	443	420	460	603	580	630	770	570	980
pH	pH Units	---	7.4	7.8	---	7.6	7.8	---	7.5	7.7	---	7.4	7.6

Basin Plan, Beneficial Uses, and Regulatory Considerations

The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised June 2015* (Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the Basin, and incorporates, by reference, plans and policies adopted by the State Water Board. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.

Antidegradation
State Water Board Resolution 68-16, ("Policy with Respect to Maintaining High Quality Water of the State") (hereafter Resolution 68-16 or "Antidegradation Policy"), requires the regional water boards to maintain high quality water of the State until it is demonstrated that any change in quality will not result in water quality less than that described in State and Regional Water Board policies or exceed water quality objectives, will not unreasonably affect beneficial uses and is consistent with the maximum benefit to the people of the State.

As discussed in the Findings in the WDRs the discharge as authorized by this Order is not expected to unreasonably affect present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives. The Discharger provides or will provide as a condition of this Order treatment and control measures intended to minimize degradation to the extent feasible.

This Order establishes terms and conditions to ensure that the authorized discharge does not unreasonably affect present and anticipated future beneficial uses of groundwater or result in groundwater quality worse than background or the water quality objectives set forth in the Basin Plan.

This Order is consistent with the Anti-Degradation Policy since: (a) the degradation will not unreasonably affect present and anticipated beneficial uses of groundwater, or result in water quality less than water quality objectives, (b) the Discharger has or will implement Best Practicable Treatment or Control to minimize degradation, and (c) the limited degradation is of maximum benefit to the people of the State.

CEQA
The Facility has been operating since 1979. The only change Ardagh Glass is proposing is to have the ability to use its comingled blowdown wastewater to: 1) supplement is "Fire Water Pond" instead of using well water, 2) supplement the oil skimmer/recirculation system, and 3) discharge to the three evaporation/percolation ponds and the unlined southwest holding pond. Also, the proposed project will not result in an increase of wastewater flows.

The issuance of this Order is exempt from the provisions of California Environmental Quality Act ("CEQA")(Pub. Resources Code, §21000 et seq.) in accordance with California Code of Regulations, title 14, section 15301, which exempts the "operation, repair, maintenance, [and] permitting…of existing public or private structures, facilities, mechanical equipment, or topographical features" from environmental review. This action may also be considered exempt because it is an action by a regulatory agency for the protection of human resources (Cal. Code Regs., tit.14, §15307.) and an action by a regulatory agency for the protection of the environment (Cal. Code Regs., tit. 14, §15308.).

Title 27
Unless the Board finds that the discharge of designated waste is exempt from Title 27 of the California Code of Regulations, the release of designated waste is subject to full containment requirements. Here, the discharge of domestic wastewater, cooling tower blowdown, and storm water are exempt from the requirements of Title 27 pursuant to the wastewater exemptions found at Title 27, sections 20090 (b).

Proposed Order Terms and Conditions

Discharge Prohibitions, Specifications and Provisions

The proposed Order prohibits the discharge of waste to surface waters and to surface water drainage courses. The proposed Order restricts the discharge to a monthly average daily flow limit of 0.39 mgd.

The proposed Order prescribes groundwater limitations that ensure the discharge does not affect present and anticipated beneficial uses of groundwater. The limitations require that the discharge not cause or contribute to exceedances of water quality objectives or natural background water quality, whichever is greater.

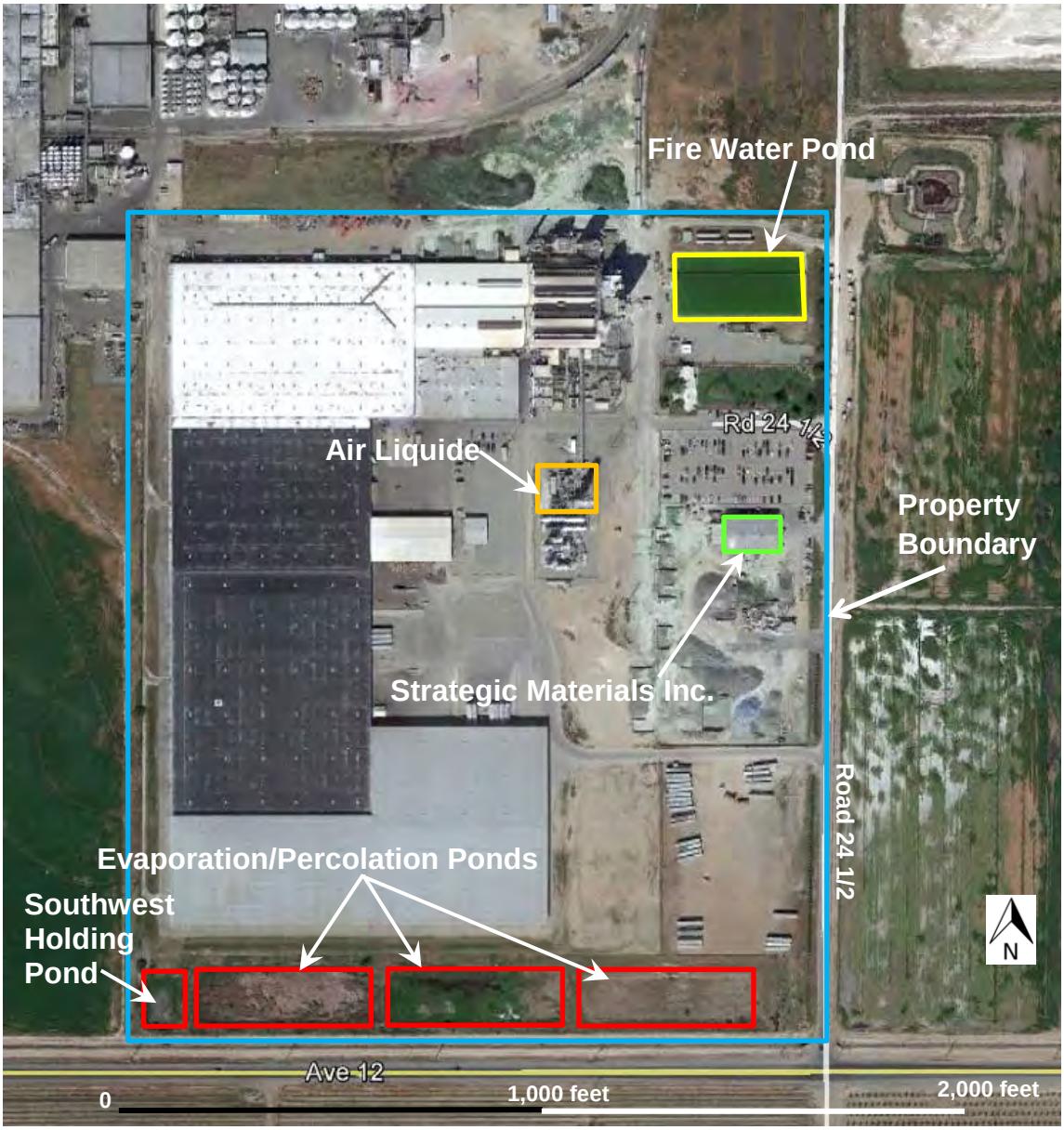
Monitoring Requirements

Section 13267 of the Water Code authorizes the Central Valley Water Board to require the Discharger to submit monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State.

The proposed Order includes effluent monitoring, pond monitoring, and source water monitoring. This monitoring is necessary to characterize the discharge, evaluate compliance with effluent and mass loading limitations prescribed by the Order.

Reopener

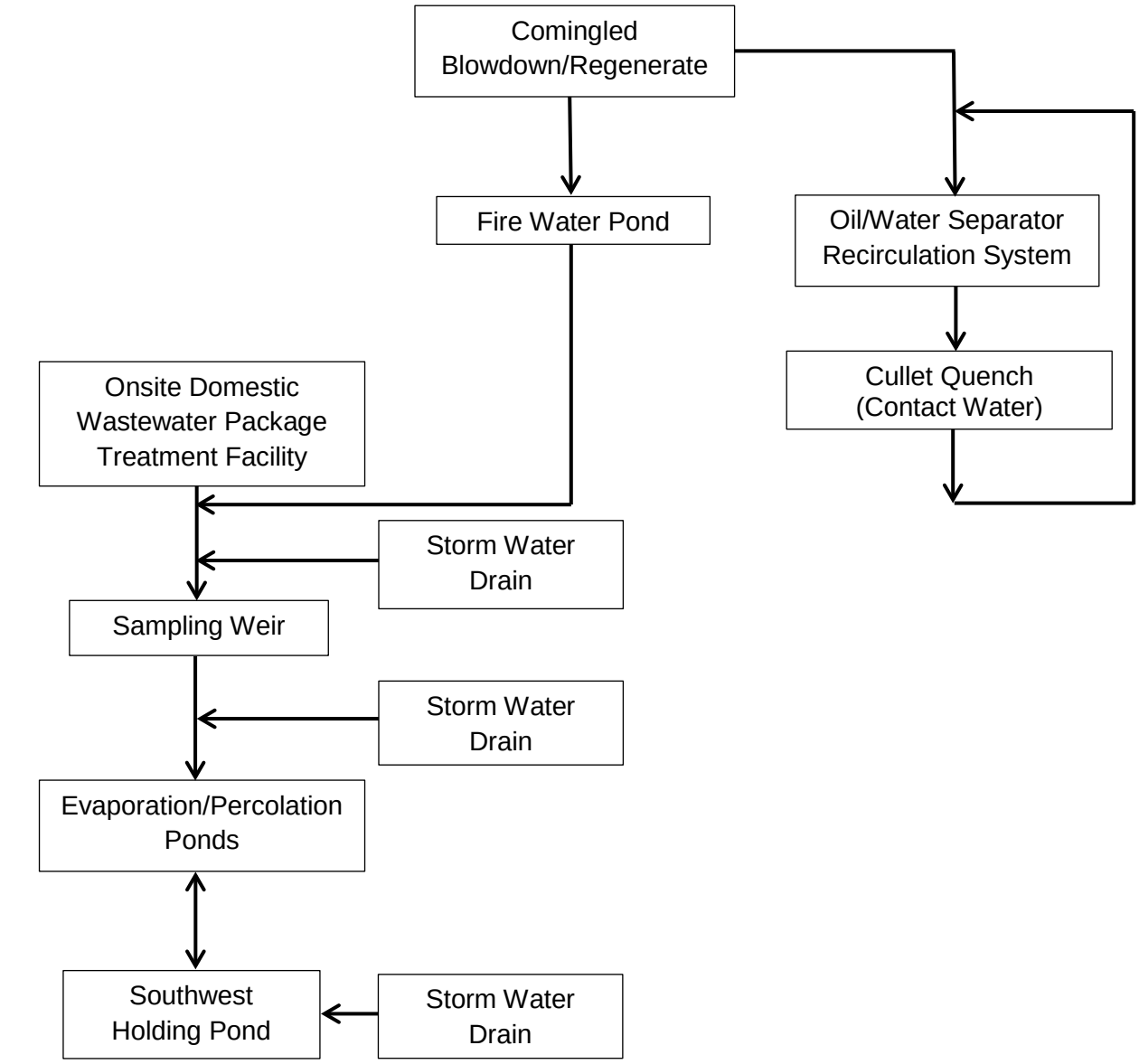
The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. It may be appropriate to reopen the Order if new technical information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



FACILITY MAP

WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0019
FOR
ARDAGH GLASS INC.
AIR LIQUIDE INDUSTRIAL U.S. LIMITED PARTNERSHIP AND
STRATEGIC MATERIALS INC.
GLASS FACILITY
MADERA COUNTY

ATTACHMENT A



NOT TO SCALE

FLOW SCHEMATIC

WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0019
FOR
ARDAGH GLASS INC.
AIR LIQUIDE INDUSTRIAL U.S. LIMITED PARTNERSHIP AND
STRATEGIC MATERIALS INC.
GLASS FACILITY
MADERA COUNTY

ATTACHMENT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS FOR WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.

2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.

3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

   a. Violation of any term or condition contained in this Order;

   b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

   c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;

   d. A material change in the character, location, or volume of discharge.

4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:

   a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.

   b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.

   c. The addition of a major industrial, municipal or domestic waste discharge facility.

   d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.

6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.

7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.

8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:

   a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,

   b. Copy any records required to be kept under terms and conditions of this Order,

   c. Inspect at reasonable hours, monitoring equipment required by this Order, and

   d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.

9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.

10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.

11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.

12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

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

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

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

   This plan shall:

   a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.

   b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.

   c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

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

3. All reports shall be signed by persons identified below:

   a. <u>For a corporation</u>: by a principal executive officer of at least the level of senior vice-president.

   b. <u>For a partnership or sole proprietorship</u>: by a general partner or the proprietor.

   c. <u>For a municipality, state, federal or other public agency</u>: by either a principal executive officer or ranking elected or appointed official.

   d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;

      (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;

      (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

      (3) the written authorization is submitted to the Board

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

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

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.

5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114
Note: Current addresses for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.
or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).

2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

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

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

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

Record of monitoring information shall include:

a. the date, exact place, and time of sampling or measurements,
b. the individual(s) who performed the sampling of the measurements,
c. the date(s) analyses were performed,
d. the individual(s) who performed the analyses,
e. the laboratory which performed the analysis,
f. the analytical techniques or methods used, and
g. the results of such analyses.

4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.

5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.

6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:

   a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.

   b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.

2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

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

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.

4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

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

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.

2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:

   a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and

      (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or

   b. (1) by-pass is required for essential maintenance to assure efficient operation; and

      (2) neither effluent nor receiving water limitations are exceeded; and

      (3) the discharger notifies the Board ten days in advance.

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

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

a. an upset occurred and the cause(s) can be identified;

b. the permitted facility was being properly operated at the time of the upset;

c. the discharger submitted notice of the upset as required in paragraph B.1. above; and

d. the discharger complied with any remedial measures required by waste discharge requirements.

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

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.

5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

6. Definitions

   a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.

   b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

      Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.

   c. The monthly average concentration is the arithmetic mean of measurements made during the month.

   d. The "daily maximum" **discharge** is the total discharge by volume during any day.

e. The "daily maximum" **concentration** is the highest measurement made on any single discrete sample or composite sample.

f. A "grab" sample is any sample collected in less than 15 minutes.

g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;

(1) at equal time intervals, with a maximum interval of one hour

(2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

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

7. Annual Pretreatment Report Requirements:

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

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

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

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

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

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

c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.

d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the inddustrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent that the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:

(1) Complied with baseline monitoring report requirements (where applicable);

(2) Consistently achieved compliance;

(3) Inconsistently achieved compliance;

(4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);

(5) Complied with schedule to achieve compliance (include the date final compliance is required);

(6) Did not achieve compliance and not on a compliance schedule;

(7) Compliance status unknown.

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

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

f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:

(1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;

(2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;

(3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;

(4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.

(5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;

(6) Restriction of flow to the treatment plant; or

(7) Disconnection from discharge to the treatment plant.

g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.

h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.

i. A summary of public participation activities to involve and inform the public.

j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

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

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

and

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

Revised January 2004 to update addresses and phone numbers