STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 W. 4th Street, Suite 200, Los Angeles

FACT SHEET
WASTE DISCHARGE REQUIREMENTS
for
SAINT-GOBAIN CONTAINERS
(FORMERLY BALL-FOSTER GLASS CONTAINER CORPORATION)

NPDES Permit No.: CA0000884
Public Notice No.: 05-030

FACILITY ADDRESS	FACILITY MAILING ADDRESS
Saint-Gobain Containers	Saint-Gobain Containers
4000 N. Arden Dr.	P.O. Box 5238
El Monte, CA 91734	El Monte, CA 91734
	Contact: Sandy Nakano
	Telephone: (626) 448-9831

I. Public Participation

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced facility. As an initial step in the WDR process, the Regional Board staff has developed tentative WDRs. The Regional Board encourages public participation in the WDR adoption process.

A. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to:

Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

To be fully responded to by staff and considered by the Regional Board, written comments pertaining to this proposed Board action must be submitted to the Regional Board staff no later than 5 p.m. on June 10, 2005. The Regional Board chair may exclude from the record written materials received after this date. (See Cal.

Code Regs., tit. 23, § 648.4).

B. Public Hearing

The Regional Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	July 7, 2005
Time:	9:00 a.m.
Location:	The City of Simi Valley Council Chambers, 2929 Tapo Canyon Road, Simi Valley, California.

Interested persons are invited to attend. At the public hearing, the Regional Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is www.swrcb.ca.gov/rwqcb4 where you can access the current agenda for changes in dates and locations.

C. Waste Discharge Requirements Appeals

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Board's action to the following address:

State Water Resources Control Board, Office of General Counsel
ATTN: Elizabeth Miller Jennings, Senior Staff Counsel
1001 I Street, 22nd Floor
Sacramento, CA 95814

D. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special conditions, comments received, and other information are on file and may be inspected at 320 West 4th Street, Suite 200, Los Angeles, California 90013, at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Regional Board by calling (213) 576-6600.

E. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Board, reference this facility,

and provide a name, address, and phone number.

II. Introduction

Saint-Gobain Containers (formerly Ball-Foster Glass Container Corporation) (hereinafter, SGC or Discharger) intermittently (once every five to ten years) discharges glass quenching water via a storm drain to the Rio Hondo Channel and then to the Los Angeles River, a water of the United States under WDRs contained in Order No. 98-096 (NPDES No. CA0000884). Order No. 98-096 expired on November 10, 2003.

SGC filed a Report of Waste Discharge on October 10, 2002 and applied for renewal of its WDRs and a NPDES permit for the intermittent discharge of up to 800,000 gpd of glass quenching wastewater via a storm drain to the Rio Hondo Channel. The tentative Order is the reissuance of the WDRs and a NPDES permit for discharges from SGC.

A NPDES permit Compliance Evaluation Inspection (CEI) was conducted on May 28, 2004. The CEI served as a site visit to observe observations, verify conditions, and collect additional data to develop permit limitations and conditions.

The facility is also regulated under the Statewide General Permit for Storm Water Associated With Industrial Activities CAS000001.

III. Description of Facility and Waste Discharge

Saint-Gobain operates the Saint-Gobain Containers facility located at 4000 North Arden Drive, El Monte, California for the manufacturing of glass containers from raw materials and recycled glass. Operations at the facility began in 1947 and include the production of glass containers, primarily for the food and beverage industries. The facility manufactures colored and flint (clear) bottles and jars used as food containers from both new material consisting primarily of silica sand and soda ash, and recycled glass. While water is not a component of the final product, it is used throughout the manufacturing process for supporting equipment and plant operations.

The existing Order (Order No. 98-096) regulates the intermittent discharge of up to 800,000 gallons per day (gpd) of glass quenching water through Discharge Serial No. 001 (Latitude 34° 04' 46" North, Longitude 118° 02' 34" West). City water is used to cool molten glass that is drained from the glass furnace at the time of furnace repair. Wastewater flows via a storm drain to the Rio Hondo Channel and then to the Los Angeles River. Discharge from the furnace drains is intermittent and has been infrequent, with the most recent discharge occurring in December 2001, which was the only discharge during the previous permit term.

All process wastewater from the facility is treated and discharged to the sewer system of the County Sanitation Districts of Los Angeles County (CSDLAC) under an industrial discharge permit.

The NPDES permit renewal application states that the glass quenching water is discharged once every five to ten years (or as needed) for maintenance purposes. The duration of the discharge is approximately one day with a flow of up to 800,000 gpd. No chemical additives are used. No treatment is provided for the effluent prior to discharge. The effluent is discharged from the furnace, via temporary piping, to the storm drain located north of Valley Boulevard (Discharge Serial No. 001).

Storm water discharges were not addressed in the previous permit, nor did the Discharger apply for authorization to discharge stormwater in the permit renewal application. Stormwater discharges are being covered under the Statewide General Permit for Storm Water Associated with Industrial Activities CAS000001. Therefore, stormwater discharges are not addressed in the renewed NPDES permit.

The Regional Board and the U.S. EPA have classified SGC as a minor discharge.

Effluent limitations contained in the existing permit for Discharge Serial No. 001 and representative monitoring data from the previous permit term are presented in the following Table. The data characterize discharges of furnace drain quench water during the December 2001 discharge event:

Constituent	Unit	Maximum Daily Effluent Limitations (MDELs)	Reported Monitoring Results
Flow	gpd	800,000	NR [1]
Temperature	°F	100	91
pH	s.u.	6 – 9	7
Suspended Solids	mg/L	75	27
	lbs/day [2]	500	NR
Settleable Solids	ml/L	0.2	0.4 [3]
Biochemical Oxygen Demand (BOD) [4]	mg/L	30	ND
	lbs/day [2]	200	NR
Total Dissolved Solids	mg/L	750	310
	lbs/day [2]	5,000	NR
Oil and Grease	mg/L	15	NR [5]
	lbs/day [2]	100	NR
Acute Toxicity	% survival	[6]	NR [5]

NR = Not Reported
ND = Non-Detect

1. Monitoring and Reporting Program No. 5720 requires the Discharger to monitor total waste flow. The Discharger did not report discharge flow data in accordance with the Monitoring and Reporting Program.

2. Mass-based effluent limitations in Order No. 98-096 were based on a maximum flow of 800,000 gpd. The Discharger did not report discharge data in units of mass (e.g., lbs/day).

3. The reported value for settleable solids exceeded the permit limitation on December 19, 2001.

4. 5-day biochemical oxygen demand at 20°C.

5. The existing Order requires the Discharger to sample for oil and grease and acute toxicity once per discharge. The Discharger did not report data for oil and grease, and acute toxicity as required by Monitoring and Reporting Program No. 5720.

6. For any three consecutive 96-hour static or continuous flow bioassay tests must be at least 90%, with no single test producing less than 70% survival.

The effluent monitoring data indicate that the effluent limitation for settleable solids of 0.2 mg/L was exceeded on December 19, 2001 (0.4 mg/L). In addition, the facility appears to have not submitted discharge data to the Regional Board for total waste flow, oil and grease, and acute toxicity as required by Monitoring and Reporting Program No. 5720 (MRP). All identified violations are being evaluated for appropriate enforcement actions.

IV. Applicable Plans, Policies, Laws and Regulations

The requirements contained in the proposed Order are based on the requirements and authorities contained in the following:

A. The Federal Clean Water Act (CWA) requires that any point source discharges of pollutants to a water of the United States must be done in conformance with an NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality.

B. Title 40, Code of Federal Regulations (CFR) – Protection of Environment, Chapter I, Environmental Protection Agency, Subchapter D, Water Programs, Parts 122-125 and Subchapter N, Effluent Guidelines. These CWA regulations provide effluent limitations for certain dischargers and establish procedures for NPDES permitting, including how to establish effluent limitations for certain pollutants discharged.

C. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan contains water quality objectives and beneficial uses for inland surface waters and for the Pacific Ocean. The immediate receiving body for the permitted discharge covered by this permit is a storm drain that conveys wastewater to the Rio Hondo Channel. The Basin Plan contains beneficial uses and water quality objectives for the Rio Hondo Channel. The beneficial uses listed in the Basin Plan for the Rio Hondo Channel, below the spreading grounds (H.U. 405.15) are:

Existing Uses:	Non-contact water recreation.
Intermittent Uses:	Ground water recharge and wildlife habitat.
Potential Uses:	Municipal and domestic water supply, water contact recreation, and warm freshwater habitat.

D. Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Lif*e. The Ammonia Basin Plan amendment was approved by the State Board, the Office of Administrative Law, and U.S. EPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with U.S. EPA's 1999 ammonia criteria update.

E. The State Water Resources Control Board (State Board) adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

F. On May 18, 2000, the U.S. Environmental Protection Agency (U.S. EPA) promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as 40 CFR section 131.38]. In the CTR, U.S. EPA promulgated criteria that protect the general population at an incremental cancer risk level of one in a million (10^{-6}), for all priority toxic pollutants regulated as carcinogens. The CTR also allows for a schedule of compliance not to exceed five years from the date of permit renewal for an existing discharger if the Discharger demonstrates that it is infeasible to promptly comply with the effluent limitations derived from the CTR criteria. CTR's Compliance Schedule provisions sunset on May 18, 2005. After this date, the provisions of the SIP allow for Compliance Schedules not to exceed five years from issuance or past May 1, 2011, which ever is sooner.

G. On March 2, 2000, State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP*).* The SIP was effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through National Toxics Rule (NTR) and to the priority pollutant objectives established by the Regional Boards in their basin plans, with the exception of the

provision on alternate test procedures for individual discharges that have been approved by the U.S. EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The SIP requires the dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring water quality-based effluent limitations (WQBELs) and to calculate the effluent limitations. The CTR criteria for the protection of freshwater aquatic life or human health for consumption of organisms, whichever are more stringent, are used to develop the effluent limitations in the proposed Order to protect the beneficial uses of the Rio Hondo Channel and the Los Angeles River.

H. 40 CFR Part 426 specifies effluent limitations and requirements applicable to discharges resulting from the process by which raw materials are melted in a furnace and mechanically processed into glass containers. The discharge covered under this proposed Order has been determined by the Regional Board to be applicable to the Effluent Limitations Guidelines (ELGs) specified in 40 CFR Part 426, Subpart H.

I. 40 CFR section 122.44(d)(1)(vi)(A) requires the establishment of numeric effluent limitations to attain and maintain applicable narrative water quality criteria to protect the designated beneficial uses. Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR section 122.44(d) specifies that WQBELs may be set based on U.S. EPA criteria and supplemented, where necessary, by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.

J. State and Federal anti-backsliding and anti-degradation policies require that Regional Board actions to protect the water quality of a water body and to ensure that the water body will not be further degraded. The anti-backsliding provisions are specified in sections 402(o) and 303 (d)(4) of the CWA and in 40 CFR section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions where effluent limitations may be relaxed.

K. Effluent limitations are established in accordance with Parts 301, 304, 306, and 307 of the Federal CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of the Rio Hondo Channel and the Los Angeles River.

L. Existing waste discharge requirements are contained in Board Order No. 98-096, adopted by the Regional Board on December 14, 1998. In some cases, permit conditions (effluent limitations and other special conditions) established in the existing waste discharge requirements have been carried over to the proposed Order.

M. On March 30, 2000, U.S. EPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for Clean Water Act (CWA) purposes (40 CFR 131.21, 65 FR 24641, April 27, 2000). Under

U.S. EPA' s new regulation (also known as the Alaska rule), new and revised standards submitted to U.S. EPA after May 30, 2000, must be approved before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to U.S. EPA by May 30, 2000, may be used for CWA purposes, whether or not approved by EPA.

N. This Order contains restrictions on individual pollutants that are no more stringent than required by the federal Clean Water Act. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on total suspended solids (TSS), pH, BOD, and oil and grease. Restrictions on TSS, pH, BOD, and oil and grease are specified in federal regulations as discussed in Findings No. 28, and the permit's technology-based pollutant restrictions are no more stringent than required by the Clean Water Act. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the California Toxics Rule, the California Toxics Rule is the applicable standard pursuant to 40 C.F.R. 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by U.S.EPA on May 1, 2001. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S.EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S.EPA prior to May 30, 2000, but not approved by U.S.EPA before that date, are nonetheless "applicable water quality standards for purposes of the Clean Water Act" pursuant to 40 C.F.R. 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically Ammonia) were approved by U.S. EPA on June 19, 2003, and are applicable water quality standards pursuant to 40 C.F.R. 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the Clean Water Act and the applicable water quality standards for purposes of the Clean Water Act. and oil and grease. Restrictions on TSS, pH, BOD, and oil and grease are specified in federal regulations as discussed in Findings No. 17, and the permit's

V. Regulatory Basis for Effluent Limitations

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of the discharge of pollutants is established through NPDES permits that contain effluent limitations and standards. The CWA establishes two principal bases for effluent limitations. First, dischargers are required to meet technology-based effluent limitations that reflect the best controls available considering costs and economic impact. Second, they are required to meet WQBELs that are developed to protect applicable designated uses of the receiving water.

The CWA requires that technology-based effluent limitations be established based on several levels of control:

- Best practicable treatment control technology (BPT) is based on the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

- Best conventional pollutant control technology (BCT) is a standard for the control from existing industrial point sources of conventional pollutants, which are BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BCT, BAT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 of the NPDES regulations authorize the use of Best Professional Judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern.

Under 40 CFR section 426.80, ELGs exist for the glass container manufacturing subcategory and regulate oil and grease, TSS and pH. The degree of effluent reduction attained by the application of the BPT and BCT is based on the pounds of glass produced per 1,000 pounds of furnace pull. According to 40 CFR section 426.81, furnace pull is defined as the amount of glass drawn from the glass furnace or furnaces.

If a reasonable potential exists for pollutants in a discharge to exceed water quality standards, WQBELs are also required under 40 CFR section 122.44(d)(1)(i). WQBELs are established after determining that technology-based limitations are not stringent enough to ensure that state water quality standards are met for the receiving water. WQBELs are based on the designated use of the receiving water, water quality criteria necessary to support the designated uses, and the state's anti-degradation policy. For discharges to inland surface waters, enclosed bays, and estuaries, the SIP establishes specific implementation procedures for determining reasonable potential and establishing WQBELs for priority pollutant criteria promulgated by U.S. EPA through the CTR and NTR, as well as the Basin Plan.

There are several other specific factors affecting the development of effluent limitations and requirements in the proposed Order. These are discussed as follows:

A. Pollutants of Concern

The CWA requires that any pollutant that may be discharged by a point source in quantities of concern must be regulated through an NPDES permit. Further, the NPDES regulations and SIP require regulation of any pollutant that (1) causes; (2) has the reasonable potential to cause; or (3) contributes to the exceedance of a receiving water quality criteria or objective. The SIP includes provisions for priority pollutant criteria promulgated by U.S. EPA in the CTR and NTR, and for those priority pollutants outlined in the Basin Plan.

SGC operates a glass manufacturing facility, which produces clear glass containers and jars. The effluent consists of glass quenching water used to cool molten glass that is drained from the furnace. Effluent limitations for glass container manufacturing are established in 40 CFR section 426.80 for oil, TSS, and pH. Further, effluent limitations have been established in the previous permit for oil and grease, TSS, and pH. Thus, oil and grease, TSS, and pH have been determined by the Regional Board to be pollutants of concern for this discharge.

In addition to oil and grease, TSS, and pH, the existing Order established effluent limitations for Discharge Serial No. 001 for BOD, settleable solids, and total dissolved solids. Further, solids (e.g., suspended solids, settleable solids, total dissolved solids) may be present in glass quenching wastewater from the furnace. Solids present in wastewater may also contribute to increased levels of turbidity and BOD. Furthermore, BOD, settleable solids, TDS, and turbidity are parameters typically used to characterize wastewater. Thus, BOD, settleable solids, TDS, and turbidity are considered pollutants of concern for this discharge.

Based on published documentation[1], typical effluent characteristics from glass manufacturing operations include pH, TSS, COD, oil and grease, and metals. The existing Order includes monitoring requirements for most of these constituents that are typically found in the effluent from glass manufacturing facilities.

The proposed Order establishes effluent limitations or monitoring requirements to address these pollutants of concern.

B. Technology-Based Effluent Limitations

40 CFR Part 426 establishes effluent limitations and requirements for the Glass Container Manufacturing point source category. The applicability discussion in the regulation indicates that the category applies to discharges resulting from the process by which raw materials are melted in a furnace and mechanically processed into

[1] The World Bank, Pollution Prevention and Abatement Handbook, "Glass Manufacturing," July 1998.

glass containers. Therefore, the ELGs are applicable to discharges from furnace draining activities.

40 CFR Part 426 establishes pollutant effluent limitations and standards for direct discharge point sources. The limitations contained in 40 CFR Part 426 represent the degree of effluent reduction attainable by the application of the BPT and BCT. The limitations require production data to determine mass-based effluent limitations for process wastewaters. The Discharger provided production data from January 2001 to December 2003; ELG calculations were based on data from 2001, 2002 and 2003 and were used in developing effluent limitations in accordance with 40 CFR section 122.45. For each month during 2001-2003, the Discharger provided the maximum daily production and the average daily production. The maximum reported value for maximum daily production was considered in developing the maximum daily effluent limitations for oil and grease and TSS. In the case of oil and grease and TSS, the mass-based effluent limitations were determined by multiplying the concentration listed in 40 CFR section 426.82 by the pounds per day of glass produced at the facility. See Attachment A for specific effluent limitation calculations.

1. Mass Based-Limitations

   Mass based-limitation = effluent limitation X highest reported production

   Where:
   Effluent Limitation= allowances specified in 40 CFR 426.82 (lb/1,000lbs of furnace pull)
   Highest reported production = 1,198,000 lbs of furnace pull

   Mass-based effluent limitations established in the proposed Order are applicable to intermittent discharges of glass quenching water through Discharge Serial No. 001 (Latitude 34° 04' 46" North and Longitude 118° 02' 34" West) and are as follows:

Constituent	Maximum Daily Effluent Limitations (MDELs) (lbs/day)
Oil and Grease	72
Total Suspended Solids (TSS)	168

   The calculations for the mass-based effluent limitations for oil and grease and TSS are included in Attachment A – *Calculation of Effluent Limitations in Accordance with 40 CFR sections 426.82 and 426.87.* The existing Order did not include effluent limitations derived from the ELGs. However, the Regional Board determined the ELGs are applicable to Saint Gobain's glass quenching water discharge and therefore, the proposed Order will establish the ELG-based limitations for oil and grease and TSS in the glass quenching water discharge.

These effluent limitations are applicable to the discharge of oil and grease and TSS in the final discharge through Discharge Serial No. 001.

40 CFR section 426.82 also specifies a pH range between 6.0 – 9.0. The Basin Plan requirement range is 6.5 – 8.5. The more stringent Basin Plan requirement is specified for compliance.

C. Water Quality-Based Effluent Limitations

As specified in 40 CFR section 122.44(d)(1)(i), permits are required to include WQBELs for toxic pollutants (including toxicity) that are or may be discharged at levels which cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses for the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria (that are contained in other state plans and policies, or U.S. EPA water quality criteria contained in the CTR and NTR). The specific procedures for determining reasonable potential, and if necessary for calculating WQBELs, are contained in the SIP for non-storm water discharges.

The CTR contains both saltwater and freshwater criteria. According to 40 CFR section 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time; saltwater criteria apply at salinities of 10 ppt and above at locations where this occurs 95 percent or more of the time; and at salinities between 1 and 10 ppt, the more stringent of the two apply. The CTR criteria for protection of freshwater aquatic life or human health for consumption of organisms, whichever are more stringent, are used to develop the effluent limitations in the proposed Order to protect the beneficial uses of the Rio Hondo Channel, above the Estuary.

1. Reasonable Potential Analysis (RPA)

In accordance with Section 1.3 of the SIP, the Regional Board conducts a Reasonable Potential Analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Board analyzes effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that have a reasonable potential, numeric WQBELs are required. The RPA considers water quality objectives outlined in the CTR, NTR, as well as the Basin Plan. To conduct the RPA, the Regional Board must identify the maximum observed effluent concentration (MEC) for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete an RPA:

a. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed.

b. Trigger 2 – If MEC<C and background water quality (B) > C, a limitation is needed.

c. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger is required to gather the appropriate data for the Regional Board to conduct the RPA. Upon review of the data, and if the Regional Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The Discharger was issued a 13267 letter dated July 27, 2001 from the Regional Board requiring quarterly sampling (between July 2001 through March 2003) of the effluent and receiving water for the CTR priority pollutants. These data were to be utilized to evaluate reasonable potential and calculate effluent limitations, if necessary. The Discharger reports that no CTR sampling has been conducted. There was only one discharge in 2001 in last six year period. The Discharger intends to discharge once in five to ten years, therefore, sufficient priority pollutant monitoring data cannot be collected to conduct the RPA. The Discharge is required to monitor all CTR priority pollutants, whenever furnace is being repaired and quench water is discharged to storm drain.

2. Calculating WQBELs

If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one of three procedures contained in Section 1.4 of the SIP. These procedures include:

a. If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).

b. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

c. Where sufficient effluent and receiving water data exist, use of a dynamic model which has been approved by the Regional Board.

3. Impaired Water Bodies in 303 (d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Regional Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The U.S. EPA approved the State's 2002 303(d) list of impaired water bodies on July 25, 2003. Certain receiving waters in the Los Angeles Region Watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2002 303(d) list and have been scheduled for TMDL development.

Rio Hondo Channel receives discharges from highly industrial areas. The 2002 303(d) list classifies the Rio Hondo Channel as impaired. The facility discharges within Reach 1 of the Rio Hondo Channel. The pollutants of concern for Reach 1 of the Rio Hondo Channel include: copper, high coliform count, lead, pH, trash, and zinc.

The Rio Hondo Channel is a tributary to the Los Angeles River. The Trash TMDL for the Los Angeles River watershed, was adopted by the Regional Board on September 19, 2001. It designates WLAs for Permittees and Co-Permittees of the Los Angeles County Municipal Stormwater Permit that are located within (entirely or partially) the Los Angeles River Watershed. WLAs are based on a phased reduction from the estimated current discharge over a 10-year period until the final WLA (currently set at zero) has been met. Based on the contributing waste stream from the facility, the Regional Board believes the discharge is not likely to contribute trash to the Los Angeles River Watershed. However, because the facility discharges to the Los Angeles County municipal separate storm sewer system, Los Angeles County may invoke requirements on the facility in order to meet the waste load allocation.

4. Whole Effluent Toxicity

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and measures mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing Order contains acute toxicity limitations and monitoring requirements for Discharge Serial No. 001. However, because the Discharger failed to monitor for WET as required in the existing Order, there are no toxicity data available for review.

In accordance with the Basin Plan, acute toxicity limitations dictate that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Consistent with Basin Plan requirements, the proposed Order carries over the acute toxicity limitations and monitoring requirements.

The discharge is infrequent and intermittent. Therefore, a chronic toxicity trigger has been determined to be unnecessary.

D. Specific Rationale for Each Numerical Effluent Limitation

Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in reissued permits be at least as stringent as those in the existing permit.

The proposed Order establishes final effluent mass limitations for glass quenching water discharged from the furnace, through Discharge Serial No. 001 for oil and grease, and TSS in accordance with 40 CFR Part 426. The limitations contained in 40 CFR section 426.82 are production-based and require an estimate of glass production data, or amount of furnace pull. As stated previously, Attachment A contains calculations of effluent limitations for oil and TSS.

SGC provided glass production for the period from January 2001 through December 2003. The highest reported value of maximum daily glass production is 599 tons (1,198,000 pounds). Effluent limitation allowances in 40 CFR 426.82 were multiplied by this production rate to develop maximum daily mass-based effluent limitations, for oil and grease and TSS.

Further, 40 CFR 122.45(f)(2) states, pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations. Thus, to be consistent with the previous permit, and other permits recently adopted by the Regional Board, and the fact that the information will be available due to the need to measure concentration to calculate mass loading emissions, concentration-based effluent limitations have been calculated as specified below.

1. Concentration Based-Limitations

Concentration-based limitation (mg/L) = mass-based limitation / (8.34 X maximum allowable flow (mgd))
Where:
Mass-based limitation (lbs/day) = BPT/BCT mass-based limitation calculated
Conversion factor = 8.34
Maximum allowable flow = 800,000 gpd

The calculated concentration based-effluent limitations were compared to the existing permit limitations and found to be more stringent. Therefore, the more stringent ELG-based effluent limitations for TSS and oil and grease (mass- and concentration-based) are established in the proposed permit.

The final effluent limitations for settleable solids, BOD, and TDS have been carried over from the previous permit. Because the conventional pollutant $BOD_5$20C is an indicator of the potential for a receiving water body to become depleted in oxygen, limits are included in NPDES permits. Water with high BOD and no means for rapidly replenishing the oxygen becomes depleted in oxygen and may become anaerobic and will not support aquatic life. Generally, a $BOD_5$20C of 5 mg/L in a slow-moving stream may be enough to produce anaerobic conditions, while a rapid mountain stream might be able to assimilate a $BOD_5$20C of 50 mg/L without appreciable oxygen depletion. Therefore a middle range of 20 mg/L as a monthly average limit, and 30 as a daily maximum limit, are considered to be protective of receiving waters based upon Best Professional Judgement (BPJ). The final effluent limitations for turbidity have been based on permits with similar discharges recently adopted by the Regional Board.

The previous permit did not establish AMELs. In the previous Order, the permit limitations for parameters were expressed only as MDELs. Consistent with section 122.45(e), permit limitations may be allowed as MDELs for non-continuous discharges. Therefore, effluent limitations in the proposed Order for settleable solids, BOD, TDS, and turbidity are expressed as MDELs.

The applicable ELGs in 40 CFR Part 426.82 specify a pH range between 6.0 – 9.0. The Basin Plan specifies a pH range between 6.5 – 8.5. The pH effluent limitations in this permit are based on the more stringent, upper and lower ranges established in the Basin Plan and 40 CFR Part 426.82. The pH range established in the Basin Plan is more stringent, and therefore will be established in the proposed Order.

The effluent limitation for temperature at Discharge Serial No. 001 has been established in accordance with the Thermal Plan. Quench water is generated when molten glass that is in the furnace has to cooled from around 2000 degree

Fahrenheit to normal temperature, whenever the furnace needs to be repaired. Temperature of the quench water is a pollutant of concern.

Mass-based final limitations will be established in the proposed Order for discharges of conventional and non-conventional pollutants at Discharge Serial No. 001. Generally, mass-based effluent limitations ensure that proper treatment is employed, and not dilution, to comply with the final effluent concentration limitations. Mass based-limitations for TSS and oil and grease have been established in accordance with 40 CFR 426.82. Mass based-limitations for BOD and TDS have been calculated using the formula below:

2. Non-ELG Mass Based-Effluent Limitations

Mass-based effluent limitation (lbs/day) = Concentration-based limitation (mg/L) X maximum allowable flow X 8.34

Where:
Maximum allowable flow = 800,000 gpd
Conversion factor = 8.34

Effluent limitations established in the proposed Order are applicable to intermittent glass quenching water discharges through Discharge Serial No. 001 (Latitude 34° 04' 46" North, Longitude 118° 02' 34" West):

Pollutant	Units	Maximum Daily Effluent Limitations (MDELs)	Rationale [1]
Temperature	°F	86 [2]	TP
pH	s.u.	6.5 – 8.5 [2]	BP
Oil and Grease	mg/L [3]	11	BPT/BCT
	lbs/day	72	
Total Suspended Solids	mg/L [3]	25	BPT/BCT
	lbs/day	168	
Settleable Solids	ml/L	0.2	E
BOD [4]	mg/L	30	E
	lbs/day [3]	200	
Total Dissolved Solids	mg/L	750	E
	lbs/day [3]	5,000	
Turbidity	NTU	75	BPJ
Acute Toxicity	% survival	[5]	E, BP

1. TP = Thermal Plan; BP = Basin Plan; BPT/BCT = Effluent Guidelines reflecting the Best Practicable Control Technology Currently Available specified in 40 CFR section 426.82 and Best Conventional Pollutant Control Technology specified in 40 CFR section 426.87; E = Existing permit; BPJ =

Best Professional Judgment.

2. This temperature value represents an instantaneous maximum value, not to be exceeded at any time. The pH shall remain in this range at all times.

3. Based on a maximum total flow of 800,000 gpd.

4. 5-day biochemical oxygen demand at 20°C.

5. Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

E. Monitoring Requirements

The previous MRP (No. 5720) for SGC, required monitoring for total flow, pH, temperature, oil and grease, settleable solids, TSS, TDS, BOD, and acute toxicity once per discharge.

Monitoring requirements are discussed in detail in Sections III and V of the MRP. As described in the MRP, monitoring reports must be submitted quarterly.

1. Effluent Monitoring

To demonstrate compliance with effluent limitations established in the permit, and to assess the impact of the discharge to the beneficial uses of the receiving waters, this Order establishes monitoring once per discharge event for all parameters regulated under this Order.

Additional monitoring requirements have been added for turbidity to determine compliance with effluent limitations, and for COD to determine its presence in the effluent. Further, the SIP states that the Regional Boards will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly, the Regional Board is requiring, as part of the MRP, that the Discharger conduct effluent monitoring during all quench water discharges for the priority pollutants listed on pages T10 – T12 of the MRP.

Temperature of the quench water is a pollutant of concern. The Discharger is required to monitor the temperature of discharged quench water (and submit the recorded temperature chart) on a continuous basis during the entire discharge period.

The effluent monitoring program for the discharge of glass quenching water through Discharge Serial No. 001 (Latitude 34° 04' 46" North, Longitude 118° 02' 34" West) is presented in Section III of the MRP No. 5720.

2. Receiving Water Monitoring

   a. Temperature Monitoring

      Receiving water shall be monitored (during each effluent discharge event) at two points one hour after the start of discharge to storm drain. The two points of monitoring are one approximately 50 feet upstream and the second one 50 feet downstream of the discharge point (i.e., storm drain) into the receiving water.

   b. Priority Pollutant Monitoring

      The Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (March 2, 2000) requires that the Regional Boards require periodic monitoring of the receiving water to provide ambient background concentrations of priority pollutants, which are used in evaluating reasonable potential. The monitoring requirement is further supported by the California Water Code, section 13267, which states that the Discharger is required to submit data sufficient for: (1) determining if WQBELs for priority pollutants are required, and (2) to calculate effluent limitations, if required.

      Accordingly, the Regional Board is requiring that the Discharger conduct receiving water monitoring of the priority pollutants listed in Section VI of the MRP. Not more than two receiving water samples shall be collected during the life of the permit. The first receiving water sample shall be collected at the same time as the first effluent discharge to storm drain. The results of monitoring for reasonable potential determination shall be submitted in accordance with Section I.A of the MRP. Receiving water sampling shall be conducted at the same time as the effluent monitoring. The monitoring stations shall be within 50 feet upstream from the discharge point (i.e., storm drain) into the receiving water (i.e., Rio Hondo Channel).

      Monitoring requirements for receiving water are discussed in greater detail in Sections V and VI of the MRP.

3. Monitoring for Reasonable Potential Determination

   The SIP states that the Regional Board will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established.

   The Regional Board is requiring, as part of the MRP, that the Discharger conduct effluent monitoring, during all discharges, for the priority pollutants (except for

2,3,7,8-TCDD) for which there are no effluent limitations established in the permit. In addition, the Regional Board is requiring that the Discharger conduct receiving water monitoring for the priority pollutants, twice during the life of the permit, and at the same time effluent samples are collected. Further, the Discharger must analyze pH, salinity, and hardness of the receiving water concurrent with the analysis for the priority pollutants. The required monitoring frequency and type of sample are provided in Section VI of the MRP.

This monitoring shall occur at the following locations:

- Effluent: Monitoring shall occur at Discharge Serial No. 001 (Latitude 34° 04' 46" North and Longitude 118° 02' 34" West), prior to entering the storm drain located north of Valley Boulevard.

- Receiving water: Monitoring shall be at a location 50 feet upstream from the discharge point (i.e., storm drain) into the receiving water (i.e., Rio Hondo Channel).

The Regional Board is requiring, as part of the MRP, that the Discharger conduct effluent and receiving water monitoring for 2,3,7,8 TCDD, once during the permit term. The SIP requires monitoring for 2,3,7,8-TCDD and the 17 congeners listed in Section VI of the MRP. The Discharger is required to calculate Toxic Equivalence (TEQ) for each congener by multiplying its analytical concentration by the appropriate Toxicity Equivalence Factors (TEF) provided in Section VI of the MRP.