



Sunnyvale

January 30, 2024

Water Pollution Control Plant
1444 Borregas Avenue
Sunnyvale, CA 94088-3707
TDD/TYY 408-730-7501
sunnyvale.ca.gov

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

TV Tracking #: 887

1. RECEIVED IN ENFORCEMENT: 01/30/2024

Attn: Title V Reports

Re: Semiannual Monitoring Report, City of Sunnyvale Water Pollution Control Plant, Facility No. A0733

To Whom It May Concern:

Per Section I, Part F of its Title V permit, the City of Sunnyvale Water Pollution Control Plant (Facility No. A0733) is submitting this Semiannual Monitoring Report for the period from July 1 through December 31, 2023. After reasonable inquiry, we conclude the following regarding this period of operation:

- There were no deviations during this reporting period;
- All reports were submitted on time; and
- All CEM QA procedures, methodologies, and maintenance were performed as required.

PGF Input Heat Limits Monitoring [Condition 10844(2)]:

S-14 and S-15 gas throughput for each fuel type is monitored continuously at five-second intervals on a daily basis, well in compliance with the required 15-minute interval. Monthly samples are collected from each fuel stream and analyzed for the high-heat value, which is used with the gas throughput to calculate the daily and consecutive 12-month total heat inputs for each engine to determine compliance with the respective limits.

The IHV values for both engines were maintained below the 200 MMBTU limit during the reporting period. Furthermore, the WPCP remained in compliance with the 72,000 MMBTU annual total limit throughout the reporting period.

As part of its 2017 Major Facility Review Renewal Application, Sunnyvale presented findings from an investigation on the origin of the IHV limits in Condition 10844(2) showing that the daily and annual IHV limits are an artifact of an error that occurred during the issuance of the Authority to Construct (ATC Application #11087) for Sources S-14 and S-15. Sunnyvale maintains that the 200 mmBTU/day limit was derived from the heat capacity of surrogate Waukesha engines that were never installed. To correct this issue and prevent future exceedances of the daily IHV limit during routine maintenance activities, Sunnyvale will be submitting a request for an administrative amendment to correct the limits.

Source Test [BAAQMD 8-34-301.4; Condition 10844(6)]:

The last annual source test for was performed on February 10, 2023, and the results indicated compliance with all emission limits.

PGF Combustion Temperature Monitoring [Condition 10844(8)]:

The thermocouple data collected during this reporting period are accurate, reflective of the operating conditions of S-14 and S-15, and in compliance with Condition 10844(8).

PGF Quarterly Emissions Monitoring [9-8-503, 9-8-302.1, 9-8-302.3]:

Third and fourth quarter emissions monitoring events for S-14 and S-15 were conducted on July 25 and December 13, 2023, respectively. All results were in compliance with the applicable emissions limits of 70 ppm NOx and 2,000 ppm CO.

RICE Oil Change Frequency [Table 2d.13 of NESHAP 63.6603(a)]:

There were no exceedances of the 1,440-hour limit for oil and filter changes and hose and spark plug inspections, as established in Table 2d.13 of NESHAP 63.6603(a), for all applicable RICE engines at the facility.

Sulfur Compounds Monitoring [Condition 19978(2)]:

The results from quarterly monitoring of total reduced sulfur compounds in digester gas used to operate S-16, S-17, and S-18 provided in the following table demonstrate compliance with the 1,550 ppmvd limit:

Total Reduced Sulfur Compounds – Draeger Tube Test Results				
S-16, 17 & 18	Date of Test	Requirement	Result ppmv (dry)	Compliant (Y/N)
Q3 2023	8/16/23	19978 (2)	950	Y
Q4 2023	11/11/23	19978 (2)	1,000	Y

Emergency Standby Diesel Generator Reliability-Related Activities [Condition 22850(1)]:

During the reporting period, reliability-related activities performed on the emergency standby diesel generators (S-26 and S-27) were in compliance with the limitation of ≤ 50 hours/year.

Landfill Gas Component System Leak Testing [8-34-301.2]:

Third and fourth quarter monitoring of the landfill gas system components were conducted on September 26 and 29 and December 18, 22, and 29, 2023, to identify any presence of organic compound concentrations above the permit limit of 1,000 ppmv measured as methane. On September 26, 2023, concentrations of 3,000 ppmv and 2,657 ppmv were detected at the blower for S-14 and valve for S-15, respectively. Work orders were issued and repairs made by WPCP Maintenance staff members the same day. The equipment was retested on September 29, 2023, and was in compliance with the limits. On

December 18, 2023, a concentration of 1,000 ppmv was detected at S-15, which is just at but not over the threshold for required follow up. WPCP personnel made repairs on December 19 and the system was retested on December 22 showing a return to being below the 1,000 ppmv threshold. The system was also tested on December 29 as S-14 was not operating during the earlier testing and the results were below 1,000 ppmv.

Landfill Gas Emission Control System [8-34-113.2]:

During the reporting period, the LFG emission control system was in compliance with the shutdown time limitation of ≤ 240 hours/year.

I am the responsible person for the City of Sunnyvale Water Pollution Control Plant. I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report are true, accurate and complete.

Please contact Melody Tovar at (408) 730-7740 or mtovar@sunnyvale.ca.gov if you have any questions or comments on this report.

Sincerely,

Ramana Chinnakotla

Ramana Chinnakotla
Director, Environmental Services Department