EARTHJUSTICE

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

[CERTIFIED MAIL NUMBER]

June 5, 2024

Plant Manager Commerce City Refinery Suncor Energy (U.S.A.) Inc. 5801 Brighton Blvd Commerce City, CO 80022	Administrator Michael Regan Environmental Protection Agency Office of the Administrator Mail Code 1101A 1200 Pennsylvania Avenue, N.W. Washington, DC 20460
Suncor Energy (U.S.A.) Inc. 5455 Brighton Blvd. Commerce City, CO 80022	Executive Director Jill Hunsaker Ryan Colorado Dept. Public Health & Environment 4300 Cherry Creek Drive South Denver, CO 80246
Suncor Energy (U.S.A.) Inc. c/o CT Corporation System 7700 E Arapahoe Rd Ste 220 Centennial, CO 80112-1268	Director Michael Ogletree Colorado Dept. Public Health & Environment Air Pollution Control Division 4300 Cherry Creek Drive South Denver, CO 80246

Re: Notice of Intent to Sue for Violations of Clean Air Act at the Suncor Energy (U.S.A.) Inc's Refinery in Commerce City, Colorado

Dear Plant Manager, Administrator Regan, Director Ryan, and Director Ogletree:

Pursuant to 42 U.S.C. § 7604(b) of the Clean Air Act, we write on behalf of Sierra Club, 350 Colorado, and GreenLatinos (collectively, "Community Groups"), to provide you with notice of our intent to file suit against Suncor Energy (U.S.A.) Inc. ("Suncor") to enforce against violations of the Clean Air Act, 42 U.S.C. § 7401 *et seq*., at Suncor's Commer City Refinery, Plants 1 and 3 ("West Plant") and Plant 2 ("East Plant") at 5800 Brighton Blvd, Commerce City, CO 80022 ("Suncor Refinery").

As detailed below in this notice ("Notice"), we have documented at least 9,209 days of violations of regulations, consent decrees, and permit provisions by Suncor in the past five years. Suncor's violations threaten the health of the Community Groups' members who are routinely exposed to the polluted air emitted from the refinery. Specifically, Suncor has violated

1. Limits on the hydrogen sulfide ("H_2S") content of fuel gas burned by forty separate boilers, heaters, flares, and other units at the refinery. These limits help control release of H_2S, sulfur dioxide ("SO_2"), and particulate matter ("PM").

2. Limits on the "opacity" of emissions from processing units that break down crude oil and extract sulfur from process gases. These limits help control releases of particulate matter and hazardous air pollutants.

3. Limits on carbon monoxide ("CO") emissions at certain boilers and crude processing units. In addition to CO, these limits also help control releases of harmful hazardous air pollutants like benzene and formaldehyde.

4. Limits on emissions of SO_2 from a processing unit that extracts sulfur from process gases. These limits also help control releases of PM and other sulfurous hazardous air pollutants.

5. Operational requirements for flares. These requirements are meant to control releases of volatile organic compounds ("VOCs")—including many hazardous air pollutants—by ensuring that flares are efficiently burning and breaking down those pollutants. These requirements also help control emissions of particulate matter, nitrogen oxides ("NOx)", and CO.

6. Limits on emissions of NOx from a process heater that has been violating the requirement continuously since 2006.

This Notice begins with a background section describing: (i) the Suncor Refinery, (ii) the Refinery's effects on the health of the surrounding community, (iii) its pollution-emitting units, (iv) its permitting history, (v) its emissions reporting, and (vi) the state's enforcement history for the refinery. The Notice then outlines the Clean Air Act emissions standards and limits applicable to Suncor. Next, the Notice describes Suncor's violations of those standards and why the state's prior enforcement actions do not resolve those violations. Finally, the Notice describes the Community Group's authority to bring the suit, Suncor's responsibility for its violations, and a description of the Community Groups.

Table of Contents

I. Background

A. Description of Refinery

The Suncor Refinery has a 98,000-barrel-per-day refining capacity. It consists of three main operating plants: Plant 1, Plant 2, and Plant 3, which receive crude oil via pipeline. The crude oil is refined into finished products that are generally shipped out of the refinery in tanker trucks or railcars.

Plants 1 and 3 are an integrated operation, referred to collectively as the West Plant. Plant 1 is located on the west side of Brighton Boulevard and refines low-sulfur crude. Plant 3, also called the Asphalt Plant, is located on the east side of Brighton Boulevard. Plant 3 refines high-sulfur crude.

Plant 2, also referred to as the East Plant, is located on the east side of Brighton Boulevard and refines low-sulfur crude.

B. The Suncor Refinery Pumps Pollution into Neighborhoods Already Suffering from Some of the Highest Pollution Levels in the Country

The Suncor Refinery is one of the largest sources of pollution in the state of Colorado, and particularly pollutes into the surrounding communities: the north Denver neighborhoods of Elyria, Swansea, and Globeville, and Commerce City in Adams County—all of which face some of the greatest environmental risks in Colorado.[1]

The communities surrounding the Suncor Refinery are considered "Disproportionately Impacted Communities" under Colorado's Environmental Justice Act, H.B. 21-1266, Colo. Rev. Stat. ("C.R.S.") § 24-4-109(2)(b)(ii).[2] Indeed, at least 85 percent of communities in Colorado are less environmentally burdened than those surrounding the Suncor Refinery according to the Colorado EnviroScreen Tool.[3] According to EPA's recent analysis of the area around the Suncor Refinery, 69,570 residents live within a five-kilometer radius,[4] with the nearest residential home less than half a mile from the refinery. EPA determined that 72 percent of those residents are people of color and 37 percent are economically disadvantaged.[5] Additionally, EPA found that the

---

[1] *See generally* Katherine L. Dickinson et al., Who Bears the Cost? North Denver Environmental Justice Report and Data Audit (2022), https://www.greenlatinos.org/wp-content/uploads/2024/04/N-Denver-Report_English_Online_workinghyperlinks.pdf.

[2] *See* Colo. Dep't of Pub. Health & Env't, Disproportionately Impacted Communities (DRAFT Version September 2021), https://www.arcgis.com/home/item.html?id=7d0cf560b11e41f0a4d323c4e6c90e0b (last visited Oct. 4, 2022) (showing census blocks groups immediately adjacent to Suncor qualify as Disproportionately Impacted Communities for one or more categories based on percentage of residents who are housing-cost burdened, low-income, or people of color).

[3] CDPHE, Colorado EnviroScreen, https://teeo-cdphe.shinyapps.io/COEnviroScreen_English/#map, (last visited May 22, 2024).

[4] Colo. Dep't of Pub. Health & Env't, *Order Granting in Part and Denying in Part Petitions for Objection to a Title V Operating Permit, Permit No. 95OPAD108*, (July 31, 2023), at 7, https://www.epa.gov/system/files/documents/2023-08/Suncor%20Plant%202%20Order_07-31-23.pdf.

[5] *Id*.

area falls within some of the highest percentiles on all 13 of EPA's EJScreen Environmental Justice Indicators: (1) Particulate Matter, 96%; (2) Ozone, 89%; (3) Diesel Particulate Matter, 95%; (4) Air Toxics Cancer Risk, 97%; (5) Air Toxics Respiratory Hazard, 97%; (6) Toxic Releases to Air, 94%; (7) Traffic Proximity, 87%; (8) Lead Paint, 92%; (9) Superfund Proximity, 96%; (10) RMP Facility Proximity, 96%; (11) Hazardous Waste Proximity, 96%; (12) Underground Storage Tanks, 89%; and (13) Wastewater Discharge, 91%.[6] Further, a recent study demonstrated that people of color (POC) in Denver are exposed to higher levels of air pollution.[7] These inequities in North Denver, where people of color are disproportionately burdened by air pollution, are driven by decades of inequitable city planning practices such as redlining and other exclusionary zoning laws.[8]

The 80216-zip code, which includes the Elyria, Swansea, and Globeville neighborhoods, as well as part of south Commerce City, was ranked the most polluted zip code in the United States.[9] Emissions from the Suncor Refinery are a major contributor to the pollution in North Denver and Commerce City. In 2020 alone, the refinery emitted approximately 20 tons of hazardous air pollutants, 500 tons of CO, 650 tons of NOx, 125 tons of PM, 450 tons of VOCs, and 230 tons of SO_2.[10] The health risks created by these pollutants threaten the already susceptible nearby residents who have among the highest rates of several diseases associated with air pollution, including asthma, cardiovascular disease, and diabetes.[11]

Suncor's violations are made even more egregious because it is located in the Denver-Metro North Front Range ozone nonattainment area. The Suncor Refinery's emissions contribute to the unhealthy levels of ozone and disparate cumulative impacts of pollution endured by nearby residents.

C. The Suncor Refinery Contains Hundreds of Sources of Air Pollutants

The Suncor Refinery contains over 200 individual emission units. As relevant to this Notice, the units fall into the following four general categories, grouped by general function:

---

[6] *Id*.

[7] Alexander C. Bradley, et. al., *Air Pollution Inequality in the Denver Metroplex and its Relationship to Historical Redlining*, 58 Env't Sci. & Tech. 4226, 4231 (2024).

[8] *Id*. at 4232–33.

[9] Amanda Horvath, How a Denver neighborhood became one of the most polluted zip codes in America, Rocky Mountain PBS (November 7, 2023), https://www.rmpbs.org/blogs/rocky-mountain-pbs/80216-polluted-zip-code-timeline.

[10] Enforcement and Compliance History Online, *Air Pollutant Report*, Env't Prot. Agency, (last visited March 18, 2024), https://echo.epa.gov/air-pollutant-report?fid=110032913024.

[11] Gretchin Armijo & Gene C. Hook, Denver Dep't of Env't Health, *How Neighborhood Planning Affects Health in Globeville and Elyria Swansea*, 16–17 (2014) ("Health Impact Assessment"), https://www.denvergov.org/content/dam/denvergov/Portals/746/documents/HIA/HIA%20Composite%20Report_9-18-14.pdf.

(1) boilers, process heaters, and similar units that burn refinery fuel gas; (2) flares; (3) sulfur recovery units; and (4) fluid catalytic cracking units.[12]

1. Boilers, Process Heaters, and Similar Units that Burn Refinery Fuel Gas

The Suncor Refinery includes dozens of boilers, process heaters, and similar units that burn refinery fuel gas ("fuel gas") to generate steam or to heat other process material as part of the refining process.[13] These "fuel gas combustion devices"[14] burn fuel gas that is generated onsite as a refining byproduct. As crude oil is refined, various hydrocarbon gases are extracted from liquid crude.[15] These gases are separated into individual gas streams and captured for sale or use at the refinery.[16] The lightest gases, largely consisting of methane and ethane, are generally collected to be used in a refinery's fuel gas system.[17]

The Suncor Refinery captures the fuel gas and routes it to two centralized fuel gas systems—one at the East Plant and one at the West Plant.[18] As described further below, the fuel-gas-burning units are subject to limits on the H_2S content of the fuel gas that they burn. Suncor monitors the H_2S content of its two fuel gas systems at two centralized monitors to ensure that the H_2S concentration of the fuel gas does not exceed 162 parts-per-million: (1) the Plant 1 fuel gas monitor (serving the West Plant), and (2) the Plant 2 fuel gas monitor (serving the East Plant).

The West Plant fuel gas system serves 27 boilers, process heaters, and similar units, and the East Plant system serves 9 such units, listed below:[19]

---

[12] Community Groups have also identified a history of violations of Suncor's duty to eliminate emissions of VOCs from its large storage tanks. Community Groups have not included claims related to the storage tanks here, but Community Group will continue to monitor Suncor's violations and take appropriate action if the storage tank violations recur.

[13] *See, e.g.,* 40 C.F.R. § 60.101(g) (defining "fuel gas combustion device"); 40 C.F.R. § 63.7575 (defining "boiler" and "process heater").

[14] Under federal regulations, "fuel gas combustion device" is defined as "any equipment, such as process heaters, boilers and flares used to combust fuel gas, except facilities in which gases are combusted to produce sulfur or sulfuric acid." 40 C.F.R. § 60.101(g). We exclude flares from the term for purposes of this section because flares are discussed separately in the following section.

[15] William L. Leffler, Petroleum Refining in Nontechnical Language 58 (4th ed. 2008).

[16] *See id*. at 57-64.

[17] *See id*. at 64-65.

[18] Fuel gas generally has a high concentration of H_2S and must be treated before it is burned in the fuel gas combustion devices. *See generally* Standards of Performance for New Stationary Source, 44 Fed. Reg. 13480 (March 12, 1979).

[19] The references to SRU (H-25) and SRU (B011) refer to the tail-gas incinerators for the West Plant and East Plant sulfur recovery units, respectively. *See* Section I.C.3, below. The reference to the East Plant FCCU is a reference to the preheater for the East Plant fluid catalytic cracking unit. *See* Section I.C.4, below. The East Plant FCCU includes multiple emissions units subject to different regulatory requirements, including the preheater B002, the reactor-regenerator P004, catalyst handling P014, and fugitive sources F002. All subparts of the East Plant FCCU fall under

West Plant	East Plant
Boiler B-4	Reformer Heater B003
Boiler B-6	Reformer Heater B004
Boiler B-8	Reformer Heater B005
Heater H-6	Boiler B504
Heater H-10	Boiler B505
Heater H-11	Crude Heater B001
Heater H-13	East Plant FCCU
Heater H-16	SRU (B011)
Heater H-17	Vacuum Heater B010
Heater H-18	
Heater H-19	
Heater H-20	
Heater H-21	
Heater H-22	
Heater H-27	
Heater H-28	
Heater H-29	
Heater H-30	
Heater H-31	
Heater H-32	
Heater H-33	
Heater H-37	
Heater H-1716	
Heater H-1717	
Heater H-2101	
Heater H-2410	
SRU (H-25)	

2. Flares

The refinery uses four main open-air flares:[20] (1) the West Plant's main refinery flare ("Plant 1 Flare"), (2) the East Plant's main refinery flare ("Plant 2 Flare"), (3) the Asphalt Plant's main flare ("Plant 3 Flare"), and (4) the Asphalt Plant's gasoline benzene reduction flare ("GBR Flare"). The open-air flares are used to (i) control emissions of waste VOCs (including hazardous air pollutants) from other refinery units, and (ii) to control waste gases produced during process upsets.

the same main permit condition in Suncor's Title V permit. For ease of review, this Notice uses East Plant FCCU to refer to any or all subparts of the FCCU as appropriate.

[20] Additional flares and vapor combustors are used at the refinery's loading racks.

3. Sulfur Recovery Units

The refinery uses three sulfur recovery units ("SRUs") to remove H_2S from fuel gas and sour water at the refinery.[21] The West Plant contains SRU #1 (unit P101) and SRU #2 (unit P102). The East Plant contains SRU #3 (unit P009). Emissions from the SRUs are routed through "tail gas incinerators" to further reduce H_2S and hazardous air pollutant emissions before releasing to the air. The East Plant's tail gas incinerator is unit B011 ("SRU (B011)"), and the West Plant's tail gas incinerator is unit H-25 ("SRU (H-25)").[22] Because emissions from the SRUs are routed through the associated tail gas incinerators, any emissions exceedance associated with an SRU is identified by its associated tail gas incinerator.

4. Fluid Catalytic Cracking Units

The refinery includes two fluid catalytic cracking units ("FCCUs"). The FCCUs use a chemical catalyst to "crack" larger hydrocarbon molecules into gasoline and other smaller hydrocarbons.[23] The West Plant contains the West Plant FCCU (unit P103) ("West Plant FCCU"). The East Plant contains the East Plant FCCU (unit P003) ("East Plant FCCU"). The East Plant FCCU includes a fuel-gas-burning preheater (unit B002).[24] Emissions exceedances from the preheater are identified as exceedances by the East Plant FCCU.

D. History of Suncor's Two Title V Operating Permits

The Suncor Refinery holds two operating permits issued under the Clean Air Act Title V program, one for the East Plant ("East Plant Title V Permit") and one for the West Plant ("West Plant Title V Permit"). The purpose of a Title V permit is to, among other things, (1) detail the applicable emissions standards and limitations, and (2) impose monitoring and reporting requirements.[25] The permits are issued by the Colorado Air Pollution Control Division ("Division"), which is part of the Department of Public Health and Environment ("CDPHE").

The East Plant Title V Permit was first issued on October 1, 2006. The permit has been renewed twice: on June 15, 2009 ("2009 East Plant Title V Permit") and September 1, 2022 ("2022 East Plant Title V Permit"). The 2022 East Plant Title V Permit is the currently operative permit. In the period between the 2009 renewal and the 2022 renewal, Suncor applied for and made 41 modifications that were not reflected in the permit until it was revised in 2022. As a result,

---

[21] *See* Technical Review Document for Operating Permit 095OPAD120, Suncor Energy (USA), Inc. West Plant, revised October 2003 ("West Plant Permit TRD (2003)") at 15; Technical Review Document for Operating Permit 095OPAD108, Suncor Energy (USA), Inc. East Plant, revised September 2006 ("East Plant Permit TRD (2006)") at 7. SRUs strip H_2S out of gases generated at the refinery, convert the H_2S to sulfur dioxide (SO_2), and then converts the SO_2 to elemental, solid sulfur.

[22] The tail gas incinerators burn fuel gas to operate, so they qualify as fuel gas combustion devices and are included in the list of those units in Section I.C.1, above.

[23] *See* East Plant Permit TRD (2006) at 4; West Plant Permit TRD (2003) at 17.

[24] *See* East Plant Permit TRD (2006) at 4.

[25] *See* 40 C.F.R. § 70.6.

additional authorities must be reviewed to identify certain emission standards and limitations that apply to Suncor but are not included in the permit.

The West Plant Title V Permit was first issued on August 1, 2004. The permit has been revised four times, most recently on February 22, 2018 ("2018 West Plant Title V Permit")—which is the currently operative permit. In May of 2022, the Division issued a draft renewal permit for the West Plant for public comment ("2022 Draft West Plant Title V Permit") and a supporting technical review document ("2022 Draft West Plant TRD"). No final permit has been issued as of the date of this Notice. According to the 2022 Draft West Plant TRD, Suncor applied for and made more than 20 modifications to the West Plant permit between the 2018 revision and the draft renewal permit. Similarly, additional authorities must be reviewed to clarify the full universe of emission standards and limitations that apply to the West Plant.

E. Suncor Emissions Reporting

Suncor files various periodic reports with the Division and/or EPA in accordance with regulatory or permit reporting requirements.[26] Three of Suncor's periodic reports are most relevant to the violations alleged in this Notice: (1) quarterly excess emissions reports, (2) semi-annual permit and monitoring deviation reports, and (3) community compliance reports.

Quarterly Excess Emissions Reports ("EERs"): For any emission unit that federal regulations require be monitored with a continuous emissions monitoring system ("CEMS"), Suncor must report if the emission of a pollutant exceeds the numeric limits identified in the Title V permit.[27] These reports must be submitted quarterly.

Semi-Annual Monitoring and Permit Deviation Reports ("Deviation Reports"): At least every six months, Suncor must report any deviation from a permit requirement, including violations of emissions standards or limitations.[28] In certain circumstances, prompt deviation reports must be made within twenty-four to forty-eight hours.[29] The Deviation Reports often overlap with information included in the Excess Emissions Reports, but also include violations that are not monitored with CEMS.

Community Compliance Reports: The 2022 East Plant Title V Permit requires Suncor to submit a quarterly report that "will identify in an easy to understand format any emissions violations at the facility during the previous quarter."[30] The Community Compliance Reports overlap with information included in the EERs and Deviation Reports.

---

[26] Suncor's reports are available to the public online on CDPHE's Public Access Viewer: https://oitco.hylandcloud.com/CDPHERMPublicAccess/index.html.

[27] *See* 40 C.F.R. § 60.7(c); Colorado Regulation No. 1, 5 C.C.R. § 1001-3:IV.G.

[28] Colorado Regulation No. 3, 5 C.C.R. § 1001-5:3C.V.C.7.

[29] Colo. Dep't of Pub. Health & Env't, Operating Permit, *Suncor Energy (U.S.A.) Inc., Commerce City Refinery, Plant 2 (East)*, 95OPAD108, renewed September 1, 2022 ("2022 East Plant Title V Permit"), § IV.21.b; Suncor submits what are presumably prompt deviation reports of excess emissions under two names: (1) startup/shutdown reports, and (2) malfunction reports.

[30] *Id.* at § II.23.8.

F. This Action is Necessary Because Colorado Has Taken Limited Action Against Suncor to Enforce Violations and Protect Community Health

The Division has taken limited enforcement action against Suncor for the violations covered by this Notice. Specifically, the Division has merely issued three compliance advisories and issued an administrative order settling certain violations with Suncor. However, the Division's limited actions did little to cease Suncor's violations, as evidenced by the 9,209 days of alleged violations outlined in this Notice.

The Division has issued three compliance advisories covering violations alleged in this Notice, on: (1) August 23, 2021 ("2021 Compliance Advisory"), (2) May 25, 2022 ("2022 Compliance Advisory"), and (3) June 1, 2023 ("2023 Compliance Advisory"). According to Division policy, a compliance advisory is a document that "formally notifies a Source of alleged violations, per § 25-7-115, C.R.S."[31] The compliance advisory summarizes regulatory standards applicable to the source and any alleged violations or noncompliance by the source.[32] The 2021 Compliance Advisory addressed violations between February 2019 through July 2020. The 2022 Compliance Advisory addressed violations between August 2020 and June 2021. The 2023 Compliance Advisory addressed violations between July 2021 and June 2022.

On February 5, 2024 the Division entered into a Compliance Order on Consent ("Compliance Order") with Suncor to settle the violations identified in the 2021 and 2022 Compliance Advisories. Under the Compliance Order, Suncor agreed to pay approximately $2.5 million in civil penalties[33] and to perform an $8 million project to retroactively address Suncor's periodic power disruptions that result in substantial excess emissions.[34]

II. Applicable Clean Air Act Requirements

Under the Clean Air Act, a citizen can sue a polluter who has violated or is violating an "emission standard or limitation."[35] "Emission standard or limitation" is defined broadly and includes, among other things:

- Any "requirement of continuous emission reduction, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction;"[36]

- Any state or federal requirement "which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and

[31] CO Air Pollution Control Div., *Compliance Assistance and Enforcement Guide* 5 (Nov. 2017 revision).

[32] *Id*. at 15.

[33] Colo. Dep't of Pub. Health & Env't, *Compliance Order on Consent: Case Nos. 2021-082 &2022-076, AIRS No. 001-0003* (Feb. 5, 2024), 64-65.

[34] *Id*. at 60-62.

[35] 42 U.S.C. § 7604(a)(1).

[36] 42 U.S.C. § 7604(f)(1); 42 U.S.C. § 7602(l) (defining "standard of performance").

any design, equipment, work practice or operational standard promulgated under this chapter;"[37]

- Any term or condition of a permit issued under Title I of the Clean Air Act;[38]

- Any New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants (see Section II.A, below);[39] and

- Any term or condition of any other permit issued under the Clean Air Act or an-EPA-approved State Implementation Plan, including Title V permits and construction permits.[40]

Where a violation of an emissions standard or limitation is proven, the court may issue an appropriate injunction and impose a civil penalty for each day of violation.[41]

The following subsections describe the "emissions standards or limitations" that Suncor has violated. They fall into four main categories:

1. Regulatory standards established by EPA, which include New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants;

2. Requirements imposed by consent decrees between EPA and previous owners of the Suncor Refinery;

3. Colorado state implementation plan standards, including opacity limits and reasonably available control technology standards; and

4. Requirements in Suncor's Title V operating permits and construction permits issued by the Division.

These standards and limitations set limits on emissions of five pollutants: (1) H_2S, (2) CO, (3) SO_2, (4) NOx, and (5) VOCs. The standards and limitations also include (i) limits on the opacity of emissions (which acts as a surrogate for particulate matter and metallic hazardous air pollutants), and (ii) certain operational requirements to ensure that pollutant emissions are reduced.

As described below, multiple emissions standards or limitations may impose the same limit on an emission unit.[42] For example, the following four authorities impose a 500 part-per-million by volume ("ppmv") concentration limit on CO emissions from the East Plant FCCU: (1) NSPS

[37] 42 U.S.C. § 7604(f)(1); 42 U.S.C. § 7602(k) (defining "emission limitation" and "emission standard").

[38] 42 U.S.C. § 7604(f)(3).

[39] 42 U.S.C. § 7604(f)(3).

[40] 42 U.S.C. § 7604(f)(4).

[41] *See* 42 U.S.C. § 7604(a).

[42] *See, e.g.,* 40 C.F.R. § 63.1(a)(3) (stating MACT standards do not supplant other standards on the same unit unless the MACT standard says so explicitly).

Subpart J, (2) NSPS Subpart Ja, (3) MACT UUU, and (4) the East Plant Consent Decree.[43] Therefore, if the East Plant FCCU's emissions exceeds the 500 ppmv limit, Suncor would potentially have violated the limit under each of the separate authorities, resulting in four enforceable violations. [44]

The following subsections describe the specific emissions standards and limitations in detail. The next section, Section III, describes the pollutants and harms associated with them.

A. EPA Regulatory Standards and Limitations

Pursuant to the Clean Air Act, EPA has adopted certain standards that require facilities to meet specified emissions limits and other requirements. For purposes of this notice, these are (1) New Source Performance Standards,[45] and (2) National Emission Standards for Hazardous Air Pollutants.[46]

1. New Sources Performance Standards

New Source Performance Standards ("NSPS") are technological requirements and emissions standards that apply to new and modified major sources of air pollution if the facility is constructed or modified after the date the new standards are proposed or finalized.[47] EPA establishes specific NSPS standards for each category of sources that "may reasonably be anticipated to endanger public health or welfare."[48] Each NSPS Subpart in Part 60 of Title 40 of the Code of Federal Regulations applies to units—from a specific source category—that were built or modified as of a certain date.

As explained in detail below, EPA has established two NSPS for petroleum refineries: Subpart J and Subpart Ja.[49]

---

[43] *See* 2022 East Plant Title V Permit, §§ II.2.7.2, III.3; 2.7.3; 2.12; 2.16.

[44] Colo. Dep't of Pub. Health & Env't, *Compliance Advisory: Case No. 2021-082, AIRS No. 001*-0003 § I.Q.i, (Aug. 3, 2021), https://oitco.hylandcloud.com/CDPHERMPOP/DocPop/DocPop.aspx?docid=7802307 (identifying multiple standards violated).

[45] 42 U.S.C. § 7411(b).

[46] 42 U.S.C. § 7412(c)(2), (d).

[47] *See* 40 C.F.R. § 60.1(a)-(b).

[48] 42 U.S.C. § 7412(b)(1)(B).

[49] Certain flares in the West Plant are also subject to provisions of NSPS Subpart A, 40 C.F.R. §§ 60.1-19. Specifically, Subpart A includes certain combustion zone temperature requirements for the flares in the West Plant. *See* 40 C.F.R. § 60.18(c)(3); *see also* Consent Decree, *United States v. Conoco, Inc.*, (No. H-01-4430, Apr. 30, 2002) ("West Plant Consent Decree"), ¶ 156 (stating 60.18 applies to West Plant flares). However, these provisions have generally been superseded by the requirements of MACT CC discussed below.

a. NSPS Subpart J

NSPS Subpart J, 40 C.F.R. §§ 60.100-09, imposes standards on four main types of units used at Suncor: (1) fuel gas combustion devices, (2) flares, (3) SRUs, and (4) FCCUs.[50] With some exceptions, Subpart J applies to units that were constructed or modified between June 11, 1973 and May 14, 2007; however, the applicability period for flares runs through June 24, 2008.[51]

Subpart J includes four emissions standards relevant to this Notice: (1) three-hour rolling H_2S concentration of 162 ppmv; (2) six-minute average opacity limit of 30%; (3) hourly CO limit of 500 ppmv; and (4) twelve-hour SO_2 limit of 250 ppmv.

i. Three-Hour Rolling H_2S Concentration of 162 ppmv

Subpart J limits the H_2S content of the fuel gas that fuel gas combustion devices and flares can burn. The limit is a three-hour rolling concentration of 162 ppmv:

> No owner or operator subject to the provisions of this subpart shall . . .[b]urn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf). The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this paragraph.[52]

This limit applies to the following units: (1) two flares and twenty-four other fuel-gas-burning units at the West Plant, including the SRU tail gas incinerator (H-25), and (2) one flare and seven other fuel-gas-burning units at the East Plant (including the East Plant FCCU Pre-heater), as detailed in the chart below:

Plant	Unit	Permit Citation
1	Boiler B-4	2018 West Plant Title V Permit § II.12.3
1	Boiler B-6	2018 West Plant Title V Permit § II.13.3
1	Boiler B-8	2018 West Plant Title V Permit § II.13.3
1	Heater H-6	2018 West Plant Title V Permit § II.11.3
1	Heater H-10	2018 West Plant Title V Permit § II.12.3
1	Heater H-11	2018 West Plant Title V Permit § II.12.3
1	Heater H-13	2018 West Plant Title V Permit § II.14.3
1	Heater H-16	2018 West Plant Title V Permit § II.12.3
1	Heater H-17	2018 West Plant Title V Permit § II.14.3
1	Heater H-18	2018 West Plant Title V Permit § II.12.3
1	Heater H-19	2018 West Plant Title V Permit § II.15.3

[50] *See* 40 C.F.R. § 60.100(a).

[51] *See* 40 C.F.R. § 60.100.

[52] 40 C.F.R. § 60.104(a)(1); *see also* 73 Fed. Reg. 35838, 35852 (June 24, 2008) (indicating that the 230 mg/dscm limit translates to 162 ppmv over three hours); 2022 East Plant Title V Permit § II.31.3 (same).

Plant	Unit	Permit Citation
1	Heater H-20	2018 West Plant Title V Permit § II.12.3
1	Heater H-21	2018 West Plant Title V Permit § II.12.3
1	Heater H-22	2018 West Plant Title V Permit § II.12.3
1	Heater H-27	2018 West Plant Title V Permit § II.12.3
1	Heater H-28	2018 West Plant Title V Permit § II.16.3
1	Heater H-29	2018 West Plant Title V Permit § II.16.3
1	Heater H-30	2018 West Plant Title V Permit § II.16.3
1	Heater H-31	2018 West Plant Title V Permit § II.17.3
1	Heater H-32	2018 West Plant Title V Permit § II.17.3
1	Heater H-33	2018 West Plant Title V Permit § II.18.3
1	Heater H-37	2018 West Plant Title V Permit § II.18.3
1	Heater H-2101	2018 West Plant Title V Permit § II.27.3
1	SRU (H-25)	2018 West Plant Title V Permit § II.20.6.2
1	Plant 1 Flare	2018 West Plant Title V Permit § II.29.2
3	Plant 3 Flare	2018 West Plant Title V Permit § II.30.2
2	Reformer Heater B003	2022 East Plant Title V Permit § II.3.4[53]
2	Reformer Heater B004	2022 East Plant Title V Permit § II.3.4[54]
2	Reformer Heater B005	2022 East Plant Title V Permit § II.3.4[55]
2	Crude Heater B001	2022 East Plant Title V Permit § II.1.3[56]
2	East Plant FCCU	2022 East Plant Title V Permit § II.2.4[57]
2	SRU (B011)	2022 East Plant Title V Permit § II.5.3.1[58]
2	Vacuum Heater B010	2022 East Plant Title V Permit § II.1.3[59]
2	Plant 2 Flare	2022 East Plant Title V Permit § II.8.9[60]

ii. Six-minute average opacity limit of 30%

Subpart J imposes a six-minute average opacity[61] limit of 30% on FCCUs:

> No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any fluid catalytic cracking unit

[53] *See also* Colo. Dep't of Pub. Health & Env't, Operating Permit, *Suncor Energy (U.S.A.) Inc., Commerce City Refinery, Plant 2 (East)*, 95OPAD108, revised June 15, 2009 ("2009 East Plant Title V Permit"), § II.3.3.

[54] *Id*.

[55] *Id*.

[56] 2009 East Plant Title V Permit, § II.1.3.

[57] 2009 East Plant Title V Permit, § II.2.10.

[58] 2009 East Plant Title V Permit, § II.5.11.

[59] 2009 East Plant Title V Permit, § II.1.3.

[60] 2009 East Plant Title V Permit, § II.8.4.

[61] For a description of opacity, *see* Section III.B, below.

catalyst regenerator . . . [g]ases exhibiting greater than 30 percent opacity, except for one six-minute average opacity reading in any one hour period.[62]

The limit applies to both the West Plant FCCU[63] and the East Plant FCCU.[64]

iii. Hourly CO Limit of 500 ppmv

Subpart J imposes an hourly CO concentration limit of 500 ppmv on FCCUs:

> No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any fluid catalytic cracking unit catalyst regenerator any gases that contain carbon monoxide (CO) in excess of 500 ppm by volume (dry basis).[65]

The limit applies to the West Plant FCCU[66] and East Plant FCCU.[67]

iv. Twelve-hour SO_2 Limit of 250 ppmv

Subpart J imposes a twelve-hour rolling SO_2 concentration limit of 250 ppmv on SRUs:

> No owner or operator subject to the provisions of this subpart shall . . . [d]ischarge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of . . . 250 ppm by volume (dry basis) of sulfur dioxide (SO_2) at zero percent excess air.[68]

This limit applies to the West Plant's SRU tail gas incinerator—SRU (H-25).[69]

b. NSPS Subpart Ja

NSPS Subpart Ja, 40 C.F.R. §§ 100a-09a, applies to the same categories of units as Subpart J, s*ee* 40 C.F.R. § 60.100a(a), but Subpart Ja applies to units that were constructed or significantly modified after the end dates listed above for Subpart J. As detailed below, Subpart Ja imposes two

---

[62] 40 C.F.R. § 60.102(a).

[63] *See* Colo. Dep't of Pub. Health & Env't, Operating Permit. *Suncor Energy (U.S.A.) Inc., Commerce City Refinery, Plant 1 (West) & Plant 3 (Asphalt Unit)*, 96OPAD120, revised February 22, 2018 ("2018 West Plant Title V Permit"), §§ II.22.7.2, 45.1.2.

[64] *See* 2022 East Plant Title V Permit, §§ II.2.7.2; 31.1.2; Consent Decree, *United States v. Valero Refining Co.*, (No. SA-05-CA-0568, Jun. 16, 2005) ("East Plant Consent Decree"), ¶ 9.

[65] 40 C.F.R. § 60.103(a).

[66] *See* 2018 West Plant Title V Permit, §§ II.22.11, 45.2.

[67] *See* 2022 East Plant Title V Permit, §§ II.2.7.2; 31.2; East Plant Consent Decree, ¶ 9.

[68] 40 C.F.R. 60.104(a)(1).

[69] *See* 2018 West Plant Title V Permit, §§ II.20.6.1, 45.12.

emission standards relevant to this Notice: (1) three-hour rolling H_2S concentration of 162 ppmv; and (2) hourly CO limit of 500 ppmv—both of which are identical to standards under Subpart J.

i. Three-Hour Rolling H_2S Limit of 162 ppmv

Subpart Ja imposes the same numeric H_2S limit as Subpart J but applies to some additional units than Subpart J.[70]

This limit applies to the following units at the West Plant: Plant 1 Flare,[71] Plant 3 Flare,[72] GBR Unit Flare,[73] Heater H-1716,[74] Heater H-1717,[75] and Heater H-2410.[76] The limit applies to the following units at the East Plant: Plant 2 Flare,[77] Boiler B504,[78] and Boiler B505.[79]

ii. Hourly CO Limit of 500 ppmv

Subpart Ja imposes the same CO limit as Subpart J.[80] The limit applies to the East Plant FCCU.[81]

c. General Duty to Minimize Emissions

In addition to the specific standards identified in Subpart J and Ja, the NSPS also impose a general duty to operate and maintain those units in a way to minimize emissions:

> At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not

[70] *See* 40 C.F.R. § 60.102a(g)(1)(ii) (fuel combustion units); 40 C.F.R. § 60.103a(h).

[71] *See* 2018 West Plant Title V Permit, §§ II.29.9, 46.8.

[72] *See* 2018 West Plant Title V Permit, §§ II.30.1, 46.8.

[73] *See* 2018 West Plant Title V Permit, §§ II.31.2, 46.8.

[74] *See* 2018 West Plant Title V Permit, §§ II.21.3, 46.1.1.

[75] *See id*.

[76] *See* 2018 West Plant Title V Permit, §§ II.28.3, 46.1.1.

[77] *See* 2022 East Plant Title V Permit, §§ II.8.9, 32.9; Technical Review Document for Renewal/Modifications to Operating Permit 095OPAD120, Suncor Energy (USA), Inc. East Plant, published September 1, 2022 ("East Plant Permit TRD (2022)"), § III.1.20 (describing January 14, 2015 modification).

[78] *See* 2022 East Plant Title V Permit, §§ II.6.4, 32.2.1; East Plant Permit TRD (2022), § III.1.15 (describing Oct. 11, 2012 modification).

[79] *Id*.

[80] *See* 40 C.F.R. § 102a(b)(4).

[81] *See* 2022 East Plant Title V Permit, §§ II.2.7.3; 32.11; Colo. Dep't of Pub. Health & Env't, Construction Permit. *Suncor Energy (U.S.A.) Inc.*, 09AD0961, issued Oct. 1, 2009 ("Construction Permit 09AD0961"), at 7.

limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.[82]

This general standard applies to any unit subject to a NSPS standard, including all units listed in the preceding subsections.

2. National Emission Standards for Hazardous Air Pollutants

The National Emission Standards for Hazardous Air Pollutants—which are also referred to as Maximum Achievable Control Technology ("MACT") standards[83]—are technological requirements and emissions standards intended to reduce emissions of hazardous air pollutants. Like the NSPS, EPA establishes MACT standards for specific types of facilities. However, unlike NSPS standards that apply only to new and modified sources, MACT standards generally apply to both new and existing subject facilities.[84] MACT Subparts in Part 63 of Title 40 of the C.F.R. are broken down by source category (or, in the case of refineries, types of units from a specific source category).

As explained in detail below, EPA has established two MACT Subparts that are relevant to this Notice: MACT UUU and MACT CC.

a. MACT UUU

MACT UUU, 40 C.F.R. §§ 63.1560-79, sets standards for new and existing FCCUs and SRUs, among other units.[85] The limits act as surrogates for the hazardous air pollutant emissions of (i) particulate metals and organic compounds from catalytic cracking units, (ii) organic and inorganic compounds from catalytic reforming units, and (iii) reduced sulfur compounds from sulfur recovery units.[86] The surrogate limits are used in the rule to allow easier monitoring requirements and less expensive measuring methods.[87] MACT UUU imposes four standards relevant to this Notice: (1) six-minute average opacity limit of 30%; (2) three-hour rolling opacity limit of 20%; (3) hourly CO limit of 500 ppmv; and (4) twelve-hour SO_2 limit of 250 ppmv—three of which are identical to NSPS Subpart J standards:

[82] 40 C.F.R. § 60.11(d); *see also* 40 C.F.R. § 60.1(a); 2018 West Plant Title V Permit, § II.56.2; 2022 East Plant Title V Permit, § II.30.2; 2009 East Plant Title V Permit, § II.36.5.

[83] This Notice uses MACT to be consistent with Suncor's reporting.

[84] *See* 40 C.F.R. § 63.1.

[85] Certain types of units are exempt from MACT UUU. *See* 40 C.F.R. § 1561(f); *See* 40 C.F.R. § 1562(a)-(b).

[86] National Emissions Standards for Hazardous Air Pollutants for Petroleum Refineries, 67 Fed. Reg. 17,764 (Apr. 11, 2002).

[87] *Id*.

i. Six-minute average opacity limit of 30%

MACT UUU imposes the same six-minute average opacity limit of 30% on FCCUs as NSPS Subpart J.[88] EPA established the opacity emissions limit as a surrogate for metal hazardous air pollutants.[89]

The limit applies to both the West Plant FCCU[90] and the East Plant FCCU.[91]

ii. Three-Hour Rolling Opacity Limit of 20%

MACT UUU imposes a three-hour rolling opacity limit of 20% on FCCUs: "On and after August 1, 2017, maintain the three-hour rolling average opacity of emissions from your catalyst regenerator vent no higher than 20 percent."[92] EPA established the opacity emissions limit as a surrogate for metal hazardous air pollutants.[93]

The limit applies to both the West Plant FCCU[94] and the East Plant FCCU.[95]

iii. Hourly CO Limit of 500 ppmv

MACT UUU imposes the same 500 ppmv CO limit on FCCUs as NSPS Subpart J.[96] EPA established the CO limit as a surrogate for organic hazardous air pollutants.[97]

---

[88] *See* 40 C.F.R. § 1564(a)(1) (adopting NSPS Subpart J limit in 40 C.F.R. § 60.102). However, MACT UUU regulations allow Suncor to follow an alternative compliance mechanism during periods of startup, shutdown, or hot standby: "maintain the inlet velocity to the primary internal cyclones of the catalytic cracking unit catalyst regenerator at or above 20 feet per second." 40 C.F.R. § 1564(a)(5)(ii).

[89] National Emissions Standards for Hazardous Air Pollutants for Petroleum Refineries, 67 Fed. Reg. 17,764 (Apr. 11, 2002).

[90] *See* 2018 West Plant Title V Permit, §§ II.22.7.3, 54.1.2.

[91] *See* 2022 East Plant Title V Permit, §§ II.2.16; 41.5.2.1; 2009 East Plant Title V Permit, § 2.7 (requiring compliance with MACT UUU).

[92] 40 C.F.R. § 63.1564(a)(2); 40 C.F.R. Table 2, item 1.

[93] National Emissions Standards for Hazardous Air Pollutants for Petroleum Refineries, 67 Fed. Reg. 17,764 (Apr. 11, 2002).

[94] *See* 2018 West Plant Title V Permit, § 22.12 (requiring compliance with MACT UUU); Technical Review Document for Renewal/Modifications to Operating Permit 095OPAD120, Suncor Energy (USA), Inc. West Plant, published May 9, 2022 ("Draft West Plant Permit TRD (2022)"), at 25 (noting that 2018 permit's Condition 54.3 was incorrect for saying that operating limits of 40 C.F.R. § 1564(a)(2) were inapplicable).

[95] *See* 2022 East Plant Title V Permit, §§ 2.16; 41.5.2.1; 2009 East Plant Title V Permit, § II.2.7 (requiring compliance with MACT UUU).

[96] 40 C.F.R. § 63.1565(a)(1) (adopting NSPS Subpart J limit in 40 C.F.R. 60.103).

[97] National Emissions Standards for Hazardous Air Pollutants for Petroleum Refineries, 67 Fed. Reg. 17,764 (Apr. 11, 2002). However, during periods of startup, shutdown and hot standby (see 40 C.F.R. § 63.1579), MACT UUU regulations state that Suncor can choose to comply with an alternative standard: "maintain the O2 concentration in the exhaust gas of the FCCU catalyst regenerator at or above 1%." *See* 40 C.F.R. § 63.1565(a)(5)(ii).

The limit applies to the West Plant FCCU[98] and East Plant FCCU.[99]

iv. Twelve-hour SO_2 Limit of 250 ppmv

MACT UUU imposes the same twelve-hour rolling SO_2 concentration limit of 250 ppmv on SRUs imposed by NSPS Subpart J.[100] EPA established the SO_2 limit to represent the total reduced sulfur hazardous air pollutant emissions from SRUs.[101]

This standard applies to the West Plant's SRU tail gas incinerator, SRU (H-25).[102] The East Plant SRU is not subject to this standard.[103]

v. General Duty to Minimize Emissions

Like the general duty under the NSPS standards, MACT UUU includes a general duty to minimize emissions:

> At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.[104]

This general standard applies to any unit subject to MACT UUU.

b. MACT CC

MACT CC, 40 C.F.R. §§ 63.640-71, sets emissions standards to limit hazardous air pollutants emissions from various units at major-source petroleum refineries that are not otherwise

---

[98] *See* 2018 West Plant Title V Permit, §§ II.22.12, 54.7.

[99] *See* 2022 East Plant Title V Permit, §§ II.2.16; 41.8.1.1; *see also* 2009 East Plant Title V Permit, § II.2.7 (requiring compliance with MACT UUU).

[100] 40 C.F.R. § 63.1568(a)(1) (adopting SO_2 limit in 40 C.F.R. § 104). However, under MACT UUU, during startup or shutdown, Suncor can elect to comply with an alternative practice by sending purge gases to "an incinerator operated at a minimum hourly average temperature of 1,200°F in the firebox and a minimum hourly average outlet O2 concentration of 2% by volume." 40 C.F.R. § 63.1568(a)(4)(iii).

[101] National Emissions Standards for Hazardous Air Pollutants for Petroleum Refineries, 67 Fed. Reg. 17,764 (Apr. 11, 2002).

[102] *See* 2018 West Plant Title V Permit, §§ II.20.1, 54.28.

[103] *See* 2022 East Plant Title V Permit, § II.41.17.1.

[104] 40 C.F.R. § 63.1570(c); 2018 West Plant Title V Permit, § II.54.35; 2022 East Plant Title V Permit, § II.41.22.

addressed by MACT UUU.[105] As relevant to this Notice, MACT CC sets standards for flares that are used as emission control devices.[106] Specifically, it establishes two operational limits that the Suncor Refinery's flares have violated: (1) flare minimum combustion zone net heating value; and (2) flare smoke visibility limits.

i. Flare Minimum Combustion Zone Net Heating Value

To ensure that the flare is burning hot enough to breakdown pollutants, MACT CC establishes a minimum heating value for a flare's combustion zone, averaged over fifteen minutes:

> For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas (NHV_{cz}) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes."[107] Compliance with this operating limit—and the other Subpart CC operating requirements that apply to flares, including the visible emissions requirement discussed below—is critical to ensuring that flares are adequately destroying [hazardous air pollutants].[108]

This limit applies to the Plant 1 Flare,[109] Plant 2 Flare,[110] Plant 3 Flare,[111] and GBR Unit Flare.[112]

ii. Flare Smoke Visibility Limits

MACT CC provides that flare emissions can only be visible for 5 minutes in any consecutive 2-hour period:

> The owner or operator shall specify the smokeless design capacity of each flare and operate with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the

[105] *See* 40 C.F.R. § 63.640(a), (c).

[106] *See* 40 C.F.R. § 63.670.

[107] 40 C.F.R. § 63.670(e).

[108] For example, in its 2015 final rule stablishing the combustion zone operating limit for refinery flares, EPA explained: "EPA is finalizing a single minimum [combustion zone net heating value] operating limit for flares subject to the Petroleum Refinery MACT standards of 270 BTU/scf during any 15-minute period. The agency believes, given the results from the various data analyses conducted, that this operating limit . . . will ensure that refinery flares meet 98-percent destruction efficiency at all times when operated in concert with the other suite of requirements refinery flares need to achieve (*e.g.,* flare tip velocity requirements, visible emissions requirements, and continuously lit pilot flame requirements)." 80 Fed. Reg. 75,178, 75,211 (Dec. 1, 2015).

[109] 2018 West Plant Title V Permit, §§ II.29.1, 53.91.

[110] 2022 East Plant Title V Permit, §§ II.8.11, 40.94; East Plant Permit TRD 2022, § III.1.29 (July 20, 2017 modification).

[111] 2018 West Plant Title V Permit, §§ II.30.11, 53.91.

[112] 2018 West Plant Title V Permit, §§ II.31.1, 53.91.

flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare.[113]

This limit applies to the Plant 1 Flare,[114] Plant 2 Flare,[115] Plant 3 Flare,[116] and GBR Unit Flare.[117]

iii. General Duty to Minimize Emissions

Like MACT UUU, MACT CC imposes a substantively identical general duty to minimize emissions.[118]

This general standard applies to any unit subject to MACT CC, including all units listed in the preceding subsections.

B. Federal Consent Decree Requirements

In addition to regulatory requirements, the Suncor Refinery is also subject to additional emissions standards and limitations imposed in two consent decrees entered into between EPA and previous owners of the West Plant and East Plant.

1. West Plant Consent Decree

On April 30, 2002, EPA entered into a consent decree with Conoco Inc., the prior owner of the West Plant—No. H-01-4430 ("West Plant Consent Decree"). The West Plant Consent Decree has been amended twice, most recently on July 12, 2006. The West Plant Consent Decree imposes various requirements on the West Plant, with three requirements particularly relevant to this Notice.

First, the West Plant Consent Decree imposes the same 500 ppmv CO limit on the West Plant FCCU as NSPS Subpart J.[119]

Second, the West Plant Consent Decree also imposes a twenty-four-hour rolling CO average concentration of 0.06 pounds per one million British thermal units of fuel burned ("MMBtu") on boilers Boiler B-6 and Boiler B-8.[120]

---

[113] 40 C.F.R. § 63.670(c).

[114] 2018 West Plant Title V Permit, §§ II.29.1, 53.89.

[115] 2022 East Plant Title V Permit, §§ II.8.11, 40.91; East Plant Permit TRD 2022, § III.1.29 (July 20, 2017 modification).

[116] 2018 West Plant Title V Permit, §§ II.30.11, 53.89.

[117] 2018 West Plant Title V Permit, §§ II.31.1, 53.89.

[118] 40 C.F.R. § 63.642(n); 2018 West Plant Title V Permit, § II.53.12; 2022 East Plant Title V Permit, § II.40.12.

[119] 2018 West Plant Title V Permit, § II.22.10.1; West Plant Consent Decree, ¶ 49.

[120] 2018 West Plant Title V Permit, § II.13.8; West Plant Consent Decree, ¶ 73(a).

Third, the West Plant Consent Decree imposes a three-hour rolling NOx average concentration of 0.04 lb/MMBTu on Heater H-2101.[121]

2. East Plant Consent Decree

On November 23, 2005, EPA entered into a consent decree with Valero Refining Company, the prior owner of the East Plant—No. SA-05-CA-0569 ("East Plant Consent Decree"). The East Plant Consent Decree imposes various requirements on the East Plant, with one requirement particularly relevant to this Notice. Specifically, the East Plant Consent Decree imposes the same 500 ppmv CO limit on the East Plant FCCU as NSPS Subpart J.[122]

C. Colorado State Implementation Plan Emission Limitations

Colorado is required to establish emission limitations in its state implementation plan ("SIP").[123] These requirements are enumerated in regulations adopted by the Colorado Air Quality Control Commission ("AQCC") and then approved by EPA in the SIP.

1. Colorado Regulation No. 1 (Emission Control of PM, Smoke, CO, and SO_2)

Colorado Regulation No. 1, 5 C.C.R. § 1001-3 ("CO Reg. 1" or "Reg. 1"), imposes various limitations on the opacity of emissions from pollution sources to reduce emissions of PM, smoke, CO, and SO_2.[124] Three of the opacity limits in Reg. 1 are relevant to this Notice: (1) six-minute average opacity limit of 20%; (2) six-minute average opacity limit of 30% during certain activities; and (3) six-minute average opacity limit of 30% for flares.

a. Six-Minute Average Opacity Limit of 20%

Colorado Reg. 1 imposes a six-minute average opacity limit of 20% on all sources:

> [N]o owner or operator of a source should allow or cause the emission into the atmosphere of any air pollutant that is in excess of 20% opacity. This standard is based on 24 consecutive opacity readings taken at 15-second intervals for six minutes.[125]

[121] West Plant Consent Decree, ¶ 220(a); 2022 Draft West Plant Permit TRD, at 159 (explaining requirement applies to Heater H-2101); March 11, 2022 email from Jackie Joyce, Colo. Dep't of Pub. Health & Env't (describing requirement and fact that Heater H-2101 cannot meet that requirement); April 5, 2022 Letter from Donald Austin, Suncor (with compliance schedule for Heater H-2101).

[122] 2022 East Plant Title V Permit, § II.2.12; East Plant Consent Decree, ¶ 94.

[123] 42 U.S.C. § 7410(a)(2).

[124] *See* Reg. 1, 5 C.C.R. § 1001-3:I.A.

[125] Reg. 1, 5 C.C.R. § 1001-3:II.A.1.

This standard applies, in pertinent part, to the West Plant FCCU[126] and East Plant FCCU.[127]

b. Six-Minute Average Opacity Limit of 30% During Certain Activities

Colorado Reg. 1 also imposes a limit of 30% opacity for any period over six minutes in every hour during certain activities:

> [N]o owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, any process modification, or adjustment or occasional cleaning of control equipment, which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes.[128]

This standard applies, in pertinent part, to the West Plant FCCU[129] and East Plant FCCU.[130]

c. Six-Minute Average Opacity Limit of 30% for Flares

Colorado Reg. 1 imposes a six-minute average opacity limit of 30% on flares:

> No owner or operator of a smokeless flare or other flare for the combustion of waste gases shall allow or cause emissions into the atmosphere of any air pollutant which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes.[131]

This standard applies, in pertinent part, to the Plant 1 Flare,[132] Plant 2 Flare,[133] Plant 3 Flare,[134] and GBR Unit Flare.[135] Compliance with the opacity limits is measured by compliance with the MACT CC visible emissions limitation in 40 C.F.R. § 63.670(c).[136]

---

[126] 2018 West Plant Title V Permit, §§ II.22.7.1; 35.1.

[127] 2022 East Plant Title V Permit, §§ II. 2.8, 20.1; 2009 East Plant Title V Permit, §§ II.2.8, 19.1.

[128] Reg. 1, 5 C.C.R. § 1001-3:II.A.4.

[129] 2018 West Plant Title V Permit, §§ II.22.7.1; 35.2.

[130] 2022 East Plant Title V Permit, §§ II.2.8, 20.2; 2009 East Plant Title V Permit, §§ II.2.8, 19.2.

[131] Reg. 1, 5 C.C.R. § 1001-3:II.A.5.

[132] 2018 West Plant Title V Permit, §§ II.29.6, 35.3.

[133] 2022 East Plant Title V Permit, § II.8.7; 2009 East Plant Title V Permit, §§ II.8.9, 19.3.

[134] 2018 West Plant Title V Permit, §§ II.30.5, 35.3.

[135] 2018 West Plant Title V Permit, §§ II.31.5, 35.3.

[136] *See* 2022 East Plant Title V Permit, §§ II.8.7, 40.92; 2018 West Plant Title V Permit, §§ II.29.6, 30.5, 31.5, 57, 53.8; *see also* 2022 Draft West Plant Title V Permit, §§ II.29.6, 30.5, 31.5.

2. Reasonably Available Control Technology Requirements

Colorado Regulation Nos. 3[137] and 7[138] impose "reasonably available control technology" ("RACT") requirements on categories of emission units. The controls that qualify as RACT for a particular unit may be set forth either (1) in the regulation itself or (2) in the construction or operating permit imposing the RACT requirement. In Suncor's permits, many RACT provisions refer to other standards, meaning that any violation of the reference standard would be a violation of the RACT requirement. For the purposes of this Notice, Suncor is subject to four RACT standards that rely on reference standards.

First, the West Plant permits establish the 162 ppmv H_2S limit from NSPS Subpart J and/or Ja as the reference standard for the PM_{10} RACT standard for the following units: Heater H-1716, Heater H-1717, Heater H-2101, and SRU (H-25).[139]

Second, the East Plant FCCU is subject to RACT for CO,[140] and Suncor's permits establish the 500 CO ppmv limit from the East Plant Consent Decree as the reference standard for the RACT requirement.[141]

Third, the West Plant SRU (H-25) is subject to RACT for SO_2 as a PM_{10} precursor, [142] and Suncor's permits have established the 15.68 lbs/hour SO_2 limit from the 2018 West Plant Title V Permit as the reference standard for the RACT requirement. [143]

Fourth, the West Plant permits establish the MACT CC flare control requirements—including net heating zone requirements—as the reference RACT standard for PM_{10}, NOx, and CO at the GBR Unit Flare.[144]

D. Construction and Operating Permit Conditions

Certain emissions standards and limitations are set by federally-enforceable construction permits[145] or Title V operating permits.[146] For example, most annual emissions limits governing Suncor's operations were requested by Suncor itself in its SIP-required Air Pollutant Emission Notifications ("APENs"); they were then incorporated into construction permits or into the Title V operating permits.

---

[137] Colorado Regulation No. 3 ("Reg. 3"), 5 C.C.R. § 1001-5:B.III.D.2.b.

[138] Colorado Regulation No. 7 ("Reg. 7"), 5 C.C.R. § 1001-9:A.II.C.

[139] *See* 2018 West Plant Title V Permit, §§ II.21.7, 21.3, 27.8.1, 27.3, 20.6.2, 20.11.2.1.

[140] *See* 2022 East Plant Title V Permit, §§ II.2.12, 2.15.4; Construction Permit 09AD0961, Conds. 16, 19.

[141] *See* 2022 East Plant Title V Permit, §§ II.2.12, 2.15.4; Construction Permit 09AD0961, Conds. 16, 19.

[142] *See* 2018 West Plant Title V Permit, §§ II.20.1, 20.11.1.

[143] *See id*.

[144] *See* 2018 West Plant Title V Permit, §§ II.31.4.2, 31.8, 31.10, 53.91, 57.1.

[145] CO Reg. 3, 5 C.C.R. § 1001-5:B.II.A.1.

[146] *Id*.

Two standalone permit conditions are relevant to this Notice.

1. Three-Hour Rolling H_2S Limit of 162 ppmv on Boilers B504 and B505

Construction Permit 09AD1422 imposes the same 162 ppmv H_2S limit as NSPS Subpart J on Boilers B504 and B505.[147]

2. An Hourly Average SO_2 Limit of 15.68 Pounds for the West Plant's SRU (H-25)

The West Plant Title V Permit imposes an hourly SO_2 emission limit of 15.68 lbs on the West Plant SRU's tail gas incinerator (H-25).[148]

III. Violations of Emissions Standards and Limitations

As described in the following subsections, Suncor is violating, or has repeatedly violated, the above emissions standards or limitations during the five-year statute of limitations period applicable to an action under 42 U.S.C. § 7604(a)(1).[149]

The violations alleged below are based upon information from the following sources: (1) Suncor's quarterly excess emissions reports; (2) Suncor's semi-annual deviation reports; (3) Suncor's prompt deviation reports; (4) Suncor's community compliance reports; and (5) the following compliance advisories issued by the CDPHE to Suncor: (i) Compliance Advisory 2021-082, (ii) Compliance Advisory 2022-076, and (iii) Compliance Advisory 2023-082.

The violations alleged below are organized by pollutant and, where applicable, by the governing numeric emission limit. In several circumstances, the same numeric emission limit is imposed by multiple emissions standards or limitations. For example, a six-minute 30% opacity limit applies to both FCCUs from a NSPS standard, a MACT standard, and a SIP emissions limit. Therefore, a reported exceedance of one standard can indicate a violation of multiple standards.

A. Hydrogen Sulfide Violations

Forty units at the Suncor Refinery are subject to limits on the H_2S concentration of the fuel gas they burn. H_2S is a flammable gas that smells like rotten eggs.[150] H_2S occurs naturally in crude petroleum[151] and is also created as part of the petroleum refining process.[152] When combusted,

---

[147] Colo. Dep't of Pub. Health & Env't, Construction Permit, *Suncor Energy (U.S.A.) Inc.*, 09AD1422 (May 14, 2010) Cond. 10; *see also* 2022 East Plant Title V Permit, § III.3.

[148] *See* 2018 West Plant Title V Permit, § II.20.1.

[149] *Sierra Club v. Okla. Gas & Elec. Co.*, 816 F.3d 666, 671 (10th Cir. 2016) (applying default five-year limitations period under 42 U.S.C. § 2462).

[150] Agency for Toxic Substances and Disease Registry ("ASTDR"), Hydrogen Sulfide – ToxFAQs 1 (Dec. 2016) available at https://www.epa.gov/sites/default/files/2017-12/documents/appendix_e-atsdr_h2s_factsheet.pdf.

[151] *Id.*

[152] Leffler, *supra* note 15, at 158.

H_2S converts to sulfur dioxide ("SO_2").[153] Exposure to H_2S is dangerous—high levels of H_2S can cause death, while even low concentrations can cause eye and throat irritation, headaches, and tiredness.[154]

As detailed in the following sections, Suncor has exceeded the 162 ppmv H_2S limit at multiple units, which results in violations of (1) NSPS Subpart J, (2) NSPS Subpart Ja, (3) construction permit requirements, and (4) RACT requirements for PM_{10}.

1. Three-Hour Rolling H_2S Limit of 162 ppmv

As described in detail in Sections II.A.1.a.i, II.A.1.b.i, and II.D.1, above, boilers, heaters, flares, and other fuel gas combustion devices at Suncor are subject to a three-hour rolling H_2S limit of 162 ppmv on the fuel gas burned by the units. This limit comes from the following three sources:

- NSPS Subpart J, 40 C.F.R. § 60.104(a)(1)
- NSPS Subpart Ja, 40 C.F.R. § 60.102a(g)(1)(ii)
- Construction Permit 09AD1422, Condition 10[155]

In summary, the three limits apply to the emission units as follows:

Plant	Emission Unit	NSPS Subpart J	NSPS Subpart Ja	Construction Permit 09AD1422
1	Boiler B-4	X		
1	Boiler B-6	X		
1	Boiler B-8	X		
1	Heater H-6	X		
1	Heater H-10	X		
1	Heater H-11	X		
1	Heater H-13	X		
1	Heater H-16	X		
1	Heater H-17	X		
1	Heater H-18	X		
1	Heater H-19	X		
1	Heater H-20	X		
1	Heater H-21	X		
1	Heater H-22	X		
1	Heater H-27	X		

[153] *Id*. at 163.

[154] Agency for Toxic Substances and Disease Registry, Hydrogen Sulfide – ToxFAQs 1 (Dec. 2016) available at https://www.epa.gov/sites/default/files/2017-12/documents/appendix_e-atsdr_h2s_factsheet.pdf.

[155] *See also* 2022 East Plant Title V Permit, § III.3.

Plant	Emission Unit	NSPS Subpart J	NSPS Subpart Ja	Construction Permit 09AD1422
1	Heater H-28	X		
1	Heater H-29	X		
1	Heater H-30	X		
1	Heater H-31	X		
1	Heater H-32	X		
1	Heater H-33	X		
1	Heater H-37	X		
1	Heater H-1716		X	
1	Heater H-1717		X	
1	Heater H-2101	X		
1	SRU (H-25)	X		
1	Plant 1 Flare	X	X	
2	Reformer Heater B003	X		
2	Reformer Heater B004	X		
2	Reformer Heater B005	X		
2	Boiler B504		X	X
2	Boiler B505		X	X
2	Crude Heater B001	X		
2	East Plant FCCU	X		
2	SRU (B011)	X		
2	Plant 2 Flare	X	X	
2	Vacuum Heater B010	X		
3	Heater H-2410		X	
3	GBR Unit Flare		X	
3	Plant 3 Flare	X	X	

Suncor monitors its compliance with these H_2S limits in two ways. *First*, each flare has an individual monitor to measure H_2S concentration, and Suncor reports exceedances of those limits on its quarterly excess emission reports. *Second*, for the remaining units, Suncor monitors the H_2S concentration of its fuel gas with two fuel gas monitors—one for the East Plant fuel gas system ("Plant 2 Fuel Gas Monitor") and one for the West Plant fuel gas system ("Plant 1 Fuel Gas Monitor"). At each plant, all fuel gas burning units draw fuel gas from a common system, so Suncor is permitted to monitor the H_2S concentration of each plant's fuel gas system instead of monitoring each individual unit.[156] Suncor reports exceedances of the H_2S limit for each monitor

[156] *See* 40 C.F.R. § 60.105(a)(4)(ii).

on its quarterly excess emissions reports. An exceedance of the H_2S limit at a fuel-gas monitor indicates an exceedance at each of the fuel gas burning units drawing from that system.[157]

Suncor's violations of each of the three emission standards or limitations are detailed in Tables 1-A, 1-B, and 1-C, attached hereto, which combine to be 1,209 days of violations.

2. Three-Hour Rolling H_2S Limit of 162 ppmv as RACT for PM_{10}

As described in Section II.A.1.b.i above, the Division has set the 162 ppmv H_2S limit discussed in the preceding section as RACT for emissions of PM_{10} at the following four West Plant units:

Plant	Emission Unit
1	Heater H-25
1	Heater H-2101
1	Heater H-1716
1	Heater H-1717

Because compliance with the RACT requirement is based on compliance with the 162 ppmv H_2S limit, any exceedance of the limit at the Plant 1 Fuel Gas Monitor is also a violation of the RACT requirement at these four units. Suncor's violations of the standard are detailed in Table 1-D, attached hereto, which combine to be 92 days of violations.

B. Opacity Limit Violations

As relevant to this Notice, three units at the Suncor Refinery are subject to limits on the opacity of their emissions: (1) the West Plant FCCU, (2) the East Plant FCCU, and (3) the West Plant SRU (H-25). Under federal regulations, opacity measurements are used as a surrogate to limit emissions of particulate matter and some metallic hazardous air pollutant emissions.[158] In addition to hazardous air pollutants and particulate matter, the Colorado state regulations use opacity measurements as a surrogate to limit emissions of smoke, CO, and SO_2.[159]

Particulate matter pollution consists of particles with various physical and chemical compositions categorized by the size of the particles. Two categories are relevant to this Notice: (1) particles that are smaller than or equal to 10 micrometers in diameter ("PM_{10}"), and (2) particles smaller than or equal to 2.5 micrometers in diameter ("$PM_{2.5}$").[160] Inhaling particulate

[157] We understand that an exceedance at a fuel gas monitor does not trigger an exceedance at a flare because pilot gas for flares is exempt from the requirement by being considered inherently low in sulfur. *See* 40 C.F.R. § 60.105(a)(4)(iv)(A).

[158] *See, e.g.* 40 C.F.R. § 60.102(a)(2) (using opacity as a standard for PM); 40 C.F.R. § 63.1564(a)(2) (using opacity as emissions limitation for metal hazardous air pollutant emissions).

[159] *See* Reg. 1, 5 C.C.R. §§ 1001-3:I.A, 1001-3:X.

[160] ASTDR, Guidance for Inhalation Exposures to Particulate Matter 2-3 (Apr. 2022), *available at* https://www.atsdr.cdc.gov/pha-guidance/resources/ATSDR-Particulate-Matter-Guidance-508.pdf.

matter can cause significant health problems including death, heart disease, respiratory problems, diabetes, and impaired brain development in children.[161]

Metallic hazardous air pollutants, including "antimony, cadmium, chromium, nickel, beryllium, and manganese," are emitted by FCCUs and SRUs.[162] Several of these compounds are known or probable human carcinogens, and they have been shown to cause, among other things, respiratory damage, nervous disorders, developmental disorders, and kidney damage.[163]

As detailed in the following sections, federal and state standards impose three different numeric opacity limits that Suncor has violated.

1. Six-Minute Average Opacity Limit of 30%

As described in Sections II.A.1.a.ii, II.A.2.a.i, II.C.1.b, the two FCCUs at Suncor are subject to a six-minute average opacity limit of 30%. The limit comes from the following three sources:

- NSPS Subpart J, 40 C.F.R. 60.102(a)(2)
- MACT UUU, 40 C.F.R. 63.1564(a)(1)
- Colorado Regulation No. 1, 5 C.C.R. § 1001-3:II.A.5.

Suncor monitors its compliance with the 30% opacity limit with a continuous opacity monitor ("COMS") attached to the FCCUs.[164] Suncor reports exceedances of the 30% opacity limit on its quarterly excess emissions reports. However, Suncor does not report exceedances of all applicable standards.

For the West Plant FCCU, Suncor reports exceedances under MACT UUU and CO Reg. 1. Suncor does not report exceedances under NSPS Subpart J.

For the East Plant FCCU, Suncor reports exceedances under MACT UUU. Suncor does not report exceedances under NSPS Subpart J.[165] Suncor also does not report exceedances under CO Reg. 1.

---

[161] *Id.* at 3.

[162] National Emission Standards for Hazardous Air Pollutants for Source Categories; National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries—Catalytic Cracking (Fluid and Other) Units, Catalytic Reforming Units, and Sulfur Plant Units, 63 Fed. Reg. 48890-01, 48892 (Sept. 11, 1998).

[163] *Id*.

[164] *See* 2018 West Plant Title V Permit, § II.22.9.3; 2022 East Plant Title V Permit, § II.2.17.

[165] Suncor reported Subpart J exceedances for the East Plant FCCU only twice. First, in the second quarter 2023 excess emissions report, Suncor reported Subpart J exceedances jointly with MACT UUU. Second, in the fourth quarter of 2023, Suncor reported Subpart J exceedances separately from MACT UUU exceedances. It is unclear why Suncor's reporting was different in these quarters.

Suncor's violations of each of the three emissions standards or limitations are detailed in Tables 2-A, 2-B, and 2-C, attached hereto, which combine to be 108 days of violations. Except for two quarters where Suncor reported exceedances of NSPS Subpart J, all violations of NSPS Subpart J are based on reported exceedances under MACT UUU.

2. Six-Minute Average Opacity Limit of 20%

As described in Section II.C.1.a, Colorado Reg. 1, imposes a six-minute average opacity limit of 20% on the following units:

Plant	Emission Unit
1	West Plant FCCU
2	East Plant FCCU

Suncor monitors compliance with this emissions standard or limitation with the COMS described in the previous section and reports exceedances of the standard on its quarterly excess emissions reports. Suncor's violations of this emissions standard or limitation are detailed in Table 3, attached hereto, which combine to 99 days of violations.

3. Three-Hour Rolling Opacity Limit of 20%

As described in Section II.A.2.a.ii, above, MACT UUU imposes a three-hour rolling opacity limit of 20% on the following units:

Plant	Emission Unit
1	West Plant FCCU
2	East Plant FCCU

Suncor monitors compliance with this emissions standard or limitation with the COMS and reports exceedances of the standard on its quarterly excess emissions reports. Suncor's violations of this emissions standard or limitation are detailed in Table 4, attached hereto, which combines to 20 days of violations.

C. Carbon Monoxide Limit Violations

As relevant to this Notice, four units at Suncor are subject to CO limits: the East Plant FCCU, the West Plant FCCU, Boiler B-6, and Boiler B-8.

CO is a colorless and odorless gas formed from incomplete combustion of hydrocarbons. CO is one of the six pollutants subject to a National Ambient Air Quality Standard ("NAAQS"). At low concentrations, it can cause fatigue and chest pain.[166] At higher concentrations, it can cause impaired vision, headaches, dizziness, confusion, and nausea.[167]

[166] EPA, What is Carbon Monoxide, https://www.epa.gov/indoor-air-quality-iaq/what-carbon-monoxide.

[167] *Id*.

As noted in Section II.A.2.a.iii, CO is also used a surrogate for organic hazardous air pollutant emissions from FCCUs. FCCUs emit, among other organic hazardous air pollutants: benzene, formaldehyde, and phenol.[168] Short-term exposure to these compounds can cause (1) eye, nose, and throat irritation, (2) respiratory problems, and (3) reproductive and developmental disorders.[169] Benezene is a known human carcinogen, while formaldehyde is a probable carcinogen.[170]

As detailed in the following sections, Suncor violated various federal and state standards that impose three different numeric CO emission limits.

1. Hourly CO Limit of 500 ppmv

As described in Section II.A.1.a.iii, II.A.1.b.ii, II.A.2.a.iii, II.B.1, and II.B.2, the FCCUs at Suncor are subject to an hourly CO limit of 500 ppmv. This limit comes from the following six sources:

- NSPS Subpart J, 40 C.F.R § 60.102(a)(2)
- NSPS Subpart Ja, 40 C.F.R. § 60.102a(b)(4)
- MACT UUU, 40 C.F.R. § 63.1565(a)(1)
- West Plant Consent Decree, ¶ 49
- East Plant Consent Decree, ¶ 94
- CO RACT requirements

In summary, the six emissions standard or limitations apply to the FCCUs as follows:

Emission Unit	NSPS Subpart J	NSPS Subpart Ja	MACT UUU	West Plant CD	East Plant CD	CO RACT
West Plant FCCU	X		X	X		
East Plant FCCU	X	X	X		X	X

[168] National Emission Standards for Hazardous Air Pollutants for Source Categories; National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries—Catalytic Cracking (Fluid and Other) Units, Catalytic Reforming Units, and Sulfur Plant Units, 63 Fed. Reg. 48890-01, 48892 (Sept. 11, 1998).

[169] *Id*.

[170] *Id*.

Suncor monitors compliance with the limit using a continuous monitoring system.[171] Suncor reports exceedances of the limit on its quarterly excess emissions reports, but it does not report exceedances of all the relevant standards.

For the West Plant, Suncor reports exceedances of the limit under the West Plant CD and under MACT UUU separately. Despite identical numeric limits, Suncor reports fewer MACT UUU exceedances than West Plant CD exceedances. Suncor does not report exceedances of the limit under NSPS Subpart J.

For the East Plant, Suncor jointly reports exceedances of the limit under the East Plant CD and NSPS Subpart Ja. Suncor also reports exceedances of the limit under MACT UUU separately. Despite identical numerical limits, Suncor reports fewer MACT UUU exceedances than East Plant CD and NSPS Subpart Ja exceedances. Suncor does not report exceedances of the limit under NSPS Subpart J or the CO RACT requirement.

Suncor's violations of each of these standards are detailed in Tables 5-A, 5-B, 5-C, 5-D, 5-E, and 5-F, attached hereto, which combine to be 401 days of violation. Because Suncor does not report exceedances under Subpart J, all violations alleged for Subpart J are taken from reported exceedances of the West Plant CD or East Plant CD. Similarly, all violations alleged under the CO RACT standard are taken from exceedances reported under the East Plant CD. Also, this Notice alleges violations of MACT UUU based on both (i) Suncor's reported MACT UUU exceedances, and (ii) any reported exceedances of the applicable Consent Decrees where Suncor did not report corresponding exceedances of MACT UUU.

2. Twenty-Four-Hour Rolling Average CO Limit of 0.06 lbs/MMBTu

As described in Section II.B.1, the West Plant Consent Decree imposes a twenty-four-hour rolling average CO limit of 0.06 lbs/MMBTu on Boiler B-6 and Boiler B-8.

Suncor reports exceedances of this limit on its quarterly excess emissions reports. Suncor's violations of this standard are detailed in Table 6, attached hereto, which combine to be 41 days of violation.

D. Sulfur Dioxide Limit Violations

The West Plant SRU (H-25) is subject to three relevant SO_2 emissions standards or limitations. SO_2 is one of the six pollutants subject to a NAAQS. SO_2 is a gas that, at low concentrations, can cause breathing problems in sensitive populations,[172] and it can cause death at high concentrations.[173] SO_2 can also contribute to the formation of particulate matter pollution.[174]

---

[171] *See, e.g.,* 2022 East Plant Title V Permit, § II.2.1.5; 2018 West Plant Title V Permit, § II.22.1.

[172] EPA, Sulfur Dioxide Basics, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#what%20is%20so2.

[173] EPA, Sulfur Dioxide Basics, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#what%20is%20so2; Agency for Toxic Substances and Disease Registry, Sulfur Dioxide – ToxFAQs 1 (June 1999) *available at* https://www.atsdr.cdc.gov/toxfaqs/tfacts116.pdf.

[174] EPA, Sulfur Dioxide Basics, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#what%20is%20so2.

As noted in Section II.A.2.a.iv, SO_2 is also used as a proxy indicator for reduced sulfur compounds, including carbonyl sulfide and carbon disulfide.[175] Carbonyl sulfide can cause central nervous system effects and skin and eye irritation.[176]

As detailed in the following sections, EPA-established standards and Title V permit conditions impose two numeric SO_2 limits on the West Plant SRU (H-25) that Suncor has violated: (i) a twelve-hour SO_2 concentration limit of 250 ppmv, and (ii) an hourly SO_2 emission limit of 15.68 pounds. The 15.68-pound limit is also RACT for PM_{10} emissions from the West Plant SRU (H-25).

1. Twelve-Hour Rolling SO_2 Limit of 250 ppmv on West Plant SRU (H-25)

As described in Sections II.A.1.a.iv and II.A.2.a.iv., above, the West Plant SRU (H-25) is subject to a twelve-hour rolling total SO_2 limit of 250 ppmv from the following two standards:

- NSPS Subpart J, 40 C.F.R. 60.104(a)(2)
- MACT UUU, 40 C.F.R. 63.1568(a)(1)

Suncor monitors its compliance with the 250 ppmv SO_2 limit using a continuous emission monitoring system, or CEMS.[177] Suncor reports exceedances of both limits individually on its quarterly excess emissions reports. However, despite identical numerical limits, Suncor reports fewer MACT UUU exceedances than NSPS Subpart J exceedances.

Suncor's violations of these standards are detailed in Tables 7-A and 7-B, attached hereto, which combine to be 244 days of violation. Also, this Notice alleges violations of MACT UUU based on both (i) Suncor's reported MACT UUU exceedances, and (ii) any reported exceedance of NSPS Subpart J where Suncor did not report corresponding exceedances of MACT UUU.

2. Hourly SO_2 Limit of 15.68 Pounds on West Plant SRU (H-25)

As described in Section II.D.2, above, the West Plant Title V permit imposes an hourly SO_2 emission limit of 15.68 pounds on the West Plant SRU (H-25). Suncor monitors its emissions using a continuous emissions monitoring system.[178] Suncor reports exceedances of this limit on its quarterly excess emissions reports.

Suncor's violations of this standard are detailed in Table 8-A, attached hereto, which combine to be 98 days of violation.

---

[175] *See also* National Emission Standards for Hazardous Air Pollutants for Source Categories; National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries—Catalytic Cracking (Fluid and Other) Units, Catalytic Reforming Units, and Sulfur Plant Units, 63 Fed. Reg. 48890-01, 48892, 48895 (Sept. 11, 1998).

[176] *See also id*.

[177] *See* 2018 West Plant Title V Permit, § II.20.1.

[178] *See id*.

3. Hourly SO_2 Limit of 15.68 Pounds as RACT for PM_{10}

As explained in Section II.D.2., Suncor's West Plant Title V permit sets the 15.68 pound SO_2 limit as RACT for PM_{10} emissions from the West Plant SRU (H-25). Suncor does not report exceedances under the RACT standard.

Because the RACT requirement relies on the standard in the prior section, any exceedance of that standard is a violation of the RACT requirement. Suncor's violations of the standard are detailed in Table 8-B, attached hereto, which combine to be 98 days of violation.

E. Flare Operation Standard Violations

As described in Sections II.A.2.b and II.C.2 the flares at the Suncor Refinery are subject to certain EPA-established flare operation requirements intended to ensure that pollutants, including VOCs, sent to the flare are adequately destroyed before gases are emitted from the flares into the air. In addition, compliance with some of these standards also determines compliance with state-established flare opacity limits.

VOCs are a diverse class of chemical compounds that can become gaseous at normal indoor temperatures,[179] and includes many hazardous air pollutants.[180] Exposure to VOCs can cause (i) eye, nose, and throat irritation, (ii) headaches, loss of coordination, and nausea, (ii) liver, kidney, and central nervous system damage, (iv) certain cancers.[181] VOCs are also a precursor for the formation of ground-level ozone,[182] meaning Suncor's excess emissions of VOCs contribute to Denver/Metro Front Range's longstanding failure to attain the federal ozone NAAQS and current EPA designation as a severe nonattainment zone. Excess ozone in the air can cause or exacerbate a variety of respiratory ailments, including making it more difficult to breathe, increasing susceptibility to lung infections, increasing the frequency of asthma attacks, and aggravating asthma, emphysema, and chronic bronchitis.[183]

As detailed below, Suncor has violated four standards, resulting in excess pollution being emitted from the refinery: (1) flare minimum combustion zone heating values; (2) flare minimum combustion zone operating temperature limits as RACT for PM_{10}, NOx, and CO; (3) flare smoke visibility limits; and (4) flare smoke visibility limits as compliance with 30% opacity limits for flares.

---

[179] EPA, Technical Overview of Volatile Organic Compounds, https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds (last visited March 13, 2024).

[180] EPA, Regulatory Information by Topic: Air, https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-air#toxic (last visited March 13, 2024).

[181] EPA, Technical Overview of Volatile Organic Compounds, https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds (last visited March 13, 2024).

[182] EPA, Ground Level Ozone Basics, https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics (last visited March 13, 2024).

[183] EPA, Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution (last visited March 13, 2024).

1. Flare Minimum Combustion Zone Operating Net Heating Value

As described in Section II.A.2.b.i above, the flares at the refinery are subject to the MACT CC minimum combustion zone net heating value of 270 BTU/scf over a fifteen-minute period.

Suncor monitors compliance with the minimum combustion temperature by continuously measuring heating value and gas flow rates.[184] Suncor reports exceedances of the limit in its semi-annual deviation reports.

Suncor's violations of this emissions standard are detailed in Table 9-A, attached hereto, which combine to be 21 days of violation.

2. Flare Minimum Combustion Zone Operating Temperature as RACT for PM_{10}, NOx, and CO at the GBR Unit Flare

As described in Section II.A.2.b.i, the Division set the flare combustion zone operating temperature limit on the GBR Unit Flare as RACT for PM_{10}, NOx, and CO at that unit. Suncor does not report exceedances of the RACT standard.

Because compliance with the RACT requirement is based on compliance with the flare combustion zone operating temperature limit, any violation of that limit is also a violation of the RACT requirement for these three pollutants. Suncor's violations of the standard are detailed in Table 9-B, attached hereto, which combine to be 15 days of violation.

3. Flare Smoke Visibility Limits

As described in Section II.A.2.b.ii, above, the flares at the refinery are subject to the MACT CC limit that flare emissions may not be visible for more than five minutes in any two-hour period.

Suncor monitors compliance with the visibility limitation using a continuously recording video camera.[185] Suncor reports exceedances of the flare visibility limitation in its semi-annual deviation reports.

Suncor's violations of this standard are detailed in Table 10-A, attached hereto, which combine to be 16 days of violation.

4. Flare Smoke Visibility Limits as Compliance with 30% Opacity Limit for Flares

As described in Section II.C.1.c, above, the flares at the refinery are subject to the Colorado Regulation No. 1 30% opacity limit for flares, and compliance with the opacity limit is based on compliance with the MACT CC flare visibility limit. Therefore, any violation of the MACT CC flare visibility limit is also a violation of the Colorado Reg. 1 30% opacity limit for flares.

---

[184] *See, e.g.,* 2022 East Plant Title V Permit, §§ II.40.101, II.40.100, II.40.98.1; 2018 West Plant Title V Permit, §§ II.53.99, II.53.98, II.53.96.1.

[185] *See, e.g.,* 2022 East Plant Title V Permit, § II.40.96.2.

Suncor's violations of this standard are detailed in Table 10-B, attached hereto, which combine to be 16 days of violation.

F. Nitrogen Oxide Limit Violations

As relevant to this Notice, Heater H-2101 at the West Plant is subject to a limit on emissions of NOx. NOx are a collection of nitrogen molecules, including, among others, nitric oxide (NO) and nitrogen dioxide (NO_2). NOx emissions generally result from the combustion of fossil fuels. Short-term exposure to NOx can aggravate respiratory illnesses such as asthma while long-term exposure can cause asthma and increase susceptibility to respiratory infections.[186] NOx are also precursors for the formation of ground-level ozone,[187] so Suncor's excess emissions of VOCs contribute to Denver/Metro Front Range's longstanding failure to attain the federal ozone NAAQS. Also, nitrogen dioxide is one of the six pollutants subject to NAAQS.

1. Three-Hour NOx Limit of 0.04 lbs/MMBtu on Heater H-2101

As detailed in Section II.B.1 above, Heater H-2101 at the West Plant is subject to a three-hour rolling NOx concentration average limit of 0.04 lbs/MMBtu.

Suncor does not report violations of this standard in its quarterly excess emissions reports or its semi-annual deviation reports. Suncor's violations of this standard are identified in Compliance Advisory 2023-082.

Suncor has been and is continuing to violate this concentration limit since Heater H-2101 was installed in 2006.[188] Suncor's violations of this emissions standard are identified in Table 11, attached hereto, and combine to be 6,731 days of violation up to the date of this Notice.

G. Violations of General Duties to Minimize Emissions

Suncor has violated its duties to use good air pollution control practices to minimize emissions set forth in the New Source Performance Standards and MACT standards, as described below.

1. NSPS Duty

As described in Section II.A.1.c, Suncor is required to maintain and operate any unit subject to a NSPS standard "in a manner consistent with good air pollution control practice for minimizing emissions."

---

[186] EPA, Basic Information About NO_2, https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2 (last visited March 13, 2024).

[187] EPA, Ground Level Ozone Basics, https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics (last visited March 13, 2024).

[188] *See* 2018 West Plant Title V Permit, § I.5 (stating Heater H-2101 was installed in January 2006); Letter from Donald Austin, Suncor to Jackie Joyce, Colo. Dep't of Pub. Health & Env't (Apr. 6, 2022) (admitting that Heater H-2101 cannot meet required NOx concentration limit); Compliance Advisory 2023-082 ¶ II.1.ii (stating Heater H-2101 has failed to comply with NOx limit since installed).

Each of the violations of NSPS Subpart J or Ja described in the preceding sections is also a violation of this duty.

2. MACT UUU Duty

As described in Section II.A.2.a.v, above, Suncor is required to maintain and operate any unit subject to MACT UUU "in a manner consistent with safety and good air pollution control practices for minimizing emissions."

Each of the violations of MACT UUU described in the preceding sections is also a violation of this duty.

3. MACT CC Duty

As described in Section II.A.2.b.iii, above, Suncor is required to maintain and operate any unit subject to MACT CC "in a manner consistent with safety and good air pollution control practices for minimizing emissions."

Each of the violations of MACT CC described in the preceding sections is also a violation of this duty.

IV. The Violations Described Above Are Not Resolved by Defenses for Startup, Shutdown, and Malfunction or the Division's Enforcement Actions

A. Suncor is Not Entitled to Defenses for Startup, Shutdown, and Malfunctions of Emission Units

This Notice alleges violations for emissions exceedances or permit deviations regardless of whether Suncor has identified them as occurring during startup, shutdown, or malfunction events ("SSM") for two reasons: (1) Suncor is not entitled to SSM defenses because the defenses violate the Clean Air Act, and (2) even if Suncor could claim these defenses, the burden would be on Suncor to prove the defenses were applicable.

First, Suncor is not entitled to SSM defenses because SSM defenses violate the Clean Air Act. Suncor's reports claim that some emissions exceedances and permit deviations stem from the startup, shutdown, or malfunction of emission units. Certain EPA regulations and provisions of the Colorado SIP have purported to create defenses for violations that occur during SSM events. However, the D.C. Circuit has held that SSM defenses violate the Clean Air Act because the Act requires emissions standards and limitations to apply "continuously,"[189] and SSM defenses improperly interfere with the court's role in assessing penalties in citizen suits.[190] EPA has adopted the D.C. Circuit's interpretation that the Clean Air Act does not allow SSM exemptions and

[189] *Sierra Club v. E.P.A.*, 551 F.3d 1019, 1027-28 (D.C. Cir. 2008) (vacating SSM exemption from EPA regulation because it rendered the emissions standard non-continuous).

[190] *See Nat. Res. Def. Council v. E.P.A.*, 749 F.3d 1055, 1063-64 (D.C. Cir. 2014) (holding EPA does not have authority to create affirmative defenses to civil penalties in Clean Air Act citizen suits).

defenses. EPA removed SSM provisions from many of its regulations[191] and ordered states to remove SSM provisions from their state implementation plans.[192] Colorado has responded and removed the SSM defense from its SIP.[193] Therefore, Suncor is not entitled to any SSM defenses to liability or civil penalties.

Second, even if Suncor could be eligible for SSM defenses, the burden is on Suncor to prove to the court that the defenses apply.

Therefore, this Notice alleges violations for all relevant emissions exceedances and permit deviations, regardless of whether Suncor has identified them as related to SSM events.

B. The Division's Enforcement Actions Do Not Limit the Violations that Can Be Addressed in the Community Group's Citizen Suit

Neither the Division's Compliance Advisories nor the Compliance Order limit the violations that Community Groups can include in a citizen suit. Under the Clean Air Act, Community Groups can file suit to enforce any of Suncor's violations[194] unless the state or EPA is "diligently prosecuting a civil action in a court" to enforce the violations.[195] Because the Division's Compliance Advisories and Compliance Order are "purely administrative enforcement efforts," they cannot bar or limit the violations included in the Community Group's citizen suit.[196] Instead, the court can consider any payments made by Suncor under the Compliance Order when determining what civil penalty to impose against Suncor.[197]

The facts around Suncor's violations demonstrate at least two additional reasons why it is appropriate to allow a Clean Air Act citizen suit to enforce violations that have been included in a state administrative settlement. *First*, the civil penalties that may be imposed in a federal Clean Air Act suit are significantly higher than the Division may impose. Under the Clean Air Act, the

---

[191] *See, e.g.,* Court Vacatur of Exemption from Emissions Standards During Periods of Startup, Shutdown, and Malfunction, 86 Fed. Reg. 13819 (March 11, 2021) (removing SSM exemption from hazardous air pollutant regulation); Removal of Title V Emergency Affirmative Defense Provisions From State Operating Permit Programs and Federal Operating Permit Program, 88 Fed. Reg. 47029 (July 21, 2023) (removing SSM defense from Title V regulations).

[192] *See, e.g.*, State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction, 80 Fed. Reg. 33840 (June 12, 2015) (granting Sierra Club petition and issuing SIP call related to SSM exemptions around country, including Colorado); State Implementation Plans: Findings of Substantial Inadequacy and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction, 88 Fed. Reg. 11842 (Feb. 15, 2023) (reinstating SIP calls).

[193] *See* 5 C.C.R. § 1001-2:V.S.

[194] Subject to the statute of limitations and standing requirements.

[195] 42 U.S.C. § 7604(b)(1)(B).

[196] *See WildEarth Guardians v. Lamar Utilities Bd.*, No. 11-CV-00742-MSK-MJW, 2012 WL 1059981, at *2 (D. Colo. Mar. 29, 2012).

[197] 42 U.S.C. § 7413(e) (setting out criteria for the court to consider when assessing civil penalties).

court may impose a maximum civil penalty $121,275 per day of violation.[198] However, under state law, the Division can only impose a maximum civil penalty of (1) $15,000 per day for violations before July 3, 2020, and (2) $47,357 per day for violations beginning on July 3, 2020.[199] *Second*, the $2.5 million civil penalty imposed in the Compliance Order is unreasonably low given the sheer number of violations and Suncor's long history of similar violations.[200] Community Groups estimate that the maximum civil penalty that the state could have reasonably imposed for the violations included in the Compliance Order is approximately $32 million.

V. Authority to Bring Suit

As described in Section II, the Clean Air Act authorizes any person to, upon providing a 60-day notice of intent, bring suit "against any person . . . who is alleged to have violated (if there is evidence that the alleged violation has been repeated) or to be in violation of [] an emission standard or limitation" established under the Clean Air Act.[201]

As discussed above, Suncor's own reports and CDPHE's compliance advisories show that Suncor is currently violating or has repeatedly violated the emissions standards or limitations.

Consequently, Suncor has currently accrued 9,207 days of repeated or continuous violations during the periods covered by this Notice, including (1) 6,731 days of violation of the NOx limit at Heater H-2101, and (2) 2,476 days of violation for the remaining emission standards or limitations discussed above.

VI. Persons Responsible for Violations

The Suncor Refinery is owned and operated by Suncor Energy (U.S.A.) Inc., a subsidiary of Suncor Energy Inc. Suncor Energy (U.S.A.) Inc. is the legal owner and operator of the Suncor Refinery, is in control of day-to-day operations, and is therefore a "person" under the Clean Air Act who is responsible for the violations alleged herein.

VII. Persons Giving Notice

GreenLatinos is a national nonprofit organization that convenes a broad coalition of Latino leaders committed to addressing environmental, natural resources, and conservation issues that significantly affect the health and welfare of the Latino community. GreenLatinos engages in this advocacy at the national, regional, and local levels. It strives to amplify the voices of minority, low-income, and tribal communities, with more than 89,000 members, including over 3,100 members in Colorado.

Sierra Club's mission is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and

[198] 40 C.F.R. § 19.4 tbl. 1.

[199] Colo. Rev. Stat. § 25-7-122(b), (d) (2024); Environmental Justice and Projects Increase Environmental Fines, H.B. 1143, 72nd Gen. Assemb., 2nd Reg. Sess., 2020 Colo. Sess. Laws 342.

[200] *See* C.R.S. § 25-7-122(2) (setting forth criteria for calculating civil penalties).

[201] 42 U.S.C. § 7604(a)(1).

enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. In addition to helping people from all backgrounds explore nature and our outdoor heritage, Sierra Club works to promote clean energy, safeguard the health of our communities, protect wildlife, and preserve our remaining wild places through grassroots activism, public education, lobbying, and legal action. Sierra Club currently has 684,994 members nationwide, and 20,091 members in Colorado aiming to advance health equity, environmental justice, and community resilience. Environmental justice, clean transportation, clean air, and climate change are among the organization's core priorities.

350 Colorado is a grassroots movement working to build a fossil-free future powered by 100% renewable energy. 350 Colorado empowers communities to come together to dismantle oppressive systems that enable poverty, racism, and inequality. 350 Colorado engages at the local and state level to ensure that Colorado has a clear and immediate pathway to reduce emissions and secure 100% clean, renewable energy for all. 350 Colorado strives to protect vulnerable communities because all Coloradans deserve a safe and livable environment. 350 Colorado has around 20,000 members working towards a fossil-free future.

Sierra Club 2101 Webster St., Suite 1300 Oakland, CA 94612	GreenLatinos 1919 14th St. Suite 700 Boulder, CO 80302	350 Colorado PO Box 607 Boulder, CO 80306

VIII. Conclusion

Suncor continually violated the emissions standards and limitations identified herein. Evidence suggests that these violations are both ongoing and recurring, and almost certain to recur in the future absent intervention, with detrimental health impacts for the members of the Community Groups.

Accordingly, this letter serves to notify Suncor that, in accordance with Section 304(b)(1)(A) of the Clean Air Act, Community Groups intend to file suit in a federal district court to remedy these violations of the Clean Air Act identified above at any time upon the expiration of the 60-day period after the postmarked date of this letter.[202] In doing so, Community Groups may seek to (1) obtain declaratory relief, (2) enjoin future violations of limitations, (3) have the court impose civil penalties, (4) compel compliance with the requirements of the CAA, the Colorado SIP, and Suncor's Title V Operating Permits, (4) abate pollution, (5) recover attorney's fees and costs of litigation, and (6) obtain any other relief that may be necessary or appropriate.

If you believe any of the above information is incorrect, believe you are currently in compliance with the Clean Air Act, would like to take steps to permanently correct any of the described violations, or have any questions concerning this letter or the described violations, please contact Ian Coghill as soon as possible at (303) 623-9466, or at the address or email listed below

[202] 40 C.F.R. §§ 54.2, 54.3.

for the undersigned. As mentioned above, Community Groups would be happy to meet with you, within 45 days of this notice letter, to discuss resolution of the matters raised.

Sincerely,

/s/ Ian Coghill

Ian Coghill
Rachael Jaffe
Earthjustice
633 17th St., Suite 1600
Denver, CO 80202
(303) 623-9466
icoghill@earthjustice.org
rjaffe@earthjustice.org

Counsel for GreenLatinos, Sierra Club, and 350 Colorado

CC: Regional Administrator KC Becker
Region 8, U.S. Environmental Protection Agency
1595 Wynkoop St.
Denver, CO 80202-1129

Governor Jared Polis
Office of the Governor
200 E. Colfax Ave, Rm. 136
Denver, CO 80203-1716

Shannon McMillan
Compliance and Enforcement Program Manager
Colorado Dept. Public Health & Environment
Air Pollution Control Division
4300 Cherry Creek Drive
South Denver, CO 80246

Encl: Tables of Violations

TABLE 1-A: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Calendar Days	Adjustment	Enforceable Violation Days	# of Units	Total Enforceable Violation Days	Total Viol Days
Plant 1 Flare	7/16/2019	8:00	7/16/2019	10:00	1	0	1	1	1	830
Plant 1 Flare	7/17/2019	16:00	7/17/2019	17:00	1	0	1	1	1	
Plant 1 Flare	10/20/2019	19:00	10/20/2019	21:00	1	0	1	1	1	
Plant 1 Flare	10/21/2019	1:00	10/21/2019	20:00	1	0	1	1	1	
Plant 1 Flare	10/23/2019	14:00	10/23/2019	17:00	1	0	1	1	1	
Plant 1 Fuel Gas Monitor	5/18/2020	22:00	5/19/2020	1:00	2	0	2	24	48	
Plant 1 Fuel Gas Monitor	5/20/2020	21:00	5/22/2020	6:00	3	0	3	24	72	
Plant 1 Fuel Gas Monitor	5/22/2020	16:00	5/23/2020	1:00	2	-1	1	24	24	
Plant 1 Fuel Gas Monitor	8/13/2020	15:00	8/13/2020	16:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	6/14/2021	13:00	6/14/2021	14:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	6/17/2021	20:00	6/18/2021	3:00	2	0	2	24	48	
Plant 1 Fuel Gas Monitor	6/19/2021	3:00	6/19/2021	18:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	7/8/2021	6:00	7/8/2021	16:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	6/3/2022	19:00	6/3/2022	23:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	9/6/2022	10:00	9/6/2022	14:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	12/22/2022	13:00	12/22/2022	21:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	12/24/2022	2:00	12/24/2022	4:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	4/12/2023	8:00	4/12/2023	22:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	4/29/2023	1:00	4/30/2023	7:00	2	0	2	24	48	
Plant 1 Fuel Gas Monitor	12/16/2023	17:00	12/16/2023	23:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	12/22/2023	17:00	12/22/2023	21:00	1	0	1	24	24	
Plant 1 Fuel Gas Monitor	1/14/2024	16:00	1/15/2024	18:00	2	0	2	24	48	
Plant 2 Flare	11/27/2019	9:00	11/27/2019	10:00	1	0	1	1	1	
Plant 2 Flare	11/27/2019	13:00	11/27/2019	17:00	1	-1	0	1	0	
Plant 2 Flare	11/28/2019	3:00	11/28/2019	9:00	1	0	1	1	1	
Plant 2 Flare	3/17/2020	19:00	3/18/2020	5:00	2	0	2	1	2	
Plant 2 Flare	11/5/2020	0:00	11/6/2020	11:00	2	0	2	1	2	
Plant 2 Flare	11/6/2020	15:00	11/6/2020	21:00	1	-1	0	1	0	
Plant 2 Flare	11/7/2020	15:00	11/7/2020	17:00	1	0	1	1	1	
Plant 2 Flare	11/7/2020	15:00	11/7/2020	17:00	1	-1	0	1	0	
Plant 2 Flare	11/21/2020	15:00	11/21/2020	17:00	1	0	1	1	1	
Plant 2 Flare	4/13/2021	22:00	4/13/2021	23:00	1	0	1	1	1	
Plant 2 Flare	6/9/2021	10:00	6/9/2021	10:00	1	0	1	1	1	
Plant 2 Flare	8/17/2021	11:00	8/17/2021	20:00	1	0	1	1	1	
Plant 2 Flare	8/18/2021	13:00	8/18/2021	21:00	1	0	1	1	1	
Plant 2 Flare	9/10/2021	21:00	9/11/2021	3:00	2	0	2	1	2	
Plant 2 Flare	9/15/2021	6:00	9/15/2021	11:00	1	0	1	1	1	
Plant 2 Flare	9/15/2021	19:00	9/15/2021	22:00	1	-1	0	1	0	
Plant 2 Flare	9/18/2021	21:00	9/19/2021	0:00	2	0	2	1	2	
Plant 2 Flare	11/2/2021	23:00	11/3/2021	9:00	2	0	2	1	2	
Plant 2 Flare	11/18/2021	9:00	11/18/2021	12:00	1	0	1	1	1	
Plant 2 Flare	11/19/2021	6:00	11/19/2021	15:00	1	0	1	1	1	
Plant 2 Flare	1/25/2022	22:00	1/26/2022	0:00	2	0	2	1	2	
Plant 2 Flare	1/28/2022	17:00	1/29/2022	0:00	2	0	2	1	2	
Plant 2 Flare	3/2/2022	5:00	3/2/2022	8:00	1	0	1	1	1	
Plant 2 Flare	4/5/2022	4:00	4/5/2022	6:00	1	0	1	1	1	
Plant 2 Flare	5/6/2022	10:00	5/6/2022	18:00	1	0	1	1	1	
Plant 2 Flare	5/22/2022	6:00	5/22/2022	12:00	1	0	1	1	1	
Plant 2 Flare	7/26/2022	20:00	7/26/2022	23:00	1	0	1	1	1	
Plant 2 Flare	12/22/2022	7:00	12/22/2022	10:00	1	0	1	1	1	
Plant 2 Flare	12/24/2022	18:00	12/25/2022	4:00	2	0	2	1	2	
Plant 2 Flare	12/27/2022	7:00	12/27/2022	8:00	1	0	1	1	1	

TABLE 1-A: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Calendar Days	Adjustment	Enforceable Violation Days	# of Units	Total Enforceable Violation Days	Total Viol Days
Plant 2 Flare	12/27/2022	12:00	12/27/2022	13:00	1	-1	0	1	0	
Plant 2 Flare	12/27/2022	16:00	12/27/2022	19:00	1	-1	0	1	0	
Plant 2 Flare	12/28/2022	11:00	12/28/2022	13:00	1	0	1	1	1	
Plant 2 Flare	12/28/2022	16:00	12/29/2022	12:00	2	-1	1	1	1	
Plant 2 Flare	1/20/2023	9:00	1/20/2023	11:00	1	0	1	1	1	
Plant 2 Flare	2/23/2023	3:00	2/23/2023	5:00	1	0	1	1	1	
Plant 2 Flare	2/23/2023	8:00	2/23/2023	16:00	1	-1	0	1	0	
Plant 2 Flare	2/26/2023	8:00	2/26/2023	10:00	1	0	1	1	1	
Plant 2 Flare	2/26/2023	13:00	2/26/2023	16:00	1	-1	0	1	0	
Plant 2 Flare	4/17/2023	0:00	4/17/2023	3:00	1	0	1	1	1	
Plant 2 Flare	6/13/2023	8:00	6/14/2023	2:00	2	0	2	1	2	
Plant 2 Flare	6/23/2023	9:00	6/23/2023	17:00	1	0	1	1	1	
Plant 2 Flare	6/23/2023	18:00	6/24/2023	3:00	2	-1	1	1	1	
Plant 2 Flare	6/25/2023	11:00	6/25/2023	12:00	1	0	1	1	1	
Plant 2 Flare	6/26/2023	14:00	6/26/2023	15:00	1	0	1	1	1	
Plant 2 Flare	7/5/2023	23:00	7/6/2023	0:00	2	0	2	1	2	
Plant 2 Flare	7/6/2023	3:00	7/6/2023	6:00	1	-1	0	1	0	
Plant 2 Flare	7/6/2023	9:00	7/6/2023	10:00	1	-1	0	1	0	
Plant 2 Flare	12/16/2023	1:00	12/17/2023	23:00	2	0	2	1	2	
Plant 2 Flare	1/14/2024	2:00	1/14/2024	22:00	1	0	1	1	1	
Plant 2 Flare	1/15/2024	2:00	1/15/2024	16:00	1	0	1	1	1	
Plant 2 Fuel Gas Monitor	7/2/2019	17:00	7/2/2019	20:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	7/14/2019	17:00	7/14/2019	18:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	8/20/2019	12:00	8/20/2019	13:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	11/27/2019	8:00	11/27/2019	21:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	11/28/2019	3:00	11/28/2019	4:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	8/1/2020	11:00	8/1/2020	19:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	8/27/2020	18:00	8/27/2020	20:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	8/28/2020	9:00	8/28/2020	11:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	8/29/2020	2:00	8/29/2020	20:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	11/26/2020	10:00	11/26/2020	12:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	3/19/2021	5:00	3/19/2021	6:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	3/19/2021	7:00	3/19/2021	12:00	1	-1	0	7	0	
Plant 2 Fuel Gas Monitor	8/17/2021	11:00	8/18/2021	20:00	2	0	2	7	14	
Plant 2 Fuel Gas Monitor	11/19/2021	7:00	11/19/2021	10:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	1/26/2022	3:00	1/26/2022	5:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	2/3/2022	2:00	2/3/2022	9:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	5/6/2022	9:00	5/6/2022	13:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	6/1/2022	14:00	6/1/2022	22:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	8/15/2022	23:00	8/16/2022	8:00	2	0	2	7	14	
Plant 2 Fuel Gas Monitor	11/17/2022	12:00	11/18/2022	3:00	2	0	2	7	14	
Plant 2 Fuel Gas Monitor	11/30/2022	20:00	12/1/2022	0:00	2	0	2	7	14	
Plant 2 Fuel Gas Monitor	12/5/2022	15:00	12/5/2022	16:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	6/13/2023	0:00	6/13/2023	0:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	6/22/2023	15:00	6/22/2023	17:00	1	0	1	7	7	

TABLE 1-A: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Calendar Days	Adjustment	Enforceable Violation Days	# of Units	Total Enforceable Violation Days	Total Viol Days
Plant 2 Fuel Gas Monitor	6/23/2023	9:00	6/23/2023	21:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	12/16/2023	1:00	12/16/2023	3:00	1	0	1	7	7	
Plant 2 Fuel Gas Monitor	12/16/2023	18:00	12/17/2023	6:00	2	-1	1	7	7	
Plant 3 Flare	7/13/2019	18:00	7/13/2019	20:00	1	0	1	1	1	
Plant 3 Flare	9/1/2019	14:00	9/1/2019	18:00	1	0	1	1	1	
Plant 3 Flare	9/2/2019	10:00	9/2/2019	13:00	1	0	1	1	1	
Plant 3 Flare	3/2/2020	11:00	3/2/2020	14:00	1	0	1	1	1	
Plant 3 Flare	5/17/2020	10:00	5/17/2020	16:00	1	0	1	1	1	
Plant 3 Flare	9/25/2020	20:00	9/25/2020	22:00	1	0	1	1	1	
Plant 3 Flare	2/25/2022	11:00	2/25/2022	12:00	1	0	1	1	1	
Plant 3 Flare	2/25/2022	15:00	2/25/2022	20:00	1	-1	0	1	0	
Plant 3 Flare	8/31/2022	17:00	8/31/2022	19:00	1	0	1	1	1	
Plant 3 Flare	12/21/2022	23:00	12/22/2022	1:00	2	0	2	1	2	
Plant 3 Flare	1/13/2024	9:00	1/13/2024	12:00	1	0	1	1	1	

TABLE 1-B: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER NSPS SUBPART JA

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Violation Days	# of Units	Enforceable Violation Days	Total Viol Days
Plant 1 Flare	7/16/2019	8:00	7/16/2019	10:00	1	1	1	319
Plant 1 Flare	7/17/2019	16:00	7/17/2019	17:00	1	1	1	
Plant 1 Flare	10/20/2019	19:00	10/20/2019	21:00	1	1	1	
Plant 1 Flare	10/21/2019	1:00	10/21/2019	20:00	1	1	1	
Plant 1 Flare	10/23/2019	14:00	10/23/2019	17:00	1	1	1	
Plant 1 Flare	4/8/2020	10:00	4/8/2020	13:00	1	1	1	
Plant 1 Flare	4/29/2020	21:00	4/30/2020	16:00	2	1	2	
Plant 1 Flare	5/5/2020	7:00	5/5/2020	8:00	1	1	1	
Plant 1 Flare	5/17/2020	12:00	5/19/2020	21:00	3	1	3	
Plant 1 Flare	5/20/2020	1:00	5/20/2020	18:00	1	1	1	
Plant 1 Flare	5/22/2020	2:00	5/22/2020	6:00	1	1	1	
Plant 1 Flare	5/22/2020	8:00	5/22/2020	9:00	0	1	0	
Plant 1 Flare	5/22/2020	15:00	5/23/2020	1:00	1	1	1	
Plant 1 Flare	8/13/2020	16:00	8/13/2020	17:00	1	1	1	
Plant 1 Flare	10/21/2020	19:00	10/22/2020	12:00	2	1	2	
Plant 1 Flare	11/7/2020	5:00	11/7/2020	12:00	1	1	1	
Plant 1 Flare	11/9/2020	20:00	11/9/2020	22:00	1	1	1	
Plant 1 Flare	11/10/2020	8:00	11/10/2020	9:00	1	1	1	
Plant 1 Flare	11/13/2020	2:00	11/13/2020	3:00	1	1	1	
Plant 1 Flare	11/20/2020	12:00	11/20/2020	13:00	1	1	1	
Plant 1 Flare	12/17/2020	21:00	12/18/2020	17:00	2	1	2	
Plant 1 Flare	1/26/2021	20:00	1/26/2021	22:00	1	1	1	
Plant 1 Flare	2/15/2021	0:00	2/15/2021	2:00	1	1	1	
Plant 1 Flare	2/20/2021	18:00	2/21/2021	1:00	2	1	2	
Plant 1 Flare	3/15/2021	23:00	3/16/2021	10:00	2	1	2	
Plant 1 Flare	3/30/2021	21:00	3/31/2021	17:00	2	1	2	
Plant 1 Flare	4/18/2021	12:00	4/18/2021	14:00	1	1	1	
Plant 1 Flare	4/19/2021	20:00	4/19/2021	22:00	1	1	1	
Plant 1 Flare	4/20/2021	9:00	4/20/2021	12:00	1	1	1	
Plant 1 Flare	4/21/2021	3:00	4/21/2021	4:00	1	1	1	
Plant 1 Flare	6/17/2021	9:00	6/18/2021	0:00	2	1	2	
Plant 1 Flare	6/20/2021	10:00	6/20/2021	15:00	1	1	1	
Plant 1 Flare	6/26/2021	11:00	6/26/2021	13:00	1	1	1	
Plant 1 Flare	6/27/2021	19:00	6/28/2021	0:00	2	1	2	
Plant 1 Flare	7/1/2021	7:00	7/1/2021	9:00	1	1	1	
Plant 1 Flare	7/8/2021	7:00	7/8/2021	18:00	1	1	1	
Plant 1 Flare	7/27/2021	9:00	7/27/2021	14:00	1	1	1	
Plant 1 Flare	8/23/2021	15:00	8/23/2021	21:00	1	1	1	
Plant 1 Flare	10/8/2021	15:00	10/8/2021	21:00	1	1	1	
Plant 1 Flare	12/8/2021	17:00	12/9/2021	13:00	2	1	2	
Plant 1 Flare	12/17/2021	11:00	12/17/2021	13:00	1	1	1	
Plant 1 Flare	12/17/2021	18:00	12/18/2021	2:00	1	1	1	
Plant 1 Flare	2/24/2022	7:00	2/24/2022	11:00	1	1	1	
Plant 1 Flare	2/25/2022	10:00	2/26/2022	4:00	2	1	2	
Plant 1 Flare	2/26/2022	5:00	2/26/2022	22:00	0	1	0	
Plant 1 Flare	2/27/2022	12:00	2/27/2022	15:00	1	1	1	
Plant 1 Flare	2/28/2022	10:00	2/28/2022	13:00	1	1	1	
Plant 1 Flare	3/12/2022	1:00	3/12/2022	4:00	1	1	1	
Plant 1 Flare	3/17/2022	13:00	3/19/2022	21:00	3	1	3	
Plant 1 Flare	3/22/2022	8:00	3/23/2022	16:00	2	1	2	
Plant 1 Flare	3/24/2022	1:00	3/24/2022	20:00	1	1	1	
Plant 1 Flare	5/9/2022	16:00	5/9/2022	19:00	1	1	1	
Plant 1 Flare	6/4/2022	17:00	6/4/2022	20:00	1	1	1	
Plant 1 Flare	8/25/2022	14:00	8/25/2022	16:00	1	1	1	
Plant 1 Flare	8/31/2022	12:00	8/31/2022	18:00	1	1	1	
Plant 1 Flare	9/15/2022	22:00	9/16/2022	10:00	2	1	2	
Plant 1 Flare	9/26/2022	15:00	9/26/2022	16:00	1	1	1	
Plant 1 Flare	9/28/2022	16:00	10/1/2022	17:00	4	1	4	

TABLE 1-B: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER NSPS SUBPART JA

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Violation Days	# of Units	Enforceable Violation Days	Total Viol Days
Plant 1 Flare	9/28/2022	16:00	10/1/2022	17:00	4	1	4	
Plant 1 Flare	10/11/2022	18:00	10/11/2022	23:00	1	1	1	
Plant 1 Flare	10/14/2022	20:00	10/15/2022	14:00	2	1	2	
Plant 1 Flare	12/21/2022	20:00	12/24/2022	14:00	4	1	4	
Plant 1 Flare	12/25/2022	0:00	12/25/2022	3:00	1	1	1	
Plant 1 Flare	2/1/2023	18:00	2/2/2023	2:00	2	1	2	
Plant 1 Flare	2/3/2023	11:00	2/3/2023	18:00	1	1	1	
Plant 1 Flare	3/10/2023	19:00	3/11/2023	0:00	2	1	2	
Plant 1 Flare	3/11/2023	10:00	3/11/2023	22:00	0	1	0	
Plant 1 Flare	3/22/2023	10:00	3/22/2023	12:00	1	1	1	
Plant 1 Flare	3/24/2023	3:00	3/24/2023	9:00	1	1	1	
Plant 1 Flare	4/2/2023	11:00	4/3/2023	15:00	2	1	2	
Plant 1 Flare	4/3/2023	17:00	4/3/2023	21:00	0	1	0	
Plant 1 Flare	4/12/2023	8:00	4/13/2023	12:00	2	1	2	
Plant 1 Flare	4/22/2023	15:00	4/22/2023	22:00	1	1	1	
Plant 1 Flare	4/29/2023	3:00	4/29/2023	22:00	1	1	1	
Plant 1 Flare	5/4/2023	1:00	5/4/2023	8:00	1	1	1	
Plant 1 Flare	5/24/2023	18:00	5/25/2023	5:00	2	1	2	
Plant 1 Flare	7/14/2023	15:00	7/14/2023	20:00	1	1	1	
Plant 1 Flare	7/29/2023	3:00	7/29/2023	5:00	1	1	1	
Plant 1 Flare	8/30/2023	17:00	8/30/2023	20:00	1	1	1	
Plant 1 Flare	11/19/2023	5:00	11/19/2023	7:00	1	1	1	
Plant 1 Flare	11/23/2023	7:00	11/23/2023	10:00	1	1	1	
Plant 1 Flare	11/23/2023	23:00	11/24/2023	3:00	1	1	1	
Plant 1 Flare	12/1/2023	7:00	12/1/2023	9:00	1	1	1	
Plant 1 Flare	12/16/2023	1:00	12/18/2023	14:00	3	1	3	
Plant 1 Flare	12/19/2023	11:00	12/19/2023	12:00	1	1	1	
Plant 1 Flare	12/21/2023	10:00	12/21/2023	13:00	1	1	1	
Plant 1 Flare	12/22/2023	5:00	12/22/2023	19:00	1	1	1	
Plant 1 Flare	1/13/2024	8:00	1/13/2024	12:00	1	1	1	
Plant 1 Flare	1/14/2024	3:00	1/15/2024	17:00	2	1	2	
Plant 1 Flare	1/16/2024	2:00	1/16/2024	12:00	1	1	1	
Plant 1 Flare	1/19/2024	2:00	1/19/2024	6:00	1	1	1	
Plant 1 Flare	2/11/2024	5:00	2/11/2024	14:00	1	1	1	
Plant 1 Flare	3/5/2024	15:00	3/5/2024	20:00	1	1	1	
Plant 1 Flare	3/8/2024	19:00	3/10/2024	15:00	3	1	3	
Plant 1 Flare	5/21/2024	20:00	5/21/2024	22:00	1	1	1	
Plant 1 Fuel Gas Monitor	5/18/2020	22:00	5/19/2020	1:00	2	3	6	
Plant 1 Fuel Gas Monitor	5/20/2020	21:00	5/22/2020	6:00	3	3	9	
Plant 1 Fuel Gas Monitor	5/22/2020	16:00	5/23/2020	1:00	1	3	3	
Plant 1 Fuel Gas Monitor	8/13/2020	15:00	8/13/2020	16:00	1	3	3	
Plant 1 Fuel Gas Monitor	6/14/2021	13:00	6/14/2021	14:00	1	3	3	
Plant 1 Fuel Gas Monitor	6/17/2021	20:00	6/18/2021	3:00	2	3	6	
Plant 1 Fuel Gas Monitor	6/19/2021	3:00	6/19/2021	18:00	1	3	3	
Plant 1 Fuel Gas Monitor	7/8/2021	6:00	7/8/2021	16:00	1	3	3	
Plant 1 Fuel Gas Monitor	6/3/2022	19:00	6/3/2022	23:00	1	3	3	
Plant 1 Fuel Gas Monitor	9/6/2022	10:00	9/6/2022	14:00	1	3	3	

TABLE 1-B: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER NSPS SUBPART JA

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Violation Days	# of Units	Enforceable Violation Days	Total Viol Days
Plant 1 Fuel Gas Monitor	12/22/2022	13:00	12/22/2022	21:00	1	3	3	
Plant 1 Fuel Gas Monitor	12/24/2022	2:00	12/24/2022	4:00	1	3	3	
Plant 1 Fuel Gas Monitor	4/12/2023	8:00	4/12/2023	22:00	1	3	3	
Plant 1 Fuel Gas Monitor	4/29/2023	1:00	4/30/2023	7:00	2	3	6	
Plant 1 Fuel Gas Monitor	12/16/2023	17:00	12/16/2023	23:00	1	3	3	
Plant 1 Fuel Gas Monitor	12/22/2023	17:00	12/22/2023	21:00	1	3	3	
Plant 1 Fuel Gas Monitor	1/14/2024	16:00	1/15/2024	18:00	2	3	6	
Plant 2 Flare	11/27/2019	9:00	11/27/2019	10:00	1	1	1	
Plant 2 Flare	11/27/2019	13:00	11/27/2019	17:00	0	1	0	
Plant 2 Flare	11/28/2019	3:00	11/28/2019	9:00	1	1	1	
Plant 2 Flare	3/17/2020	19:00	3/18/2020	5:00	2	1	2	
Plant 2 Flare	11/5/2020	0:00	11/6/2020	11:00	2	1	2	
Plant 2 Flare	11/6/2020	15:00	11/6/2020	21:00	0	1	0	
Plant 2 Flare	11/7/2020	15:00	11/7/2020	17:00	1	1	1	
Plant 2 Flare	11/7/2020	15:00	11/7/2020	17:00	0	1	0	
Plant 2 Flare	11/21/2020	15:00	11/21/2020	17:00	1	1	1	
Plant 2 Flare	4/13/2021	22:00	4/13/2021	23:00	1	1	1	
Plant 2 Flare	6/9/2021	10:00	6/9/2021	10:00	1	1	1	
Plant 2 Flare	8/17/2021	11:00	8/17/2021	20:00	1	1	1	
Plant 2 Flare	8/18/2021	13:00	8/18/2021	21:00	1	1	1	
Plant 2 Flare	9/10/2021	21:00	9/11/2021	3:00	2	1	2	
Plant 2 Flare	9/15/2021	6:00	9/15/2021	11:00	1	1	1	
Plant 2 Flare	9/15/2021	19:00	9/15/2021	22:00	0	1	0	
Plant 2 Flare	9/18/2021	21:00	9/19/2021	0:00	2	1	2	
Plant 2 Flare	11/2/2021	23:00	11/3/2021	9:00	2	1	2	
Plant 2 Flare	11/18/2021	9:00	11/18/2021	12:00	1	1	1	
Plant 2 Flare	11/19/2021	6:00	11/19/2021	15:00	1	1	1	
Plant 2 Flare	1/25/2022	22:00	1/26/2022	0:00	2	1	2	
Plant 2 Flare	1/28/2022	17:00	1/29/2022	0:00	2	1	2	
Plant 2 Flare	3/2/2022	5:00	3/2/2022	8:00	1	1	1	
Plant 2 Flare	4/5/2022	4:00	4/5/2022	6:00	1	1	1	
Plant 2 Flare	5/6/2022	10:00	5/6/2022	18:00	1	1	1	
Plant 2 Flare	5/22/2022	6:00	5/22/2022	12:00	1	1	1	
Plant 2 Flare	7/26/2022	20:00	7/26/2022	23:00	1	1	1	
Plant 2 Flare	12/22/2022	7:00	12/22/2022	10:00	1	1	1	
Plant 2 Flare	12/24/2022	18:00	12/25/2022	4:00	2	1	2	
Plant 2 Flare	12/27/2022	7:00	12/27/2022	8:00	1	1	1	
Plant 2 Flare	12/27/2022	12:00	12/27/2022	13:00	0	1	0	
Plant 2 Flare	12/27/2022	16:00	12/27/2022	19:00	0	1	0	
Plant 2 Flare	12/28/2022	11:00	12/28/2022	13:00	1	1	1	
Plant 2 Flare	12/28/2022	16:00	12/29/2022	12:00	1	1	1	
Plant 2 Flare	1/20/2023	9:00	1/20/2023	11:00	1	1	1	
Plant 2 Flare	2/23/2023	3:00	2/23/2023	5:00	1	1	1	
Plant 2 Flare	2/23/2023	8:00	2/23/2023	16:00	0	1	0	
Plant 2 Flare	2/26/2023	8:00	2/26/2023	10:00	1	1	1	
Plant 2 Flare	2/26/2023	13:00	2/26/2023	16:00	0	1	0	
Plant 2 Flare	4/17/2023	0:00	4/17/2023	3:00	1	1	1	
Plant 2 Flare	6/13/2023	8:00	6/14/2023	2:00	2	1	2	
Plant 2 Flare	6/23/2023	9:00	6/23/2023	17:00	1	1	1	
Plant 2 Flare	6/23/2023	18:00	6/24/2023	3:00	1	1	1	
Plant 2 Flare	6/25/2023	11:00	6/25/2023	12:00	1	1	1	

TABLE 1-B: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER NSPS SUBPART JA

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Violation Days	# of Units	Enforceable Violation Days	Total Viol Days
Plant 2 Flare	6/26/2023	14:00	6/26/2023	15:00	1	1	1	
Plant 2 Flare	7/5/2023	23:00	7/6/2023	0:00	2	1	2	
Plant 2 Flare	7/6/2023	3:00	7/6/2023	6:00	0	1	0	
Plant 2 Flare	7/6/2023	9:00	7/6/2023	10:00	0	1	0	
Plant 2 Flare	12/16/2023	1:00	12/17/2023	23:00	2	1	2	
Plant 2 Flare	1/14/2024	2:00	1/14/2024	22:00	1	1	1	
Plant 2 Flare	1/15/2024	2:00	1/15/2024	16:00	1	1	1	
Plant 2 Fuel Gas Monitor	7/2/2019	17:00	7/2/2019	20:00	1	2	2	
Plant 2 Fuel Gas Monitor	7/14/2019	17:00	7/14/2019	18:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/20/2019	12:00	8/20/2019	13:00	1	2	2	
Plant 2 Fuel Gas Monitor	11/27/2019	8:00	11/27/2019	21:00	1	2	2	
Plant 2 Fuel Gas Monitor	11/28/2019	3:00	11/28/2019	4:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/1/2020	11:00	8/1/2020	19:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/27/2020	18:00	8/27/2020	20:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/28/2020	9:00	8/28/2020	11:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/29/2020	2:00	8/29/2020	20:00	1	2	2	
Plant 2 Fuel Gas Monitor	11/26/2020	10:00	11/26/2020	12:00	1	2	2	
Plant 2 Fuel Gas Monitor	3/19/2021	5:00	3/19/2021	6:00	1	2	2	
Plant 2 Fuel Gas Monitor	3/19/2021	7:00	3/19/2021	12:00	0	2	0	
Plant 2 Fuel Gas Monitor	8/17/2021	11:00	8/18/2021	20:00	2	2	4	
Plant 2 Fuel Gas Monitor	11/19/2021	7:00	11/19/2021	10:00	1	2	2	
Plant 2 Fuel Gas Monitor	1/26/2022	3:00	1/26/2022	5:00	1	2	2	
Plant 2 Fuel Gas Monitor	2/3/2022	2:00	2/3/2022	9:00	1	2	2	
Plant 2 Fuel Gas Monitor	5/6/2022	9:00	5/6/2022	13:00	1	2	2	
Plant 2 Fuel Gas Monitor	6/1/2022	14:00	6/1/2022	22:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/15/2022	23:00	8/16/2022	8:00	2	2	4	
Plant 2 Fuel Gas Monitor	11/17/2022	12:00	11/18/2022	3:00	2	2	4	
Plant 2 Fuel Gas Monitor	11/30/2022	20:00	12/1/2022	0:00	2	2	4	
Plant 2 Fuel Gas Monitor	12/5/2022	15:00	12/5/2022	16:00	1	2	2	
Plant 2 Fuel Gas Monitor	6/13/2023	0:00	6/13/2023	0:00	1	2	2	
Plant 2 Fuel Gas Monitor	6/22/2023	15:00	6/22/2023	17:00	1	2	2	
Plant 2 Fuel Gas Monitor	6/23/2023	9:00	6/23/2023	21:00	1	2	2	

TABLE 1-B: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER NSPS SUBPART JA

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Violation Days	# of Units	Enforceable Violation Days	Total Viol Days
Plant 2 Fuel Gas Monitor	12/16/2023	1:00	12/16/2023	3:00	1	2	2	
Plant 2 Fuel Gas Monitor	12/16/2023	18:00	12/17/2023	6:00	1	2	2	
Plant 3 Flare	7/13/2019	18:00	7/13/2019	20:00	1	1	1	
Plant 3 Flare	9/1/2019	14:00	9/1/2019	18:00	1	1	1	
Plant 3 Flare	9/2/2019	10:00	9/2/2019	13:00	1	1	1	
Plant 3 Flare	3/2/2020	11:00	3/2/2020	14:00	1	1	1	
Plant 3 Flare	5/17/2020	10:00	5/17/2020	16:00	1	1	1	
Plant 3 Flare	9/25/2020	20:00	9/25/2020	22:00	1	1	1	
Plant 3 Flare	2/25/2022	11:00	2/25/2022	12:00	1	1	1	
Plant 3 Flare	2/25/2022	15:00	2/25/2022	20:00	0	1	0	
Plant 3 Flare	8/31/2022	17:00	8/31/2022	19:00	1	1	1	
Plant 3 Flare	12/21/2022	23:00	12/22/2022	1:00	2	1	2	
Plant 3 Flare	1/13/2024	9:00	1/13/2024	12:00	1	1	1	

TABLE 1-C: VIOLATIONS OF 162 PPMV H2S LIMIT UNDER EAST PLANT CONSENT DECREE

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Violation Days	# of Units	Enforceable Violation Days	Total Viol Days
Plant 2 Fuel Gas Monitor	7/2/2019	17:00	7/2/2019	20:00	1	2	2	60
Plant 2 Fuel Gas Monitor	7/14/2019	17:00	7/14/2019	18:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/20/2019	12:00	8/20/2019	13:00	1	2	2	
Plant 2 Fuel Gas Monitor	11/27/2019	8:00	11/27/2019	21:00	1	2	2	
Plant 2 Fuel Gas Monitor	11/28/2019	3:00	11/28/2019	4:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/1/2020	11:00	8/1/2020	19:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/27/2020	18:00	8/27/2020	20:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/28/2020	9:00	8/28/2020	11:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/29/2020	2:00	8/29/2020	20:00	1	2	2	
Plant 2 Fuel Gas Monitor	11/26/2020	10:00	11/26/2020	12:00	1	2	2	
Plant 2 Fuel Gas Monitor	3/19/2021	5:00	3/19/2021	6:00	1	2	2	
Plant 2 Fuel Gas Monitor	3/19/2021	7:00	3/19/2021	12:00	0	2	0	
Plant 2 Fuel Gas Monitor	8/17/2021	11:00	8/18/2021	20:00	2	2	4	
Plant 2 Fuel Gas Monitor	11/19/2021	7:00	11/19/2021	10:00	1	2	2	
Plant 2 Fuel Gas Monitor	1/26/2022	3:00	1/26/2022	5:00	1	2	2	
Plant 2 Fuel Gas Monitor	2/3/2022	2:00	2/3/2022	9:00	1	2	2	
Plant 2 Fuel Gas Monitor	5/6/2022	9:00	5/6/2022	13:00	1	2	2	
Plant 2 Fuel Gas Monitor	6/1/2022	14:00	6/1/2022	22:00	1	2	2	
Plant 2 Fuel Gas Monitor	8/15/2022	23:00	8/16/2022	8:00	2	2	4	
Plant 2 Fuel Gas Monitor	11/17/2022	12:00	11/18/2022	3:00	2	2	4	
Plant 2 Fuel Gas Monitor	11/30/2022	20:00	12/1/2022	0:00	2	2	4	
Plant 2 Fuel Gas Monitor	12/5/2022	15:00	12/5/2022	16:00	1	2	2	
Plant 2 Fuel Gas Monitor	6/13/2023	0:00	6/13/2023	0:00	1	2	2	
Plant 2 Fuel Gas Monitor	6/22/2023	15:00	6/22/2023	17:00	1	2	2	
Plant 2 Fuel Gas Monitor	6/23/2023	9:00	6/23/2023	21:00	1	2	2	
Plant 2 Fuel Gas Monitor	12/16/2023	1:00	12/16/2023	3:00	1	2	2	
Plant 2 Fuel Gas Monitor	12/16/2023	18:00	12/17/2023	6:00	1	2	2	

TABLE 1-D: VIOLATIONS OF 162 PPMV H2S LIMIT AS PM10 RACT FOR HEATERS H-25, H-2101, H1716, AND H-1717

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Violation Days	# of Units	Enforceable Violation Days	Total Viol Days
Plant 1 Fuel Gas Monitor	5/18/2020	22:00	5/19/2020	1:00	2	4	8	92
Plant 1 Fuel Gas Monitor	5/20/2020	21:00	5/22/2020	6:00	3	4	12	
Plant 1 Fuel Gas Monitor	5/22/2020	16:00	5/23/2020	1:00	1	4	4	
Plant 1 Fuel Gas Monitor	8/13/2020	15:00	8/13/2020	16:00	1	4	4	
Plant 1 Fuel Gas Monitor	6/14/2021	13:00	6/14/2021	14:00	1	4	4	
Plant 1 Fuel Gas Monitor	6/17/2021	20:00	6/18/2021	3:00	2	4	8	
Plant 1 Fuel Gas Monitor	6/19/2021	3:00	6/19/2021	18:00	1	4	4	
Plant 1 Fuel Gas Monitor	7/8/2021	6:00	7/8/2021	16:00	1	4	4	
Plant 1 Fuel Gas Monitor	6/3/2022	19:00	6/3/2022	23:00	1	4	4	
Plant 1 Fuel Gas Monitor	9/6/2022	10:00	9/6/2022	14:00	1	4	4	
Plant 1 Fuel Gas Monitor	12/22/2022	13:00	12/22/2022	21:00	1	4	4	
Plant 1 Fuel Gas Monitor	12/24/2022	2:00	12/24/2022	4:00	1	4	4	
Plant 1 Fuel Gas Monitor	4/12/2023	8:00	4/12/2023	22:00	1	4	4	
Plant 1 Fuel Gas Monitor	4/29/2023	1:00	4/30/2023	7:00	2	4	8	
Plant 1 Fuel Gas Monitor	12/16/2023	17:00	12/16/2023	23:00	1	4	4	
Plant 1 Fuel Gas Monitor	12/22/2023	17:00	12/22/2023	21:00	1	4	4	
Plant 1 Fuel Gas Monitor	1/14/2024	16:00	1/15/2024	18:00	2	4	8	

TABLE 2-A: VIOLATIONS OF 30% OPACITY LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	3/17/2020	17:30	3/17/2020	18:12	1	47
East Plant FCCU	8/17/2020	1:18	8/17/2020	2:18	1	
East Plant FCCU	11/5/2020	15:42	11/5/2020	16:00	1	
East Plant FCCU	2/9/2022	6:54	2/9/2022	7:30	1	
East Plant FCCU	2/13/2022	19:42	2/13/2022	19:54	1	
East Plant FCCU	2/16/2023	18:42	2/16/2023	18:48	1	
East Plant FCCU	2/23/2023	5:18	2/23/2023	5:24	1	
East Plant FCCU	2/24/2023	9:42	2/24/2023	9:48	1	
East Plant FCCU	2/25/2023	9:30	2/25/2023	9:36	1	
East Plant FCCU	2/25/2023	10:18	2/25/2023	10:24	0	
East Plant FCCU	2/25/2023	10:30	2/25/2023	10:45	0	
East Plant FCCU	2/25/2023	11:54	2/25/2023	12:12	0	
East Plant FCCU	7/5/2023	6:00	7/5/2023	6:24	1	
East Plant FCCU	12/21/2023	19:30	12/21/2023	19:42	1	
West Plant FCCU	11/6/2020	15:12	11/6/2020	15:36	1	
West Plant FCCU	7/12/2021	11:30	7/12/2021	11:48	1	
West Plant FCCU	10/26/2021	7:24	10/26/2021	9:12	1	
West Plant FCCU	1/19/2023	10:54	1/19/2023	11:00	1	
West Plant FCCU	3/29/2023	8:36	3/29/2023	8:42	1	
West Plant FCCU	3/29/2023	9:36	3/29/2023	9:42	0	
West Plant FCCU	3/29/2023	11:18	3/29/2023	11:24	0	
West Plant FCCU	3/29/2023	12:12	3/29/2023	12:54	0	
West Plant FCCU	3/29/2023	13:00	3/29/2023	14:34	0	
West Plant FCCU	3/29/2023	16:00	3/29/2023	16:30	0	
West Plant FCCU	3/29/2023	22:54	3/30/2023	0:24	1	
West Plant FCCU	3/30/2023	0:54	3/30/2023	1:18	0	
West Plant FCCU	3/31/2023	15:54	3/31/2023	16:12	1	
West Plant FCCU	3/31/2023	16:18	3/31/2023	16:30	0	
West Plant FCCU	3/31/2023	18:00	3/31/2023	18:12	0	
West Plant FCCU	3/31/2023	18:24	3/31/2023	18:30	0	
West Plant FCCU	3/31/2023	19:48	3/31/2023	20:00	0	
West Plant FCCU	3/31/2023	21:00	3/31/2023	21:30	0	
West Plant FCCU	4/1/2023	7:12	4/1/2023	7:36	1	
West Plant FCCU	4/1/2023	8:54	4/1/2023	9:00	0	
West Plant FCCU	4/1/2023	12:48	4/1/2023	13:00	0	
West Plant FCCU	4/1/2023	19:12	4/1/2023	19:18	0	
West Plant FCCU	4/2/2023	5:00	4/2/2023	5:54	1	
West Plant FCCU	4/2/2023	6:00	4/2/2023	6:54	0	
West Plant FCCU	4/2/2023	7:00	4/2/2023	7:54	0	
West Plant FCCU	4/2/2023	8:00	4/2/2023	8:54	0	
West Plant FCCU	4/2/2023	9:00	4/2/2023	9:06	0	
West Plant FCCU	4/2/2023	10:00	4/2/2023	10:54	0	
West Plant FCCU	4/2/2023	21:36	4/2/2023	22:30	0	
West Plant FCCU	4/2/2023	22:36	4/23/2023	22:42	21	
West Plant FCCU	4/3/2023	0:18	4/3/2023	1:48	1	
West Plant FCCU	4/3/2023	1:18	4/3/2023	1:30	0	
West Plant FCCU	9/3/2023	21:36	9/3/2023	21:48	1	
West Plant FCCU	11/27/2023	0:30	11/27/2023	0:42	1	
West Plant FCCU	11/27/2023	1:30	11/27/2023	1:54	0	

TABLE 2-A: VIOLATIONS OF 30% OPACITY LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
West Plant FCCU	11/27/2023	2:06	11/27/2023	3:00	0	
West Plant FCCU	11/27/2023	3:06	11/27/2023	4:00	0	
West Plant FCCU	11/27/2023	4:06	11/27/2023	5:00	0	
West Plant FCCU	11/27/2023	5:06	11/27/2023	6:00	0	
West Plant FCCU	11/27/2023	6:06	11/27/2023	7:00	0	
West Plant FCCU	11/27/2023	7:06	11/27/2023	8:00	0	
West Plant FCCU	11/27/2023	8:06	11/27/2023	9:00	0	
West Plant FCCU	11/27/2023	9:06	11/27/2023	10:00	0	
West Plant FCCU	11/27/2023	10:06	11/27/2023	11:00	0	
West Plant FCCU	11/27/2023	11:06	11/27/2023	12:00	0	
West Plant FCCU	11/27/2023	12:06	11/27/2023	13:00	0	
West Plant FCCU	11/27/2023	13:06	11/27/2023	14:00	0	
West Plant FCCU	11/27/2023	14:06	11/27/2023	14:18	0	
West Plant FCCU	11/27/2023	14:42	11/27/2023	14:54	0	
West Plant FCCU	11/27/2023	15:42	11/27/2023	15:54	0	
West Plant FCCU	12/16/2023	0:18	12/16/2023	0:42	1	
West Plant FCCU	12/20/2023	19:42	12/20/2023	20:00	1	
West Plant FCCU	12/20/2023	20:06	12/20/2023	21:00	0	
West Plant FCCU	12/20/2023	21:06	12/20/2023	22:00	0	
West Plant FCCU	12/20/2023	22:06	12/20/2023	23:00	0	
West Plant FCCU	12/20/2023	23:06	12/21/2023	0:00	1	
West Plant FCCU	12/21/2023	0:06	12/21/2023	1:00	0	
West Plant FCCU	12/21/2023	1:06	12/21/2023	2:00	0	
West Plant FCCU	12/21/2023	2:06	12/21/2023	3:00	0	
West Plant FCCU	12/21/2023	3:06	12/21/2023	4:00	0	
West Plant FCCU	12/21/2023	4:06	12/21/2023	5:00	0	
West Plant FCCU	12/21/2023	5:06	12/21/2023	6:00	0	
West Plant FCCU	12/21/2023	6:42	12/21/2023	6:48	0	
West Plant FCCU	12/21/2023	7:18	12/21/2023	7:30	0	
West Plant FCCU	12/21/2023	7:48	12/21/2023	8:00	0	
West Plant FCCU	12/21/2023	8:06	12/21/2023	9:00	0	
West Plant FCCU	12/21/2023	9:06	12/21/2023	10:00	0	
West Plant FCCU	12/21/2023	10:06	12/21/2023	11:00	0	
West Plant FCCU	12/21/2023	11:06	12/21/2023	11:54	0	
West Plant FCCU	12/21/2023	12:12	12/21/2023	12:54	0	
West Plant FCCU	12/21/2023	13:06	12/21/2023	13:18	0	
West Plant FCCU	12/21/2023	13:24	12/21/2023	13:48	0	
West Plant FCCU	12/21/2023	14:00	12/21/2023	14:06	0	
West Plant FCCU	12/21/2023	14:18	12/21/2023	14:36	0	
West Plant FCCU	12/21/2023	15:30	12/21/2023	15:36	0	
West Plant FCCU	12/21/2023	16:30	12/21/2023	16:42	0	

TABLE 2-B: VIOLATIONS OF 30% OPACITY LIMIT UNDER MACT UUU

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	3/17/2020	17:30	3/17/2020	18:12	1	46
East Plant FCCU	8/17/2020	1:18	8/17/2020	2:18	1	
East Plant FCCU	11/5/2020	15:42	11/5/2020	16:00	1	
East Plant FCCU	2/9/2022	6:54	2/9/2022	7:30	1	
East Plant FCCU	2/13/2022	19:42	2/13/2022	19:54	1	
East Plant FCCU	2/16/2023	18:42	2/16/2023	18:48	1	
East Plant FCCU	2/23/2023	5:18	2/23/2023	5:24	1	
East Plant FCCU	2/24/2023	9:42	2/24/2023	9:48	1	
East Plant FCCU	2/25/2023	9:30	2/25/2023	9:36	1	
East Plant FCCU	2/25/2023	10:18	2/25/2023	10:24	0	
East Plant FCCU	2/25/2023	10:30	2/25/2023	10:45	0	
East Plant FCCU	2/25/2023	11:54	2/25/2023	12:12	0	
East Plant FCCU	7/5/2023	6:00	7/5/2023	6:24	1	
West Plant FCCU	11/6/2020	15:12	11/6/2020	15:36	1	
West Plant FCCU	7/12/2021	11:30	7/12/2021	11:48	1	
West Plant FCCU	10/26/2021	7:24	10/26/2021	9:12	1	
West Plant FCCU	1/19/2023	10:54	1/19/2023	11:00	1	
West Plant FCCU	3/29/2023	8:36	3/29/2023	8:42	1	
West Plant FCCU	3/29/2023	9:36	3/29/2023	9:42	0	
West Plant FCCU	3/29/2023	11:18	3/29/2023	11:24	0	
West Plant FCCU	3/29/2023	12:12	3/29/2023	12:54	0	
West Plant FCCU	3/29/2023	13:00	3/29/2023	14:34	0	
West Plant FCCU	3/29/2023	16:00	3/29/2023	16:30	0	
West Plant FCCU	3/29/2023	22:54	3/30/2023	0:24	1	
West Plant FCCU	3/30/2023	0:54	3/30/2023	1:18	0	
West Plant FCCU	3/31/2023	15:54	3/31/2023	16:12	1	
West Plant FCCU	3/31/2023	16:18	3/31/2023	16:30	0	
West Plant FCCU	3/31/2023	18:00	3/31/2023	18:12	0	
West Plant FCCU	3/31/2023	18:24	3/31/2023	18:30	0	
West Plant FCCU	3/31/2023	19:48	3/31/2023	20:00	0	
West Plant FCCU	3/31/2023	21:00	3/31/2023	21:30	0	
West Plant FCCU	4/1/2023	7:12	4/1/2023	7:36	1	
West Plant FCCU	4/1/2023	8:54	4/1/2023	9:00	0	
West Plant FCCU	4/1/2023	12:48	4/1/2023	13:00	0	
West Plant FCCU	4/1/2023	19:12	4/1/2023	19:18	0	
West Plant FCCU	4/2/2023	5:00	4/2/2023	5:54	1	
West Plant FCCU	4/2/2023	6:00	4/2/2023	6:54	0	
West Plant FCCU	4/2/2023	7:00	4/2/2023	7:54	0	
West Plant FCCU	4/2/2023	8:00	4/2/2023	8:54	0	
West Plant FCCU	4/2/2023	9:00	4/2/2023	9:06	0	
West Plant FCCU	4/2/2023	10:00	4/2/2023	10:54	0	
West Plant FCCU	4/2/2023	21:36	4/2/2023	22:30	0	
West Plant FCCU	4/2/2023	22:36	4/23/2023	22:42	21	
West Plant FCCU	4/3/2023	0:18	4/3/2023	1:48	1	
West Plant FCCU	4/3/2023	1:18	4/3/2023	1:30	0	
West Plant FCCU	9/3/2023	21:36	9/3/2023	21:48	1	

TABLE 2-B: VIOLATIONS OF 30% OPACITY LIMIT UNDER MACT UUU

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
West Plant FCCU	11/27/2023	0:30	11/27/2023	0:42	1	
West Plant FCCU	11/27/2023	1:30	11/27/2023	1:54	0	
West Plant FCCU	11/27/2023	2:06	11/27/2023	3:00	0	
West Plant FCCU	11/27/2023	3:06	11/27/2023	4:00	0	
West Plant FCCU	11/27/2023	4:06	11/27/2023	5:00	0	
West Plant FCCU	11/27/2023	5:06	11/27/2023	6:00	0	
West Plant FCCU	11/27/2023	6:06	11/27/2023	7:00	0	
West Plant FCCU	11/27/2023	7:06	11/27/2023	8:00	0	
West Plant FCCU	11/27/2023	8:06	11/27/2023	9:00	0	
West Plant FCCU	11/27/2023	9:06	11/27/2023	10:00	0	
West Plant FCCU	11/27/2023	10:06	11/27/2023	11:00	0	
West Plant FCCU	11/27/2023	11:06	11/27/2023	12:00	0	
West Plant FCCU	11/27/2023	12:06	11/27/2023	13:00	0	
West Plant FCCU	11/27/2023	13:06	11/27/2023	14:00	0	
West Plant FCCU	11/27/2023	14:06	11/27/2023	14:18	0	
West Plant FCCU	11/27/2023	14:42	11/27/2023	14:54	0	
West Plant FCCU	11/27/2023	15:42	11/27/2023	15:54	0	
West Plant FCCU	12/16/2023	0:18	12/16/2023	0:42	1	
West Plant FCCU	12/20/2023	19:42	12/20/2023	20:00	1	
West Plant FCCU	12/20/2023	20:06	12/20/2023	21:00	0	
West Plant FCCU	12/20/2023	21:06	12/20/2023	22:00	0	
West Plant FCCU	12/20/2023	22:06	12/20/2023	23:00	0	
West Plant FCCU	12/20/2023	23:06	12/21/2023	0:00	1	
West Plant FCCU	12/21/2023	0:06	12/21/2023	1:00	0	
West Plant FCCU	12/21/2023	1:06	12/21/2023	2:00	0	
West Plant FCCU	12/21/2023	2:06	12/21/2023	3:00	0	
West Plant FCCU	12/21/2023	3:06	12/21/2023	4:00	0	
West Plant FCCU	12/21/2023	4:06	12/21/2023	5:00	0	
West Plant FCCU	12/21/2023	5:06	12/21/2023	6:00	0	
West Plant FCCU	12/21/2023	6:42	12/21/2023	6:48	0	
West Plant FCCU	12/21/2023	7:18	12/21/2023	7:30	0	
West Plant FCCU	12/21/2023	7:48	12/21/2023	8:00	0	
West Plant FCCU	12/21/2023	8:06	12/21/2023	9:00	0	
West Plant FCCU	12/21/2023	9:06	12/21/2023	10:00	0	
West Plant FCCU	12/21/2023	10:06	12/21/2023	11:00	0	
West Plant FCCU	12/21/2023	11:06	12/21/2023	11:54	0	
West Plant FCCU	12/21/2023	12:12	12/21/2023	12:54	0	
West Plant FCCU	12/21/2023	13:06	12/21/2023	13:18	0	
West Plant FCCU	12/21/2023	13:24	12/21/2023	13:48	0	
West Plant FCCU	12/21/2023	14:00	12/21/2023	14:06	0	
West Plant FCCU	12/21/2023	14:18	12/21/2023	14:36	0	
West Plant FCCU	12/21/2023	15:30	12/21/2023	15:36	0	
West Plant FCCU	12/21/2023	16:30	12/21/2023	16:42	0	

TABLE 2-C: VIOLATIONS OF 30% OPACITY LIMIT UNDER CO REG. 1

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	11/18/2021	7:00	11/18/2021	7:36	1	15
West Plant FCCU	8/13/2020	13:00	8/13/2020	13:24	1	
West Plant FCCU	11/10/2020	11:57	11/10/2020	12:01	1	
West Plant FCCU	11/10/2020	12:56	11/10/2020	13:01	0	
West Plant FCCU	11/10/2020	13:57	11/10/2020	14:01	0	
West Plant FCCU	11/10/2020	15:00	11/10/2020	15:01	0	
West Plant FCCU	11/10/2020	16:00	11/10/2020	16:01	0	
West Plant FCCU	11/20/2020	2:52	11/20/2020	2:57	1	
West Plant FCCU	2/19/2021	19:56	2/19/2021	20:01	1	
West Plant FCCU	7/1/2021	9:16	7/1/2021	9:19	1	
West Plant FCCU	6/3/2022	16:01	6/3/2022	16:03	1	
West Plant FCCU	3/29/2023	8:36	3/29/2023	8:42	1	
West Plant FCCU	3/29/2023	9:36	3/29/2023	9:42	0	
West Plant FCCU	3/29/2023	11:20	3/29/2023	11:26	0	
West Plant FCCU	3/29/2023	12:20	3/29/2023	12:26	0	
West Plant FCCU	4/1/2023	19:18	4/1/2023	19:24	1	
West Plant FCCU	4/1/2023	20:20	4/1/2023	20:26	0	
West Plant FCCU	4/1/2023	21:20	4/1/2023	21:26	0	
West Plant FCCU	4/1/2023	22:20	4/1/2023	22:26	0	
West Plant FCCU	4/1/2023	23:20	4/1/2023	23:26	0	
West Plant FCCU	4/2/2023	0:20	4/2/2023	0:26	1	
West Plant FCCU	4/2/2023	1:20	4/2/2023	1:26	0	
West Plant FCCU	4/2/2023	2:20	4/2/2023	2:26	0	
West Plant FCCU	4/2/2023	3:20	4/2/2023	3:26	0	
West Plant FCCU	4/2/2023	4:20	4/2/2023	4:26	0	
West Plant FCCU	4/2/2023	23:22	4/2/2023	23:28	0	
West Plant FCCU	4/3/2023	1:34	4/3/2023	1:41	1	
West Plant FCCU	4/3/2023	2:38	4/3/2023	2:42	0	
West Plant FCCU	4/3/2023	4:39	4/3/2023	4:43	0	
West Plant FCCU	9/3/2023	21:30	9/3/2023	22:00	1	
West Plant FCCU	11/27/2023	0:13	11/27/2023	0:19	1	
West Plant FCCU	11/27/2023	1:15	11/27/2023	1:19	0	
West Plant FCCU	11/27/2023	2:12	11/27/2023	2:19	0	
West Plant FCCU	11/27/2023	3:12	11/27/2023	3:19	0	
West Plant FCCU	11/27/2023	4:12	11/27/2023	4:19	0	
West Plant FCCU	11/27/2023	5:12	11/27/2023	5:19	0	
West Plant FCCU	11/27/2023	7:10	11/27/2023	7:16	0	
West Plant FCCU	11/27/2023	10:03	11/27/2023	10:10	0	
West Plant FCCU	11/27/2023	11:03	11/27/2023	11:10	0	
West Plant FCCU	11/27/2023	12:42	11/27/2023	12:49	0	
West Plant FCCU	11/27/2023	13:42	11/27/2023	13:49	0	
West Plant FCCU	11/27/2023	14:42	11/27/2023	14:49	0	
West Plant FCCU	11/27/2023	15:42	11/27/2023	15:59	0	
West Plant FCCU	11/27/2023	16:43	11/27/2023	16:49	0	
West Plant FCCU	11/27/2023	17:43	11/27/2023	17:49	0	
West Plant FCCU	11/27/2023	18:44	11/27/2023	18:49	0	
West Plant FCCU	11/27/2023	19:44	11/27/2023	19:49	0	

TABLE 2-C: VIOLATIONS OF 30% OPACITY LIMIT UNDER CO REG. 1

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
West Plant FCCU	12/20/2023	19:32	12/20/2023	19:38	1	
West Plant FCCU	12/20/2023	20:31	12/20/2023	20:38	0	
West Plant FCCU	12/20/2023	21:31	12/20/2023	21:38	0	
West Plant FCCU	12/20/2023	22:31	12/20/2023	22:38	0	
West Plant FCCU	12/20/2023	23:31	12/20/2023	23:38	0	
West Plant FCCU	12/21/2023	0:31	12/21/2023	0:38	1	
West Plant FCCU	12/21/2023	1:31	12/21/2023	1:38	0	
West Plant FCCU	12/21/2023	2:31	12/21/2023	2:38	0	
West Plant FCCU	12/21/2023	2:31	12/21/2023	3:38	0	
West Plant FCCU	12/21/2023	4:31	12/21/2023	4:38	0	
West Plant FCCU	12/21/2023	5:31	12/21/2023	5:38	0	
West Plant FCCU	12/21/2023	6:32	12/21/2023	6:38	0	
West Plant FCCU	12/21/2023	7:31	12/21/2023	7:38	0	
West Plant FCCU	12/21/2023	8:31	12/21/2023	8:38	0	
West Plant FCCU	12/21/2023	9:31	12/21/2023	9:39	0	
West Plant FCCU	12/21/2023	10:31	12/21/2023	10:38	0	
West Plant FCCU	12/21/2023	11:31	12/21/2023	11:38	0	
West Plant FCCU	12/21/2023	12:31	12/21/2023	12:38	0	
West Plant FCCU	12/21/2023	13:31	12/21/2023	13:38	0	
West Plant FCCU	12/21/2023	14:31	12/21/2023	14:38	0	
West Plant FCCU	12/21/2023	15:32	12/21/2023	15:38	0	
West Plant FCCU	12/21/2023	16:32	12/21/2023	16:38	0	
West Plant FCCU	12/21/2023	17:32	12/21/2023	17:38	0	
West Plant FCCU	12/21/2023	18:33	12/21/2023	18:38	0	
West Plant FCCU	12/21/2023	19:36	12/21/2023	19:38	0	
West Plant FCCU	12/21/2023	20:36	12/21/2023	20:38	0	

TABLE 3: VIOLATIONS OF SIX-MINUTE 20% OPACITY LIMIT UNDER CO REG. 1

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	11/27/2019	15:00	11/27/2019	15:06	1	99
East Plant FCCU	12/11/2019	9:18	12/11/2019	10:18	1	
East Plant FCCU	12/11/2019	10:36	12/11/2019	11:36	0	
East Plant FCCU	12/11/2019	11:42	12/11/2019	15:18	0	
East Plant FCCU	12/18/2019	1:00	12/18/2019	1:12	1	
East Plant FCCU	12/18/2019	15:18	12/18/2019	15:30	0	
East Plant FCCU	12/20/2019	14:24	12/20/2019	14:54	1	
East Plant FCCU	1/3/2020	20:00	1/3/2020	20:06	1	
East Plant FCCU	1/4/2020	9:12	1/4/2020	9:30	1	
East Plant FCCU	1/5/2020	13:36	1/5/2020	13:42	1	
East Plant FCCU	1/5/2020	14:54	1/5/2020	15:00	0	
East Plant FCCU	1/5/2020	18:24	1/5/2020	19:00	0	
East Plant FCCU	1/5/2020	20:06	1/5/2020	21:18	0	
East Plant FCCU	1/5/2020	21:24	1/5/2020	21:36	0	
East Plant FCCU	1/6/2020	0:36	1/6/2020	0:48	1	
East Plant FCCU	1/7/2020	11:30	1/7/2020	11:48	1	
East Plant FCCU	3/17/2020	17:30	3/17/2020	18:24	1	
East Plant FCCU	8/17/2020	1:18	8/17/2020	2:24	1	
East Plant FCCU	8/26/2020	15:54	8/26/2020	16:00	1	
East Plant FCCU	8/26/2020	21:30	8/26/2020	22:00	0	
East Plant FCCU	8/26/2020	23:42	8/26/2020	23:54	0	
East Plant FCCU	11/4/2020	20:36	11/4/2020	20:42	1	
East Plant FCCU	11/5/2020	15:36	11/5/2020	16:06	1	
East Plant FCCU	12/10/2020	14:48	12/10/2020	14:54	1	
East Plant FCCU	3/22/2021	11:54	3/22/2021	12:18	1	
East Plant FCCU	4/13/2021	14:00	4/13/2021	14:06	1	
East Plant FCCU	8/18/2021	17:54	8/18/2021	18:00	1	
East Plant FCCU	8/26/2021	14:00	8/26/2021	14:30	1	
East Plant FCCU	8/27/2021	1:18	8/27/2021	1:54	1	
East Plant FCCU	8/27/2021	9:54	8/27/2021	10:12	0	
East Plant FCCU	8/27/2021	14:48	8/27/2021	15:18	0	
East Plant FCCU	8/27/2021	22:18	8/27/2021	23:06	0	
East Plant FCCU	8/28/2021	8:36	8/28/2021	9:06	1	
East Plant FCCU	8/28/2021	19:36	8/28/2021	19:42	0	
East Plant FCCU	8/28/2021	20:00	8/28/2021	20:12	0	
East Plant FCCU	8/28/2021	21:06	8/28/2021	21:18	0	
East Plant FCCU	9/5/2021	8:06	9/5/2021	8:18	1	
East Plant FCCU	9/10/2021	0:06	9/10/2021	0:12	1	
East Plant FCCU	9/10/2021	18:00	9/10/2021	18:06	0	
East Plant FCCU	11/2/2021	10:24	11/2/2021	10:30	1	
East Plant FCCU	11/2/2021	14:06	11/2/2021	14:18	0	
East Plant FCCU	11/2/2021	15:12	11/2/2021	15:18	0	
East Plant FCCU	11/2/2021	15:30	11/2/2021	15:36	0	
East Plant FCCU	11/2/2021	15:42	11/2/2021	15:54	0	
East Plant FCCU	11/2/2021	16:00	11/2/2021	16:12	0	
East Plant FCCU	11/2/2021	16:30	11/2/2021	16:36	0	
East Plant FCCU	11/8/2021	17:12	11/8/2021	17:48	1	

TABLE 3: VIOLATIONS OF SIX-MINUTE 20% OPACITY LIMIT UNDER CO REG. 1

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	11/9/2021	1:48	11/9/2021	1:54	1	
East Plant FCCU	11/9/2021	9:36	11/9/2021	9:42	0	
East Plant FCCU	11/9/2021	19:24	11/9/2021	19:30	0	
East Plant FCCU	11/9/2021	22:30	11/9/2021	22:36	0	
East Plant FCCU	11/9/2021	22:42	11/9/2021	22:48	0	
East Plant FCCU	11/10/2021	0:30	11/10/2021	0:36	1	
East Plant FCCU	11/10/2021	2:30	11/10/2021	2:36	0	
East Plant FCCU	11/10/2021	5:30	11/10/2021	5:42	0	
East Plant FCCU	11/15/2021	10:42	11/15/2021	12:18	1	
East Plant FCCU	11/15/2021	12:42	11/15/2021	12:48	0	
East Plant FCCU	11/15/2021	20:12	11/15/2021	20:24	0	
East Plant FCCU	11/15/2021	20:54	11/15/2021	21:00	0	
East Plant FCCU	11/15/2021	21:24	11/15/2021	21:36	0	
East Plant FCCU	11/16/2021	1:00	11/16/2021	1:06	1	
East Plant FCCU	11/16/2021	1:48	11/16/2021	2:00	0	
East Plant FCCU	11/16/2021	4:54	11/16/2021	5:12	0	
East Plant FCCU	11/16/2021	6:18	11/16/2021	6:36	0	
East Plant FCCU	11/16/2021	7:00	11/16/2021	8:54	0	
East Plant FCCU	11/17/2021	15:36	11/18/2021	1:36	2	
East Plant FCCU	11/18/2021	6:48	11/18/2021	8:18	0	
East Plant FCCU	11/18/2021	9:00	11/18/2021	9:06	0	
East Plant FCCU	11/18/2021	10:42	11/18/2021	10:48	0	
East Plant FCCU	11/18/2021	11:00	11/18/2021	11:06	0	
East Plant FCCU	11/18/2021	11:30	11/18/2021	12:48	0	
East Plant FCCU	11/18/2021	15:06	11/18/2021	15:30	0	
East Plant FCCU	2/9/2022	6:54	2/9/2022	7:30	1	
East Plant FCCU	2/13/2022	19:42	2/13/2022	19:54	1	
East Plant FCCU	2/13/2022	20:00	2/13/2022	20:42	0	
East Plant FCCU	2/14/2022	0:00	2/14/2022	0:06	1	
East Plant FCCU	4/4/2022	16:06	4/4/2022	16:18	1	
East Plant FCCU	4/4/2022	19:36	4/4/2022	19:42	0	
East Plant FCCU	4/4/2022	23:00	4/4/2022	23:06	0	
East Plant FCCU	4/5/2022	2:06	4/5/2022	2:12	1	
East Plant FCCU	2/10/2023	23:06	2/10/2023	23:18	1	
East Plant FCCU	2/16/2023	18:42	2/16/2023	19:00	1	
East Plant FCCU	2/17/2023	22:18	2/17/2023	22:24	1	
East Plant FCCU	2/17/2023	22:42	2/17/2023	23:00	0	
East Plant FCCU	2/23/2023	0:42	2/23/2023	0:45	1	
East Plant FCCU	2/23/2023	5:18	2/23/2023	5:24	0	
East Plant FCCU	2/24/2023	9:42	2/24/2023	9:54	1	
East Plant FCCU	2/25/2023	6:48	2/25/2023	7:24	1	
East Plant FCCU	2/25/2023	8:54	2/26/2023	9:36	1	
East Plant FCCU	2/25/2023	10:18	2/25/2023	10:45	1	
East Plant FCCU	2/25/2023	11:48	2/25/2023	12:18	0	
East Plant FCCU	2/25/2023	15:42	2/25/2023	15:48	0	
East Plant FCCU	2/25/2023	18:12	2/25/2023	18:18	0	
East Plant FCCU	2/25/2023	19:06	2/25/2023	19:12	0	

TABLE 3: VIOLATIONS OF SIX-MINUTE 20% OPACITY LIMIT UNDER CO REG. 1

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	6/13/2023	12:00	6/13/2023	12:06	1	
East Plant FCCU	6/21/2023	13:00	6/21/2023	13:06	1	
East Plant FCCU	6/29/2023	0:00	6/29/2023	0:00	1	

TABLE 4: VIOLATIONS OF THREE-HOUR 20% OPACITY LIMIT UNDER MACT UUU

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	12/11/2019	10:00	12/11/2019	16:00	1	20
East Plant FCCU	1/5/2020	20:00	1/5/2020	23:00	1	
East Plant FCCU	3/17/2020	18:00	3/17/2020	20:00	1	
East Plant FCCU	11/15/2021	12:00	11/15/2021	14:00	1	
East Plant FCCU	11/16/2021	8:00	11/16/2021	10:00	1	
East Plant FCCU	11/17/2021	17:00	11/18/2021	3:00	2	
East Plant FCCU	11/18/2021	7:00	11/18/2021	10:00	0	
East Plant FCCU	11/18/2021	11:00	11/18/2021	14:00	0	
East Plant FCCU	2/25/2023	11:00	2/25/2023	14:00	1	
East Plant FCCU	7/5/2023	8:00	7/5/2023	10:00	1	
West Plant FCCU	5/18/2020	11:00	5/19/2020	12:00	2	
West Plant FCCU	5/20/2020	5:00	5/20/2020	7:00	1	
West Plant FCCU	10/22/2020	16:00	10/22/2020	21:00	1	
West Plant FCCU	6/3/2022	12:24	6/3/2022	12:36	1	
West Plant FCCU	3/29/2023	9:00	3/29/2023	19:00	1	
West Plant FCCU	3/29/2023	23:00	3/30/2023	3:00	1	
West Plant FCCU	3/31/2023	8:00	4/1/2023	0:00	2	
West Plant FCCU	4/1/2023	0:00	4/1/2023	1:00	0	
West Plant FCCU	4/1/2023	2:00	4/2/2023	14:00	1	
West Plant FCCU	4/2/2023	21:00	4/3/2023	5:00	1	

TABLE 5-A: VIOLATIONS OF 500 PPMV CO LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	8/20/2019	10:00	8/20/2019	11:00	1	102
East Plant FCCU	11/27/2019	6:00	11/27/2019	16:00	1	
East Plant FCCU	12/9/2019	20:00	12/9/2019	21:00	1	
East Plant FCCU	12/9/2019	23:00	12/10/2019	1:00	1	
East Plant FCCU	12/11/2019	4:00	12/11/2019	12:00	1	
East Plant FCCU	12/11/2019	13:00	12/11/2019	16:00	0	
East Plant FCCU	1/4/2020	9:00	1/4/2020	10:00	1	
East Plant FCCU	1/4/2020	11:00	1/4/2020	12:00	0	
East Plant FCCU	1/4/2020	13:00	1/4/2020	14:00	0	
East Plant FCCU	1/4/2020	18:00	1/4/2020	20:00	0	
East Plant FCCU	1/5/2020	11:00	1/5/2020	13:00	1	
East Plant FCCU	1/5/2020	16:00	1/5/2020	18:00	0	
East Plant FCCU	1/5/2020	20:00	1/5/2020	21:00	0	
East Plant FCCU	1/7/2020	11:00	1/7/2020	19:00	1	
East Plant FCCU	8/25/2020	16:00	8/25/2020	17:00	1	
East Plant FCCU	8/26/2020	20:00	8/27/2020	6:00	2	
East Plant FCCU	11/5/2020	19:00	11/5/2020	20:00	1	
East Plant FCCU	11/6/2020	10:00	11/7/2020	18:00	2	
East Plant FCCU	11/30/2020	9:00	11/30/2020	20:00	1	
East Plant FCCU	3/22/2021	7:00	3/22/2021	19:00	1	
East Plant FCCU	3/25/2021	8:00	3/25/2021	19:00	1	
East Plant FCCU	4/13/2021	7:00	4/13/2021	18:00	1	
East Plant FCCU	4/30/2021	12:00	4/30/2021	13:00	1	
East Plant FCCU	8/26/2021	22:00	8/26/2021	23:00	1	
East Plant FCCU	8/27/2021	4:00	8/27/2021	6:00	1	
East Plant FCCU	8/28/2021	19:00	8/28/2021	22:00	1	
East Plant FCCU	8/29/2021	2:00	8/29/2021	8:00	1	
East Plant FCCU	9/10/2021	10:00	9/10/2021	20:00	1	
East Plant FCCU	11/2/2021	11:00	11/2/2021	22:00	1	
East Plant FCCU	11/3/2021	7:00	11/3/2021	10:00	1	
East Plant FCCU	11/16/2021	22:00	11/17/2021	6:00	2	
East Plant FCCU	11/17/2021	14:00	11/17/2021	17:00	0	
East Plant FCCU	11/18/2021	11:00	11/18/2021	16:00	1	
East Plant FCCU	1/27/2022	1:00	1/27/2022	15:00	1	
East Plant FCCU	1/28/2022	9:00	1/28/2022	18:00	1	
East Plant FCCU	2/14/2022	12:00	2/14/2022	18:00	1	
East Plant FCCU	2/14/2022	22:00	2/15/2022	1:00	1	
East Plant FCCU	4/2/2022	23:00	4/3/2022	0:00	2	
East Plant FCCU	4/3/2022	7:00	4/3/2022	8:00	0	
East Plant FCCU	4/3/2022	10:00	4/3/2022	14:00	0	
East Plant FCCU	4/4/2022	16:00	4/5/2022	2:00	2	
East Plant FCCU	7/26/2022	11:00	7/26/2022	16:00	1	
East Plant FCCU	2/15/2023	13:00	2/15/2023	17:00	1	
East Plant FCCU	2/16/2023	15:00	2/16/2023	22:00	1	
East Plant FCCU	2/17/2023	21:00	2/18/2023	4:00	2	
East Plant FCCU	2/25/2023	0:00	2/25/2023	10:00	1	
East Plant FCCU	2/25/2023	14:00	2/26/2023	9:00	1	

TABLE 5-A: VIOLATIONS OF 500 PPMV CO LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	6/21/2023	11:00	6/21/2023	19:00	1	
East Plant FCCU	7/5/2023	7:00	7/5/2023	22:00	1	
East Plant FCCU	12/21/2023	5:00	12/21/2023	7:00	1	
East Plant FCCU	12/22/2023	1:00	12/22/2023	10:00	1	
West Plant FCCU	1/9/2020	11:00	1/9/2020	12:00	1	
West Plant FCCU	4/7/2020	19:00	4/8/2020	7:00	2	
West Plant FCCU	5/17/2020	9:00	5/19/2020	12:00	3	
West Plant FCCU	5/21/2020	2:00	5/21/2020	7:00	1	
West Plant FCCU	5/21/2020	11:00	5/21/2020	12:00	0	
West Plant FCCU	5/21/2020	14:00	5/21/2020	15:00	0	
West Plant FCCU	5/22/2020	6:00	5/22/2020	7:00	1	
West Plant FCCU	8/13/2020	13:00	8/13/2020	17:00	1	
West Plant FCCU	8/14/2020	3:00	8/14/2020	6:00	1	
West Plant FCCU	10/21/2020	16:00	10/21/2020	17:00	1	
West Plant FCCU	11/7/2020	23:00	11/8/2020	16:00	2	
West Plant FCCU	11/8/2020	18:00	11/9/2020	12:00	1	
West Plant FCCU	11/9/2020	18:00	11/9/2020	19:00	0	
West Plant FCCU	11/9/2020	22:00	11/10/2020	6:00	1	
West Plant FCCU	11/12/2020	2:00	11/12/2020	3:00	1	
West Plant FCCU	11/12/2020	6:00	11/12/2020	12:00	0	
West Plant FCCU	11/19/2020	14:00	11/20/2020	4:00	2	
West Plant FCCU	4/19/2021	6:00	4/19/2021	7:00	1	
West Plant FCCU	6/21/2021	23:00	6/22/2021	18:00	2	
West Plant FCCU	6/30/2021	8:00	7/1/2021	0:00	2	
West Plant FCCU	7/1/2021	0:00	7/1/2021	14:00	0	
West Plant FCCU	7/1/2021	16:00	7/2/2021	2:00	1	
West Plant FCCU	7/2/2021	13:00	7/2/2021	14:00	0	
West Plant FCCU	7/2/2021	17:00	7/2/2021	18:00	0	
West Plant FCCU	7/3/2021	4:00	7/3/2021	10:00	1	
West Plant FCCU	7/3/2021	15:00	7/3/2021	18:00	0	
West Plant FCCU	7/4/2021	0:00	7/4/2021	8:00	1	
West Plant FCCU	7/12/2021	12:00	7/13/2021	12:00	2	
West Plant FCCU	10/26/2021	7:00	10/27/2021	3:00	2	
West Plant FCCU	3/17/2022	12:00	3/17/2022	18:00	1	
West Plant FCCU	3/19/2022	23:00	3/20/2022	0:00	2	
West Plant FCCU	3/20/2022	5:00	3/20/2022	7:00	0	
West Plant FCCU	3/21/2022	6:00	3/21/2022	9:00	1	
West Plant FCCU	3/21/2022	10:00	3/21/2022	21:00	0	
West Plant FCCU	5/9/2022	14:00	5/9/2022	22:00	1	
West Plant FCCU	6/2/2022	1:00	6/3/2022	2:00	2	
West Plant FCCU	6/3/2022	3:00	6/3/2022	14:00	0	
West Plant FCCU	8/7/2022	20:00	8/7/2022	21:00	1	
West Plant FCCU	10/4/2022	8:00	10/4/2022	9:00	1	
West Plant FCCU	3/28/2023	9:00	3/29/2023	15:00	2	
West Plant FCCU	3/30/2023	21:00	3/31/2023	23:59	2	
West Plant FCCU	4/1/2023	0:00	4/1/2023	16:00	1	
West Plant FCCU	9/1/2023	17:00	9/1/2023	18:00	1	

TABLE 5-A: VIOLATIONS OF 500 PPMV CO LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
West Plant FCCU	9/1/2023	22:00	9/1/2023	23:00	0	
West Plant FCCU	9/2/2023	13:00	9/3/2023	17:00	2	
West Plant FCCU	9/3/2023	18:00	9/3/2023	23:00	0	
West Plant FCCU	11/19/2023	4:00	11/19/2023	18:00	1	
West Plant FCCU	11/26/2023	14:00	11/27/2023	12:00	2	
West Plant FCCU	12/16/2023	0:00	12/16/2023	4:00	1	
West Plant FCCU	12/19/2023	14:00	12/21/2023	9:00	3	

TABLE 5-B: VIOLATIONS OF 500 PPMV CO LIMIT UNDER NSPS SUBPART JA

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	8/20/2019	10:00	8/20/2019	11:00	1	48
East Plant FCCU	11/27/2019	6:00	11/27/2019	16:00	1	
East Plant FCCU	12/9/2019	20:00	12/9/2019	21:00	1	
East Plant FCCU	12/9/2019	23:00	12/10/2019	1:00	1	
East Plant FCCU	12/11/2019	4:00	12/11/2019	12:00	1	
East Plant FCCU	12/11/2019	13:00	12/11/2019	16:00	0	
East Plant FCCU	1/4/2020	9:00	1/4/2020	10:00	1	
East Plant FCCU	1/4/2020	11:00	1/4/2020	12:00	0	
East Plant FCCU	1/4/2020	13:00	1/4/2020	14:00	0	
East Plant FCCU	1/4/2020	18:00	1/4/2020	20:00	0	
East Plant FCCU	1/5/2020	11:00	1/5/2020	13:00	1	
East Plant FCCU	1/5/2020	16:00	1/5/2020	18:00	0	
East Plant FCCU	1/5/2020	20:00	1/5/2020	21:00	0	
East Plant FCCU	1/7/2020	11:00	1/7/2020	19:00	1	
East Plant FCCU	8/25/2020	16:00	8/25/2020	17:00	1	
East Plant FCCU	8/26/2020	20:00	8/27/2020	6:00	2	
East Plant FCCU	11/5/2020	19:00	11/5/2020	20:00	1	
East Plant FCCU	11/6/2020	10:00	11/7/2020	18:00	2	
East Plant FCCU	11/30/2020	9:00	11/30/2020	20:00	1	
East Plant FCCU	3/22/2021	7:00	3/22/2021	19:00	1	
East Plant FCCU	3/25/2021	8:00	3/25/2021	19:00	1	
East Plant FCCU	4/13/2021	7:00	4/13/2021	18:00	1	
East Plant FCCU	4/30/2021	12:00	4/30/2021	13:00	1	
East Plant FCCU	8/26/2021	22:00	8/26/2021	23:00	1	
East Plant FCCU	8/27/2021	4:00	8/27/2021	6:00	1	
East Plant FCCU	8/28/2021	19:00	8/28/2021	22:00	1	
East Plant FCCU	8/29/2021	2:00	8/29/2021	8:00	1	
East Plant FCCU	9/10/2021	10:00	9/10/2021	20:00	1	
East Plant FCCU	11/2/2021	11:00	11/2/2021	22:00	1	
East Plant FCCU	11/3/2021	7:00	11/3/2021	10:00	1	
East Plant FCCU	11/16/2021	22:00	11/17/2021	6:00	2	
East Plant FCCU	11/17/2021	14:00	11/17/2021	17:00	0	
East Plant FCCU	11/18/2021	11:00	11/18/2021	16:00	1	
East Plant FCCU	1/27/2022	1:00	1/27/2022	15:00	1	
East Plant FCCU	1/28/2022	9:00	1/28/2022	18:00	1	
East Plant FCCU	2/14/2022	12:00	2/14/2022	18:00	1	
East Plant FCCU	2/14/2022	22:00	2/15/2022	1:00	1	
East Plant FCCU	4/2/2022	23:00	4/3/2022	0:00	2	
East Plant FCCU	4/3/2022	7:00	4/3/2022	8:00	0	
East Plant FCCU	4/3/2022	10:00	4/3/2022	14:00	0	
East Plant FCCU	4/4/2022	16:00	4/5/2022	2:00	2	
East Plant FCCU	7/26/2022	11:00	7/26/2022	16:00	1	
East Plant FCCU	2/15/2023	13:00	2/15/2023	17:00	1	
East Plant FCCU	2/16/2023	15:00	2/16/2023	22:00	1	
East Plant FCCU	2/17/2023	21:00	2/18/2023	4:00	2	
East Plant FCCU	2/25/2023	0:00	2/25/2023	10:00	1	

TABLE 5-B: VIOLATIONS OF 500 PPMV CO LIMIT UNDER NSPS SUBPART JA

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	2/25/2023	14:00	2/26/2023	9:00	1	
East Plant FCCU	6/21/2023	11:00	6/21/2023	19:00	1	
East Plant FCCU	7/5/2023	7:00	7/5/2023	22:00	1	
East Plant FCCU	12/21/2023	5:00	12/21/2023	7:00	1	
East Plant FCCU	12/22/2023	1:00	12/22/2023	10:00	1	

TABLE 5-C: VIOLATIONS OF 500 PPMV CO LIMIT UNDER MACT UUU

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	8/20/2019	10:00	8/20/2019	11:00	1	101
East Plant FCCU	11/27/2019	6:00	11/27/2019	16:00	1	
East Plant FCCU	12/9/2019	20:00	12/9/2019	21:00	1	
East Plant FCCU	12/9/2019	23:00	12/10/2019	1:00	1	
East Plant FCCU	12/11/2019	4:00	12/11/2019	12:00	1	
East Plant FCCU	12/11/2019	13:00	12/11/2019	16:00	0	
East Plant FCCU	1/4/2020	9:00	1/4/2020	10:00	1	
East Plant FCCU	1/4/2020	11:00	1/4/2020	12:00	0	
East Plant FCCU	1/4/2020	13:00	1/4/2020	14:00	0	
East Plant FCCU	1/4/2020	18:00	1/4/2020	20:00	0	
East Plant FCCU	1/5/2020	11:00	1/5/2020	13:00	1	
East Plant FCCU	1/5/2020	16:00	1/5/2020	18:00	0	
East Plant FCCU	1/5/2020	20:00	1/5/2020	21:00	0	
East Plant FCCU	1/7/2020	11:00	1/7/2020	19:00	1	
East Plant FCCU	8/25/2020	16:00	8/25/2020	17:00	1	
East Plant FCCU	8/26/2020	20:00	8/27/2020	6:00	2	
East Plant FCCU	11/5/2020	19:00	11/5/2020	20:00	1	
East Plant FCCU	11/6/2020	10:00	11/7/2020	18:00	2	
East Plant FCCU	11/30/2020	9:00	11/30/2020	20:00	1	
East Plant FCCU	3/22/2021	7:00	3/22/2021	19:00	1	
East Plant FCCU	3/25/2021	8:00	3/25/2021	19:00	1	
East Plant FCCU	4/13/2021	7:00	4/13/2021	18:00	1	
East Plant FCCU	4/30/2021	12:00	4/30/2021	13:00	1	
East Plant FCCU	8/26/2021	22:00	8/26/2021	23:00	1	
East Plant FCCU	8/27/2021	4:00	8/27/2021	6:00	1	
East Plant FCCU	8/28/2021	19:00	8/28/2021	22:00	1	
East Plant FCCU	8/29/2021	2:00	8/29/2021	8:00	1	
East Plant FCCU	9/10/2021	10:00	9/10/2021	20:00	1	
East Plant FCCU	11/2/2021	11:00	11/2/2021	22:00	1	
East Plant FCCU	11/3/2021	7:00	11/3/2021	10:00	1	
East Plant FCCU	11/16/2021	22:00	11/17/2021	6:00	2	
East Plant FCCU	11/17/2021	14:00	11/17/2021	17:00	0	
East Plant FCCU	11/18/2021	11:00	11/18/2021	16:00	1	
East Plant FCCU	1/27/2022	1:00	1/27/2022	15:00	1	
East Plant FCCU	1/28/2022	9:00	1/28/2022	18:00	1	
East Plant FCCU	2/14/2022	12:00	2/14/2022	18:00	1	
East Plant FCCU	2/14/2022	22:00	2/15/2022	1:00	1	
East Plant FCCU	4/2/2022	23:00	4/3/2022	0:00	2	
East Plant FCCU	4/3/2022	7:00	4/3/2022	8:00	0	
East Plant FCCU	4/3/2022	10:00	4/3/2022	14:00	0	
East Plant FCCU	4/4/2022	16:00	4/5/2022	2:00	2	
East Plant FCCU	7/26/2022	11:00	7/26/2022	16:00	1	
East Plant FCCU	2/15/2023	13:00	2/15/2023	17:00	1	
East Plant FCCU	2/16/2023	15:00	2/16/2023	22:00	1	
East Plant FCCU	2/17/2023	21:00	2/18/2023	4:00	2	

TABLE 5-C: VIOLATIONS OF 500 PPMV CO LIMIT UNDER MACT UUU

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	2/25/2023	0:00	2/25/2023	10:00	1	
East Plant FCCU	2/25/2023	14:00	2/26/2023	9:00	1	
East Plant FCCU	6/21/2023	11:00	6/21/2023	19:00	1	
East Plant FCCU	7/5/2023	7:00	7/5/2023	22:00	1	
East Plant FCCU	12/22/2023	1:00	12/22/2023	10:00	1	
West Plant FCCU	1/9/2020	11:00	1/9/2020	12:00	1	
West Plant FCCU	4/7/2020	19:00	4/8/2020	1:00	2	
West Plant FCCU	5/17/2020	9:00	5/19/2020	12:00	3	
West Plant FCCU	5/21/2020	2:00	5/21/2020	7:00	1	
West Plant FCCU	5/21/2020	11:00	5/21/2020	12:00	0	
West Plant FCCU	5/21/2020	14:00	5/21/2020	15:00	0	
West Plant FCCU	5/22/2020	6:00	5/22/2020	7:00	1	
West Plant FCCU	8/13/2020	13:00	8/13/2020	17:00	1	
West Plant FCCU	8/14/2020	3:00	8/14/2020	6:00	1	
West Plant FCCU	10/21/2020	16:00	10/21/2020	17:00	1	
West Plant FCCU	11/7/2020	23:00	11/8/2020	16:00	2	
West Plant FCCU	11/8/2020	18:00	11/9/2020	12:00	1	
West Plant FCCU	11/9/2020	18:00	11/9/2020	19:00	0	
West Plant FCCU	11/9/2020	22:00	11/10/2020	6:00	1	
West Plant FCCU	11/12/2020	2:00	11/12/2020	3:00	1	
West Plant FCCU	11/12/2020	6:00	11/12/2020	12:00	0	
West Plant FCCU	11/19/2020	14:00	11/20/2020	4:00	2	
West Plant FCCU	4/19/2021	6:00	4/19/2021	7:00	1	
West Plant FCCU	6/21/2021	23:00	6/22/2021	18:00	2	
West Plant FCCU	6/30/2021	8:00	7/1/2021	0:00	2	
West Plant FCCU	7/1/2021	0:00	7/1/2021	14:00	0	
West Plant FCCU	7/1/2021	16:00	7/2/2021	2:00	1	
West Plant FCCU	7/2/2021	13:00	7/2/2021	14:00	0	
West Plant FCCU	7/2/2021	17:00	7/2/2021	18:00	0	
West Plant FCCU	7/3/2021	4:00	7/3/2021	10:00	1	
West Plant FCCU	7/3/2021	15:00	7/3/2021	18:00	0	
West Plant FCCU	7/4/2021	0:00	7/4/2021	8:00	1	
West Plant FCCU	7/12/2021	12:00	7/13/2021	12:00	2	
West Plant FCCU	10/26/2021	7:00	10/27/2021	3:00	2	
West Plant FCCU	3/17/2022	12:00	3/17/2022	18:00	1	
West Plant FCCU	3/19/2022	23:00	3/20/2022	0:00	2	
West Plant FCCU	3/20/2022	5:00	3/20/2022	7:00	0	
West Plant FCCU	3/21/2022	6:00	3/21/2022	9:00	1	
West Plant FCCU	3/21/2022	10:00	3/21/2022	21:00	0	
West Plant FCCU	5/9/2022	14:00	5/9/2022	22:00	1	
West Plant FCCU	6/2/2022	1:00	6/3/2022	2:00	2	
West Plant FCCU	6/3/2022	3:00	6/3/2022	14:00	0	
West Plant FCCU	8/7/2022	20:00	8/7/2022	21:00	1	
West Plant FCCU	10/4/2022	8:00	10/4/2022	9:00	1	
West Plant FCCU	3/28/2023	9:00	3/28/2023	20:00	1	

TABLE 5-C: VIOLATIONS OF 500 PPMV CO LIMIT UNDER MACT UUU

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
West Plant FCCU	3/28/2023	21:00	3/29/2023	6:00	1	
West Plant FCCU	3/29/2023	8:00	3/29/2023	11:00	0	
West Plant FCCU	3/30/2023	21:00	3/31/2023	23:59	2	
West Plant FCCU	4/1/2023	0:00	4/1/2023	16:00	1	
West Plant FCCU	9/1/2023	17:00	9/1/2023	18:00	1	
West Plant FCCU	9/1/2023	22:00	9/1/2023	23:00	0	
West Plant FCCU	9/2/2023	13:00	9/3/2023	17:00	2	
West Plant FCCU	9/3/2023	18:00	9/3/2023	23:00	0	
West Plant FCCU	11/19/2023	4:00	11/19/2023	18:00	1	
West Plant FCCU	11/26/2023	14:00	11/27/2023	12:00	2	
West Plant FCCU	12/16/2023	0:00	12/16/2023	1:00	1	
West Plant FCCU	12/16/2023	2:00	12/16/2023	3:00	0	
West Plant FCCU	12/19/2023	14:00	12/20/2023	22:00	2	
West Plant FCCU	12/20/2023	23:00	12/21/2023	2:00	1	
West Plant FCCU	12/21/2023	4:00	12/21/2023	9:00	0	

TABLE 5-D: VIOLATIONS OF 500 PPMV CO LIMIT UNDER WEST PLANT CONSENT DECREE

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
West Plant FCCU	1/9/2020	11:00	1/9/2020	12:00	1	54
West Plant FCCU	4/7/2020	19:00	4/8/2020	7:00	2	
West Plant FCCU	5/17/2020	9:00	5/19/2020	12:00	3	
West Plant FCCU	5/21/2020	2:00	5/21/2020	7:00	1	
West Plant FCCU	5/21/2020	11:00	5/21/2020	12:00	0	
West Plant FCCU	5/21/2020	14:00	5/21/2020	15:00	0	
West Plant FCCU	5/22/2020	6:00	5/22/2020	7:00	1	
West Plant FCCU	8/13/2020	13:00	8/13/2020	17:00	1	
West Plant FCCU	8/14/2020	3:00	8/14/2020	6:00	1	
West Plant FCCU	10/21/2020	16:00	10/21/2020	17:00	1	
West Plant FCCU	11/7/2020	23:00	11/8/2020	16:00	2	
West Plant FCCU	11/8/2020	18:00	11/9/2020	12:00	1	
West Plant FCCU	11/9/2020	18:00	11/9/2020	19:00	0	
West Plant FCCU	11/9/2020	22:00	11/10/2020	6:00	1	
West Plant FCCU	11/12/2020	2:00	11/12/2020	3:00	1	
West Plant FCCU	11/12/2020	6:00	11/12/2020	12:00	0	
West Plant FCCU	11/19/2020	14:00	11/20/2020	4:00	2	
West Plant FCCU	4/19/2021	6:00	4/19/2021	7:00	1	
West Plant FCCU	6/21/2021	23:00	6/22/2021	18:00	2	
West Plant FCCU	6/30/2021	8:00	7/1/2021	0:00	2	
West Plant FCCU	7/1/2021	0:00	7/1/2021	14:00	0	
West Plant FCCU	7/1/2021	16:00	7/2/2021	2:00	1	
West Plant FCCU	7/2/2021	13:00	7/2/2021	14:00	0	
West Plant FCCU	7/2/2021	17:00	7/2/2021	18:00	0	
West Plant FCCU	7/3/2021	4:00	7/3/2021	10:00	1	
West Plant FCCU	7/3/2021	15:00	7/3/2021	18:00	0	
West Plant FCCU	7/4/2021	0:00	7/4/2021	8:00	1	
West Plant FCCU	7/12/2021	12:00	7/13/2021	12:00	2	
West Plant FCCU	10/26/2021	7:00	10/27/2021	3:00	2	
West Plant FCCU	3/17/2022	12:00	3/17/2022	18:00	1	
West Plant FCCU	3/19/2022	23:00	3/20/2022	0:00	2	
West Plant FCCU	3/20/2022	5:00	3/20/2022	7:00	0	
West Plant FCCU	3/21/2022	6:00	3/21/2022	9:00	1	
West Plant FCCU	3/21/2022	10:00	3/21/2022	21:00	0	
West Plant FCCU	5/9/2022	14:00	5/9/2022	22:00	1	
West Plant FCCU	6/2/2022	1:00	6/3/2022	2:00	2	
West Plant FCCU	6/3/2022	3:00	6/3/2022	14:00	0	
West Plant FCCU	8/7/2022	20:00	8/7/2022	21:00	1	
West Plant FCCU	10/4/2022	8:00	10/4/2022	9:00	1	
West Plant FCCU	3/28/2023	9:00	3/29/2023	15:00	2	
West Plant FCCU	3/30/2023	21:00	3/31/2023	23:59	2	
West Plant FCCU	4/1/2023	0:00	4/1/2023	16:00	1	
West Plant FCCU	9/1/2023	17:00	9/1/2023	18:00	1	
West Plant FCCU	9/1/2023	22:00	9/1/2023	23:00	0	
West Plant FCCU	9/2/2023	13:00	9/3/2023	17:00	2	
West Plant FCCU	9/3/2023	18:00	9/3/2023	23:00	0	
West Plant FCCU	11/19/2023	4:00	11/19/2023	18:00	1	

TABLE 5-D: VIOLATIONS OF 500 PPMV CO LIMIT UNDER WEST PLANT CONSENT DECREE

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
West Plant FCCU	11/26/2023	14:00	11/27/2023	12:00	2	
West Plant FCCU	12/16/2023	0:00	12/16/2023	4:00	1	
West Plant FCCU	12/19/2023	14:00	12/21/2023	9:00	3	

TABLE 5-E: VIOLATIONS OF 500 PPMV CO LIMIT UNDER EAST PLANT CONSENT DECREE

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	8/20/2019	10:00	8/20/2019	11:00	1	48
East Plant FCCU	11/27/2019	6:00	11/27/2019	16:00	1	
East Plant FCCU	12/9/2019	20:00	12/9/2019	21:00	1	
East Plant FCCU	12/9/2019	23:00	12/10/2019	1:00	1	
East Plant FCCU	12/11/2019	4:00	12/11/2019	12:00	1	
East Plant FCCU	12/11/2019	13:00	12/11/2019	16:00	0	
East Plant FCCU	1/4/2020	9:00	1/4/2020	10:00	1	
East Plant FCCU	1/4/2020	11:00	1/4/2020	12:00	0	
East Plant FCCU	1/4/2020	13:00	1/4/2020	14:00	0	
East Plant FCCU	1/4/2020	18:00	1/4/2020	20:00	0	
East Plant FCCU	1/5/2020	11:00	1/5/2020	13:00	1	
East Plant FCCU	1/5/2020	16:00	1/5/2020	18:00	0	
East Plant FCCU	1/5/2020	20:00	1/5/2020	21:00	0	
East Plant FCCU	1/7/2020	11:00	1/7/2020	19:00	1	
East Plant FCCU	8/25/2020	16:00	8/25/2020	17:00	1	
East Plant FCCU	8/26/2020	20:00	8/27/2020	6:00	2	
East Plant FCCU	11/5/2020	19:00	11/5/2020	20:00	1	
East Plant FCCU	11/6/2020	10:00	11/7/2020	18:00	2	
East Plant FCCU	11/30/2020	9:00	11/30/2020	20:00	1	
East Plant FCCU	3/22/2021	7:00	3/22/2021	19:00	1	
East Plant FCCU	3/25/2021	8:00	3/25/2021	19:00	1	
East Plant FCCU	4/13/2021	7:00	4/13/2021	18:00	1	
East Plant FCCU	4/30/2021	12:00	4/30/2021	13:00	1	
East Plant FCCU	8/26/2021	22:00	8/26/2021	23:00	1	
East Plant FCCU	8/27/2021	4:00	8/27/2021	6:00	1	
East Plant FCCU	8/28/2021	19:00	8/28/2021	22:00	1	
East Plant FCCU	8/29/2021	2:00	8/29/2021	8:00	1	
East Plant FCCU	9/10/2021	10:00	9/10/2021	20:00	1	
East Plant FCCU	11/2/2021	11:00	11/2/2021	22:00	1	
East Plant FCCU	11/3/2021	7:00	11/3/2021	10:00	1	
East Plant FCCU	11/16/2021	22:00	11/17/2021	6:00	2	
East Plant FCCU	11/17/2021	14:00	11/17/2021	17:00	0	
East Plant FCCU	11/18/2021	11:00	11/18/2021	16:00	1	
East Plant FCCU	1/27/2022	1:00	1/27/2022	15:00	1	
East Plant FCCU	1/28/2022	9:00	1/28/2022	18:00	1	
East Plant FCCU	2/14/2022	12:00	2/14/2022	18:00	1	
East Plant FCCU	2/14/2022	22:00	2/15/2022	1:00	1	
East Plant FCCU	4/2/2022	23:00	4/3/2022	0:00	2	
East Plant FCCU	4/3/2022	7:00	4/3/2022	8:00	0	
East Plant FCCU	4/3/2022	10:00	4/3/2022	14:00	0	
East Plant FCCU	4/4/2022	16:00	4/5/2022	2:00	2	
East Plant FCCU	7/26/2022	11:00	7/26/2022	16:00	1	
East Plant FCCU	2/15/2023	13:00	2/15/2023	17:00	1	
East Plant FCCU	2/16/2023	15:00	2/16/2023	22:00	1	
East Plant FCCU	2/17/2023	21:00	2/18/2023	4:00	2	
East Plant FCCU	2/25/2023	0:00	2/25/2023	10:00	1	

TABLE 5-E: VIOLATIONS OF 500 PPMV CO LIMIT UNDER EAST PLANT CONSENT DECREE

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	2/25/2023	14:00	2/26/2023	9:00	1	
East Plant FCCU	6/21/2023	11:00	6/21/2023	19:00	1	
East Plant FCCU	7/5/2023	7:00	7/5/2023	22:00	1	
East Plant FCCU	12/21/2023	5:00	12/21/2023	7:00	1	
East Plant FCCU	12/22/2023	1:00	12/22/2023	10:00	1	

TABLE 5-F: VIOLATIONS OF 500 PPMV CO LIMIT UNDER CO RACT

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	8/20/2019	10:00	8/20/2019	11:00	1	48
East Plant FCCU	11/27/2019	6:00	11/27/2019	16:00	1	
East Plant FCCU	12/9/2019	20:00	12/9/2019	21:00	1	
East Plant FCCU	12/9/2019	23:00	12/10/2019	1:00	1	
East Plant FCCU	12/11/2019	4:00	12/11/2019	12:00	1	
East Plant FCCU	12/11/2019	13:00	12/11/2019	16:00	0	
East Plant FCCU	1/4/2020	9:00	1/4/2020	10:00	1	
East Plant FCCU	1/4/2020	11:00	1/4/2020	12:00	0	
East Plant FCCU	1/4/2020	13:00	1/4/2020	14:00	0	
East Plant FCCU	1/4/2020	18:00	1/4/2020	20:00	0	
East Plant FCCU	1/5/2020	11:00	1/5/2020	13:00	1	
East Plant FCCU	1/5/2020	16:00	1/5/2020	18:00	0	
East Plant FCCU	1/5/2020	20:00	1/5/2020	21:00	0	
East Plant FCCU	1/7/2020	11:00	1/7/2020	19:00	1	
East Plant FCCU	8/25/2020	16:00	8/25/2020	17:00	1	
East Plant FCCU	8/26/2020	20:00	8/27/2020	6:00	2	
East Plant FCCU	11/5/2020	19:00	11/5/2020	20:00	1	
East Plant FCCU	11/6/2020	10:00	11/7/2020	18:00	2	
East Plant FCCU	11/30/2020	9:00	11/30/2020	20:00	1	
East Plant FCCU	3/22/2021	7:00	3/22/2021	19:00	1	
East Plant FCCU	3/25/2021	8:00	3/25/2021	19:00	1	
East Plant FCCU	4/13/2021	7:00	4/13/2021	18:00	1	
East Plant FCCU	4/30/2021	12:00	4/30/2021	13:00	1	
East Plant FCCU	8/26/2021	22:00	8/26/2021	23:00	1	
East Plant FCCU	8/27/2021	4:00	8/27/2021	6:00	1	
East Plant FCCU	8/28/2021	19:00	8/28/2021	22:00	1	
East Plant FCCU	8/29/2021	2:00	8/29/2021	8:00	1	
East Plant FCCU	9/10/2021	10:00	9/10/2021	20:00	1	
East Plant FCCU	11/2/2021	11:00	11/2/2021	22:00	1	
East Plant FCCU	11/3/2021	7:00	11/3/2021	10:00	1	
East Plant FCCU	11/16/2021	22:00	11/17/2021	6:00	2	
East Plant FCCU	11/17/2021	14:00	11/17/2021	17:00	0	
East Plant FCCU	11/18/2021	11:00	11/18/2021	16:00	1	
East Plant FCCU	1/27/2022	1:00	1/27/2022	15:00	1	
East Plant FCCU	1/28/2022	9:00	1/28/2022	18:00	1	
East Plant FCCU	2/14/2022	12:00	2/14/2022	18:00	1	
East Plant FCCU	2/14/2022	22:00	2/15/2022	1:00	1	
East Plant FCCU	4/2/2022	23:00	4/3/2022	0:00	2	
East Plant FCCU	4/3/2022	7:00	4/3/2022	8:00	0	
East Plant FCCU	4/3/2022	10:00	4/3/2022	14:00	0	
East Plant FCCU	4/4/2022	16:00	4/5/2022	2:00	2	
East Plant FCCU	7/26/2022	11:00	7/26/2022	16:00	1	
East Plant FCCU	2/15/2023	13:00	2/15/2023	17:00	1	
East Plant FCCU	2/16/2023	15:00	2/16/2023	22:00	1	

TABLE 5-F: VIOLATIONS OF 500 PPMV CO LIMIT UNDER CO RACT

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
East Plant FCCU	2/17/2023	21:00	2/18/2023	4:00	2	
East Plant FCCU	2/25/2023	0:00	2/25/2023	10:00	1	
East Plant FCCU	2/25/2023	14:00	2/26/2023	9:00	1	
East Plant FCCU	6/21/2023	11:00	6/21/2023	19:00	1	
East Plant FCCU	7/5/2023	7:00	7/5/2023	22:00	1	
East Plant FCCU	12/21/2023	5:00	12/21/2023	7:00	1	
East Plant FCCU	12/22/2023	1:00	12/22/2023	10:00	1	

TABLE 6: VIOLATIONS OF 0.06 LBS/MMBTU CO LIMIT ON BOILERS B-6 AND B-8

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
Boiler B-6	10/26/2020	5:00	10/26/2020	14:00	1	41
Boiler B-6	6/7/2021	5:00	6/9/2021	7:00	3	
Boiler B-6	6/10/2021	2:00	6/13/2021	13:00	4	
Boiler B-6	10/27/2021	18:00	10/27/2021	20:00	1	
Boiler B-6	10/31/2021	13:00	11/3/2021	1:00	4	
Boiler B-6	11/4/2021	11:00	11/5/2021	1:00	2	
Boiler B-6	3/29/2022	0:00	3/29/2022	15:00	1	
Boiler B-6	12/15/2023	8:00	12/17/2023	7:00	3	
Boiler B-8	6/13/2021	11:00	6/14/2021	20:00	2	
Boiler B-8	6/14/2021	23:00	6/15/2021	10:00	1	
Boiler B-8	12/16/2021	6:00	12/18/2021	15:00	3	
Boiler B-8	1/31/2022	12:00	2/1/2022	0:00	2	
Boiler B-8	3/18/2022	0:00	3/22/2022	16:00	5	
Boiler B-8	3/23/2022	20:00	3/25/2022	3:00	3	
Boiler B-8	3/28/2022	21:00	3/29/2022	17:00	2	
Boiler B-8	12/16/2023	6:00	12/17/2023	7:00	2	
Boiler B-8	1/16/2024	21:00	1/17/2024	19:00	2	

TABLE 7-A: VIOLATIONS OF 250 PPMV SO2 LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
SRU (Heater H-25)	1/16/2020	18:00	1/17/2020	5:00	2	121
SRU (Heater H-25)	5/17/2020	10:00	5/24/2020	10:00	8	
SRU (Heater H-25)	5/28/2020	21:00	5/29/2020	9:00	2	
SRU (Heater H-25)	6/7/2020	9:00	6/7/2020	19:00	1	
SRU (Heater H-25)	6/8/2020	16:00	6/9/2020	2:00	2	
SRU (Heater H-25)	6/11/2020	19:00	6/12/2020	7:00	2	
SRU (Heater H-25)	6/18/2020	19:00	6/21/2020	0:00	4	
SRU (Heater H-25)	10/19/2020	17:00	10/19/2020	20:00	1	
SRU (Heater H-25)	10/21/2020	18:00	10/22/2020	14:00	2	
SRU (Heater H-25)	10/26/2020	17:00	11/4/2020	2:00	10	
SRU (Heater H-25)	11/5/2020	7:00	11/5/2020	17:00	1	
SRU (Heater H-25)	11/10/2020	11:00	11/11/2020	0:00	2	
SRU (Heater H-25)	2/14/2021	14:00	2/15/2021	2:00	2	
SRU (Heater H-25)	2/15/2021	12:00	2/16/2021	13:00	1	
SRU (Heater H-25)	4/20/2021	17:00	4/21/2021	7:00	2	
SRU (Heater H-25)	4/21/2021	23:00	4/22/2021	11:00	1	
SRU (Heater H-25)	4/29/2021	15:00	5/1/2021	20:00	3	
SRU (Heater H-25)	6/12/2021	9:00	6/13/2021	8:00	2	
SRU (Heater H-25)	6/14/2021	7:00	6/15/2021	9:00	2	
SRU (Heater H-25)	6/16/2021	17:00	6/18/2021	7:00	3	
SRU (Heater H-25)	7/1/2021	20:00	7/2/2021	10:00	2	
SRU (Heater H-25)	7/8/2021	4:00	7/9/2021	12:00	2	
SRU (Heater H-25)	7/9/2021	13:00	7/10/2021	2:00	1	
SRU (Heater H-25)	7/14/2021	12:00	7/15/2021	2:00	2	
SRU (Heater H-25)	7/15/2021	12:00	7/17/2021	15:00	2	
SRU (Heater H-25)	9/25/2021	20:00	9/26/2021	8:00	2	
SRU (Heater H-25)	10/29/2021	4:00	10/29/2021	18:00	1	
SRU (Heater H-25)	12/7/2021	15:00	12/9/2021	22:00	3	
SRU (Heater H-25)	2/24/2022	11:00	2/26/2022	15:00	3	
SRU (Heater H-25)	3/17/2022	1:00	3/17/2022	14:00	1	
SRU (Heater H-25)	3/19/2022	0:00	3/20/2022	1:00	2	
SRU (Heater H-25)	3/21/2022	23:00	3/22/2022	4:00	2	
SRU (Heater H-25)	3/22/2022	10:00	3/23/2022	4:00	1	
SRU (Heater H-25)	3/23/2022	13:00	3/24/2022	2:00	1	
SRU (Heater H-25)	12/22/2022	12:00	12/26/2022	4:00	5	
SRU (Heater H-25)	1/11/2023	1:00	1/11/2023	7:00	1	
SRU (Heater H-25)	3/1/2023	20:00	3/2/2023	5:00	2	
SRU (Heater H-25)	3/10/2023	10:00	3/11/2023	4:00	2	
SRU (Heater H-25)	3/11/2023	23:00	3/12/2023	0:00	1	
SRU (Heater H-25)	3/13/2023	9:00	3/14/2023	7:00	2	
SRU (Heater H-25)	3/30/2023	20:00	3/31/2023	12:00	2	
SRU (Heater H-25)	3/31/2023	1:00	3/31/2023	3:00	0	
SRU (Heater H-25)	4/1/2023	19:00	4/3/2023	16:00	3	
SRU (Heater H-25)	4/12/2023	6:00	4/13/2023	16:00	2	
SRU (Heater H-25)	4/28/2023	23:00	4/29/2023	18:00	2	
SRU (Heater H-25)	5/24/2023	12:00	5/25/2023	0:00	2	
SRU (Heater H-25)	6/29/2023	16:00	6/30/2023	2:00	2	
SRU (Heater H-25)	12/16/2023	10:00	12/16/2023	15:00	1	

TABLE 7-A: VIOLATIONS OF 250 PPMV SO2 LIMIT UNDER NSPS SUBPART J

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
SRU (Heater H-25)	12/16/2023	18:00	12/19/2023	5:00	3	
SRU (Heater H-25)	12/21/2023	17:00	12/22/2023	12:00	2	
SRU (Heater H-25)	12/22/2023	14:00	12/23/2023	13:00	1	
SRU (Heater H-25)	12/27/2023	13:00	12/28/2023	15:00	2	
SRU (Heater H-25)	1/6/2024	14:59	1/7/2024	2:59	2	
SRU (Heater H-25)	1/13/2024	19:00	1/15/2024	12:00	3	
SRU (Heater H-25)	1/15/2024	14:00	1/17/2024	0:00	2	
SRU (Heater H-25)	1/17/2024	3:00	1/18/2024	0:00	1	

TABLE 7-B: VIOLATIONS OF 250 PPMV SO2 LIMIT UNDER MACT UUU

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
SRU (Heater H-25)	1/16/2020	18:00	1/17/2020	5:00	2	123
SRU (Heater H-25)	5/17/2020	10:00	5/24/2020	10:00	8	
SRU (Heater H-25)	5/28/2020	21:00	5/29/2020	9:00	2	
SRU (Heater H-25)	6/7/2020	9:00	6/7/2020	19:00	1	
SRU (Heater H-25)	6/8/2020	16:00	6/9/2020	2:00	2	
SRU (Heater H-25)	6/11/2020	19:00	6/12/2020	7:00	2	
SRU (Heater H-25)	6/18/2020	19:00	6/21/2020	0:00	4	
SRU (Heater H-25)	10/19/2020	17:00	10/19/2020	20:00	1	
SRU (Heater H-25)	10/21/2020	18:00	10/22/2020	14:00	2	
SRU (Heater H-25)	10/26/2020	17:00	11/4/2020	2:00	10	
SRU (Heater H-25)	11/5/2020	7:00	11/5/2020	17:00	1	
SRU (Heater H-25)	11/10/2020	11:00	11/11/2020	0:00	2	
SRU (Heater H-25)	2/14/2021	14:00	2/15/2021	2:00	2	
SRU (Heater H-25)	2/15/2021	12:00	2/16/2021	13:00	1	
SRU (Heater H-25)	4/20/2021	17:00	4/21/2021	7:00	2	
SRU (Heater H-25)	4/21/2021	23:00	4/22/2021	11:00	1	
SRU (Heater H-25)	4/29/2021	15:00	5/1/2021	20:00	3	
SRU (Heater H-25)	6/12/2021	9:00	6/13/2021	8:00	2	
SRU (Heater H-25)	6/14/2021	7:00	6/15/2021	9:00	2	
SRU (Heater H-25)	6/16/2021	17:00	6/18/2021	7:00	3	
SRU (Heater H-25)	6/17/2021	17:00	6/17/2021	20:00	1	
SRU (Heater H-25)	7/1/2021	20:00	7/2/2021	10:00	2	
SRU (Heater H-25)	7/8/2021	4:00	7/9/2021	12:00	2	
SRU (Heater H-25)	7/9/2021	13:00	7/10/2021	2:00	1	
SRU (Heater H-25)	7/14/2021	12:00	7/15/2021	2:00	2	
SRU (Heater H-25)	7/15/2021	12:00	7/17/2021	15:00	2	
SRU (Heater H-25)	9/25/2021	20:00	9/26/2021	8:00	2	
SRU (Heater H-25)	9/25/2021	22:00	9/26/2021	0:00	2	
SRU (Heater H-25)	10/29/2021	4:00	10/29/2021	18:00	1	
SRU (Heater H-25)	12/7/2021	15:00	12/9/2021	22:00	3	
SRU (Heater H-25)	2/24/2022	11:00	2/26/2022	15:00	3	
SRU (Heater H-25)	3/17/2022	1:00	3/17/2022	14:00	1	
SRU (Heater H-25)	3/19/2022	21:00	3/19/2022	23:00	1	
SRU (Heater H-25)	3/21/2022	23:00	3/22/2022	4:00	2	
SRU (Heater H-25)	3/22/2022	0:00	3/22/2022	2:00	0	
SRU (Heater H-25)	3/23/2022	13:00	3/24/2022	2:00	2	
SRU (Heater H-25)	12/22/2022	12:00	12/26/2022	4:00	5	
SRU (Heater H-25)	1/11/2023	1:00	1/11/2023	7:00	1	
SRU (Heater H-25)	3/1/2023	20:00	3/2/2023	5:00	2	
SRU (Heater H-25)	3/10/2023	10:00	3/11/2023	4:00	2	
SRU (Heater H-25)	3/11/2023	23:00	3/12/2023	0:00	1	
SRU (Heater H-25)	3/13/2023	9:00	3/14/2023	7:00	2	
SRU (Heater H-25)	3/30/2023	20:00	3/31/2023	12:00	2	
SRU (Heater H-25)	3/31/2023	1:00	3/31/2023	3:00	0	

TABLE 7-B: VIOLATIONS OF 250 PPMV SO2 LIMIT UNDER MACT UUU

SRU (Heater H-25)	4/1/2023	19:00	4/3/2023	16:00	3
SRU (Heater H-25)	4/12/2023	6:00	4/13/2023	16:00	2
SRU (Heater H-25)	4/28/2023	23:00	4/29/2023	18:00	2
SRU (Heater H-25)	4/29/2023	1:00	4/29/2023	2:00	0
SRU (Heater H-25)	5/24/2023	12:00	5/25/2023	0:00	2
SRU (Heater H-25)	6/29/2023	16:00	6/30/2023	2:00	2
SRU (Heater H-25)	12/16/2023	10:00	12/16/2023	15:00	1
SRU (Heater H-25)	12/16/2023	18:00	12/19/2023	5:00	3
SRU (Heater H-25)	12/21/2023	17:00	12/22/2023	12:00	2
SRU (Heater H-25)	12/22/2023	14:00	12/23/2023	13:00	1
SRU (Heater H-25)	12/27/2023	13:00	12/28/2023	15:00	2
SRU (Heater H-25)	1/6/2024	14:59	1/7/2024	2:59	2
SRU (Heater H-25)	1/13/2024	19:00	1/15/2024	12:00	3
SRU (Heater H-25)	1/15/2024	14:00	1/17/2024	0:00	2
SRU (Heater H-25)	1/17/2024	3:00	1/18/2024	0:00	1

TABLE 8-A: VIOLATIONS OF 15.68 POUND SO2 LIMIT FOR SRU (H-25)

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
SRU (Heater H-25)	1/16/2020	17:00	1/16/2020	19:00	1	98
SRU (Heater H-25)	5/17/2020	9:00	5/17/2020	10:00	1	
SRU (Heater H-25)	5/17/2020	11:00	5/23/2020	3:00	6	
SRU (Heater H-25)	5/28/2020	21:00	5/28/2020	22:00	1	
SRU (Heater H-25)	6/7/2020	8:00	6/7/2020	9:00	1	
SRU (Heater H-25)	6/8/2020	14:00	6/8/2020	16:00	1	
SRU (Heater H-25)	6/11/2020	19:00	6/11/2020	21:00	1	
SRU (Heater H-25)	6/18/2020	19:00	6/20/2020	13:00	3	
SRU (Heater H-25)	10/21/2020	16:00	10/21/2020	17:00	1	
SRU (Heater H-25)	10/21/2020	23:00	10/22/2020	4:00	1	
SRU (Heater H-25)	10/26/2020	16:00	10/31/2020	8:00	6	
SRU (Heater H-25)	11/1/2020	8:00	11/1/2020	10:00	1	
SRU (Heater H-25)	11/1/2020	15:00	11/1/2020	16:00	0	
SRU (Heater H-25)	11/1/2020	23:00	11/2/2020	0:00	1	
SRU (Heater H-25)	11/3/2020	10:00	11/3/2020	15:00	1	
SRU (Heater H-25)	11/10/2020	10:00	11/10/2020	13:00	1	
SRU (Heater H-25)	2/14/2021	13:00	2/14/2021	16:00	1	
SRU (Heater H-25)	2/14/2021	23:00	2/15/2021	0:00	1	
SRU (Heater H-25)	2/15/2021	10:00	2/15/2021	14:00	0	
SRU (Heater H-25)	2/15/2021	17:00	2/16/2021	2:00	1	
SRU (Heater H-25)	2/16/2021	9:00	2/16/2021	10:00	0	
SRU (Heater H-25)	4/20/2021	17:00	4/20/2021	20:00	1	
SRU (Heater H-25)	4/21/2021	23:00	4/22/2021	0:00	2	
SRU (Heater H-25)	4/29/2021	15:00	4/29/2021	17:00	1	
SRU (Heater H-25)	4/29/2021	20:00	4/30/2021	9:00	1	
SRU (Heater H-25)	6/14/2021	6:00	6/14/2021	7:00	1	
SRU (Heater H-25)	6/14/2021	14:00	6/14/2021	15:00	0	
SRU (Heater H-25)	6/17/2021	15:00	6/17/2021	18:00	1	
SRU (Heater H-25)	6/20/2021	6:00	6/20/2021	7:00	1	
SRU (Heater H-25)	7/1/2021	20:00	7/1/2021	23:00	1	
SRU (Heater H-25)	7/8/2021	4:00	7/8/2021	5:00	1	
SRU (Heater H-25)	7/8/2021	9:00	7/8/2021	10:00	0	
SRU (Heater H-25)	7/15/2021	22:00	7/16/2021	10:00	2	
SRU (Heater H-25)	7/16/2021	13:00	7/16/2021	15:00	0	
SRU (Heater H-25)	7/16/2021	23:00	7/17/2021	5:00	1	
SRU (Heater H-25)	7/20/2021	9:00	7/20/2021	10:00	1	
SRU (Heater H-25)	8/23/2021	3:00	8/23/2021	4:00	1	
SRU (Heater H-25)	9/25/2021	20:00	9/25/2021	21:00	1	
SRU (Heater H-25)	10/29/2021	4:00	10/29/2021	7:00	1	
SRU (Heater H-25)	12/7/2021	14:00	12/7/2021	22:00	1	
SRU (Heater H-25)	12/7/2021	23:00	12/8/2021	7:00	1	
SRU (Heater H-25)	12/9/2021	10:00	12/9/2021	11:00	1	
SRU (Heater H-25)	12/9/2021	21:00	12/9/2021	22:00	0	
SRU (Heater H-25)	2/24/2022	7:00	2/24/2022	8:00	1	
SRU (Heater H-25)	2/24/2022	12:00	2/24/2022	13:00	0	
SRU (Heater H-25)	2/24/2022	16:00	2/25/2022	0:00	1	
SRU (Heater H-25)	2/25/2022	2:00	2/25/2022	10:00	0	
SRU (Heater H-25)	3/17/2022	1:00	3/17/2022	3:00	1	

TABLE 8-A: VIOLATIONS OF 15.68 POUND SO2 LIMIT FOR SRU (H-25)

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
SRU (Heater H-25)	3/19/2022	10:00	3/19/2022	13:00	1	
SRU (Heater H-25)	9/26/2022	14:00	9/26/2022	16:00	1	
SRU (Heater H-25)	12/22/2022	11:00	12/22/2022	18:00	1	
SRU (Heater H-25)	12/22/2022	19:00	12/23/2022	1:00	1	
SRU (Heater H-25)	12/23/2022	11:00	12/23/2022	14:00	0	
SRU (Heater H-25)	12/23/2022	16:00	12/23/2022	19:00	0	
SRU (Heater H-25)	12/23/2022	23:00	12/24/2022	2:00	1	
SRU (Heater H-25)	12/24/2022	3:00	12/27/2022	16:00	3	
SRU (Heater H-25)	3/10/2023	15:00	3/10/2023	17:00	1	
SRU (Heater H-25)	3/31/2023	1:00	3/31/2023	2:00	1	
SRU (Heater H-25)	4/2/2023	5:00	4/2/2023	11:00	1	
SRU (Heater H-25)	4/2/2023	12:00	4/2/2023	13:00	0	
SRU (Heater H-25)	4/2/2023	15:00	4/2/2023	16:00	0	
SRU (Heater H-25)	4/2/2023	21:00	4/3/2023	6:00	1	
SRU (Heater H-25)	4/12/2023	5:00	4/12/2023	12:00	1	
SRU (Heater H-25)	4/28/2023	22:00	4/29/2023	3:00	2	
SRU (Heater H-25)	5/24/2023	12:00	5/24/2023	14:00	1	
SRU (Heater H-25)	12/14/2023	9:00	12/14/2023	10:00	1	
SRU (Heater H-25)	12/16/2023	18:00	12/16/2023	19:00	1	
SRU (Heater H-25)	12/16/2023	23:00	12/17/2023	0:00	1	
SRU (Heater H-25)	12/17/2023	2:00	12/27/2023	4:00	10	
SRU (Heater H-25)	12/18/2023	11:00	12/18/2023	14:00	1	
SRU (Heater H-25)	12/18/2023	15:00	12/18/2023	19:00	0	
SRU (Heater H-25)	12/21/2023	16:00	12/21/2023	17:00	1	
SRU (Heater H-25)	12/21/2023	21:00	12/21/2023	22:00	0	
SRU (Heater H-25)	12/22/2023	15:00	12/23/2023	2:00	2	
SRU (Heater H-25)	12/27/2023	14:00	12/27/2023	16:00	1	
SRU (Heater H-25)	12/28/2023	2:00	12/28/2023	4:00	1	
SRU (Heater H-25)	1/6/2024	14:00	1/7/2024	3:00	2	
SRU (Heater H-25)	1/13/2024	19:00	1/15/2024	6:00	3	
SRU (Heater H-25)	1/16/2024	0:00	1/16/2024	2:00	1	
SRU (Heater H-25)	1/16/2024	3:00	1/16/2024	4:00	0	
SRU (Heater H-25)	2/25/2024	20:00	2/25/2024	21:00	1	
SRU (Heater H-25)	2/26/2024	5:00	2/26/2024	6:00	1	
SRU (Heater H-25)	3/24/2024	17:00	3/24/2024	18:00	1	
SRU (Heater H-25)	5/22/2024	12:00	5/22/2024	13:00	1	

TABLE 8-B: VIOLATIONS OF 15.68 POUND SO2 LIMIT AS PM10 RACT FOR SRU (H-25)

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
SRU (Heater H-25)	1/16/2020	17:00	1/16/2020	19:00	1	98
SRU (Heater H-25)	5/17/2020	9:00	5/17/2020	10:00	1	
SRU (Heater H-25)	5/17/2020	11:00	5/23/2020	3:00	6	
SRU (Heater H-25)	5/28/2020	21:00	5/28/2020	22:00	1	
SRU (Heater H-25)	6/7/2020	8:00	6/7/2020	9:00	1	
SRU (Heater H-25)	6/8/2020	14:00	6/8/2020	16:00	1	
SRU (Heater H-25)	6/11/2020	19:00	6/11/2020	21:00	1	
SRU (Heater H-25)	6/18/2020	19:00	6/20/2020	13:00	3	
SRU (Heater H-25)	10/21/2020	16:00	10/21/2020	17:00	1	
SRU (Heater H-25)	10/21/2020	23:00	10/22/2020	4:00	1	
SRU (Heater H-25)	10/26/2020	16:00	10/31/2020	8:00	6	
SRU (Heater H-25)	11/1/2020	8:00	11/1/2020	10:00	1	
SRU (Heater H-25)	11/1/2020	15:00	11/1/2020	16:00	0	
SRU (Heater H-25)	11/1/2020	23:00	11/2/2020	0:00	1	
SRU (Heater H-25)	11/3/2020	10:00	11/3/2020	15:00	1	
SRU (Heater H-25)	11/10/2020	10:00	11/10/2020	13:00	1	
SRU (Heater H-25)	2/14/2021	13:00	2/14/2021	16:00	1	
SRU (Heater H-25)	2/14/2021	23:00	2/15/2021	0:00	1	
SRU (Heater H-25)	2/15/2021	10:00	2/15/2021	14:00	0	
SRU (Heater H-25)	2/15/2021	17:00	2/16/2021	2:00	1	
SRU (Heater H-25)	2/16/2021	9:00	2/16/2021	10:00	0	
SRU (Heater H-25)	4/20/2021	17:00	4/20/2021	20:00	1	
SRU (Heater H-25)	4/21/2021	23:00	4/22/2021	0:00	2	
SRU (Heater H-25)	4/29/2021	15:00	4/29/2021	17:00	1	
SRU (Heater H-25)	4/29/2021	20:00	4/30/2021	9:00	1	
SRU (Heater H-25)	6/14/2021	6:00	6/14/2021	7:00	1	
SRU (Heater H-25)	6/14/2021	14:00	6/14/2021	15:00	0	
SRU (Heater H-25)	6/17/2021	15:00	6/17/2021	18:00	1	
SRU (Heater H-25)	6/20/2021	6:00	6/20/2021	7:00	1	
SRU (Heater H-25)	7/1/2021	20:00	7/1/2021	23:00	1	
SRU (Heater H-25)	7/8/2021	4:00	7/8/2021	5:00	1	
SRU (Heater H-25)	7/8/2021	9:00	7/8/2021	10:00	0	
SRU (Heater H-25)	7/15/2021	22:00	7/16/2021	10:00	2	
SRU (Heater H-25)	7/16/2021	13:00	7/16/2021	15:00	0	
SRU (Heater H-25)	7/16/2021	23:00	7/17/2021	5:00	1	
SRU (Heater H-25)	7/20/2021	9:00	7/20/2021	10:00	1	
SRU (Heater H-25)	8/23/2021	3:00	8/23/2021	4:00	1	
SRU (Heater H-25)	9/25/2021	20:00	9/25/2021	21:00	1	
SRU (Heater H-25)	10/29/2021	4:00	10/29/2021	7:00	1	
SRU (Heater H-25)	12/7/2021	14:00	12/7/2021	22:00	1	
SRU (Heater H-25)	12/7/2021	23:00	12/8/2021	7:00	1	
SRU (Heater H-25)	12/9/2021	10:00	12/9/2021	11:00	1	
SRU (Heater H-25)	12/9/2021	21:00	12/9/2021	22:00	0	
SRU (Heater H-25)	2/24/2022	7:00	2/24/2022	8:00	1	
SRU (Heater H-25)	2/24/2022	12:00	2/24/2022	13:00	0	
SRU (Heater H-25)	2/24/2022	16:00	2/25/2022	0:00	1	
SRU (Heater H-25)	2/25/2022	2:00	2/25/2022	10:00	0	
SRU (Heater H-25)	3/17/2022	1:00	3/17/2022	3:00	1	

TABLE 8-B: VIOLATIONS OF 15.68 POUND SO2 LIMIT AS PM10 RACT FOR SRU (H-25)

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
SRU (Heater H-25)	3/19/2022	10:00	3/19/2022	13:00	1	
SRU (Heater H-25)	9/26/2022	14:00	9/26/2022	16:00	1	
SRU (Heater H-25)	12/22/2022	11:00	12/22/2022	18:00	1	
SRU (Heater H-25)	12/22/2022	19:00	12/23/2022	1:00	1	
SRU (Heater H-25)	12/23/2022	11:00	12/23/2022	14:00	0	
SRU (Heater H-25)	12/23/2022	16:00	12/23/2022	19:00	0	
SRU (Heater H-25)	12/23/2022	23:00	12/24/2022	2:00	1	
SRU (Heater H-25)	12/24/2022	3:00	12/27/2022	16:00	3	
SRU (Heater H-25)	3/10/2023	15:00	3/10/2023	17:00	1	
SRU (Heater H-25)	3/31/2023	1:00	3/31/2023	2:00	1	
SRU (Heater H-25)	4/2/2023	5:00	4/2/2023	11:00	1	
SRU (Heater H-25)	4/2/2023	12:00	4/2/2023	13:00	0	
SRU (Heater H-25)	4/2/2023	15:00	4/2/2023	16:00	0	
SRU (Heater H-25)	4/2/2023	21:00	4/3/2023	6:00	1	
SRU (Heater H-25)	4/12/2023	5:00	4/12/2023	12:00	1	
SRU (Heater H-25)	4/28/2023	22:00	4/29/2023	3:00	2	
SRU (Heater H-25)	5/24/2023	12:00	5/24/2023	14:00	1	
SRU (Heater H-25)	12/14/2023	9:00	12/14/2023	10:00	1	
SRU (Heater H-25)	12/16/2023	18:00	12/16/2023	19:00	1	
SRU (Heater H-25)	12/16/2023	23:00	12/17/2023	0:00	1	
SRU (Heater H-25)	12/17/2023	2:00	12/27/2023	4:00	10	
SRU (Heater H-25)	12/18/2023	11:00	12/18/2023	14:00	1	
SRU (Heater H-25)	12/18/2023	15:00	12/18/2023	19:00	0	
SRU (Heater H-25)	12/21/2023	16:00	12/21/2023	17:00	1	
SRU (Heater H-25)	12/21/2023	21:00	12/21/2023	22:00	0	
SRU (Heater H-25)	12/22/2023	15:00	12/23/2023	2:00	2	
SRU (Heater H-25)	12/27/2023	14:00	12/27/2023	16:00	1	
SRU (Heater H-25)	12/28/2023	2:00	12/28/2023	4:00	1	
SRU (Heater H-25)	1/6/2024	14:00	1/7/2024	3:00	2	
SRU (Heater H-25)	1/13/2024	19:00	1/15/2024	6:00	3	
SRU (Heater H-25)	1/16/2024	0:00	1/16/2024	2:00	1	
SRU (Heater H-25)	1/16/2024	3:00	1/16/2024	4:00	0	
SRU (Heater H-25)	2/25/2024	20:00	2/25/2024	21:00	1	
SRU (Heater H-25)	2/26/2024	5:00	2/26/2024	6:00	1	
SRU (Heater H-25)	3/24/2024	17:00	3/24/2024	18:00	1	
SRU (Heater H-25)	5/22/2024	12:00	5/22/2024	13:00	1	

TABLE 9-A: VIOLATIONS OF 270 BTU/SCF LIMIT ON FLARES UNDER MACT CC

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
GBR Unit Flare	8/28/2019	10:45	8/28/2019	11:30	1	21
GBR Unit Flare	10/27/2019	6:45	10/27/2019	7:00	1	
GBR Unit Flare	10/27/2019	7:15	10/27/2019	7:45	0	
GBR Unit Flare	2/14/2021	3:00	2/14/2021	4:00	1	
GBR Unit Flare	3/18/2022	21:00	3/18/2022	21:15	1	
GBR Unit Flare	1/16/2024	3:15	1/16/2024	3:30	1	
GBR Unit Flare	1/16/2024	5:00	1/16/2024	5:15	0	
Plant 1 Flare	7/19/2019	20:30	7/19/2019	22:15	1	
Plant 1 Flare	6/13/2021	13:00	6/13/2021	13:15	1	
Plant 1 Flare	7/14/2021	10:15	7/14/2021	10:30	1	
Plant 1 Flare	1/16/2024	0:45	1/16/2024	10:00	1	
Plant 1 Flare	2/25/2024	7:15	2/25/2024	7:30	1	
Plant 2 Flare	10/4/2019	14:00	10/4/2019	14:15	1	
Plant 2 Flare	12/17/2019	21:15	12/17/2019	21:30	1	
Plant 2 Flare	1/19/2020	11:30	1/19/2020	12:30	1	
Plant 2 Flare	11/3/2021	5:30	11/3/2021	5:45	1	
Plant 2 Flare	11/28/2021	23:15	11/28/2021	23:45	1	
Plant 2 Flare	3/29/2022	1:34	3/29/2022	2:57	1	
Plant 2 Flare	6/3/2022	5:15	6/3/2022	9:30	1	
Plant 2 Flare	6/3/2022	12:15	6/3/2022	18:30	0	
Plant 2 Flare	6/3/2022	19:00	6/3/2022	19:30	0	
Plant 2 Flare	6/3/2022	23:30	6/4/2022	0:00	1	
Plant 2 Flare	12/25/2022	4:45	12/25/2022	8:30	1	
Plant 2 Flare	12/25/2022	12:00	12/25/2022	16:30	0	
Plant 3 Flare	4/23/2021	20:15	4/23/2021	20:30	1	
Plant 3 Flare	11/11/2022	5:15	11/11/2022	5:30	1	

TABLE 9-B: VIOLATIONS OF 270 BTU/SCF LIMIT AS RACT FOR PM10, NOX, AND CO ON GBR UNIT FLARE

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Violation Days	# of Pollutants	Enforceable Violation Days	Total Viol Days
GBR Unit Flare	8/28/2019	10:45	8/28/2019	11:30	1	3	3	15
GBR Unit Flare	10/27/2019	6:45	10/27/2019	7:00	1	3	3	
GBR Unit Flare	10/27/2019	7:15	10/27/2019	7:45	0	3	0	
GBR Unit Flare	2/14/2021	3:00	2/14/2021	4:00	1	3	3	
GBR Unit Flare	3/18/2022	21:00	3/18/2022	21:15	1	3	3	
GBR Unit Flare	1/16/2024	3:15	1/16/2024	3:30	1	3	3	
GBR Unit Flare	1/16/2024	5:00	1/16/2024	5:15	0	3	0	

TABLE 10-A: VIOLATIONS OF FLARE SMOKE VISIBILITY LIMITS UNDER MACT CC

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
Plant 1 Flare	8/2/2019	17:59	8/2/2019	18:08	1	16
Plant 1 Flare	9/21/2019	11:32	9/21/2019	11:45	1	
Plant 1 Flare	9/25/2019	0:05	9/25/2019	1:35	1	
Plant 1 Flare	11/13/2019	11:44	11/13/2019	13:44	1	
Plant 1 Flare	1/25/2020	13:30	1/25/2020	15:30	1	
Plant 1 Flare	1/26/2020	8:14	1/26/2020	10:14	1	
Plant 1 Flare	5/17/2020	8:39	5/17/2020	12:18	1	
Plant 1 Flare	8/13/2020	8:39	8/13/2020	12:18	1	
Plant 1 Flare	10/21/2020	15:58	10/21/2020	19:58	1	
Plant 1 Flare	7/12/2021	15:25	7/12/2021	15:52	1	
Plant 1 Flare	12/17/2021	9:30	12/17/2021	10:15	1	
Plant 2 Flare	8/20/2019	10:11	8/20/2019	11:11	1	
Plant 2 Flare	11/27/2019	7:11	11/27/2019	11:11	1	
Plant 2 Flare	5/17/2020	8:49	5/17/2020	9:40	1	
Plant 2 Flare	6/3/2022	4:58	6/3/2022	5:22	1	
Plant 2 Flare	6/3/2022	5:59	6/3/2022	8:24	0	
Plant 2 Flare	6/3/2022	11:54	6/3/2022	14:15	0	
Plant 3 Flare	3/2/2020	9:45	3/2/2020	10:31	1	

TABLE 10-B: VIOLATIONS OF FLARE SMOKE VISIBILITY AS COMPLIANCE WITH 30% OPACITY LIMIT

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days	Total Viol Days
Plant 1 Flare	8/2/2019	17:59	8/2/2019	18:08	1	16
Plant 1 Flare	9/21/2019	11:32	9/21/2019	11:45	1	
Plant 1 Flare	9/25/2019	0:05	9/25/2019	1:35	1	
Plant 1 Flare	11/13/2019	11:44	11/13/2019	13:44	1	
Plant 1 Flare	1/25/2020	13:30	1/25/2020	15:30	1	
Plant 1 Flare	1/26/2020	8:14	1/26/2020	10:14	1	
Plant 1 Flare	5/17/2020	8:39	5/17/2020	12:18	1	
Plant 1 Flare	8/13/2020	8:39	8/13/2020	12:18	1	
Plant 1 Flare	10/21/2020	15:58	10/21/2020	19:58	1	
Plant 1 Flare	7/12/2021	15:25	7/12/2021	15:52	1	
Plant 1 Flare	12/17/2021	9:30	12/17/2021	10:15	1	
Plant 2 Flare	8/20/2019	10:11	8/20/2019	11:11	1	
Plant 2 Flare	11/27/2019	7:11	11/27/2019	11:11	1	
Plant 2 Flare	5/17/2020	8:49	5/17/2020	9:40	1	
Plant 2 Flare	6/3/2022	4:58	6/3/2022	5:22	1	
Plant 2 Flare	6/3/2022	5:59	6/3/2022	8:24	0	
Plant 2 Flare	6/3/2022	11:54	6/3/2022	14:15	0	
Plant 3 Flare	3/2/2020	9:45	3/2/2020	10:31	1	

TABLE 11: VIOLATIONS OF 0.04 LBS/MMBTU NOX LIMIT FOR HEATER H-2101

Emissions Unit	StartDate	StartTime	EndDate	EndTime	Enforceable Violation Days
Heater H-2101	1/1/2006	0:00	Continuing	0:00	6731