October 11, 2022

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VIA EMAIL

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Re: **Colorado Department of Public Health and Environment's Clean Air Act (CAA) Renewal of Title V Permit 95OPAD108 Suncor Energy, Inc. Plant 2 (East Plant)**

Pursuant to 40 C.F.R. §§ 70.8(d), 70.12, the Elyria and Swansea Neighborhood Association, Cultivando, Colorado Latino Forum, GreenLatinos, Center for Biological Diversity, and Sierra Club ("Petitioners") hereby petition the United States Environmental Protection Agency ("EPA") to object to the Colorado Department of Public Health and Environment's ("CDPHE") renewal Title V Permit No. 95OPAD108 for Plant 2 of the Suncor Energy, Inc. petroleum refinery ("East Plant") located at 5800 Brighton Blvd., Commerce City, CO 80022, Adams County.

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Ex. 03	Gretchen Armijo & Gene C. Hook, Denver Dep't of Env't Health, *How Neighborhood Planning Affects Health in Globeville and Elyria Swansea* 21, 24 (2014) ("Health Impact Assessment"), https://www.denvergov.org/content/dam/denvergov/Portals/746/documents/HIA/HIA%20Composite%20Report_9-18-14.pdf.
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	(East) (May 11, 2021)
Ex. 41	*United States v. Valero Refining Co.*, Case No. 5:05-CV-00569-WRF, Consent Decree (June 16, 2005) (entered Nov. 23, 2005)
Ex. 42	Letter from Wes McNeil, Suncor, to Jackie Joyce, CDPHE (May 25, 2012)

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I. Introduction

The Suncor refinery is a 98,000-barrel-per-day refinery that produces gasoline, diesel fuel and paving-grade asphalt.[1] The refinery includes the Plant 2 ("East Plant") and Plants 1 and 3 ("West Plant"). The massive 230-acre facility looms over neighborhoods in Commerce City and north Denver and chokes the air with pollutants known to cause respiratory problems and to exacerbate heart conditions.[2] Suncor has a long history of violating air pollution limits and has been subject to repeated enforcement actions.[3] A significant portion of the oil produced at the refinery comes from thick "tar" sands in Canada, the processing of which can emit particularly high levels of toxic air pollution.[4]

The Proposed Permit allows Suncor's East Plant to emit 54 tons per year ("tpy") of particulate matter ("PM"), 390 tpy of sulfur dioxide ("SO_2"), 266 tpy of nitrogen oxides ("NO_x"), 311 tpy of carbon monoxide ("CO"), and 374 tpy of volatile organic compounds ("VOCs") each year. (Ex. 01); *see also*. These permitted levels include an increase of 12 tpy of PM and 138 tpy of VOCs beyond the prior applicable permit's levels, from two main causes. *See* Proposed TRD at 172 (listing "Totals" for various emissions increases).

First, some of these increases come from the Division allowing Suncor to emit even more pollutants into the already burdened neighborhoods around the refinery. *Second*, other increases stem from the Division's approval of updated emission factors and calculation methodologies. *See, e.g.*, Proposed TRD at 16–18 (Modification 1.5, revising emission factors for the Main East Plant Flare). These increases reflect the Division's continuing failure to ensure the accuracy of Suncor's existing monitoring, emission factors, and compliance demonstrations. In real-world terms, this means that for decades Suncor has actually been emitting far more pollutants than the Division originally thought, leading to Suncor's efforts to partially correct these shortcomings by updating its compliance demonstrations and securing higher emission limits. But this cycle—of Suncor simply requesting higher limits whenever it is so inclined—can continue as long as the Division allows it. Improved monitoring (including requiring continuous emissions monitoring systems ("CEMS") wherever technically feasible), accurate emission factors based on performance tests, and

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[1] Suncor, *Refining*, https://www.suncor.com/en-ca/about-us/refining (last visited July 13, 2022).

[2] Bruce Finley, *Suncor Refinery North of Denver Faces State Review of Outdated Permits, Plans $300 Million Push to Be "Better Not Bigger,"* Denver Post (Nov. 29, 2020), https:// www.denverpost.com/ 2020/11/29/suncor-oil-refinery-permit-renewals-closure-pollution/.

[3] *See, e.g.*, Colo. Dep't of Pub. Health & Env't, *Enforcement Actions Against Suncor*, https:// cdphe.colorado.gov/enforcement-actions-against-suncor (last visited July 13, 2022).

[4] Bruce Finley, *Suncor Oil Refinery's "Operational Upset" Spurs Call for Increased State Protection* (Dec. 13, 2019), https://www.denverpost.com/2019/12/13/suncor-refinery-emissions-pollution/; Nat. Res. Def. Council, *NRDC Issue Brief – Tar Sands Crude Oil: Health Effects of a Dirty and Destructive Fuel* 5 (2014), https://www.nrdc.org/sites/default/files/tar-sands-health-effects-IB.pdf.

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adjustments for excess emissions released during startup, shutdown, and malfunction ("SSM") events would all improve the accuracy of Suncor's reported emissions and help to avoid the deeply troublesome iterative process of raising Suncor's permitted limits to reflect the refinery's already-excessive emissions. Yet the Division continues to fail to impose the measures necessary to accurately monitor Suncor's emissions.

A. Suncor Primarily Harms Disproportionately Impacted Communities—Including Members of the Petitioner Groups—Resulting in Severe Environmental Justice Problems

Residents of the neighborhoods adjacent to Suncor—the north Denver neighborhoods of Elyria, Swansea, and Globeville and Commerce City in Adams County—face some of the greatest environmental health risks in Colorado.[5] In addition to the Suncor refinery, the 928-megawatt Cherokee Generating Station, which recently switched from coal- to gas-fired generation, is located immediately to the northwest of Suncor.[6] Superfund sites are just blocks from people's homes and less than half a mile from an elementary school.[7] Scattered among residential buildings and single-family homes are a wood treatment facility, roofing products manufacturer, many solvent-based industries, and a pet food manufacturing facility.[8] Freight trains filled with coal and petroleum refining products frequently travel through the communities, expelling coal dust from the uncovered cars and amplifying the near constant industrial din.[9] Two heavily trafficked highways, Interstate 70 and Interstate 25, bisect the neighborhoods, and further exacerbate air pollution problems.[10] Overall, industrial and commercial uses cover more than 70% of the neighborhoods, twice as much as the Denver average.[11] Independent community air

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[5] See generally Katherine L. Dickinson et al., Who Bears the Cost?: North Denver Environmental Justice Report and Data Audit (2022), https://www.greenlatinos.org/colorado.

[6] Gretchen Armijo & Gene C. Hook, Denver Dep't of Env't Health, *How Neighborhood Planning Affects Health in Globeville and Elyria Swansea* 21, 24 (2014) ("Health Impact Assessment"), https://www.denvergov.org/content/dam/denvergov/Portals/746/documents/HIA/HIA%20Composite%20Report_9-18-14.pdf (Ex. 03).

[7] EPA, *Superfund Sites in Reuse in Colorado*, https://www.epa.gov/superfund-redevelopment-initiative/superfund-sites-reuse-colorado (last visited Mar. 18, 2021); EPA, *Superfund Site Information: ASARCO, Inc. (Globe Plant)* https://cumulis.epa.gov/supercpad/cursites/ccontinfo.cfm?id=0800078 (last visited Mar. 18, 2021); EPA, *Superfund Site: Vasquez Boulevard and I-70 Denver, CO*, https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm? fuseaction=second.Healthenv&id=0801646 (last visited Mar. 18, 2021).

[8] Health Impact Assessment 21, 24; WE ACT for Env't Just., *Assisting Congress to Better Understand Environmental Justice* 35 (2013), https://www.sipa.columbia.edu/file/3172/download?token=gHKXRCd2.

[9] Colo. Dep't of Transp., *Colorado Freight and Passenger Rail Plan* 34 (2018), https://www.codot.gov/about/committees/trac/Agendas-and-Minutes/2018/july-13-2018/03-b1-sfprp-draft-final_-july-tc.

[10] Health Impact Assessment at 19–21.

[11] *Id.* at 19.

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quality monitoring shows that air pollution levels in the north Denver/south Commerce City area tend to be higher than other comparable metro area sites to the northwest across a range of pollutants.[12] Every day, residents face significant threats to their health from air pollution in their neighborhoods, such as spikes of high levels of particulate matter that exceed EPA's proposed health standards.[13]

Located south of the Suncor Refinery, Elyria, Swansea, and Globeville are long-established residential neighborhoods that have been largely left behind by Denver's recent boom in community improvements. Elyria-Swansea's population is 82% Latino, with 20% of residents living below the poverty line and 27% non-English speaking adults.[14] Globeville is 57% Latino, with 34% of residents living below the poverty line and 17% non-English speaking adults.[15] By comparison, the Denver Metro region as a whole is 22% Latino, with 11% of residents living below the poverty line and 4% non-English speaking adults.

In light of these factors, the communities surrounding Suncor are considered "Disproportionately Impacted Communities" under Colorado's Environmental Justice Act (House Bill 21-1266). Colo. Rev. Stat. ("C.R.S.") § 24-4-109(2)(b)(ii).[16] Colorado's EnviroScreen tool shows that the census block groups immediately surrounding Suncor rank in the 86th to 100th percentile for environmental burdens.[17] This means that between 86 to 100 percent of the census block groups in Colorado have a lower Colorado EnviroScreen score, and are thus less burdened, than the census block groups surrounding Suncor.

Every day, Suncor's pollution poses a serious threat to the health and wellbeing of nearby residents and workers. The refinery is located less than half a

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[12] Kati Weis, *New Commerce City Air Pollution Monitoring Program Leaves Some Community Members Both "Validated" and "Frustrated"*, CBS Colorado (Oct. 7, 2022), https://www.cbsnews.com/colorado/news/commerce-city-air-pollution-monitoring-leaves-some-community-members-validated-and-frustrated/.

[13] *Id.*

[14] Shift Research Lab, *Elyria Swansea* (2017 estimates), https://denvermetrodata.org/neighborhood/elyria-swansea (last visited Mar. 19, 2021).

[15] Shift Research Lab, *Globeville* (2017 estimates), https://denvermetrodata.org/neighborhood/globeville (last visited Mar. 19, 2021).

[16] *See* CDPHE, *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).

[17] CDPHE, Colorado EnviroScreen, https://teeo-cdphe.shinyapps.io/COEnviroScreen_English/#map (last visited Oct. 4, 2022) (inputs: Geo Scale – Census Block Group; Indicator – EnviroScreen Score; Measure or % - Percentile Rank).

mile from the nearest residential home.[18] Emissions from Suncor include, among other pollutants, particulate matter, sulfur dioxide, carbon monoxide, and ozone-forming volatile organic compounds and nitrogen oxides.[19] These pollutants exacerbate chronic respiratory illness and cardiovascular disease; impair lung function; cause cancer and premature death; increase the risk of neurological conditions such as autism spectrum disorders, Alzheimer's disease, and Parkinson's disease; and contribute to developmental and cognition problems.

Suncor's repeated emissions violations exacerbate the existing health challenges faced by residents in north Denver and Commerce City. Elyria, Swansea, and Globeville have among the highest rates of several diseases associated with air pollution, including asthma, cancer, cardiovascular disease, diabetes, and obesity.[20] A Health Impact Assessment, conducted by the Denver Department of Environmental Health, found that the neighborhoods have 39% higher emergency room rates for child asthma-related events than other Denver neighborhoods.[21] These problems are only getting worse: between 2006–2010 and 2013–2017, Elyria-Swansea's asthma hospitalization rate increased by 41% and was 75% higher than the state average during the 2013–2017 period. Meanwhile, Globeville's asthma hospitalization rate increased by 25% and exceeded the state average by 94%. Notably, the Health Impact Assessment found that that Suncor's planned emissions "event[s]" and flaring are among the "significant" air pollution problems in the area.[22]

Complicating matters for community members attempting to understand and address Suncor's pollution problems, the refinery has two separate Title V air permits: one for its East Plant (Plant 2) and one for its West Plant (Plants 1 & 3). Environmental and community groups have long called for a single permit to ensure that the Division comprehensively assesses the direct and cumulative impacts of all the pollution from Suncor's operations and its effects on community health, and they continue to urge for all permitting requirements to be included in a single permit, reviewed under the same deadlines. *See* Section IV.B, below.

The environmental justice problems are further heightened here because Suncor is located within the Denver-Metro North Front Range nonattainment area for the 2008 and 2015 ozone National Ambient Air Quality Standards ("NAAQS").

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[18] *See* GoogleEarth Estimate of Distance from Suncor Refinery to Residential Homes (Mar. 18, 2021) (attached as Attachment 1 to Elyria-Swansea Neighborhood Ass'n et al., Initial Comments on Suncor Energy (U.S.A.), Inc. Commerce City Refinery – Plant 2 (East) – Adams County, Title V Operating Permit Renewal (95OPAD108) (Mar. 19, 2021) ("Initial Comments") (Ex. 06)) (estimating distance using GoogleEarth Pro). The nearest residence southwest of Suncor is about 0.4 miles away; the nearest residence to the east is 0.68 miles away.

[19] For example, the FCCU emits particulate matter, carbon monoxide, volatile organic compounds (VOCs), and nitrogen oxides. The flares emit hydrogen sulfide and sulfur dioxide.

[20] Health Impact Assessment at 16–17.

[21] *Id.* at 16.

[22] Health Impact Assessment at 21.

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EPA downgraded the area to serious nonattainment for the 2008 standard on January 27, 2020, triggering a lower significance threshold of 25 tpy VOC and NO_x. *See* Finding of Failure to Attain and Reclassification of Denver Area for the 2008 Ozone National Ambient Air Quality Standard, 84 Fed. Reg. 70,897 (Dec. 26, 2019) (effective date Jan. 27, 2020). Further, EPA has announced an imminent downgrade of the area to severe nonattainment for the 2008 standard and moderate nonattainment for the 2015 standard. Determinations of Attainment by the Attainment Date, 87 Fed. Reg. 60,926, 60,927 (Oct. 7, 2022) (Ex. 04). Worse yet, the Division's draft State Implementation Plan for the 2015 standard acknowledges that the area is unlikely to attain the 2015 standard by 2024, resulting in an expected downgrade to serious nonattainment.[23] Suncor's East Plant permitted emissions of 640 tons per year of ozone-precursors, including NO_x and VOCs, contribute to the unhealthy levels of ozone in the county and the disparate cumulative impacts of pollution borne by nearby residents.

Members of the Petitioners—including the Elyria and Swansea Neighborhood Association, Cultivando, Colorado Latino Forum, GreenLatinos, Center for Biological Diversity, and Sierra Club—live, work, go to school and places of worship, and engage in recreational activities near Suncor, and they are exposed to and otherwise harmed by air pollution from the refinery. These harms show no sign of abating.

1. Elyria and Swansea Neighborhood Association

The Elyria and Swansea Neighborhood Association ("ESNA") is a Registered Neighborhood Organization with the City of Denver. ESNA represents residents and small business owners within the geographical neighborhoods of Elyria and Swansea in north Denver. ESNA's mission is to educate and inform the community and facilitate informed discussion of the many, unique issues and challenges facing our neighborhoods. ESNA provides grass-roots access for residents and property owners to the dialogue formulating and implementing the common future we all share. That mission includes public meetings and outreach, advocacy of common interests and goals to civic leaders, as well as specific projects that provide tangible benefit for the community. The future of Elyria and Swansea is threatened at all levels: many large, outside forces are acting on these neighborhoods, and ESNA is an advocate for the interests of its residents, and a bulwark against outside interests interfering with the cohesion of these affected communities.

2. Cultivando

Cultivando is a nonprofit organization that serves the Latino community in Adams County and focuses on community leadership to advance health equity through advocacy, collaboration, and policy change. Cultivando's work is based on its

[23] Colo. Dep't of Pub. Health & Env't and Regional Air Quality Council, State Implementation Plans for the Denver Metro and North Front Range Ozone Nonattainment Area: Proposed Severe and Moderate SIP Revisions, at 5-47 (Aug. 5, 2022) (Ex. 05).

organizational values of community-led work, social justice, and collaborative leadership. Cultivando firmly believes that all people have the power to maintain fair and equitable systems and to ensure opportunities for their communities to thrive. Cultivando also believes that long-term public, systems-level change begins with empowering and educating community members about issues that impact them and their well-being. Its efforts focus on education, training, advocacy, and policy change through a culturally relevant and responsive lens. Cultivando is unique because it focuses on building leaders in the community by giving community members relevant training and resources. One example of this is its Promotora model, where Cultivando trains members of its community, in house, on how to be leaders, how to advocate, and how to find and pass resources on to their fellow community members. With a focus on education and youth empowerment, Cultivando creates sustainable, long-term change because it is creating future leaders of environmental justice. In addition, through collaboration with various partners Cultivando provides a broad variety of informational sessions and trainings to the community, also allowing them to participate in policy making decisions in a powerful and engaging way. Cultivando works to reduce the disproportionate health burdens many community members face.

In 2021, Cultivando was awarded a portion of Suncor's fine exacted as part of Suncor's 2020 settlement for air pollution violations. Cultivando uses the funds for an independent air monitoring network, including a stationary air monitoring station, a mobile van, and air monitoring at homes in the neighborhoods around Suncor. Cultivando's network monitors more than 50 air pollutants, including benzene, hydrogen cyanide, sulfur dioxide, and hydrogen sulfide.

3. Colorado Latino Forum

Colorado Latino Forum is a nonprofit organization dedicated to increasing the political, social, educational, and economic strength of Latinas and Latinos. Many Latinas and Latinos in Colorado live in disproportionately burdened communities, including north Denver and Commerce City, where air pollution problems are severe. Colorado Latino Forum advocates to protect Latinas and Latinos from such harm, including by challenging air pollution permits that fail to adequately protect Colorado Latino Forum members.

4. GreenLatinos

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 and 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.

5. Center for Biological Diversity

Center for Biological Diversity is a nonprofit, 501(c)(3) conservation organization. The Center for Biological Diversity's mission is to ensure the preservation, protection, and restoration of biodiversity, native species, ecosystems, public lands and waters, and public health through science, policy, and environmental law. Based on the understanding that the health and vigor of human societies and the integrity and wildness of the natural environment are closely linked, the Center for Biological Diversity is working to secure a future for animals and plants hovering on the brink of extinction, for the ecosystems they need to survive, and for a healthy, livable future for all of us. The Center has more than 89,000 members, including over 3,100 members in Colorado.

6. Sierra Club

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 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 more than 842,510 members nationwide, and more than 24,825 members in Colorado.

B. Suncor, Already a Large Source of Pollution, Frequently Exceeds Its Emission Limits—Further Burdening the Surrounding Communities

Suncor's East Plant frequently exceeds its emissions limits, as Table 1 below shows.[24] For example, in the six and half years from 2016 through July 2022, Suncor reported exceedances of the allowable concentration of CO in the Fluid Catalytic Cracking Unit ("FCCU") Regenerator vent that totaled at least 417 hours.[25] These

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[24] The data presented in this section I.B. was presented in Petitioners' March 19, 2021, initial comments on the East Plant permit. Initial Comments at 7–12. The data also includes updated information from 2021 and 2022 that was impracticable to include in Petitioners' comments, as it was not available at that time.

[25] *See* Compilation of Suncor Quarterly Excess Emissions Reports (Q1 2016 through Q2 2022) (Ex. 07). Per Consent Decree SA-05-CA-0569, the allowable concentration of CO in the FCC Regenerator vent is 500 ppmv, 1-Hour average (0% O2 Corrected). *See id.*

We present minimum estimates of emission exceedances because the Division has failed to provide a Quarterly Excess Emission Report for 2019 Q1 and the Report is not available on the Division's public database, despite Petitioners raising the issue in their initial comments on Suncor's East Plant Title V permit. Initial Comments at 8 n.24. The Division has since acknowledged that "[t]here are no records

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exceedances occurred during more than half of the quarterly reporting periods—at least eighteen out of twenty-six quarters. Similarly, Suncor exceeded the allowable opacity concentration from the FCCU during more than half of the quarterly reporting periods from 2016 to July 2022 (at least eighteen out of twenty-six quarters).[26] The FCCU is far from the only problematic source of emissions. Over that same period, Suncor reported at least 392 hours of H_2S emissions exceeding the allowable concentration in the flare header, occurring during at least sixteen quarters.[27] In the thirteen most recent semi-annual deviation reports, the main flare has experienced a deviation in all but one of those periods.[28] As many as fifteen deviations have occurred in a single semi-annual reporting period.

Table 1. Number and Total Hours of Exceedances, East Plant Flare and FCCU

	Hydrogen Sulfide (Flare)		**Carbon Monoxide (FCCU)**		**Opacity (FCCU)**	
	162 ppmv, 3-hr rolling average basis[29]		500 ppmv, corrected to 0% O_2, 1-hr average basis[30]		20% six-minute block average basis[31]	
Year	**No.**	**Hours**	**No.**	**Hours**	**No.**	**Hours**
2022[32]	6	28	8	38	4	1.8
2021	13	65	14	87	48	25.7
2020	6	60	13	73	17	6.6
2019[33]	10	57	9	43	9	13.8
2018	13	118	5	9	1	0.6
2017	7	27	14	138	25	35
2016	8	37	3	29	10	7.5

available for 2019 Q1 RPT." Email from Records and Information Unit, Air Pollution Control Division, to Ava Farouche, Earthjustice (July 14, 2022) (Ex. 08).

[26] Per Colorado Regulation No. 1, the allowable opacity concentration from the FCC is 20% (6-minute block average).

[27] Per NSPS Subpart J/Ja, the permitted allowable concentration of H2S in the flare header is 0.1 gr/dscf (162 ppmv, 3-hour rolling average).

[28] The thirteen most recent semi-annual deviation reports span from the beginning of 2016 through the first half of 2022. See Compilation of Suncor Semi-Annual Deviation Reports (Jan. 2016 through June 2022) (Ex. 09).

[29] Per NSPS Subpart Ja.

[30] Per Consent Decree and NSPS Supbart Ja.

[31] Per 5 C.C.R. § 1001-3:II.A.1 (Reg. 1).

[32] Quarters 3 and 4 Report data is not yet available for 2022; data reported here includes only Quarters 1 and 2.

[33] No Quarter 1 Report data for 2019 is available; *see* note 28, above.

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Suncor's problems with exceeding emission limits, deviating from applicable requirements, and failing to comply with its permit conditions continue—and show no sign of abating. Further, the above exceedances are just a snapshot of Suncor's emissions problems. Plants 1 and 3—which are inappropriately considered to be separate from the East Plant, *see* Section IV.B, below—have recorded even more exceedances and deviations.

Suncor also reports more frequent upsets—specifically, consent decree reportable incidents—than many comparable refineries, according to a recent analysis from EPA.[34] The report shows that, between 2016 and 2020, Suncor reported 10 acid gas flaring incidents—the second-most out of the twelve refineries examined, and far ahead of the refinery with the third-most incidents, which had only 4. Only one refinery, the HollyFrontier El Dorado, had more incidents in the same period. But that refinery's operating capacity is more than 50% **greater** than Suncor's.[35] In addition, Suncor had the most tail gas incidents of any other refineries in the same period, with a whopping 20 incidents; the refinery with the next-most incidents had only 13 tail gas incidents.[36] Several refineries that are considerably larger than Suncor had zero incidents.[37] And for hydrocarbon flaring, Suncor reported 17 incidents over the 5-year period.[38]

Suncor's compliance history has not improved since the public comment period on the Draft Permit. For each type of incident described in EPA's analysis, the data shows that Suncor's incidents continue with the same frequency.[39] Similarly, the number and extent of exceedances at the main flare and FCCU have shown no trend of improvement. *See* Tbl. 1, above (note that 2022 data includes only the first half of the year). The lack of improvement at the FCCU is especially disturbing because, pursuant to an enforcement settlement, in April 2021 Suncor made upgrades to the FCCU intended to improve its compliance.[40] Yet the FCCU has continued to emit excess emissions after April 2021, including 30 hours of excess CO and 21 hours of excess opacity in the fourth quarter of 2021.[41] Notably, the 21 hours of excess opacity

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[34] EPA, Suncor Refinery Data Analysis (obtained by Earthjustice on Aug. 25, 2022) (Ex. 10). This information was impracticable to include in earlier comments, as the EPA report was not finalized until August 25, 2022. *See* Emails from Scott Patefield, EPA, to Alexandra Schluntz, Earthjustice (Aug. 25, 2022, and Aug. 12, 2022) (sharing report on August 25, 2022, after explaining on August 12, 2022, that the report was not ready for release) (Ex. 11).

[35] *See* Suncor Refinery Data Analysis at 1 (reporting Suncor's operable capacity as 103,000 bpcd and El Dorado's as 162,000 bpcd).

[36] *Id.* at Tbl. 3.

[37] *Id.* at Tbls 3, 1.

[38] *Id.* at Tbl. 4.

[39] *See id.* at Tbls. 2–4.

[40] Letter from Donald Austin, VP Commerce City Refinery, to Colo. Dep't of Pub. Health & Env't and the Colorado Dep't of Law (Apr. 12, 2021) ("Suncor Implementation Plan and Additional Voluntary Measures") (Ex. 12).

[41] *See* Compilation of Suncor Quarterly Excess Emissions Reports.

in just the fourth quarter of 2021 is greater than excess opacity emissions during any **annual** period between 2016 and 2020. *See* Tbl. 1, above. The automated shutdown system, while necessary, is therefore insufficient to address Suncor's problem of excess emissions: more action is essential.

In light of Suncor's persistent pollution and operational problems, EPA and the Division have opened fourteen enforcement cases against Suncor since 2011. As Table 2 below shows, these enforcement cases found numerous monitoring and LDAR violations, excess hydrogen sulfide in the fuel gas, and unlawful venting from API separators.[42] Despite these continued enforcement efforts, Suncor has yet to show that it is capable of operating within existing permit limits.

Table 2. CDPHE Enforcement Cases Against Suncor 2011–2022[43]

Case No.	Violation	Opened	Closed	Penalty	Source Report
2011-049	NESHAP Subpart FF & NSPS Subpart QQ	8/6/11	Not provided	$100,000	Q3 2013
2013-029	RACT Violations	2/19/13	12/18/15	$0	Q1 2016
2013-135	Multiple violations at East & West Plants	8/22/13	7/31/18	$0	Q3 2018
2014-122	Reporting & Emissions	12/3/14	6/7/17	$46,785	Q3 2015 & Q2 2017
2014-123	Reporting & Emissions	12/3/14	6/7/17	$171,240	Q2 2017
2016-119	Emissions & Recordkeeping	6/8/16	Not provided	$31,290	Q1 2017
2017-092	Emissions & monitoring violations	8/29/17	8/3/21	$163,080	Q3 2017, Q2 2018, Q3 2021
2018-100	Emission & monitoring violations	9/11/18	Not provided	$0	Q3 2018, Q2 2019, Q3 2019
2019-049	Failure to control emissions	3/6/19	5/28/19	$3,500	Q1 2019, Q2 2019
2019-097	Emissions, monitoring, APEN,	6/24/19	Not provided	$0	Q2 2020, Q1 2020

[42] *See, e.g.*, Case Nos. 2019-097 & 2019-194 at 58–68 (effective date Mar. 6, 2020); Case No. 2018-100 at 10–14 (effective date June 24, 2019), https://cdphe.colorado.gov/enforcement-actions-against-suncor.

[43] *See* Colo. Dep't of Pub. Health & Env't, *Enforcement Action Reports*, https://cdphe.colorado.gov/compliance-and-enforcement/enforcement-action-reports (last visited July 11, 2022).

	permitting violations				
2019-171	Failure to Control Emissions	10/1/19	Not provided	$3,500	Q3 2019, Q4 2019, Q2 2020
2019-194	Emissions & monitoring violations	12/11/19	Not provided	$1,215,810	Q1 2020
2021-082	Emission limit, failure to control emissions, monitoring and work practice violations	8/2/21	Pending	N/A	Q3 2021
2022-076	Emissions & testing violations	5/19/22	Pending	N/A	Q1 2022

C. Permitting History

EPA approved the Colorado operating permit program on August 16, 2000. 65 Fed. Reg. 49,919. The Air Pollution Control Division ("Division") of the Colorado Department of Public Health and Environment is the Colorado agency responsible for issuing Title V operating permits. The requirements of the Colorado operating permit program are set forth in Colorado's Air Quality Control Program, C.R.S. § 25-7-114 et seq., and its implementing regulations, 5 C.C.R. § 1001-5:C et seq. (Part C of Regulation No. 3).

The Division has issued one Title V permit for the East Plant and another permit for the West Plant. At issue in this Petition is the Title V permit for the East Plant. The East Plant permit was first issued on October 1, 2006, and last revised on June 15, 2009.The permit was therefore set to expire on October 1, 2011. *Id.* Suncor submitted a Title V permit renewal application on October 1, 2010. On February 17, 2021—after more than 10 years of delay—the Division issued a draft Title V renewal for public comment ("Draft Permit"). Since the last renewal, Suncor has requested, and the Division has approved, dozens of modifications to the permit.

On March 19, 2021, Petitioners submitted timely comments on the Draft Permit to the Division, which are attached as Exhibit 06 to this Petition and incorporated in full ("Initial Comments").[44] Pursuant to C.R.S. § 25-7-114.5(6)(b), Petitioners timely submitted a request for public hearing on the Draft Permit on

[44] Elyria-Swansea Neighborhood Ass'n et al., Initial Comments on Suncor Energy (U.S.A.), Inc. Commerce City Refinery – Plant 2 (East) – Adams County, Title V Operating Permit Renewal (95OPAD108) (Mar. 19, 2021) ("Initial Comments") (Ex. 06); *see also* Notice of Permit (setting thirty-day deadline to submit comments, starting February 17, 2021, and ending March 19, 2021).

March 12, 2021.[45] The Colorado Air Quality Control Commission ("AQCC") granted the request for a public hearing on March 25, 2021 and extended the deadline for public comment to May 4, 2021.[46] At the hearing, the AQCC extended the public comment period until May 11, 2021.[47]

On May 11, 2021, Petitioners submitted timely supplemental comments, attached as Exhibit 16 to this Petition and incorporated in full ("Supplemental Comments").[48] Petitioner Center for Biological Diversity additionally submitted timely comments on May 11, 2021, attached as Exhibit 17 to this Petition and incorporated in full ("CBD Comments").[49] This Petition raises objections that were raised with specificity in the Initial, Supplemental, and CBD Comments. In addition, where specifically noted in the Petition, this Petition raises arguments which arose after the comment period and therefore were impracticable to raise in prior comments. *See* 42 U.S.C. § 7661d(b)(2) (allowing objections raised during the comment period and those "that it was impracticable to raise . . . within such period or . . . arose after such period").

On February 8, 2022, the Division issued responses to comments on the Draft Permit, including responses to the Initial and Supplement Comments ("RTC-C&CG") and to CBD Comments ("RTC-CBD"), which largely dismissed Petitioners' comments.[50] The same day, the Division submitted a proposed Title V Permit to EPA ("Initial Proposed Permit"). EPA objected to the Initial Proposed Permit on March 25, 2022, citing deficiencies in the permit's Compliance Assurance Monitoring (CAM)

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[45] Elyria-Swansea Neighborhood Ass'n et al., Request for Public Comment Hearing on Suncor Energy (U.S.A.), Inc. Commerce City Refinery – Plant 2 (East) – Adams County, Title V Operating Permit Modification (95OPAD108) (Mar. 12, 2021) (Ex. 14).

[46] Colo. Air Quality Comm'n, Notice of Public Comment Hearing Regarding: Suncor Energy (U.S.A.), Inc. – Commerce City Refinery – Plant 2 (East) – Adams County, Title V Operating Permit Renewal (95OPAD108), at 2 (Mar. 25, 2021) (Ex. 15) (accepting written comments until the close of the public hearing, scheduled for May 4).

[47] *See* Colo. Dep't of Pub. Health & Env't, Response to Comments Submitted on Behalf of the Conservation & Community Groups, at 1 (Feb. 8, 2022) ("RTC-C&CG") (Ex. 18) ("Supplemental comments were submitted by Earthjustice to the Division and the Air Quality Control Commission (AQCC) via email on May 11, 2021 during the extended public comment period.").

[48] Elyria-Swansea Neighborhood Ass'n et al., Supplemental Comments on Suncor Energy (U.S.A.), Inc. Commerce City Refinery – Plant 2 (East) – Adams County, Title V Operating Permit Renewal (95OPAD108) (May 11, 2021) (Ex. 16) ("Supplemental Comments").

[49] Center for Biological Diversity, Comments on Suncor Energy (U.S.A.), Inc. Commerce City Refinery – Plant 2 (East) – Adams County, Title V Operating Permit Renewal (95OPAD108) (May 11, 2021) (Ex. 17) ("CBD Comments").

[50] Colo. Dep't of Pub. Health & Env't, Response to Comments Submitted on behalf of the Conservation & Community Groups (Feb. 8, 2022) (Ex. 18) ("RTC-C&CG"); Colo. Dep't of Pub. Health & Env't, Response to Comments Submitted on by Center for Biological Diversity ("RTC-CBD") (Feb. 8, 2022) (Ex. 19).

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analyses for the Main East Plant Flare and Railcar Dock Flare.[51] EPA raised additional concerns about minor modifications, NAAQS compliance, and environmental justice problems at Suncor.[52]

On May 25, 2022, the Division released a revised proposed Title V permit, and opened a 14-day comment period ("Revised Permit").[53] Petitioners timely submitted comments on the proposed revisions on June 8, 2022 ("Comments on Revised Permit").[54] On June 22, the Division responded to Petitioners' Comments on Revised Permit ("RTC-REV"),[55] and submitted the revised Proposed Permit to EPA. EPA did not object to the Proposed Permit within its 45-day review period, which ended on August 7, 2022. The Division issued the final permit on September 1, 2022. This Petition to Object is timely filed within 60 days of EPA's failure to raise objections during its review period. *See* 42 U.S.C. § 7661d(b)(2).

II. Standard of Review

Under the Clean Air Act, "any person" may petition EPA to object to a proposed permit "within 60 days after the expiration of [EPA's] 45-day review period." 42 U.S.C. § 7661d(b)(2); *see also* 40 C.F.R. § 70.8. Each objection in the petition must have been "raised with reasonable specificity during the public comment period provided for in § 70.7(h) of this part, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period." 40 C.F.R. § 70.8(d). Any objection included in the petition "must be based on a claim that the permit, permit record, or permit process is not in compliance with applicable requirements or requirements [of 40 C.F.R. Part 70]." 40 C.F.R. § 70.12(a)(2).

Upon receipt of a petition, EPA "*shall* issue an objection within [60 days] if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of this chapter, including the requirements of the applicable implementation plan." 42 U.S.C. § 7661d(b)(2) (emphasis added); *see also* 40 C.F.R. § 70.8(c) ("The Administrator will object to the issuance of any proposed permit determined by the Administrator not to be in compliance with applicable requirements or requirements under this part."). When deciding whether a petitioner

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[51] EPA, *EPA Objection to Suncor Energy, Inc. Plant 2 Title V Operating Permit,* at Encl. A (Mar. 25, 2022) ("EPA Objection") (Ex. 20).

[52] *Id.* at Encl. B.

[53] Colo. Dep't of Pub. Health & Env't, Notice of a Public Comment Opportunity: Suncor Energy (U.S.A.), Inc. – Commerce City Refining Plant 2 (East) Adams County – Courtesy Public Comment Period (May 25, 2022) (Ex. 21).

[54] Elyria-Swansea Neighborhood Ass'n et al., Public Comments on Revised Title V Operating Permit for Suncor Energy (U.S.A.), Inc. Commerce City Refinery – Plant 2 (East) – Adams County (95OPAD108) (June 8, 2022) ("Comments on Revised Permit") (Ex. 22).

[55] Colo. Dep't of Pub. Health & Env't, Response to Comments submitted on behalf of the Community Groups & Conservation Partners (June 22, 2022) ("RTC-REV") (Ex. 23).

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has met this demonstration requirement, EPA will evaluate the entirety of the permit record, including the statement of basis and response to comments. *See* Order Responding to Petition Requesting Objection to the Issuance of Title V Operating Permit, *In re Valero Refining-Texas, L.P.*, Petition No. VI-2021-8, at 62 (June 30, 2022) ("*Valero* Order").

III. Grounds for Objection

As explained in detail in the sub-sections below, Petitioners request that EPA object to the Proposed Permit on several grounds comprised of additional individual objections.

First, in light of Suncor's long history of violations, the Division has not provided a reasonable explanation for how the Proposed Permit conditions are adequate to assure compliance.

Second, the Proposed Permit improperly relies on AP-42 emissions factors to calculate compliance with emission limits instead of relying on site-specific factors and testing. EPA's position is that AP-42 factors are unreliable for permitting and should only be used as a last resort. Reasonable, site-specific methods of determining compliance are available (for example, stack testing), but the Division relies on AP-42 factors without reasoned explanation.

Third, the Proposed Permit's compliance calculations fail to include higher emissions from startup, shutdown, and malfunction events.

Fourth, the Proposed Permit incorporates minor Title I modifications that violate NAAQS limits. The Colorado Clean Air Act state implementation plan ("SIP") requires all minor NSR decisions to be evaluated through the state's Title V minor permit modification process—including EPA review; Colorado does not issue minor NSR permits. Modeling from both Petitioners and the Division itself shows that Suncor's modifications cause or contribute to NAAQS violations. The Division failed to model Suncor's modifications for NAAQS violations without adequate justification, and the Division has not provided a reasoned basis for otherwise determining that the modifications do not cause or contribute to NAAQS violations.

Fifth, the Division improperly failed to apply major new source review to modifications incorporated into the Proposed Permit. The Division applied the significance threshold in effect at the time of application instead of at the time of the permitting decision, and the Proposed Permit also improperly disaggregates a modification from substantially related projects.

Sixth, EPA has already determined that the permitting record for Suncor's modifications was inadequate, and the Division has not responded to EPA's concerns.

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Seventh, the CAM Plans for the Main East Plant Flare and the Railcar Dock Flare do not provide a "reasonable assurance of compliance." To begin, the Division has not provided reasoned support for its assumption that open-flame elevated flares, such as the Main East Plant Flare, can reliably attain the 98% VOC destruction efficiency that the Division assumes—despite concerns already raised by EPA regarding that assumption. Also, the CAM Plans for both flares improperly rely on "presumptively acceptable monitoring" while failing to incorporate all required monitoring elements.

Eighth, the monitoring provisions for the Main East Plant Flare are insufficient to assure compliance because, as stated, the Division has not reasonably supported the assumed 98% VOC destruction efficiency.

Finally, the Proposed Permit improperly incorporates an exemption from RACT requirements for emissions from startup, shutdown, and malfunction.

As an initial matter, it is important to recognize that each of the grounds for objection discussed in this petition must be viewed through the lens of environmental justice, consistent with Executive Order 12898. In light of the severe harms from Suncor and other sources of pollution in the Disproportionately Impacted Communities surrounding the refinery, *see* Sections I.A–I.B, above, there is a compelling need for EPA to devote increased, focused attention to ensure that the permit complies with all Title V requirements—especially by ensuring that monitoring and emission calculation requirements are adequate to assure compliance with the limits for Suncor, and ensuring that limits are not unlawfully inflated for periods of startup, shutdown, and maintenance. *See, e.g.*, *In the Matter of United States Steel Corp. – Granite City Works*, Order on Petition No. V-2011-2, at 4–6 (Dec. 3, 2012) ("*Granite City Works* Order") (because of "potential environmental justice concerns" raised by the fact that "immediate area around the [] facility is home to a high density of low-income and minority populations and a concentration of industrial activity," "[f]ocused attention to the adequacy of monitoring and other compliance assurance provisions [was] warranted") (citing in part to Executive Order 12898 (Feb. 11, 1994)).

EPA has already recognized the significant environmental justice problems for communities surrounding Suncor. In its Objection to the Initial Proposed Permit, EPA agreed "that the location of the Suncor facility raises significant environmental justice concerns, as illustrated by the severity of pollution and described health impacts facing the communities living in proximity to the Suncor site." EPA Objection, Encl. B at 1. EPA also noted that "the impacts related to [Suncor] may raise civil rights concerns." *Id.* Despite EPA's serious concerns about potential civil rights violations, the Division did not conduct any disparate impacts analysis for the Proposed Permit. Further, while the Division completed a Disparate Impacts Analysis for Suncor's West Plant Title V permit, that analysis was deficient, as

explained by both EPA and Petitioners in their respective comments on the West Plant draft permit.[56]

In light of these environmental justice problems, Executive Order 12898 informs EPA's review of the adequacy of Clean Air Act requirements—including Title V monitoring requirements for facilities in low-income communities or communities of color that are overburdened by pollution, like the community surrounding Suncor's Commerce City refinery. *See Granite City Works* Order at 4–6. More specifically, in the *Granite City Works* Order, EPA recognized that (a) Executive Order 12898 "focuses federal attention on the environmental and human health conditions of minority populations and low-income populations with the goal of achieving environmental protection for all communities;" (b) Title V "can help promote environmental justice ... through the requirements for monitoring, compliance certification, reporting and other measures intended to ensure compliance with applicable requirements;" and (c) "[f]ocused attention to the adequacy of monitoring and other compliance assurance provisions is warranted" when the "immediate area around the [relevant] facility is home to a high density of low-income and minority populations and a concentration of industrial activity." *Id.* at 5–6.[57]

As EPA has elsewhere recognized, the "determination whether monitoring is adequate in a particular circumstance generally is a context-specific determination, made on a case-by-case basis." *In the Matter of Northeast Maryland Waste Disposal Authority-Montgomery County Resource Recovery Facility*, Order on Petition No. III-2019-2 (Dec. 11, 2020) ("*MCRRF* Order"). As part of that case-by-case determination, environmental justice factors, including the demographics of the surrounding community and amount of pollution burden borne by the community, are factors that must be considered in assessing whether a particular facility's monitoring and

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[56] Comments by EPA and the Petitioners were submitted on July 13, 2022, to the Division regarding Suncor's West Plant Draft Title V Operating Permit.

[57] In a Title V order issued at the eleventh hour before the recent change in presidential administrations, EPA asserted that it had no obligation to "conduct an EJ analysis during any of the permit actions at issue." *In the Matter of AK Steel Dearborn Works*, Order on Petition No. V-2016-16, at 18 (Jan. 15, 2021) ("*AK Steel* Order"). EPA reached a similar conclusion in an order issued in 2019. *See In the Matter of Piedmont Natural Gas, Inc.-Wadesboro Compressor Station,* Order on Petition No. IV-2014-13 (March 20, 2019) ("*Piedmont Natural Gas* Order") at 10. Even if those orders were correctly decided (which Petitioners do not concede), they are inapposite here. Rather than addressing monitoring, reporting, and recordkeeping requirements or unlawful loopholes for startup, shutdown, and maintenance periods, the 2021 order addressed a claim that no agency had analyzed the disproportionate impact of the increased emissions permitted by the preconstruction and operating permits at issue, *AK Steel* Order at 16–19, and the 2019 order similarly addressed a claim requesting the evaluation of cumulative or secondary impacts of the facility at issue, *Piedmont Natural Gas* Order at 9–11. Further, these orders did not address EPA's prior *Granite City Works* order, where the agency, citing Executive Order 12898, correctly concluded that potential environmental justice concerns warranted "[f]ocused attention to the adequacy of monitoring and other compliance assurance provisions." *Granite City Works* Order at 4–6.

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emission calculation methods are adequate to ensure compliance with the relevant applicable requirements.

In communities that are disproportionately impacted by large amounts of pollution—such as the north Denver and Commerce City communities around Suncor—it is especially important to ensure that members of the surrounding community can determine whether a facility that is releasing pollution that threatens their health is actually meeting its limits, and that those limits are not unlawfully inflated for periods of maintenance, startup, and shutdown. EPA thus must fulfill its responsibilities to ensure that Suncor's East Plant Title V permit fully complies with the Clean Air Act and to protect the overburdened, low-income communities of color near Suncor from disproportionate harms of air pollution from the refinery.

A. <u>OBJECTION 1:</u> EPA Must Object to the Division's Issuance of the Proposed East Plant Permit Because the Plant's Compliance History Demonstrates That It Has Not Been Meeting Applicable Requirements, and the Division Fails to Provide a Reasoned Explanation for How the Proposed Permit Assures that Suncor Nonetheless Will Comply with Applicable Requirements Throughout the Permit Term

1. Overview

As shown in Tables 1 and 2 above, *see* Section I.B, Suncor's East Plant has consistently and substantially failed to comply with its permit conditions over the last five years (and beyond). Thus, it cannot be disputed that Suncor has not been meeting applicable requirements. Yet, despite the unambiguous Title V requirement that the Division only issue a permit renewal if the permit contains "operational requirements and limitations that **assure compliance** with all applicable requirements," 40 C.F.R. § 70.6(a)(1) (emphasis added), *see also* 5 C.C.R. § 1001-5:C.V.C.1.—and only if the Division determines that the permittee "will meet all applicable regulations," C.R.S. § 25-7-114.5(7)(a)—the Division denies any obligation to place additional operating requirements or limitations in Suncor's renewal permit to ensure that the East Plant complies with applicable requirements going forward. In fact, the Division even refuses to require Suncor to undertake measures specifically identified as necessary to avoid significant violations by Suncor's third-party expert, erroneously indicating that the Division cannot require such measures unless Suncor agrees to them.

The Division's willingness to settle for measures agreed to by Suncor that merely "improve compliance" rather than "assure compliance," RTC-C&CG at 5, 6, is directly at odds with the language and purpose of the Title V statute and regulations. We urge EPA to object to the proposed permit on the basis that the Division has misapprehended its Title V obligations and, as a result, has failed to provide a

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reasoned explanation for how the permit conditions will assure that the East Plant complies with all applicable requirements throughout the permit term.

2. Legal Requirements Not Met by the Proposed Permit

Despite the Division's acknowledgement that the East Plant will continue to violate emission limits and standards designed to protect public health, RTC-C&CG at 6, the Division contends that it has fulfilled its Title V obligations so long as Suncor is required to monitor its operations and report deviations from permit conditions, *id.* at 5. As explained in more detail below, the Division's limited view of what it means for a Title V permit to "assure compliance" with applicable requirements resulted in the Division refusing to incorporate requirements into Suncor's permit that are critical to avoiding future violations. Furthermore, the Division failed to provide a reasoned explanation for why the conditions that it did include in the Suncor permit are sufficient to ensure the facility's ongoing compliance. EPA must not allow the Division's watered-down interpretation of Title V's critical compliance-assurance purpose to stand.

The specific legal requirements governing compliance assurance that are not met by the proposed permit for Suncor's East Plant are as follows:

First, a Title V permit must include enforceable conditions sufficient to "assure compliance" with applicable Clean Air Act requirements. 42 U.S.C. § 7661c(a); *see also id.* § 7661a(f) (a state's Title V program must "appl[y] and ensure[] compliance with" all Clean Air Act requirements), *id.* § 7661a(b)(5)(A) (a state must have adequate authority to "issue permits and assure compliance by all [Title V sources] with each applicable standard, regulation or requirement under this chapter"). Likewise, the Colorado Air Quality Control Act provides that the Division shall issue a permit only if "[t]he source or activity **will meet** all applicable emission control regulations and regulations for the control of hazardous air pollutants" and "[f]or renewal operating permits, the source or activity **will meet** all applicable regulations." C.R.S. § 25-7-114.5(7)(a) (emphases added); *see also* 5 C.C.R. § 1001-5:C.V.C.1 (operating permit must contain "those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance").

The plain language and structure of Title V and the federal Title V implementing regulations—40 C.F.R. Part 70 ("Part 70")—unambiguously demonstrate that a Title V permit does not "assure compliance" merely by ***documenting violations*** with monitoring, recordkeeping, and reporting. Specifically, though documenting violations is an important Title V purpose, *see, e.g.*, 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1), a Title V permit must also aid in ***avoiding violations*** through enforceable permit conditions establishing "[e]mission limitations and standards, **including those operational requirements and limitations that assure compliance with all applicable requirements** at the

time of permit issuance," 40 C.F.R. § 70.6(a)(1) (emphasis added); *see also* 42 U.S.C. § 7661c(a), 5 C.C.R. § 1001-5:C.V.C.1. These compliance assurance conditions can (and must) be created for the first time in a facility's Title V permit.

Second, if there are changes necessary to enable a facility to comply with applicable requirements, the facility's Title V permit must include an enforceable compliance schedule with deadlines for making the requisite changes. 42 U.S.C. § 7661(3) (a Title V compliance schedule must include "a schedule of remedial measures, including an enforceable sequence of actions or operations, leading to compliance with an applicable implementation plan, emission standard, emission limitation, or emission prohibition"); *see also* 5 C.C.R. § 1001-5:C.III.C.9(c); 42 U.S.C. § 7661c(a); 40 C.F.R. §§ 70.5(c)(8)(iii), 70.6(c)(3).

The upshot: through a combination of new permit conditions establishing improved monitoring and operating practices and corrective action set forth in enforceable compliance schedules, Congress intended for Title V to ensure that major stationary sources fully comply with Clean Air Act requirements.

3. This Issue Was Addressed with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised the compliance assurance issue with specificity in timely comments filed on the Draft Permit. Initial Comments at 7–12; Supplemental Comments at 40–44.

4. The Division's Various Arguments for Why It Does Not Need to Ensure That Suncor Will Meet Applicable Requirements Are Without Merit

In response to Petitioners' comments, the Division does not, and cannot, dispute that Suncor's East Plant has a long history of Clean Air Act noncompliance and that the plant will continue violating Clean Air Act requirements in the future. RTC-C&CG at 5, 6. Nonetheless, the Division made a variety of arguments as to why it believes that renewal of the East Plant's Title V operating permit is lawful and acceptable. *Id.* at 4–6. None of the Division's arguments have merit.

a. The Division's Promise to Bring Enforcement Actions as Needed to Address Future Suncor Violations Does Not Demonstrate That Suncor Will Meet Applicable Requirements

While the Division concedes that C.R.S. § 25-7-114.5(7)(a) provides that it shall issue Suncor's renewal permit only if Suncor "**will meet**" all applicable requirements—meaning the entire plant meets all applicable requirements—the Division contends that the East Plant meets these statutory standards because "[t]he Division has taken enforcement action to address [Suncor's] periods of non-

compliance, and will continue to do so as appropriate." RTC-C&CG at 4, 5 (emphasis added) (quoting C.R.S. § 25-7-114.5(7)(a)). But the Division's declaration that it will bring enforcement actions as appropriate over the course of the permit term is plainly insufficient to assure that Suncor will meet applicable requirements. To the contrary, if enforcement is needed, Suncor presumably will *have already violated* applicable requirements. Though it is of course important that the Division oversee source compliance and bring enforcement actions where appropriate (and, in fact, its failure to do so could result in loss of authority to administer Title V requirements under 40 C.F.R. § 70.10(b)), the Division's commitment to appropriately enforce Suncor's permit does not fulfill the requirement that a Title V permit "assure compliance" with all applicable requirements and that a source demonstrate that it "will meet" such requirements throughout the permit term.

b. The Division's Claim That the Title V Permit Will "Improve Compliance" Does Not Fulfill its Legal Obligation to Determine that Suncor "Will Meet" Applicable Requirements and to Issue a Renewal Permit That "Assure[s] Compliance"

The Division suggests that the requirement under C.R.S. § 25-7-114.5(7)(a) that it determine that Suncor "will meet" all applicable requirements (and the related requirements that a permit "assure compliance" with applicable requirements) simply means that the Division is obligated "to incorporate all applicable requirements for a facility into a permit and to **improve compliance** by requiring recordkeeping, monitoring, reporting and annual compliance certifications." RTC-C&CG at 5 (emphasis added). Plainly, measures that merely "improve compliance" are not equivalent to measures that "assure compliance" such that a source "will meet" applicable requirements.

The chronic noncompliance at Suncor's East Plant documented above, *see* Section I.B, demonstrates that, contrary to the Division's suggestion, simply incorporating all applicable requirements into Suncor's permit and specifying monitoring, recordkeeping, and reporting is insufficient to assure Suncor's compliance with all applicable requirements after permit issuance. Rather, the Clean Air Act requires the Division to ensure that Suncor's permit includes both "enforceable emission limitations and standards" ***and*** "such other conditions as are necessary to assure compliance." 42 U.S.C. § 7661c(a). As explained in the federal Title V regulations, such additional conditions must include "**operational requirements and limitations that assure compliance with all applicable requirements**." 40 C.F.R. § 70.6(a)(1) (emphasis added); *see also* 5 C.C.R. § 1001-5:C.V.C.1 (same). If the necessary corrective actions are short-term (such as installing a new control or monitor), such requirements may be suitable for inclusion in a remedial compliance schedule. If the necessary corrective actions are permanent, such as a new work practice, they should be included in Suncor's permit as enforceable permit conditions. These operational requirements and limitations are

distinct from the "[m]onitoring and related recordkeeping and reporting requirements" spelled out in a separate section of the federal Title V regulations. 40 C.F.R. § 70.6(a)(3).

EPA must reject the Division's attempt to water down Congress' unambiguous intent that Title V bring all facilities into compliance and keep them in compliance; the Division cannot limit its statutory obligations to only imposing monitoring requirements that are sufficient to detect violations. While detecting violations is an important Title V component, it does not supplant the Division's responsibility to (i) evaluate what Suncor must do to achieve ongoing compliance, and (ii) include conditions in Suncor's renewal permit sufficient to assure that compliance. To ensure that Title V achieves its purpose—and that the Division satisfies its statutory duties—EPA must object to Suncor's Proposed Permit and instruct the Division to consider what additional steps Suncor must take assure its compliance with all applicable requirements, or to deny Suncor's permit renewal application.

c. EPA Must Reject as Arbitrary the Division's Unsubstantiated Declaration That It Expects Suncor to Comply

The Division also attempts to justify issuance of Suncor's renewal Title V permit on the basis that the Division "fully expects that Suncor can and will comply with emission limitations." RTC-C&CG at 5. Nowhere does the Division offer any explanation for why it expects that Suncor will meet applicable requirements despite its history of chronic non-compliance during the prior permit term. In fact, the evidence points to the contrary; as the Division acknowledges: "Suncor does have periods of non-compliance with emission limitations" and "the number of violations is not acceptable." *Id.* at 6. Further, as discussed above, Suncor has reported numerous exceedances since Petitioners filed their comments with the Division in May 2021. *See* Section I.B, above. While the Division might expect that a March 2020 settlement will "improve compliance at the facility," RTC-C&CG at 6, this is a far cry from concluding that Suncor will comply with applicable requirements over the course of the renewal permit term as required by C.R.S. § 25-7-114.5(7)(a)—as Suncor's subsequent compliance history makes clear.

To justify issuing a renewal Title V operating permit for Suncor's East Plant, the Division must make a reasonable determination that Suncor **will comply** with applicable requirements continuously over the term of the renewal permit. *See, e.g.*, *In the Matter of Inter Power Ahlcon Partners LP, Culver Power Plant*, Order on Petition No. III-2020-13 at 10 (EPA, June 7, 2022), https://www.epa.gov/system/files/ /documents/2022-06/Colver%20Order_6-07-22.pdf (explaining that the permit must "assure[] **ongoing** compliance with the hourly VOC limit" (emphasis added)). If the Division has doubts about Suncor's anticipated compliance—which obviously it does—the Division must either (a) include additional requirements or limitations in

the permit reasonably designed to avoid such non-compliance or (2) deny Suncor's permit renewal application.

d. EPA Must Reject the Division's Suggestion That a Compliance Schedule Is Required Only When a Source Will Be Violating an Applicable Requirement at the Exact Time the Division Issues the Title V Permit

Insofar as Suncor needs to make changes to the plant to ensure that it will comply with applicable requirements, the Division must incorporate a remedial compliance schedule into Suncor's permit. Despite conceding that Suncor's compliance with various applicable requirements is only "intermittent," the Division rejected including a remedial compliance schedule into Suncor's permit, apparently on the basis that Title V only requires a compliance schedule when a source is in continuous non-compliance at the time of permit issuance. RTC-C&CG at 5. This interpretation is incorrect.

Colorado's Title V regulations state that a remedial compliance schedule is required "for sources that are not anticipated to be in compliance at the time of permit issuance," 5 C.C.R. § 1001-5:C.III.C.9(c); *see also* 40 C.F.R. § 70.5(c)(8)(iii) (requiring a remedial compliance schedule "for sources that are not in compliance with all applicable requirements at the time of permit issuance"). For the compliance schedule requirement to be effective, it must be interpreted to encompass those sources that have been violating a requirement in the past and that are anticipated to continue violating the requirement during the next permit term, either intermittently or continuously. This interpretation is supported by the fact that when a source submits its annual Title V compliance certifications, it must certify non-compliance regardless of whether that non-compliance is intermittent or continuous. Clean Air Act § 114(a)(3)(D), 42 U.S.C. § 7414(a)(3)(D) ("Compliance certification shall include . . . whether compliance is continuous or intermittent."); Letter from EPA Region 6 to Thomas E. Hudson, dated July 2, 1999, https://www.epa.gov/sites/default/files/2015-08/documents/ark-cc3.pdf ("EPA considers any situation in which an emissions unit fails to meet a permit term or condition reason to prevent the facility from certifying as in compliance status" in its annual compliance certification).

This interpretation—that includes both intermittent and continuous noncompliance problems—is the only interpretation that makes practical sense. First, many applicable requirements are not monitored on a continuous basis, and thus, it would be impossible to determine whether a source will be in violation at precisely the moment that its Title V permit is issued. Second, for any requirement for which a source monitors continuously, it almost never happens that the source is always in noncompliance. Even a chronic violator would only be in non-compliance for a certain percentage of its operating time. It would be absurd to restrict the applicability of Title V's remedial compliance schedule requirement to only circumstances where a permitting authority can be confident that a source will be in

violation of an applicable requirement at precisely the time that the Title V permit is issued. Moreover, it is factually inaccurate to characterize Suncor's non-compliance as "intermittent." As detailed above, *see* Section I.B, Suncor regularly violates the same emissions limits at the same units every year. This regularity of emission violations can hardly be characterized as "intermittent."

Furthermore, EPA's discussion of the compliance schedule requirement in the preamble to the federal Title V regulations makes clear that a chronic violator like Suncor would not qualify as a facility that is "in compliance" with all applicable requirements at the time of permit issuance. Specifically, the Part 70 preamble explains that "complying sources have already demonstrated an ability to comply with applicable requirements" and "it would be burdensome and serve no useful purpose for these sources to submit detailed schedules of compliance." Operating Permit Program, 57 Fed. Reg. 32,250, 32,274 (July 21, 1992). For sources like Suncor that demonstrate chronic but intermittent noncompliance, a remedial compliance schedule would in fact serve a useful purpose—it would help to ensure Suncor's full compliance during the next permit term. Likewise, classifying a source like Suncor as a complying source that merely must certify in its application that it will "continue to comply" would be illogical. 5 C.C.R. § 1001-5:C.III.C.9. Any determination that Suncor's East Plant "will comply" with applicable requirements must, at a minimum, be supported by a remedial compliance schedule (or other permit conditions establishing new operational requirements or limitations) designed to ensure that Suncor can and will comply with all applicable requirements throughout the 5-year term of the renewal permit.

Moreover, all available evidence shows Suncor was not in compliance when the permit was issued to Suncor on September 1, 2022. For example, Suncor's most-recent semi-annual compliance report, filed on August 31, 2022, shows deviations in the same units that are consistently out of compliance: the FCCU and the Main East Plant Flare. *See* Ex. 9 at 334. Similarly, Suncor's most recent quarterly excess emissions report shows violations at the Main East Plant Flare, the FCCU, and the sulfur recovery unit, along with various failures of continuous monitoring systems. *See* Ex. 7 at 1760–1782.

e. The Division's Refusal to Incorporate Corrective Measures Identified by Suncor's Third-Party Consultant as Necessary to Avoid Future Violations is Arbitrary

Some of the additional permit terms needed to assure Suncor's compliance with applicable requirements are well-documented: they are set forth in Suncor's "Final Report Pursuant to Compliance Order on Consent, Case No. 2019-097 and 2019-194." Suncor Implementation Plan and Additional Voluntary Measures, at 1 (Ex. 12). Suncor prepared this report as a condition of its 2020 settlement with the Division, which required Suncor to retain a third-party contractor to investigate the root causes of the refinery's emission exceedances during the 2017–2019 period and "to make

recommendations to minimize or prevent such emissions exceedances in the future." *Id.* at 1. In its report, Suncor's third-party consultant explained that the Suncor refinery "experienced multiple Title V air emissions exceedances from July 2017 to June 2019, including releases of catalyst, hydrogen sulfide, sulfur dioxide, hydrogen cyanide, nitrogen oxides, carbon monoxide, and opacity exceedances." Neal Walters, Kearney, Suncor Commerce City Refinery — Third-Party Root Cause Investigation 3 (Apr. 12, 2021) ("Suncor Root Cause Investigation") (Ex. 24).

The consultant explained that the purpose of its investigation was to "investigate root causes of the emission exceedances at the site **and recommend measures to prevent future violations of the site's environmental permit**." *Id.* at 5 (emphasis added). By taking these steps, according to the consultant, Suncor could "avoid or reduce the risk of a future, potentially serious, recurrence of incidents." *Id.* at 28. Accordingly, in comments on Suncor's draft renewal permit, Petitioners contended that the recommended measures are precisely the type of conditions that must be incorporated into Suncor's Title V renewal permit to assure the East Plant's compliance with applicable requirements over the course of the permit term.

The Division rejected Petitioners' request, contending that all but one of the recommendations are inappropriate for inclusion in Suncor's Title V permit because either (1) Suncor has not agreed to them, RTC-C&CG at 79, or (2) the recommended action is "not an applicable requirement or monitoring for an applicable requirement," RTC-C&CG at 81. The Division's response reflects a misunderstanding of the Division's Title V obligations and should be rejected by EPA as arbitrary.

i. Measures That the Division Refused to Include in Suncor's Title V Permit Because Suncor Did Not Agree to Them

Of the eight recommendations made by Suncor's third-party consultant, Suncor accepted only one as an enforceable requirement: to upgrade the FCCU's shutdown system. Noting that it had only agreed to undertake $5 million worth of corrective actions and that the shutdown system upgrade will cost approximately $12 million to implement, Suncor contended that any additional actions that it takes to avoid future violations are merely "voluntary." Suncor Implementation Plan and Additional Voluntary Measures at 1–2. For the same reason, the Division rejected Petitioners' argument that these compliance assurance measures must be included as enforceable conditions in Suncor's Title V renewal permit, asserting:

> The Division's May 20, 2021 accepting Suncor's implementation plan specifically noted that the voluntary measures are not explicitly required by the March 2020 Settlement, therefore, we are not including those requirements in a permit.

RTC-C&CG at 79. Regardless of whether these actions are voluntary vis-à-vis the settlement agreement, however, that **does not mean that they qualify as voluntary for purposes of the facility's Title V permit**. Rather, as explained above and in Petitioners' comments on the Draft Permit, those measures that are needed to ensure that the facility will comply with applicable requirements must be included in Suncor's Title V permit as enforceable permit conditions. Supplemental Comments at 43–44. Unlike Suncor's 2020 settlement with the Division, Title V does not place a monetary cap on what a permittee must do to ensure that its facility will operate in compliance with all applicable requirements. Rather, Title V requires Suncor to do whatever it takes to comply. *See, e.g.*, 5 C.C.R. § 1001-5:C.V.C.11.a. (permit must include a condition stating: "The permittee must comply with all conditions of the permit issued under this Part C"). Likewise, Title V obligates the Division to include operational requirements and limitations in Suncor's Title V permit as needed to assure Suncor's compliance, regardless of whether Suncor agrees with them. *See* Section III.A.2, III.A.4.b, above.

The appropriateness of including the third-party consultant's recommendations as enforceable compliance measures in Suncor's Title V permit is demonstrated by the Division's admission that it "agrees that the voluntary measures may aid in minimizing or preventing excess emissions." RTC-C&CG at 79. And in fact, additional measures are necessary to prevent excess emissions: although Suncor has already installed the automated shutdown system at the FCCU, exceedances of carbon monoxide and opacity at the FCCU continue at an alarming rate. *See* Section I.B, above. Among other things, the recommended compliance measures include:

- developing a "training simulator," described as "a customized operator training tool that allows practicing appropriate actions to deal with potential abnormalities and incidents, so operators are much better prepared to react when these events occur in real time," Suncor Root Cause Investigation at 30;

- "digitiz[ing] key response procedures to make them available to operators in real time when alarms are activated," *id.* at 31; and

- "Digitalization at the refinery by use of augmented/virtual reality . . . to allow remote engagement with technical experts when appropriate," *id.*

Each of the consultant's recommended measures constitute an "operational requirement[]" that would serve to "assure compliance with all applicable requirements" if they were incorporated into Suncor's Title V permit as enforceable conditions. *See* 40 C.F.R. § 70.6(a)(1), 5 C.C.R. § 1001-5:C.V.C.1.

The Division's refusal to incorporate these measures into Suncor's permit is due to the Division's misunderstanding of its Title V authority. Specifically, the Division believes that it only has authority to include requirements in Title V permits

that are set forth in "applicable requirements" (e.g., the state implementation plan) or that consist of "monitoring" to assure compliance with applicable requirements. RTC-C&CG at 79. As explained above, the Division fails to recognize that (i) it is required to also include additional "operating requirements and limitations" needed to assure compliance with applicable requirements. 40 C.F.R. § 70.6(a)(1), 5 C.C.R. § 1001-5:C.V.C.1, and (ii) it can only approve the permit renewal if it makes a reasoned determination that Suncor "will meet" all of its permit conditions, C.R.S. § 25-7-114.5(7)(a). It is that responsibility that transforms the Title V permit from simply a vehicle for documenting violations into a vehicle for achieving widespread Clean Air Act compliance.

The Division based its refusal to even consider whether the additional measures recommended by Suncor's consultant are necessary to assure Suncor's compliance on its misunderstanding of its Title V authority and obligations, and therefore, the Division's decision must be rejected as arbitrary. EPA should object to the Proposed Permit and instruct the Division that it must reconsider whether these measures or others are needed to assure Suncor's compliance with applicable requirements.

ii. Measures That the Division Refused to Include in Suncor's Permit Because They Are Not an Applicable Requirement or Monitoring for an Applicable Requirement

The report by Suncor's consultant also recommends that Suncor ensure that its Process Hazards Analysis ("PHA") "includes an assessment by Suncor technical experts whether further emergency shutdown capability is warranted." RTC-C&CG at 81. Performing a periodic PHA that includes an assessment of shutdown capabilities qualifies as an operational requirement that could assist in assuring that Suncor complies with applicable requirements, especially since shutting down quickly during a malfunction event is critical to avoiding emission limit violations. Nonetheless, the Division declared that "this type of requirement is not suited for inclusion in a Title V permit as conducting PHAs is not an applicable requirement or monitoring for an applicable requirement." *Id.* at 81.

Again, as explained above, the Division is mistaken in believing that it lacks authority to include operational requirements in a Title V permit as needed to assure a facility's compliance with applicable requirements. By broadly instructing that a Title V permit must include "conditions as are necessary to assure compliance with applicable requirements of this chapter," 42 U.S.C. § 7661c(a), Congress made it clear that a Title V permit must do more than simply collect applicable requirements and impose monitoring that is sufficient to document violations. Rather, as instructed by 40 C.F.R. § 70.6(a)(1), the Division must include in a Title V permit "operational requirements and limitations" needed to ensure that a permitted facility will operate

in compliance with applicable requirements throughout the permit term. *See also* 5 C.C.R. § 1001-5:C.V.C.1.

EPA should object to Suncor's proposed permit on the basis that the Division arbitrarily refused to consider whether a permit condition requiring Suncor to undertake a PHA as described by Suncor's consultant is needed to assure Suncor's compliance with applicable requirements.

f. The Division's Refusal to Include Operating Requirements Needed to Ensure Proper Operation and Maintenance of the FCCU's Automated Shutdown System Was Arbitrary and Capricious

The Division improperly refused to impose sufficient permit conditions to ensure adequate functioning of the FCCU. In response to Petitioners' comments on the Draft Permit, the Division did agree to add to the proposed permit the one consultant-recommended measure that was "proposed by Suncor and accepted by the Division," specifically, "to install and operate a modernized automated shutdown system for the FCCU by December 31, 2022." RTC-C&CG at 79. Since Suncor had already "completed the initial installation and commissioning of an automated shutdown system within the Distributed Control System ('DCS') in the Plant 2 FCCU," RTC-C&CG at 80 (quoting Suncor), the new permit condition focuses on the next step: "upgrad[ing] the Plant 2 FCCU to include a Programmable Logic Controller, upgraded instrumentation, automated shutdown valves, and new hydraulic pressure units by December 31, 2022." RTC-C&CG at 79. These requirements now appear in Condition 2.21 of the Proposed Permit (at 27). Nonetheless, the Division rejected Petitioners' argument that the permit also needed to include "appropriate permit conditions designed to ensure the proper functioning of the automated shutdown system." RTC-C&CG at 80.

Despite conceding the primary importance of the automated shutdown system in avoiding serious emission limit violations, the Division declared: "The Title V permit does not typically address process control features that a given emission unit may be equipped with, such as an automated shutdown system." *Id.* The Division failed to explain *why* a Title V permit does not address the operation of such an important process control feature, but instead pointed to the fact that Suncor's West Plant Title V permit *also* does not include conditions designed to ensure the proper operation and maintenance of the automatic shutdown system installed there. *Id.* In other words, the Division refused to add conditions in the Proposed Permit to ensure the proper operation and maintenance of this concededly critical process control equipment because that is just not what the Division does when it issues a Title V permit. EPA must reject this absurd argument.

By Suncor's own admission, the new automated shutdown system is meant to "increase[] the speed of a unit shutdown **and significantly reduce[] the potential**

and severity of future catalyst releases from the Plant 2 FCC." RTC-C&CG at 80 (emphasis added). But the system will only achieve that goal if it is properly maintained and operated. Thus, including appropriate operating and maintenance conditions in Suncor's permit falls squarely within the Division's legal responsibility to include in Suncor's Title V permit "operational requirements and limitations that assure compliance with all applicable requirements." 40 C.F.R. § 70.6(a)(1); 5 C.C.R. § 1001-5:C.V.C.1.

EPA must reject the Division's business-as-usual explanation and object to the proposed permit due to the lack of adequate conditions needed to ensure that the automated shutdown system functions as intended. At a bare minimum, EPA must object to the Division's failure to provide a non-arbitrary explanation (based on the correct interpretation of Title V) for why it failed to include conditions in the Suncor permit that would ensure Suncor's proper maintenance and operation of the automated shutdown system.

B. <u>OBJECTION 2:</u> EPA Must Object to the Proposed Permit Because the Permit's Compliance Monitoring Provisions Utilize AP-42 Emission Factors That Are Known to Be Unreliable for Measuring Source-Specific Actual Emissions, and the Division Fails to Explain Why These Factors Nonetheless Are Sufficiently Reflective of the East Plant's Emissions to Assure Compliance with Applicable Emission Limits

1. Overview

A fundamental requirement of a Title V permit is that it include "testing, monitoring, reporting and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit," 40 C.F.R. § 70.6(c)(1). The Proposed Permit fails to satisfy this requirement because it relies extensively on EPA's AP-42, Compilation of Air Pollutant Emissions Factors (5th ed. 1995), https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors ("AP-42") to assess the facility's compliance with emissions limits without justifying why the factors reflect the facility's actual emissions.

While it can be acceptable for a Title V permit to rely on an emission factor for calculating a facility's emissions where continuous emissions monitoring is not required, the permitting authority must provide a reasonable explanation in the permit record for why the selected emission factor is sufficiently reflective of the facility's actual emissions to demonstrate its compliance with the relevant applicable requirement. *See, e.g.*, *In re Piedmont Green Power LLC*, Order on Petition No. IV-201502, at 15 (EPA, Dec. 13, 2016) ("*Piedmont Green Power* Order") ("If Georgia EPD decides to continue utilizing emission factors to determine HAP emissions, the permit record must support the selected emission factors..."); *see also In re Tesoro Refining*

and Marketing Co., Order on Petition No. IX-2005-6, at 32–33 (EPA, Mar. 15, 2005) ("*Tesoro* Order") (finding permitting authority's justification for using AP-42 factor insufficient because "a single emission factor that was developed to represent long-term average emissions can not forecast the occurrence and size of leaks in a collection of heat exchangers"). No such explanation appears in the permit record for the Proposed Permit.

The Proposed Permit relies extensively on AP-42 emission factors to demonstrate Suncor's compliance with emissions limits for various units at the refinery, which are often expressed as an annual limit of tons per year. *E.g.*, Proposed Permit § II. Cond. 1.1 (annual limits for crude heater and vacuum heater). The conditions governing the emission limits include equations for Suncor to use to calculate its emissions to demonstrate compliance with those limits. These equations largely follow the format of requiring Suncor to multiply the monthly fuel usage by an emission factor. *See, e.g.*, *id.* (calculating monthly PM, PM_{10}, CO, VOC, and NO_x emissions by multiply monthly fuel usage by an emission factor). But the factors must reliably represent the **actual** emissions from units at the refinery, or the emissions calculations will be inaccurate.

AP-42 emission factors impact a substantial amount of Suncor's emissions. For example, out of the 311 tons per year of CO that the East Plant has the potential to emit ("PTE"), Proposed TRD at 4 (identifying PTE for all criteria pollutants at the East Plant), AP-42 factors are used to calculate more than half of them, *see* Proposed Permit § II, Conds. 1.1, 2.1.1, 5.1.1, 7.1.3, 9.1.4, and 46.2.1. Similarly, AP-42 accounts for more than 25% of the 53 tons per year PTE for particulate matter. Proposed Permit § II, Conds. 1.1, 2.1.1, 5.1.1, 7.1.5.1, 8.1, 9.1.6, and 46.2.2. Though AP-42 factors contribute to a smaller percentage of NO_x and VOC emissions, they are still used to estimate more than 25 tons per year of each, *see id.* Conds, 1.1, 2.1.1, 3.1, 5.1.1, 6.1.1, 7.1.3, 8.1, 9.1.4, 46.2.1, more than the current significance level for a major source in the Denver ozone nonattainment area.

As explained in detail below and in Petitioners' public comments to the Division, AP-42 factors are generally considered unreliable to estimate emissions for individual facilities. In fact, EPA has repeatedly stated that AP-42 should not be used for permitting. Nonetheless, despite the recognized unreliability of AP-42 factors for permitting, the Division makes no attempt to justify why they are adequately reliable for the Suncor refinery. Therefore, EPA must object to the Proposed Permit on the basis that (i) the Proposed Permit lacks sufficient "testing, monitoring, reporting and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit," 40 C.F.R. § 70.6(c)(1), and (ii) the permitting record fails to "contain sufficient information to conclude that there is adequate monitoring to assure compliance with relevant emission limits." *Valero* Order at 62; *see also* 40 C.F.R. § 70.7(a)(5).

2. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following Title V requirements:

First, it fails to meet the requirement that a permit include "compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit." 40 C.F.R. § 70.6(c)(1); 5 C.C.R. § 1001-5:C.V.C.16.a.

Second, the permitting record fails to contain a sufficient "statement that sets forth the legal and factual basis for the draft permit conditions" justifying the use of unreliable AP-42 emission factors." 40 C.F.R. § 70.7(a)(5); *see also Valero* Order at 62 (grating petition to object where "the permit record, including [] statement of basis and [response to comments], does not contain sufficient information to conclude that there is adequate monitoring to assure compliance with relevant emission limits").

The conditions of the Proposed Permit (Section II) that are impacted by this objection are:

VOC Emissions from AP-42 Section 1.4, Rated C

- 1.1 (crude heater B001)
- 1.1 (vacuum heater B010)
- 2.1.1 (FCCU preheater)
- 3.1 (reformer heaters B003, B004, B005)
- 5.1.1 (sulfur recovery unit incinerator B011))
- 6.1.1 (Boilers B504 and B505)

Particulate Matter Emissions from AP-42 Section 1.4, Rated D

- 1.1 (crude heater B001)
- 2.1.1 (FCCU preheater)
- 3.1 (reformer heaters B003, B004, B005)
- 5.1.1 (sulfur recovery unit incinerator B011))
- 8.1 (Main East Plant Flare)

CO Emissions from AP-42 Section 1.4, Rated B

- 1.1 (crude heater B001)
- 2.1.1 (FCCU preheater)
- 5.1.1 (sulfur recovery unit incinerator B011))

CO Emissions from AP-42 Section 13.5, Rated Poorly

- 7.1.3 (truck loading dock combustor C001)
- 8.1 (Main East Plant Flare)
- 9.1.4 (railcar dock flare C002)

NO_x Emissions from AP-42 Section 13.5, Rated B

- 7.1.3 (truck loading dock combustor C001)
- 8.1 (Main East Plant Flare)
- 9.1.4 (railcar dock flare C002)

NO_x, CO, and SO_2 Emissions from AP-42 Section 15, Rated E

- Conditions 46.2.1, 46.2.2, 46.3 (thermal oxidizer)

3. Petitioners Raised the Unreliability of AP-42 Factors for Calculating Compliance with Emissions Limits with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised this issue with specificity in timely comments filed on the Draft Permit. Initial Comments at 17–20, 22–26; Supplemental Comments at 14–17, 46–48, 54–55.

4. Detailed Description of Emission Factor Deficiency

a. EPA Has Stated That AP-42 Should Not Be Used for Permitting

In the introduction to AP-42, EPA stated: "Use of these factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA." EPA, Introduction to AP-42 8–10 (5th ed. 1995), https://19january2021snapshot.epa.gov/sites/static/files/2020-09/documents/c00s00.pdf ("AP-42 Introduction"). EPA explains that AP-42 "emission factors essentially represent an average of a range of emission rates" and are "generally **assumed to be representative of long-term averages** for all facilities in the source category (i.e., a population average)." *Id.* at 1–2. As a result, "approximately half of the subject

sources will have emission rates greater than the emission factor . . . ." *Id.* Therefore, **"a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance."** *Id.* (emphasis added). EPA continues:

> Average emissions differ significantly from source to source and, therefore, emission factors frequently may not provide adequate estimates of the average emissions for a specific source. The extent of between-source variability that exists, even among similar individual sources, can be large depending on process, control system, and pollutant. . . . As a result, some emission factors are derived from tests that **may vary by an order of magnitude or more**. Even when the major process variables are accounted for, the emission factors developed may be the result of averaging source tests that **differ by factors of five or more**.

Id. at 3 (emphasis added).

EPA reaffirmed its position regarding the unreliability of AP-42 emission factors for use in demonstrating whether a source is complying with emission limits in an enforcement alert issued in November 2020. EPA, Pub. No. EPA 325-N-20-001, *Enforcement Alert: EPA Reminder About Inappropriate Use of AP-42 Emission Factors* 3 (Nov. 2020) ("Enforcement Alert"), https://www.epa.gov/sites/production/files/2021-01/documents/ap42-enforcementalert.pdf. EPA issued that enforcement alert because it was "concerned that some permitting agencies, consultants, and regulated entities may incorrectly be using AP-42 emission factors in place of more representative source-specific emission values for Clean Air Act permitting and compliance demonstration purposes." *Id.* at 1. EPA reminded permitting agencies, consultants, and regulated entities that AP-42 emission factors are only based on averages of data from multiple sources, and therefore "are not likely to be accurate predictors of emissions from any one specific source, except in very limited scenarios." *Id.* at 1. EPA also explained that "[i]n developing emission factors, test data are typically taken from normal operating conditions and generally avoid conditions that can cause short-term fluctuations in emissions," which "can stem from variations in process conditions, control device conditions, raw materials, ambient conditions, or other similar factors." *Id.* EPA emphasized that "even factors that are rated 'A' or 'B' are not designed to be used by a single source where other, more reliable, site-specific, data are available." *Id.* EPA declared: "**Remember, AP-42 emission factors should only be used as a last resort.**" *Id.*

EPA has previously granted a Title V petition for relying on an AP-42 factor to estimate emissions over the life of a permit. In *Tesoro*, the permitting authority relied on an AP-42 factor to estimate uncontrolled VOC emissions from cooling towers. *Tesoro* Order at 32. EPA found that the emissions estimate was insufficient to assure compliance with the emissions limit over the life of the permit because of the significant variability in the AP-42 factor, especially given that it was rated "D." *Id.*

at 32–33. EPA concluded: "For all practical purposes, a single emission factor that was developed to represent long-term average emissions can not forecast the occurrence and size of leaks in a collection of heat exchangers and is therefore not predictive of compliance at any specific time." *Id.*

Based on the above, it is clear that AP-42 emission factors are inappropriate for developing estimates for permitting purposes, since the emissions estimates for permitting are supposed to represent the "potential" or high-end emission estimate value. In contrast, AP-42 emission factors represent "average" and not maximum emission rates. Thus, in each instance that Suncor's calculations rely on AP-42 emission factors the resultant emissions estimates (all other criticisms aside) are unquestionably underestimates.

b. Suncor's Own NO_x Performance Tests Demonstrate the Unreliability of AP-42 Emission Factors at the Refinery

In addition to ignoring the general unreliability of AP-42 factors to estimate source-specific actual emissions, the Division also ignores site-specific evidence that AP-42 emission factors substantially underestimate emissions from units at the refinery. Specifically, three performance tests at Suncor—identified during the Title V renewal for Suncor's West Plant—demonstrate that actual emissions from these units are higher than those estimated by AP-42.[58]

First, in 2018, Suncor conducted a performance test on boiler B4 to comply with updates to Colorado Regulation No. 7. *See* Draft Technical Review Document for Renewal/Modifications to Operating Permit 96OPAD120, at 62 (May 9, 2022) ("West Plant Draft TRD") (Ex. 25); 5 C.C.R. § 1001-9 (Regulation Number 7). The results of the test demonstrated that true NO_x emissions were 68% higher than the emissions estimated by the emission factor from AP-42 Section 1.4. *See* West Plant Draft TRD at 62 (tested emission factor was 0.464 lb/MMBtu vs. AP-42 factor of 0.275 lb/MMBtu). This test demonstrates the unreliability of AP-42 emission factors for estimating actual emissions from the gas-fired boilers and process heaters at the refinery.

It is also important to recognize that the factor applicable to Boiler No. 4 at the time of the test was rated "A"—*the most reliable factor rating in AP-42. See* AP-42

[58] Petitioners did not cite this information in their public comments because it was only revealed in the permitting process for the West Plant, particularly in the draft permit and draft technical review document that were made publicly available on May 9, 2022. *See* Colo. Dep't of Pub. Health & Env't, Notice of a Proposed Renewal Title V Operating Permit Warranting Public Comment for Suncor Energy (U.S.A.), Inc. – Commerce City Refinery Plants 1 and 3 (West) – Adams County (May 9, 2022) (Ex. 26). Public comments on the East Plant permit at issue here were due almost one year earlier, on May 11, 2021. *See* RTC-C&CG at 1. Therefore, to the extent that this additional information qualifies as a new ground for objection, it "arose after [the public comment] period," as allowed under 40 C.F.R. § 70.12(a).

§ 1.4 tbl. 1.4-1 (listing emission factor for Large Wall-Fired Boilers, Uncontrolled (Pre-NSPS)). Many of the other AP-42 factors that the Proposed Permit rely on factors that are rated far lower.

Second, in 2002, Suncor performed a NO_x performance test on Process Heater H-33. West Plant Permit, West Plant (May 9, 2022) ("West Plant Permit")[59] § II, Cond. 18.1. That test demonstrated an emission factor for H-33 of .051 lb/MMbtu. *Id.* Cond. 18. The Section 1.4 emission factor for a heater with an ultra-low NO_x burner, like H-33, is 0.031 lb/Mmbtu. Like Boiler B-4, the site-specific performance test demonstrated emissions that were over 60% greater than the emissions estimated by AP-42.

Third, in 2019, Suncor tested NO_x emissions from the Plant 3 Rail Loading Rack Vapor Combustor. West Plant Permit § II, Cond. 24.1.2. The test demonstrated an emission factor of 0.146 lb/MMBtu. *Id.* Cond. 24. Meanwhile, the emission factor for the Truck Loading Dock Combustor in Plant 1 relies on an AP-42 factor of 0.068 lb/MMBtu—*less than half of the emission factor demonstrated in the performance test at Plant 3.*

The weaknesses demonstrated for these estimations are unsurprising for the reasons described above—the AP-42 factors are, at best, an average that guarantees that half of units will emit more than the amount identified in the emission factor. Yet, despite these demonstrated weaknesses, the Division still relies on factors—including many from Section 1.4—to estimate emissions in the Proposed Permit. This reliance is particularly troubling because even the "A"-rated emission factor for Boiler B4 above was determined to be 68% too low. As noted above, other emissions factors in Section 1.4 are rated substantially lower: (i) CO rated "B", (ii) VOCs rated "C", and (iii) particulate matter rated "D." The Division cannot reasonably rely on these demonstrably poor emission factors.

c. Reasonable Site-Specific Alternatives to AP-42 Factors Are Available

To rely on AP-42 factors as its "last resort," Enforcement Alert at 1, the Division must demonstrate that there is no way to obtain more reliable emission factors through source-specific testing. Otherwise, the Division must require Suncor to utilize a more reliable method to demonstrate its compliance with applicable requirements. As Petitioners demonstrated in their public comments, the Division has multiple alternatives to relying on AP-42 factors that would provide more reliable, site-specific emission information.

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[59] CDPHE, Draft Operating Permit for Suncor Energy (U.S.A.), Inc. – Commerce City Refinery, Plant 1 (West) & Plant 3 (Asphalt Unit) (May 9, 2022) ("West Plant Permit"), *available at https://drive.google.com/file/d/1W3ob4ClzrQOipA1PZ_oUkleDAJ1ru2ta/view?usp=sharing*

First, the Division has authority to require Suncor to test emissions directly from units at the refinery. These include stack tests for stationary combustion sources like heaters and boilers. Indeed, the Division has the obligation to impose "testing . . . sufficient to assure compliance with the terms and conditions of the permit." 40 C.F.R. § 70.6(c)(1); *see also* Initial Comments at 18–19 (describing Division's authority to require testing). This type of source-specific information is far more reliable to calculate emissions. EPA, Emissions Estimation Protocol for Petroleum Refineries, Version 3 at 4–11 (Apr. 2015) ("Emissions Protocol"), https://www.epa.gov/sites/default/files/2020-11/documents/protocol_report_2015.pdf, especially when tests are required to be updated on a regular schedule, *see* RTC-C&CG at 53. As Petitioners have argued, the Division "should require more frequent stack tests at all sources that can be tested and where the emission factors being used are questionable, e.g., those based on AP-42." Supplemental Comments at 21. At a minimum, stack tests are necessary to confirm whether AP-42 factors are sufficiently reliable.

Source-specific testing is also available for the flares at the refinery. While flares cannot be tested with stack tests, other techniques are available for measuring emissions from flares. For example, as noted in Petitioners' public comments, "video imaging spectro-radiometry (VISR) and other non-intrusive, long-path measurement methods such as Differential Absorption Lidar (DIAL)" are available methods to confirm the accuracy of emission factors (and destruction efficiencies, *see* Section III.F.1.a, below). Initial Comments at 26. Indeed, Petitioners included a chart in their public comments showing the results of flare testing using both "extractive sampling and Video Imaging Spectral Radiometry (VISR), using a product called MANTIS." *Id.* at 25.

Second, the Division also has the authority to require Suncor to install additional continuous emission monitoring systems. Petitioners requested that the Division require CEMS from all stack sources at the refinery. Supplemental Comments at 18–20. CEMS systems provide a far more complete representation of actual emissions because they directly measure pollutant concentrations and flow, including during non-routine operations like startup, malfunction, and shutdown. *See id.* CEMS for NO_x, SO_2, and CO have been available for over 20 years, *id.* at 18, and CEMS are now available for both filterable PM and VOCs, *see id.* at 19–20.

5. The Division Has Not Justified Reliance on AP-42 Factors in either the Permitting Documents or Its Response to Comments

Despite the limitations of AP-42 emission factors and available alternatives identified in Petitioners' public comments, the Division provides no explanation for why it believes AP-42 factors are sufficiently reliable to calculate emissions from Suncor.

The Division's responses to Petitioners' public comments do nothing to resolve the deficiencies in the permitting record.

In response to Petitioners' explanation of the unreliability of AP-42 factors, Initial Comments at 17–20, the Division states: "while AP-42 might have certain deficiencies, in the absence of other robust, scientifically sound supporting documentation for source-specific emission factors, EPA's AP-42 is the best source for this type of information," RTC-C&CG at 18. The Division's response is inadequate because it assumes that the Division is limited to relying on pre-existing information to develop monitoring requirements and emissions factors. But the Division is empowered, and in fact required, to also include "testing . . . sufficient to assure compliance with the terms and conditions of the permit." 40 C.F.R. § 70.6(c)(1); *see also* Initial Comments at 18. The Division cannot merely rely on default AP-42 emission factors that it knows to be unreliable when it has the authority to require testing to generate site-specific emissions factors.

In response to Petitioners' argument about the Division's authority to impose testing requirements, the Division attempts to improperly shift to Petitioners the burden of justifying the Proposed Permit's monitoring requirements:

> [Petitioners] provide[] no specific examples of those sources where additional testing should be done. In some cases, testing is not feasible, nor practical and absent any comments from Earthjustice on specific permit conditions relying on AP-42 emission factors that would benefit from additional testing, the Division cannot provide a more detailed response.

RTC-C&CG at 19. The Division provided a similar response to reject Petitioners' argument that additional stack testing should be required for all units relying on AP-42 factors, claiming that Petitioners did "not specify for which emission units and limitations additional testing is needed and does not explain why they believe the monitoring included in the draft permit is not sufficient to assess compliance with those limitations." RTC-C&CG at 53. The Division's response is both legally and factually incorrect.

Petitioners directly identified both (i) the permit conditions that relied upon AP-42 factors to determine compliance, and (ii) the weaknesses of AP-42 factors to estimate emissions. *See, e.g.*, Initial Comments at 17–20. The Division is required to impose adequate monitoring and testing to assure compliance with the permit's terms. Where, as here, Petitioners have raised a reasonable question on the adequacy of the permit's monitoring requirements, the burden is on the Division to ensure that the permitting record "contain[s] sufficient information to conclude that there is adequate monitoring to assure compliance with relevant emission limits." *Valero* Order at 62. The Division makes no effort to do so.

Also, the Division even ignores the rating grades of the AP-42 factors that the Proposed Permit relies upon. For stationary combustion units like boilers, the ratings for estimates of particulate matter is "D," *see* AP-42, Section 1.4, tbl. 1.4-2,[60] and for VOCs is "C," AP-42, Section 1.4, tbl. 1.4-1.[61] Meanwhile, for the refinery's flares, AP-42 indicates that the emissions factors for VOCs and CO are poorly representative of actual emissions. *See* AP-42, Section 13.5, Tbl. 13.5-2.[62] Finally, for the thermal oxidizer, the emission factors for NO_x, CO, and SO_2 are rated "E," the lowest available rating. *See* AP-42, Section 1.5.[63] Indeed, none of the AP-42 factors relied upon in the Proposed Permit are even rated "A," while even "A" rated factors have proven unreliable at the refinery, as discussed above. *See* Section II.B.4.b, above.

In response to Petitioners' argument regarding the unreliability of AP-42 factors for estimating emissions from the refinery flares, the Division erroneously argues: "Earthjustice says in their comments that **stack flares cannot be tested**, thus this is a situation in which use of AP-42 emission factors is appropriate." RTC-C&CG at 23–24 (emphasis added). This characterization of Petitioners' comments is wholly false. Petitioners noted that "stack flares cannot be tested **using standard approaches**" like stack tests, Initial Comments at 23 (emphasis added), but Petitioners identified multiple other methods for testing emissions from flares, Initial Comments at 25–26 (describing video imaging spectro-radiometry (VISR) and Differential Absorption Lidar (DIAL)).

The Division only makes two superficial attempts to engage with the merits of Petitioners' argument.[64]

First, the Division states that for any monitoring requirements that are carried over from the prior permit, "the justification for the monitoring would have been presented in the TRD for the original permit issuance." RTC-C&CG at 19. This response does not answer the reasonable concerns raised by Petitioners regarding the reliability of AP-42 factors to estimate emissions at the refinery. The Division cannot justify the adequacy of those factors by directing Petitioners to prior TRDs, without any indication of whether those TRDs do address AP-42's weaknesses, especially when those prior TRDs were not provided with the Proposed Permit. Regardless, Petitioners have reviewed the prior TRDs for the permit, and they are silent on the reliability of AP-42 factors to estimate emissions at the refinery.

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[60] Proposed Permit § II., Conds. 1.1, 2.1.1, 3.1, 5.1.1, 8.1.

[61] Proposed Permit § II, Conds. 1.1, 2.1.1, 3.1, 5.1.1, and 6.1.1

[62] Proposed Permit § II, Conds. 7.1.3, 8.1, 9.1.4.

[63] Proposed Permit § II, Conds. 46.2.1, 46.2.2, 46.3.

[64] Petitioners address the Division's responses related to particulate matter emissions in Section III.C, below, dealing specifically with the application of AP-42 Section 1.4's particulate matter emission factors.

Second, the Division explains that it calculates annual emissions by taking a rolling total of monthly emissions calculations based on the AP-42 factor. *Id.* at 19. The Division then concludes that "[m]onthly monitoring is sufficient to assure compliance with those annual (tons per year) emission limitations that rely on AP-42 emission factors." *Id.* This response is beside the point. Whether emissions are calculated by using monthly or annual throughput, the ultimate emissions calculation will be equally wrong if the emissions factor used does not adequately represent actual emissions.

The Division's failure to justify the reliance on AP-42 factors in light of the reasonable doubts and alternatives raised by Petitioners violates both the requirement to impose sufficient testing and monitoring to assure compliance with applicable requirements and permit conditions, 40 C.F.R. § 70.6(c), and the obligation to adequately explain and justify the monitoring conditions in the Proposed Permit, 40 C.F.R. § 70.7(a)(5).

C. <u>OBJECTION 3:</u> EPA Must Object to the Proposed Permit's Reliance on the AP-42 Emission Factor for Particulate Matter Because the Division's Explanation for Why This Factor is Adequate is Unreasonable and Unsupported by the Record

In addition to the general inadequacy of AP-42 factors to estimate emissions for permitting, the Division's explanation for relying on AP-42 factors to calculate particulate matter emissions is unreasonable and unsupported by the record.

For stationary combustion sources like boilers and heaters, AP-42 itself gives the total PM emission factor a "D" rating, AP-42 § 1.4, tbl. 1.4-2, which is considered "[b]elow average." AP-42 Introduction at 9. The Proposed Permit's reliance on an emission factor that is recognized as unreliable even by AP-42 is particularly egregious. At the time that the Division released the Draft Permit for public comment, it offered no explanation whatsoever for why use of this obviously unreliable AP-42 emission factor in Suncor's PM emissions calculations is sufficient to assure Suncor's compliance with applicable PM emission limitations. In response to Petitioners' comments on the Draft Permit, the Division attempted to justify reliance on this D-rated PM emission factor for Suncor's compliance demonstrations. As explained below, the Division's arguments lack record support and are fundamentally arbitrary.

1. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements as a result of its reliance on unreliable AP-42 emission factors for particulate matter specifically.

First, it fails to meet the requirement that a permit include "compliance certification, testing, monitoring, reporting, and recordkeeping requirements

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sufficient to assure compliance with the terms and conditions of the permit." 40 C.F.R. § 70.6(c)(1); 5 C.C.R. § 1001-5:C.V.C.16.a.

Second, the permitting record fails to contain a sufficient "statement that sets forth the legal and factual basis for the draft permit conditions" justifying the use of unreliable AP-42 emission factors." 40 C.F.R. § 70.7(a)(5); *see also Valero* Order at 62 (grating petition to object where "the permit record, including [] statement of basis and [response to comments], does not contain sufficient information to conclude that there is adequate monitoring to assure compliance with relevant emission limits.").

The conditions of the Proposed Permit (Section II) that are impacted by this objection are:

- Condition 1.1 (crude heater (B001) and vacuum heater (B010))
- Condition 2.1.1 (FCCU preheater)
- Condition 3.1 (reformer heaters (B003, B004, B005))
- Condition 5.1.1 (sulfur recovery unit incinerator (B011))
- Condition 8.1 (Main East Plant Flare)

2. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised this issue with specificity in timely comments filed on the Draft Permit on March 19, 2021. Initial Comments at 17–20.

3. The Division's Arguments in Its Response to Comments Seeking to Justify its Reliance on AP-42 Emission Factors for Particulate Matter Lack Record Support and Should Be Rejected as Arbitrary

The Division's response to Petitioners' argument concluded the total PM factor in AP-42 Section 1.4 "likely overestimates" emissions from the refinery units and, therefore, "does not consider that further testing is required." RTC-C&CG at 20. The Division reached this conclusion through a series of unsupported factual statements.

First, the Division noted a difference between the emissions factors for filterable PM, rated "B," and condensable PM, rated "D" in Section 1.4, and declared: "the condensable PM emission factor is 3 times the value of the filterable PM emission factor." *Id. Next*, the Division states that "[a] review of past performance tests for natural-gas fired combustion equipment addressed in other Title V permits indicate that the total PM emission rates are below that of the total PM emission factor in AP-42 Section 1.4 . . . and that condensable PM emissions are generally not three times

the filterable portion." *Id.* From this, the Division concludes the Section 1.4 emissions factor "likely over-estimates PM emissions from natural gas-burning combustion equipment." *Id. Finally*, the Division concludes that "[s]ince refinery fuel gas is not significantly different from natural gas," the emission factor also likely overestimates the total PM emissions from the refinery-fuel-gas combustors at the refinery. *Id.*

The Division's response is inadequate for several reasons.

First, the Division provides no support for its statement concerning the results of past performance tests of natural-gas fired combustion equipment. The results of this review are not in the permit record and the public is required to merely accept the Division's conclusions. The Division does not explain (i) how many units were reviewed, (ii) what types of facilities the units were in, (iii) how much lower the performance test results were than the AP-42 test results, or (iv) whether any performance tests reviewed showed PM emissions higher than the AP-42 estimate. Without adequate information to evaluate the Division's conclusions, the Division's response is inadequate to justify that the monitoring for these units is adequate to assure compliance.

Second, the Division relies on the erroneous assumption that "refinery fuel gas is not significantly different from natural gas," RTC-C&CG at 20, but it cites nothing to support that conclusion. The Division's failure to support this assumption is sufficient, by itself, to reject its justification. Regardless, the assumption is false. AP-42 itself recognizes that emissions will differ between natural gas and refinery gas. In its discussion of emissions from process heaters at petroleum refineries, AP-42 states that "[t]he fuel burned may be refinery gas, natural gas, residual fuel oils, or combinations" and "[t]he quantity of these emissions is a function of the type of fuel burned, the nature of the contaminants in the fuel, and the heat duty of the furnace." AP-42 § 5.1.2.9. As EPA has cautioned: "It is important to note that AP-42 does not include emission factors for all fuels (notably refinery fuel gas and coke)." Emissions Protocol at 4–11.

In fact, Colorado regulations recognizes that emissions from refinery fuel gas combustion differ from natural gas combustion. Regulation No. 7 establishes emissions limits for NO_x emissions from process heaters using natural gas and refinery fuel gas. The emissions limit for refinery-fuel-gas fired process heaters is twice the limit for natural-gas-fired process heaters. 5 C.C.R. 1001-9:E.II.A.4.g.(i).

The Division's reliance on the PM AP-42 factor in the Proposed Permit without any justification or requirements for performance testing violates its obligation to impos monitoring and testing requirements that are sufficient to assure compliance with permit terms and emissions limits, 40 C.F.R. § 70.6(c), and the obligation to adequately explain and justify the monitoring conditions in the Proposed Permit, 40 C.F.R. § 70.7(a)(5). *See Piedmont Green Power* Order at 15 (Section III.B.1, above) ("the permit record must support the selected emission factors").

D. OBJECTION 4: EPA Must Object to the Proposed Permit Because It Violates Applicable Monitoring Requirements by Excluding Higher-Than-Normal Emissions from Startup, Shutdown, and Malfunction Periods from Its Emission Compliance Calculations

The Proposed Permit's emissions calculations fail to satisfy Title V's monitoring requirements because the equations used to calculate emissions do not include emissions from startup, shutdown, and malfunction periods.

Throughout the Proposed Permit, the Division provides equations for Suncor to use to calculate its emissions for purposes of demonstrating compliance with applicable emission limitations. Each of these equations rely on emission factors that, at best, represent the emission unit's emissions during "normal" operations—that is, emissions during periods other than startup, shutdown, or malfunction (SSM). *See, e.g.*, AP-42 Introduction at 4 ("Emission factors generally are developed to represent long-term average emissions, so testing is usually conducted at normal operating conditions."). But during SSM periods, pollution controls may not be operating normally and other variables impacting emission rates can vary, resulting in higher emissions than usual. EPA has emphasized that air pollution during SSM events at industrial facilities has "real-world consequences that adversely affect public health." 80 Fed. Reg. 33,840, 33,850 (June 12, 2015). In fact, it is well-documented that facility emissions during these periods can greatly exceed emissions during "normal" operations.[65] Yet the compliance demonstrations in the Proposed Permit lack any variable or adjustment to account for increased emissions occurring during these periods.

For example, pages 10–11 of the Proposed Permit set forth emissions limits and compliance calculations for the Crude Heather and Vacuum Heater. In Condition 1.1, emissions are calculated by multiplying measure fuel usage by an identified emission factor draw from AP-42. While AP-42 emission factors fail even to properly account for emissions during normal operations—as discussed above, *see* Section III.B.IV—AP-42 emission factors (and other emission factors in the Proposed Permit) only account for emissions during normal operations. *AP-42 Introduction* at 4. As such, the emissions equation in Condition 1.1 utterly fails to account for extra emissions that often occur during startup, shutdown, and malfunction periods. Thus, calculations performed pursuant to this equation will underestimate the units'

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[65] *See, e.g.*, Proposed Rule, Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards, 79 Fed. Reg. 36,880, 36,912 (June 30, 2014) ("Pressure release events from relief valves to the atmosphere have the potential to emit large quantities of HAP."); *id.* at 36,945 ("[E]missions during a malfunction event can be significantly higher than emissions at any other time of source operation."); U.S. Env't Prot. Agency, EPA-HQ-OAR-2010-0682-0802, *Summary of Public Comments and Responses* 10 (Sept. 2015) ("We agree that SSM emissions can be significant and that these releases, particularly when directed straight to the atmosphere rather than to a flare or other control device can quickly exceed emissions from routine operations. . . .[L]arge release events can significantly impact a facility's annual emissions . . . .").

emissions and are insufficient to assure Suncor's compliance with the applicable emission limits. The same problem occurs in many other conditions of the Proposed Permit, listed below.

The Division's failure to account for these emissions in Suncor's compliance demonstrations equations therefore means that these equations cannot assure Suncor's compliance with applicable emission limits.

a. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements:

First, it fails to meet the requirement that a permit include "compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit." 40 C.F.R. § 70.6(c)(1); 5 C.C.R. § 1001-5:C.V.C.16.a.

Second, the permitting record fails to contain a sufficient "statement that sets forth the legal and factual basis for the draft permit conditions." 40 C.F.R. § 70.7(a)(5); *see also Valero* Order at 62 (granting petition to object where "the permit record, including [] statement of basis and [response to comments], does not contain sufficient information to conclude that there is adequate monitoring to assure compliance with relevant emission limits"), *Piedmont Green Power* Order at 15 (Section III.B.1, above) ("the permit record must support the selected emission factors").

The conditions of the Proposed Permit (Section II) that are impacted by this objection are:

- Condition 1.1 (crude heater (B001) and vacuum heater (B010))
- Condition 2.1.1 (FCCU preheater (B002))
- Conditions 2.1.2, 2.15 (FCCU reactor-regenerator (P004))
- Condition 3.1 (reformer heaters (B003, B004, B005))
- Condition 5.1.1 (sulfur recovery unit incinerator (B011))
- Condition 6.1.1 (boilers (B504, B505))
- Condition 7.1.1.3 (pilot and assist gas consumption)
- Conditions 7.1.5.1, 7.3 (truck loading dock combustor (C001))
- Condition 8.1 (Main East Plant Flare (F018))

- Conditions 9.1.1.1, 9.1.1.2, 9.1.1.3, 9.1.4, 9.1.6, 9.3, 9.14.2 (railcar dock flare (C002))
- Condition 10.1.1 (wastewater treatment)
- Condition 46.2.1 (thermal oxidizer)
- Condition 46.2.2 (thermal oxidizer)
- Condition 46.3 (thermal oxidizer)

b. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised this issue with specificity in timely comments filed on the Draft Permit on March 19, 2021. Initial Comments at 21–22.

c. The Division's Arguments in Its Response to Comments Are Meritless

The Division does not dispute that emission factors do not take higher emissions during SSM periods into account, RTC-C&CG at 22, but the Division improperly attempts to shift the burden onto Petitioners by demanding that they provide (1) evidence of higher emissions during SSM periods, (2) information about the length of SSM periods, and (3) details about how additional emissions would affect Suncor's compliance status. *Id.* at 23. The Division demands that Petitioners "specifically indicate[] why, for each of those permit conditions listed, . . . startup, shutdown, and malfunction emissions are significant and should be included in assessing compliance." *Id.* at 22.

These pieces of information, however, are not the Petitioners' burden to supply. Petitioners directly identified both (i) the permit conditions that did not take into account SSM periods, and (ii) the likelihood that SSM periods result in higher emissions. Initial Comments at 22 (listing permit conditions); *id.* at 21 n.61 (quoting U.S. Env't Prot. Agency, EPA-HQ-OAR-2010-0682-0802, *Summary of Public Comments and Responses* 10 (Sept. 2015) ("We agree that SSM emissions can be significant and that these releases, particularly when directed straight to the atmosphere rather than to a flare or other control device can quickly exceed emissions from routine operations. . . .**[L]arge release events can significantly impact a facility's annual emissions** . . . ." (emphasis added)). The Division "does not necessarily disagree" with Petitioners' assertion that "emissions during periods of startup, shutdown and malfunction would all be higher and the emission factors do not take those higher emissions into account." RTC-C&CG at 22.

In light of these concessions, the Division is required explain why it believes that, for each of the listed conditions, SSM periods will *not* affect the permit's

compliance equations' ability to assure compliance. *See* 40 C.F.R. § 70.6(c)(1) (requiring permit to include sufficient "testing, monitoring, [or] reporting . . . to assure compliance with the terms and conditions of the permit"). Where, as here, Petitioners have raised a reasonable question on the adequacy of the permit's monitoring requirements, the burden is on the Division to ensure that the permitting record "contain[s] sufficient information to conclude that there is adequate monitoring to assure compliance with relevant emission limits." *Valero* Order at 62; *see also In re Cash Creek Generation LLC*, Order on Petition No. IV-2010-4 (EPA, June 22, 2012) (objecting to permit on basis that the petitioners had "**demonstrated that KDAQ failed to provide a reasoned explanation** for how the compliance demonstration method associated with the VOC Emissions limit . . . accounts for all VOC emissions from the flare" (emphasis added)).[66] By summarily dismissing the Petitioners' evidence of compliance equations that do not account for SSM emissions, the Division has not met its burden.

Petitioners could never meet the burden that the Division seeks to place on them. The Division demands that Petitioners prove the level of additional emissions that occur from SSM events. But the data the Division seeks does not exist because it refused to include requirements for Suncor to calculate emissions from those events. The very provisions that Petitioners are asking for would provide Petitioners the data necessary to meet the burden that the Division claims is required for imposing those conditions.

Responding to the Petitioners, the Division only addressed two of the conditions that Petitioners flagged as deficient: Condition 1.1 and Condition 4.4. The Division's response regarding Condition 1.1 suffers from the deficiencies described above. Regarding Condition 4.4, the Division correctly identifies that the equations do not rely on emission factors, but rather on material balance. Because material balance measures concentrations of potential pollutants, those compliance equations are not subject to Petitioners' concerns about SSM periods. Petitioners thus do not object to the equations in Condition 4.4 on this basis. But rather than address Petitioners' arguments about the other listed conditions, the Division simply ignores them and relies on the flawed logic refuted above. The Division's response is therefore inadequate.

E. Objections Related to East Plant Minor Modifications Approved as Part of This Title V Permit Renewal

The Proposed Permit incorporates for the first time an array of purportedly minor modifications that Suncor has made to the East Plant since the last time that the Division renewed the plant's Title V permit. Proposed TRD at 12–158. Importantly, the Division has never issued (and will not issue) separate "Minor NSR"

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[66] Available at https://www.epa.gov/sites/default/files/2015-08/documents/cashcreek_response2010.pdf.

permits authorizing these physical and operational changes. Instead, pursuant to Colorado's SIP, all minor Title I modifications are processed as minor Title V permit modifications. 5 C.C.R. §§ 1001-5:B.II.A.6, 1001-5:C.X.I. Suncor was allowed to make these facility modifications immediately after filing its minor modification applications. RTC-C&CG at 71. Before this Title V permit renewal proceeding, the Division made no public determination whatsoever regarding the legality of Suncor's modifications, including whether these changes actually trigger major New Source Review requirements or whether these changes will cause or contribute to a NAAQS violation. Rather, the Division waited to process a final approval to these changes—and to provide an opportunity for public comment on these changes—until this Title V permit renewal proceeding. In other words, pursuant to Colorado regulations, **it is this Title V permit renewal that authorizes Suncor's minor modifications**. While Suncor has already made the facility modifications in question, Suncor assumed the risk that the Division ultimately would disapprove of them after following the required public-notice-and-comment and EPA-review procedures.

As explained below, the Division's proposed approval of many of the facility modifications incorporated into Suncor's Title V renewal permit is unlawful and arbitrary. Specifically, (1) Petitioners' modeling shows that the permitted emissions cause or contribute to a NAAQS violation as a whole, and thus, the emission increases resulting from the facility modifications cause or contribute to NAAQS violations, (2) the Division failed to perform modeling or provide any alternative reasonable basis for determining that the modifications will not cause or contribute to a NAAQS violation, (3) modifications that should have been aggregated as a single modification for purposes of determining major NSR applicability for impermissibly reviewed separately, (4) in determining whether the modifications trigger major NSR, the Division improperly applied the significance thresholds in effect at the time the application was filed rather than at the time of the Division's approval pursuant to this Title V renewal permit, and (5) the permitting record provided to EPA in connection with the modifications is inadequate for EPA to review the reasonableness of the Division's proposed approval.

1. As a Threshold Matter, the Minor Modifications Approved in This Title V Permit Renewal Are Reviewable

Before addressing why EPA should object to the minor modifications the Division proposes to incorporate into the Proposed Permit, Petitioners address the threshold question of whether the lawfulness of the Division's approval of these minor modifications may be reviewed in this Title V permit renewal proceeding. The Division takes the position that they cannot, contending that the Division previously approved modifications. *See, e.g.*, RTC-C&CG 36-40 (referring to modifications as "past permitting actions" and "complete"). For the reasons below, the Division is incorrect.

a. Contrary to the Division's Assertion, Under Colorado Law Final Approval of a Minor Modification Does Not Occur Until the Modification is Incorporated Into a Source's Title V Permit and Sent to EPA for Review

The Division's attempt to evade public and EPA review of its minor modification approvals on the basis that these approvals all took place in the "past," *see* RTC-C&CG at 36–40, is utterly meritless.

First, as a practical matter, the Division fails to point to any decision document announcing a final Division approval of any of the minor modifications at issue. Instead, the Division indicates that it simply determined that Suncor's modification applications were "complete," and states that based on those completeness determinations, Suncor was allowed to move forward with the modifications. RTC-C&CG at 37, 39, 40. On their face, these assertions do not amount to a final Division approval of the modifications in accordance with legal requirements applicable to construction permits, such as a determination that the modifications will not cause or contribute to the NAAQS. *See* C.R.S. § 25-7-114.5(7)(a)(III); 5 C.C.R. §§ 1001-5:B.III.D.1, 1001-5:B.II.A.6, 1001-5:C.X.D.5.d.

Second, as a legal matter, the Division could not finalize its approval of Suncor's minor modifications until after the proposed modifications were subject to EPA's 45-day review period for Title V modifications, which has not previously occurred. While ordinarily EPA has no formal opportunity to object to issuance of a minor Title I modification, Colorado's approved implementation plan expressly utilizes Title V permit modification procedures for the purpose of approving minor Title I modification applications. In particular, Colorado's construction permit regulations, Part B of Colorado Regulation 3, provide:

> Owners or operators of sources that have valid operating permits . . . may construct or modify such source without obtaining a construction permit prior to construction or modification, provided the construction or modification qualifies for a minor permit modification or for operational flexibility, and the applicable provisions as set forth in Sections X . . . of Part C [of Regulation No. 3] are met.

5 C.C.R. § 1001-5:B.II.A.6.

Part C of Regulation 3, meanwhile, sets forth Colorado's Title V permitting requirements, and Section X generally recites the language in the Federal Title V regulations at 40 C.F.R. § 70.7(e)(2) governing Title V minor modifications. In other words, under Colorado's air permitting regulations, **the approval process for the state's minor NSR construction permit program *is* the Title V permit modification procedure**. And those procedures state that that a minor permit

modification cannot be approved by the Division until (i) the Division sends the modification to EPA for review, and (ii) EPA's 45-day review period has expired. 5 C.C.R. §§ 1001-5:C.X.F, 1001-5:C.X.H.

Here, there is no evidence in the permitting record that the Division previously provided EPA with an opportunity to review and object to the minor modifications incorporated into the Proposed Permit. Nor has there been any opportunity for the public to submit comments to the Division on the proposed modification or to petition EPA for an objection. Moreover, the permitting record contains no approvals or modified permits that have actually been issued. While the Division states that it "sent completeness letters to Suncor indicating the relevant modification applications qualified as Title V minor modifications," RTC-C&CG at 71, no completeness letters appear in the permitting record for the East Plant, and regardless, a completeness letter is not a permit issuance. Indeed, while no completeness letters were incorporated into the East Plant permit record, the letters included with the West Plant permit record expressly tell Suncor that the modification will not be sent to EPA until the renewal is complete: "Typically, the next step for this permit modification is the EPA 45-day review period. Since the renewal application for this permit was submitted on September 16, 2016, the Division will incorporate this modification into your renewal permit." Letter from Jacqueline Joyce, APCD Permit Engineer to Bernd Haneke, Suncor Environmental Specialist (Nov. 2, 2017) (Ex. 27).

In fact, the Proposed TRD confirms that the modifications have not previously been reviewed. The full title of the TRD is "Technical Review Document for Renewal/ Modifications to Operating Permit 95OPAD108." Proposed TRD cover page. The TRD's discussion of the modifications similarly identifies changes made in the Proposed Permit "to address [the] modification applications," *e.g.,* Proposed TRD at 14; it does not describe previously approved permit modifications. Indeed, the stated purpose of the Proposed TRD is "for reference during review of the proposed permit by EPA." Proposed TRD at 2. The Division would have no reason to describe the modifications if EPA had already reviewed them.

Therefore, the Proposed Permit seeks approval of both the Title V renewal *and* the Title V modifications incorporated into the Proposed Permit.

Third, and relatedly, the Division could not finalize its approval of Suncor's minor modifications until after the proposed modifications were subject to the public participation requirements of Colorado's Title V program. In addition to requiring EPA approval, Colorado's construction permit regulations, Part B of Reg 3, expressly require that minor NSR permits go through Colorado's Title V public participation requirements. 5 C.C.R. § 1001-5:B.III.C.2.c ("Construction or modification of sources in accordance with the minor modification and flexibility provisions of section X., XI., and XII. of Part C of this regulation **are subject to the public participation requirements of Part C**." (emphasis added)).

While Part C's public participation requirements do not require an opportunity for public notice and comment at the time a minor application is submitted, 5 C.C.R. § 1001-5:C.VI.A (requiring public comment only for "initial permit issuance, significant modifications, re-openings and renewals"), all conditions proposed for incorporation into a source's renewal Title V permit are subject to public comment, including those initially deemed subject to minor modification procedures. In particular, Section VI.A of Part C instructs that a permit renewal is "subject to public notice, comment and opportunity for public hearing requirements." *Id.* § 1001-5:C.VI.A. The federal Title V regulations confirm: "Permits being renewed are subject to the same procedural requirements, including those for public participation, affected State and EPA review, that apply to initial permit issuance." 40 C.F.R. § 70.7(c)(1)(i). Furthermore, until such time as minor modification provisions are incorporated into the source's permit at the time of permit renewal (and, accordingly, subject to public and EPA review), they are not covered by the permit shield. *Id.* § 70.7(e)(2)(vi); 5 C.C.R. § 1001-5:C.X.J.

In fact, the public's right to comment on minor NSR modifications during Title V renewals was part of the Colorado AQCC's reasons for adopting the provisions applying Title V minor permit modification procedures to minor NSR modifications. As noted above, Colorado's construction and operating permit program are in Colorado Regulation No. 3. The AQCC adopted the minor modification provisions as part of Colorado's July 15, 1993 amendments to the SIP provisions in Regulation No. 3. *See* 5 C.C.R. § 1001-5:F.I.L(I)(G)(2). Prior to the amendments, Reg. No. 3 required sources to obtain a construction permit or construction permit modification for any modification, regardless of whether it was major or minor. *See id.* In the amendments, the AQCC wanted to adopt provisions of 40 C.F.R. § 70.5(e)(v) allowing a source to "make the change proposed in its minor permit modification application immediately after it files such application." *Id.* The AQCC chose to move all minor construction permit modifications into the Title V modification program, while noting that "all substantial requirements needed for a construction permit must be met" including "ambient modeling to assess the modification's impact on air quality in Colorado, as required in the SIP." *Id.* In support of this change, the AQCC stated that "[u]pon [Title V] permit renewal, **the minor modification undergoes public notice along with the rest of the permit**, and the permit shield can be extended to the minor modification provisions." *Id.* (emphasis added).

Also, the Title V renewal process must apply to the minor Title I modifications because Colorado state law provides no other mechanism to challenge the minor modifications. Colorado law allows no opportunity for state judicial review of minor construction permit or operating permit modifications. Regulation No. 3 only provides the opportunity for the public to seek judicial review of Clean Air Act permitting decisions in two circumstances. *First*, any party who participated in the public comment process on a major NSR permit may seek judicial review, after a hearing before the AQCC. 5 C.C.R. § 1001-5:D.IV.A.2 (allowing participants in public comment process to seek AQCC hearing); *id.* § 1001-1:VII.E.1 (allowing participants

in public comment process to seek judicial review of the Division's final permit decision after the AQCC public hearing). *Second*, any party who participated in a Title V public comment process may seek judicial review, after a hearing before the AQCC. *Id.* §§ 1001-5:C.VI.B.10, 1001-5:C.VI.D–E (allowing commenters to seek AQCC hearing); *id.* § 1001-1.VII.E.1 (allowing participants in public comment process to seek judicial review of the Division's final permit decision after the AQCC public hearing).

In sum, Colorado's regulations specifically provide that a Title I minor modification that is initially processed without a public comment opportunity is subject to Title V public participation requirements at the point that the source applies for renewal of its Title V permit. Therefore, the Title I minor modifications incorporated into the Proposed Permit are subject to review during the Title V process, including the opportunity for public comment and the right to petition EPA for an objection.

b. EPA Recently Held in a Title V Order That an NSR Issue is Reviewable in a Title V Permit Proceeding Where, as Here, No Separate NSR Permit Has Been Issued

In a recent Title V order, EPA explained that the adequacy of an emission limit taken to avoid major NSR was subject to review via the Title V permitting process because "no NSR permit had been issued by the permitting authority." *In re Salt River Project Improvement and Power District Agua Fria Generating Station*, Order on Petition No. IX-2022-4 at 11, n.18 (EPA, July 28, 2022) ("*Agua Fria* Order").[67] Instead, "[e]mission limits designed to restrict PTE [potential to emit] to levels below which major and minor NSR permitting requirements apply were established exclusively through a Title V permit action." *Id.* While Petitioners disagree with EPA's premise that the adequacy of the avoidance limit at issue in that permit proceeding would not have been reviewable if it *had* been established in a separate minor NSR permit, EPA's rational for granting Title V review in that circumstance applies equally to the minor modifications at issue in this proceeding. Specifically, as shown above, Colorado's air permitting regulations utilize the Title V permitting process to approve facility modifications that are subject to minor NSR. Accordingly, like the minor NSR issue addressed by the *Agua Fria* Order, there is no separate "NSR permitting process" under which the Division has or will approve the Title I modifications at issue in this petition. *See id.* Thus, as in the *Agua Fria* Order, EPA can and must review the lawfulness of the Division's proposed approval of the minor modifications addressed in this Title V permit renewal proceeding.

[67] Available at https://www.epa.gov/system/files/documents/2022-08/SRP%20Agua%20Fria%20Order_7-28-22.pdf

c. The Minor Modifications Are Reviewable because All Colorado SIP Provisions Are "Applicable Requirements," Including Provisions Related to Modifications

Even if the modifications had been issued and public comment had been provided, the minor modifications are still subject to challenge because all provisions of Colorado's SIP are applicable requirements for a Title V permit, including the SIP provisions governing minor modifications. A Title V permit must "assure compliance" with all applicable requirements. *See, e.g.*, 42 U.S.C. § 7661c(a), 5 C.C.R. § 1001-5:C.V.C.1. New Source Review requirements are incorporated into Colorado's SIP, and if they have not been applied properly to a source, Title V offers the opportunity for the state and EPA to correct that deficiency.

The definition of "applicable requirement" includes *all* requirements of the state implementation plan. *See* 40 C.F.R. § 70.2 (defining "applicable requirement" as "[a]ny standard or other requirement provided for in the applicable implementation plan approved . . . by EPA"); *see also* 5 C.C.R. § 1001-5:A.I.B.9 (substantively the same definition). The Tenth Circuit has consistently recognized that the term "any" means "all" in plain language. *See, e.g.*, *United States v. McGinty*, 610 F.3d 1242, 1246 (stating that "any" is a powerful and broad word, and it does not mean some or all but few, but instead it means "all"); *see also United States v. Hernandez*, 655 F.3d 1193, 1196 (10th Cir. 2011); *Kelley v. City of Albuquerque*, 542 F.3d 802, 814 (10th Cir. 2008). Because the term "applicable requirement" includes "any standard or other requirement provided for in the applicable implementation plan," it includes all standards or other requirements in the applicable implementation plan, including both major and minor construction permit requirements.

The Tenth Circuit Court of Appeals has accepted this plain language reading of the Title V regulations in *Sierra Club v. U.S. Env't Prot. Agency*, 964 F.3d 882 (10th Cir. 2020) ("*Hunter* Opinion"). In that case, the Tenth Circuit reversed EPA's denial of a Title V petition to object to a proposed permit that incorporated minor modifications that the petitioners asserted should have been treated as major modifications subject to major NSR. *Id.* at 887. The dispute hinged on the interpretation of the term "applicable requirement." In the challenged Title V order, EPA had concluded that SIP requirements for major NSR were not "applicable requirements" under Title V if a source had already obtained a final minor preconstruction permit pursuant to the state's minor source permitting program. *Id.* at 877. The Tenth Circuit rejected EPA's interpretation that a state's issuance of a minor NSR permit prevented EPA from considering whether the facility changes in question actually triggered applicability of major NSR. Instead, the court concluded that 40 C.F.R. § 70.2 "unmistakably requires that each Title V permit include all requirements in the state implementation plan," including major NSR requirements. *Id.* at 890–91 ("The regulatory definition of this term unambiguously refers to all

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requirements in a state's implementation plan, such as Utah's requirements for major [New Source Review]."). The court also rejected arguments that the petitioners' claims were (i) time-barred because the challenged modifications had been incorporated into the prior Title V permit and (ii) an improper collateral attack on a concluded state permitting decision, concluding that the statutory obligation of EPA is to object if a Title V permit omits an applicable requirement. *Id.* at 898–99 ("So if the Sierra Club demonstrates the applicability of major NSR requirements, the EPA must object to the Title V permit even if the Sierra Club's petition could be viewed as a collateral attack on Utah's permitting decision in 1997."). While the case centered on the question of whether modifications that were treated as "minor" should have triggered stricter "major" New Source Review requirements, the Tenth Circuit did not confine its holding to the circumstances present in that case and presented those requirements as one example of the types of requirements in a SIP that are applicable requirements. *Id.* at 891. Instead, it used broader language inclusive of the situation presented here.

Therefore, under the Tenth Circuit's opinion, EPA must object if Petitioners demonstrate that a provision of the permit does not comply with the SIP, including the validity of the minor modifications.

* * * * *

For these reasons, the minor modifications incorporated into the Proposed Permit are appropriate subjects for this petition.

2. The Proposed Permit Does Not Meet Applicable Requirements and Title V Requirements Because the Modifications Incorporated into the Permit Were Not Properly Evaluated for NAAQS Compliance

As discussed further below, the Division's obligation to ensure that the modifications will not interfere with attainment or maintenance of the NAAQS before permitting the modifications is an applicable requirement with which Title V permits must comply. Petitioners' modeling and the Division's own modeling show that Suncor is permitted to cause violations of the 2010 one-hour-averaging-time nitrogen dioxide (NO_2) and sulfur dioxide (SO_2) NAAQS. Further, the Division's reasons for not conducting modeling for the modifications, and its challenges to Petitioners' approach to modeling, are flawed. Accordingly, the Proposed Permit does not comply with applicable requirements that: (i) the Division can only issue construction permits for modifications that will not cause or contribute to a violation of the NAAQS, 40 C.F.R. § 51.160(a)–(b); 5 C.C.R. §§ 1001-5:B.III.D.1, 1001-5:C.III.C.12, 1001-5:C.V.B.1, 1001-5:C.X.D.5.d., 1001-5:C.X.A.1; and (ii) the Division must adequately justify the basis for permit terms, 40 C.F.R. § 70.7(a)(5). The Administrator must object.

Petitioners raised the following issues with specificity in their comments to the Division on the initial Draft Permit. CBD Comments at 1–7; Supplemental Comments at 7–13.

a. Whether the Division Properly Determined if the Facility Modifications Approved in This Title V Permit Renewal Will Cause or Contribute to a NAAQS Violation Is Subject to Title V Review

In its response to comments, the Division asserted that whether the facility modifications at issue cause or contribute to a NAAQS violation is not subject to Title V review because (1) the Division has "already approved" the modifications, and (2) "modeling [for NAAQS compliance] is not required for a Title V renewal permit." RTC-CBD at 2; *see also id.* at 4–5 (stating that "[t]he NAAQS are not applicable requirements"); RTC-C&CG at 33–34 (stating that "[t]he NAAQS are not applicable requirements" and "[m]odeling is not required"). The Division's reasoning is flawed.

First, as explained above, while the Division allowed Suncor to make its proposed modifications, final Division approval of those modifications is occurring through this Title V permit renewal process. *Second*, regardless of whether the Division previously approved these modifications (which it has not), a Title V permit must assure compliance with all applicable requirements. While NAAQS modeling is not a generally applicable requirement for all Title V sources, that is not the issue in this proceeding. Rather, Petitioners seek to assure compliance with **the prohibition in Colorado's SIP against facility modifications that cause or contribute to a NAAQS violation.** As explained, the requirements of Colorado's SIP are "applicable requirements" with respect to which Suncor's Title V permit must assure compliance. *See* Section III.E.1.c, above. **The Division's assertion that Title V is not the right vehicle for assuring that a facility modification complies with the NAAQS is refuted by the plain language of Colorado's Title V regulations, which requires an applicant for a "combined construction/ operating permit" to provide "[d]ata necessary to allow the Division to determine whether the source complies with . . . Any applicable ambient air quality standards."** 5 C.C.R. § 1001-5:C.III.C.12.

Compliance with the NAAQS is a key consideration in the Clean Air Act's preconstruction permitting program for major and minor sources of air pollution. States implement this permitting program through their SIPs. *See* 42 U.S.C. § 7410(a). Pursuant to the Clean Air Act, states must ensure that the minor source programs set forth in their SIPs "include . . . regulation of the modification and construction of any stationary source . . . to assure that [NAAQS] are achieved." *Id.* § 7410(a)(2)(C). Thus, EPA cannot approve a state's minor source program if that program "would interfere with any applicable requirement concerning attainment" of NAAQS. *Id.* § 7410(l); *see also Texas v. EPA*, 690 F.3d 670, 676 (5th Cir. 2012).

EPA's minor new source review regulations are consistent with the statutory requirement. These regulations require a state permitting agency to reject an application for construction of a minor source or minor modification of an existing source if approving it would interfere with attainment of the NAAQS. 40 C.F.R. § 51.160(a)–(b). To ensure that state permitting authorities know when a new minor source or minor modification to a major source could interfere with NAAQS compliance, the regulations specify:

> Each plan must set forth legally enforceable procedures that enable the State or local agency to determine whether the construction or modification of a facility, building, structure or installation, or combination of these will result in . . .
>
> . . .
>
> (2) Interference with attainment or maintenance of a national standard in the State in which the proposed source (or modification) is located or in a neighboring State.
>
> [and]
>
> (b) Such procedures must include means by **which the State or local agency responsible for final decisionmaking on an application for approval to construct or modify will prevent such construction or modification if—**
>
> . . .
>
> (2) **It will interfere with the attainment or maintenance of a national standard.**

Id. (emphasis added). The regulations go on to state that, where appropriate, the permitting agency should rely on air quality models, databases, and other requirements specified in the Guidelines on Air Quality Models in Appendix W to meet these obligations. *Id.* § 51.160(f).

In keeping with these requirements, Colorado's SIP requires that all facility modifications be evaluated for compliance with NAAQS and other applicable requirements. The Division may only grant a construction permit, or construction authorization via a minor modification to an operating permit, if, among other requirements, the proposed source or activity will satisfy the NAAQS and all applicable regulations. C.R.S. § 25-7-114.5(7)(a)(III); 5 C.C.R. § 1001-5:B.III.D.1; *id.* § B.II.A.6; *see also* EPA, *EPA Approved Statutes and Regulations in the Colorado SIP*, https://www.epa.gov/sips-co/epa-approved-statutes-and-regulations-colorado-sip (last accessed Aug. 23, 2022).

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To facilitate these determinations, Colorado's Title V operating permit regulations require that an applicant for a combined construction/operating permit provide "[d]ata necessary to allow the Division to determine whether the source complies with . . . [a]ny applicable ambient air quality standards." 5 C.C.R. § 1001-5:C.III.C.12; *see also id.* § 1001-5:C.V.B.1 (Division can issue an operating permit, permit modification or permit renewal only if the Division has received a complete permit application).[68] Likewise, the Division may only approve a combined construction/operating permit application if it determines, among other things, that the source "will comply with . . . applicable ambient air quality standards." *Id.* § 1001-5:C.IV.A. Colorado's rules governing minor modifications of Title V operating permits are substantively the same. Applicants for a minor permit modification must provide the Division with:

> [d]ata necessary to allow the Division to determine whether the source complies with . . . [a]ny applicable ambient air quality standards and all applicable regulations. When the data includes modeling, the model used shall be an appropriate one given the topography, meteorology, and other characteristics of the region, which the source will impact.

Id. § 1001-5:C.X.D.5.d.

The Division may not issue a minor modification to an operating permit if doing so would violate any applicable requirement, *id.* § 1001-5:C.X.A.1, which includes the requirement under § 1001-5:B.III.D.1 that a minor modification cannot interfere with attainment or maintenance of the NAAQS, *see id.* § 1001-5:B.II.A.6 (stating that minor permit modifications must comply with Part B section D.1.a through D.1.g.).

b. <u>OBJECTION 5:</u> EPA Must Object to the Proposed Permit Because Modeling Shows That Suncor's Modifications Cause or Contribute To Violations of the NAAQS, so the Proposed Permit Does Not Meet Applicable Requirements

EPA must object to the Proposed Permit because it includes permit modifications that increase emissions and therefore cause or contribute to violations of the 2010 one-hour averaging time NO_2 and SO_2 NAAQS.[69] This is demonstrated by Petitioners' modeling and the Division's own modeling.

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[68] The minor permit modification provisions make clear that all application requirements for operating permit applications also apply to minor permit modification applications. 5 C.C.R. § 1001-5:C.X.D.

[69] Ultimately, after EPA objects to this proposed Title V permit, the Division can add enforceable, one-hour-averaging-time emission limits to Suncor's permits to resolve the NAAQS violations. The Division should have done this when it approved these modifications. Note that there was no public comment period on these modifications, so Petitioners could not have commented on the need for these emission limits prior to the issuance of this Title V renewal.

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In support of their public comments, Petitioners commissioned an air quality modeling expert to model the impacts of Suncor's emissions on NAAQS. Petitioners' modeling shows that Suncor's permitted emissions, which include increased emissions from the incorporated permit modifications, will cause violations of both the one-hour NO_2 and SO_2 NAAQS. *See* Lindsey Meyers, *Air Dispersion Modeling Analysis for Verifying Compliance of Permitted Emissions with the One-Hour SO_2 and NO_2 NAAQS: Suncor Refinery, Commerce City, Colorado*, (May 10, 2021; updated July 12, 2022, and Aug. 30, 2022) ("Meyers Modeling Analysis") (Ex. 28).[70] Petitioners' initial modeling showed a NO_2 value of 235.21 micrograms per cubic meter (ug/m^3), which exceeds the NO_2 NAAQS of 188 ug/m^3. *Id.* at 18. The modeling also showed an SO_2 value of 230.52 ug/m^3, while the SO_2 NAAQS is 196.2 ug/m^3. *Id.* at 17.

Petitioners revised their modeling to address the concerns raised by Suncor in its response to comments. *See* Meyers Modeling Analysis; *see also* Suncor Energy (U.S.A.) Inc., Response to Public Comments Regarding Plant 2 Title V Permit Renewal 23 (May 21, 2021) (Ex. 30). Even after addressing the concerns Suncor raised in its response to public comments, without evaluating their accuracy, Petitioners' adjusted modeling showed that Suncor causes violations of the one-hour NO_2 and SO_2 NAAQS under every modeled scenario. Meyers Modeling Analysis at 20. This modeling showed a NO_2 value of 235.12 ug/m^3 and an SO_2 value of 230.40 ug/m^3. *Id.*

For both modeling analyses, Petitioners used a variety of techniques and inputs, especially considering the limited time, information, and resources available to us, in order to be comprehensive. Petitioners selected the modeled values for NO_2 and SO_2 referenced above based on the Division's preferred approach to modeling Suncor's emissions, with which Petitioners do not necessarily agree.[71] Petitioners also used the same meteorological data sets as the Division. Meyers Modeling Analysis at 14–15; *see also* Proposed TRD at 76–77; CDPHE Modeling Review Comments at 1, 5–9. These various techniques and inputs all resulted in finding that Suncor will violate the health-based one-hour NO_2 and SO_2 NAAQS. Further, Petitioners' modeled values relied on non-conservative assumptions, so the values are very likely underestimates. Meyers Modeling Analysis at 17. For example, due to limited information, Petitioners were not able to (i) model all of the emissions points at Suncor; (ii) include downwash parameters for all of the objects as Suncor; or (iii) include nearby sources of pollution, of which there are many in the overburdened

[70] While the updated Meyers analysis clearly identifies changes made after the original public comment period, Petitioners also attach a copy of the original Meyers analysis submitted with CBD's public comments. *See* Lindsey Meyers, *Air Dispersion* Modeling *Analysis for Verifying Compliance of Permitted Emissions with the One-Hour SO2 and NO2 NAAQS: Suncor Refinery, Commerce City, Colorado* (May 10, 2021) (Ex. 29).

[71] The Division's preferred approach to modeling with respect to Suncor is discussed in its Modeling Review Comments, issued in response to Petitioners' modeling report. Colo. Dep't of Pub. Health & Env't, Modeling Review Comments, Project ID: 538-210630 1–2 (June 30, 2021) ("CDPHE Modeling Review Comments") (June 30, 2021) (Ex. 31).

community where Suncor is located. *Id.* at 11–12, 17–18. Examples of nearby sources include the Cherokee Generating Station, Metro-Denver's sewer plant, the expanded I-70, and I-270.

The Division's own modeling confirms that Suncor violates the one-hour NO_2 and SO_2 NAAQS. *See generally* CDPHE Modeling Review Comments. In response to the modeling analysis submitted with Petitioners' public comments, the Division conducted its own modeling.[72] The Division's modeling shows violations of the one-hour SO_2 NAAQS under every modeling scenario, with values ranging from 211.71 ug/m^3 to 232.97 ug/m^3. CDPHE Modeling Review Comments at App. B, Table 2.3; Colo. Dep't Pub. Health & Env't, Suncor Impacts (Ex. 32). The modeling shows one-hour NO_2 NAAQS exceedances in 16 out of 20 scenarios, *see* Suncor Impacts, and the Division stated that "[i]t can be concluded that [Suncor] will contribute and/or cause a modeled violation of the 1-hr NO_2 NAAQS standard," CDPHE Modeling Review Comments at 1; *see also id.* at App. B, Table 2.3. The Division's report summarizes the results, stating:

> Although a cumulative analyses [sic] could be completed including all of the sources at Suncor and nearby sources, it is expected that this facility will continue to contribute and/or cause a modeled violation of the 1hr NO_2 and 1hr SO_2 NAAQS due to the facility alone exceeding over 100% of the NAAQS for both 1hr NO_2 and SO_2.

CDPHE Modeling Review Comments at 1.

i. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements.

First, the Proposed Permit violates the requirement that the Division cannot approve a combined construction/operating permit application unless the applicant submits a complete application that includes "[d]ata necessary to allow the Division to determine whether the source complies with . . . [a]ny applicable ambient air quality standards and all applicable regulations." 5 C.C.R. § 1001-5:C.X.D.5.d.; *see id.* §§ 1001-5:C.III.C.12, 1001-5:C.V.B.1.

Second, the Proposed Permit violates the applicable SIP requirement that the Division may only approve a modification if "[t]he proposed source or activity will not cause an exceedance of any National Ambient Air Quality Standards." *Id.* § 1001-5:B.III.D.1.c; *see id.* § 1001-5:B.II.A.6 (minor modifications subject to Part C Section X must satisfy Part B Section III.D.1.a. through III.D.1.g.); *see also* C.R.S. § 25-7-

[72] The differences between the Division's modeling and Petitioners' modeling are discussed on pages 22 to 24 of the Meyers Modeling Analysis (Ex. 28).

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114.5(7)(a)(III) ("Any permit required pursuant to this article shall be granted by the division or the commission, as the case may be, if it finds that . . . . For construction permits, the source or activity will meet any applicable ambient air quality standards and all applicable regulations.").

Third, the Proposed Permit violates the requirement that the Division may only use minor permit modification procedures "for those permit modifications that . . . [d]o not violate any applicable requirement." 5 C.C.R. § 1001-5:C.X.A.1.

The conditions of the Proposed Permit that are impacted by this objection are: (i) Modification 1.28 (Section I, Cond. 5.1; Section II, Cond. 8.1, 8.6, 8.8, 8.11, 18); (ii) Modification 1.29 (Section I, Cond. 5.1; Section II, Cond. 5.1, 8.1, 8.6, 8.8, 8.10, 18; (iii) Modification 1.33 (Section I, Cond. 5.1; Section II, Cond. 9.1, 9.5, 9.7; (iv) Modification 1.36 (same as 1.33); and (v) Modification 1.38 (Section II, Cond. 7.1).

ii. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised this issue with specificity in timely comments filed on the Draft Permit. Supplemental Comments at 7–13; CBD Comments at 1–7.

iii. The Division's Arguments in Its Response to Comments Are Meritless

In its responses to Petitioners' comments, the Division summarized:

> The Division has reviewed the modeling analysis behind the Lindsay [sic] Meyers report and conducted its own preliminary modeling. This modeling showed lower values than the Lindsey Meyers report but still **showed the facility was exceeding the SO_2 and NO_x NAAQS.** Based on this, **the Division agrees that additional modeling and analysis should be done, with further refinements including input from the source**. While these findings are concerning and deserve more in-depth assessment, this information does not provide a legal basis for denying the Title V renewal since the facility already has received construction permits for its operations and the NAAQS is not considered an applicable requirement for Title V purposes.

RTC-CBD at 5 (emphasis added); *see also* RTC-C&CG at 34 (substantively identical).

Accordingly, the Division admits the modeled violations of the health-based NAAQS in fact. The Division's arguments supporting its decision to include the modifications in the Proposed Permit are meritless.

First, the Division cites an EPA statement in the preamble to the Part 70 program to argue that the EPA regulations concerning NAAQS compliance are not

"applicable requirements" for Title V permit renewals. RTC-C&CG at 33; RTC-CBD at 4. This argument fails for the reasons stated in Sections III.E.1–2.a, above: (i) the prohibition against modifications that cause or contribute to a NAAQS violation is a requirement of the Colorado SIP and therefore an "applicable requirement" under the Tenth Circuit's *Hunter* decision, and (ii) the Proposed Permit is both a Title V renewal and an approval of facility modifications that has not previously been subject to EPA review or public petition.

Second, the Division states that EPA NAAQS attainment is generally evaluated by air quality monitoring, not modeling. RTC-C&CG at 33–34; RTC-CBD at 5–6. While true, the Division's argument is beside the point. EPA is clear that single-source impacts on NAAQS compliance can only effectively be done through modeling, not monitoring. 40 C.F.R. Part 51, App. W §§ 1.0(b); 9.1(c); *see also* Section III.E.2.c, below.[73]

EPA must object to the Proposed Permit because, contrary to the Division's assertions, the modifications in the Proposed Permit must satisfy the applicable requirement of compliance with the NAAQS and they do not. As such, the Proposed Permit must be denied or Suncor must accept lower emissions limits that satisfy NAAQS limitations.

c. <u>OBJECTION 6:</u> EPA Must Object to the Proposed Permit Because It Incorporates Minor Modifications That Cannot Be Approved Because the Division Failed to Model the Modifications for Potential Violations of the NAAQS Without Adequate Justification and Failed to Offer Any Other Reasonable Basis for Determining That the Modifications Will Not Cause or Contribute to NAAQS Violations

While the Division modeled Suncor's emissions in response to comments on the initial Draft Permit, the Division did not consider that modeling to be relevant to the Proposed Permit. The Division improperly failed to require modeling for the modifications being incorporated into the Proposed Permit to ensure that the modifications did not violate NAAQS.

As detailed in Sections III.E.2.a–b, above, the Division was required to affirmatively determine that each modification did not cause or contribute to a NAAQS violation. EPA regulations require that, where appropriate, the permitting agencies use air quality modeling to determine whether a modification will cause or contribute to a NAAQS violation. 40 C.F.R. § 51.160(f); *see also* 5 C.C.R. § 1001-

[73] Petitioners address the Division's arguments concerning its modeling policies in the following section.

5:C.X.D.5.d. The modeling requirements are specified in EPA's Guideline on Air Quality Models at Appendix W to 40 C.F.R. Part 51. *See* 40 C.F.R. § 51.160(f)(1).

EPA has made clear that modeling is the preferred approach for determining whether a source will violate NAAQS. 40 C.F.R. Part 51, App. W § 1.0(b). More specifically, EPA has stated that: "The impacts of new sources that do not yet exist, and modifications to existing sources that have yet to be implemented, **can only be determined through modeling. Thus, models have become a primary analytical tool in most air quality assessments**." *Id.* (emphasis added). While air quality measurements may be appropriate for determining an entire area's attainment, *see id.*; *see also* Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. 35,520, 35,550 (June 22, 2010), they are "rarely sufficient for characterizing the ambient impacts of individual sources or demonstrating adequacy of emission limits for an existing source due to limitations in spatial and temporal coverage of ambient monitoring networks," 40 C.F.R. Part 51 App. W § 1.0(b). However, despite the regulatory requirements and guidance from EPA, the Division did not require modeling for any of the minor modifications that are incorporated in the Draft Permit.

Indeed, EPA has already determined that the Division's refusal to model was unjustified and the permit record does not adequately support a conclusion that the modifications do not violate the NAAQS. EPA determined in its recommendations that "the permit record provided for some of these actions does not appear to sufficiently demonstrate that these projects will meet applicable ambient air quality standards." EPA Objection, Encl. B at 2. EPA explained that "it appears that in some instances the state rejected the use of modeling in assessing permitting actions without sufficient justification." *Id.* at 3. EPA concluded that:

> A reliance on emissions thresholds to reject the use of modeling could be inappropriate and use of an emissions threshold to reach the conclusion that adverse impacts will not occur does not necessarily provide a record that demonstrates that the permitting action will not cause a NAAQS exceedance.

Id.

i. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements:

First, the Proposed Permit violates the requirement that the Division cannot approve a combined construction/operating permit application unless the applicant submits a complete application that includes "[d]ata necessary to allow the Division to determine whether the source complies with . . . [a]ny applicable ambient air

quality standards and all applicable regulations." 5 C.C.R. § 1001-5:C.X.D.5.d.; *see id.* §§ 1001-5:C.III.C.12, 1001-5:C.V.B.1.

Second, the Proposed Permit violates the applicable SIP requirement that the Division may only approve a modification if "[t]he proposed source or activity will not cause an exceedance of any National Ambient Air Quality Standards." *Id.* § 1001-5:3B.III.D.1.c; *see id.* § 1001-5:B.II.A.6 (minor modifications subject to Part C Section X must satisfy Part B Section III.D.1.a. through III.D.1.g.); *see also* C.R.S. § 25-7-114.5(7)(a)(III) ("Any permit required pursuant to this article shall be granted by the division or the commission, as the case may be, if it finds that . . . . For construction permits, the source or activity will meet any applicable ambient air quality standards and all applicable regulations.").

Third, the Proposed Permit violates the requirement that the Division may only use minor permit modification procedures "for those permit modifications that . . . Do not violate any applicable requirement." 5 C.C.R. § 1001-5:C.X.A.1.

Fourth, the permitting record fails to contain an adequate statement justifying the Division's decision to incorporate the modifications without modeling their impact on NAAQS compliance. 40 C.F.R. § 70.7(a)(5).

The conditions of the Proposed Permit that are impacted by this objection are (i) Modification 1.28 (Section I, Cond. 5.1; Section II, Cond. 8.1, 8.6, 8.8, 8.11, 18); (ii) Modification 1.29 (Section I, Cond. 5.1; Section II, Cond. 5.1, 8.1, 8.6, 8.8, 8.10, 18; (iii) Modification 1.33 (Section I, Cond. 5.1; Section II, Cond. 9.1, 9.5, 9.7; (iv) Modification 1.36 (same as 1.33); (v) Modification 1.38 (Section II, Cond. 7.1).

ii. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised this issue with specificity in timely comments filed on the Draft Permit. Supplemental Comments at 7–13; CBD Comments at 1–7.

iii. The Division's Arguments in Its Response to Comments Are Meritless

The Division advances several reasons in the Draft TRD for not requiring modeling; all of these reasons fail.

First, the Division improperly relied upon only the change in permitted emissions from the project, not the emissions from the entire source, when it initially concluded that modeling was not required for the modifications. RTC-CBD at 9; RTC-C&CG at 37; *see, e.g.*, Proposed TRD at 82–84 (1.28 Miscellaneous Process Vent); 93–94 (1.29 Upgrade Main East Plant Flare); 105–06 (1.33 Rail Rack Liquefied Petroleum Gas (LPG) Loading); 117–18 (1.36 Rail Rack Flare RSR Project); 120–21 (1.38 Revise Truck Rack VCU Emission Calculation Methodology). The Division

claimed that "the first step of the modeling process is to model the project, not the entire facility." *See, e.g.*, RTC-C&CG at 37. This statement is false. A NAAQS analysis must be based on emissions from the source, not a change in emissions.

Colorado's SIP mandates that the Division must determine that "[t]he proposed source or activity will not cause an exceedance of any National Ambient Air Quality Standards" and "will meet any applicable ambient air quality standards." 5 C.C.R. § 1001-5:B.III.D.1.c–d. The regulations say nothing about the "change in emissions." Similarly, 40 C.F.R. Part 51, Appendix W, Section 9.2.3.a.i, which the Division cited to justify modeling the change in emissions from an emission unit rather than the facility, RTC-CBD at 9, does not say that only the change in emissions from a modification should be modeled. Rather, Appendix W describes the first stage of the modeling analysis as "**a single-source impact analysis**, since this stage involves considering only the impact of the new or modifying **source**." 40 C.F.R. Pt. 51, App. W § 9.2.3.a.i (emphases added). Appendix W focuses exclusively on the term "the source," *id.* § 9.2.3.c., which in this case is the Suncor refinery; it does not mention individual projects, emissions units, or emissions points. The goal of this first step is to determine "the potential of a proposed new **or modifying source** to cause or contribute to a NAAQS . . . violation," *id.* (emphasis added), not whether a **project** will contribute to a NAAQS violation. The second step, meanwhile, is a cumulative impacts analysis that models nearby sources and other sources—for example, natural, minor, and distant major sources. *Id.* § 9.2.3.a.ii; *see also id.* § 9.2.3.d.

The Division's approach of only considering the change in permitted emissions improperly disregards some, or even most, of the emissions of the source, contrary to the plain language of Appendix W and Colorado regulations. While the change in emissions might be relevant to determining whether a modification is major or minor, it is not relevant to whether the source causes or contributes to a NAAQS violation.

Second, the Division improperly relied upon modeling guidance that the state of Colorado has determined was not legally justified—referred to as PS Memo 10-01—to determine that modeling was not required for certain minor modifications. *See, e.g.*, Proposed TRD at 82–84 (1.28 Miscellaneous Process Vent); 93–94 (1.29 Upgrade Main East Plant Flare); 117–18 (1.36 Rail Rack Flare RSR Project); *see also id.* at 164 (PS Memo 10-01). PS Memo 10-01 established a per se rule that no modeling was required for short-term SO_2 and NO_2 where a modification involved a change in emissions below 40 tpy. *See* Proposed TRD at 162–63. The Division relied on the rule in PS Memo 10-01 to refuse to model NAAQS compliance for Modifications 1.28, 1.29, and 1.36. *See id.* at 83, 93, 117, 164.

The Division's reliance on PS Memo 10-01 is unjustifiable. There is no rationale relationship between the 40-tpy threshold, which comes from the Prevention of Significant Deterioration (PSD) significance threshold established well before the 2010 1-hour NO_2 and SO_2 NAAQS were created. Obviously, a significance threshold that existed before a NAAQS cannot be based on, or even consider that NAAQS.

Moreover, a tons-per-year standard is not rationally related to a NAAQS based on a one-hour average time because hourly emissions can be extremely high while still staying below the tons-per-year threshold if the emissions point only pollutes for a small number of hours per year. The Center for Biological Diversity and others have long demonstrated that sources with annual emissions below 40 tpy can cause or contribute to violations of the 2010 one-hour NO_2 and SO_2 NAAQS. The modeling for Suncor discussed above proves this point, as does modeling that has been done for JBS Swift Beef. *See* Lindsey Meyers, *Air Dispersion Modeling Analysis for Verifying Compliance with the One-Hour NO_2 NAAQS: JBS Swift Beef Company, Greeley, Colorado* (Feb. 2, 2021) (Ex. 33).

Indeed, the State's use of PS Memo 10-01 has been rejected by both (1) a state investigation, and (2) EPA. An independent investigation commissioned by the Colorado Department of Law determined that PS Memo 10-01 was not legally justifiable and APCD's reliance on it "failed to ensure minor sources will not exceed the 1-hour NAAQS." Troutman Pepper Hamilton Sanders LLP, *Public Report of Independent Investigation of Alleged Non-Enforcement of National Ambient Air Quality Standards by The Colorado Department of Public Health and Environment* 28–31 (Sept. 22, 2021) (Ex. 34). Furthermore, EPA stated in the Recommendations in its Objection to the initial Draft Permit that "it appears that in some instances the state rejected the use of modeling in assessing permitting actions without sufficient justification." EPA Objection, Encl. B at 4 (discussing PS Memo 10-01) (Ex. 20). EPA further concluded that "reliance on emissions thresholds to reject the use of modeling could be inappropriate." *Id.*

The Division's responses to comments argues that (1) PS Memo 10-01 was in place at the time Suncor applied for the modifications, and, therefore, (2) the Division cannot reevaluate those decisions. *See* RTC-CBD at 7–8; RTC-C&CG at 36–37, 38–39. However, the Division's conclusion is incorrect because, as described above in Section III.E.1.a., no final permitting decision has been made because the modifications have never been sent to EPA for review. Instead, the Division must "apply the rules in effect **at the time of the permitting decision**," *Sierra Club v. EPA*, 762 F.3d 971, 979 (9th Cir. 2014) (emphasis added), and the permitting decision is being made now. The Division claims to have retired PS Memo 10-01 before April 14, 2021, which is well before the Division submitted the proposed permit to EPA on June 23, 2022, and even before the public comment period on the original Draft Permit closed on May 11, 2021. Letter from Jill Ryan, Exec. Dir., Colo. Dep't Pub. Health & Env't, to Chandra Rosenthal, Rocky Mountain PEER Dir. 1 (Apr. 14, 2021) (Ex. 35). It was arbitrary for the Division to make permitting decisions based on guidance that is no longer valid.

Third, the Division attempts to justify issuing the permit modifications without determining whether the modifications cause violations of the NAAQS by claiming that the modifications' impacts are below the significant impact level ("SIL") for the one-hour NO_2 and SO_2 NAAQS. RTC-CBD at 9, 13–15; RTC-C&CG at 37, 42–

43. However, as Petitioners explained in their public comments, *see* Supplemental Comments at 13; CBD Comments at 7, there are no SILs for the one-hour NO_2 and SO_2 NAAQS. Further, neither the Clean Air Act, EPA regulations, nor Colorado law contain any mention of SILs. The Division cannot disregard federal and state law requirements that require the Division to ensure that its permitting decisions do not interfere with NAAQS compliance by referencing arbitrary thresholds that do not appear in federal or state statutes or regulations. Nor can the Division usurp the authority of the Colorado AQCC. It is the Commission, and not the Division, which has the authority to create air regulations in Colorado.

In addition, even if the AQCC wanted to create SILs for the one-hour NO_2 and SO_2 NAAQS, it could not under current law. Nothing in applicable federal or state law indicates that a permitting authority ever has the power to approve a modification without considering the modification's potential impact on ambient air quality. *See* 42 U.S.C. § 7410(a)(2)(C); 40 C.F.R. § 51.160(a)–(b); C.R.S. § 25-7-114.5(7)(a)(III); 5 C.C.R. § 1001-5:B.III.D.1 (containing no mention of an exemption from the required analysis of air quality impacts for modifications based on an anticipated emissions increase that is not generally deemed to be "significant"). The plain language of the statute—which does not contain the word significant—controls, regardless of whether the implementing agency has taken an alternative approach. *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 842–843 (1984). Indeed, the D.C. Circuit Court of Appeals expressly rejected use of SILs to "automatically exempt sources with projected impacts below the SILs from having to make the demonstration" that a source will not cause or contribute to a NAAQS violation. *Sierra Club v. EPA*, 705 F.3d 458, 465 (D.C. Cir. 2013) (vacating and remanding back to EPA a rule establishing a SIL for determining whether, in a PSD analysis, particular matter emissions violated NAAQS).

Where Congress did intend to utilize a significance threshold in the Clean Air Act, it did so explicitly. *See, e.g.*, 42 U.S.C. § 7410(a)(2)(D)(i)(I) (state implementation plan must prohibit emissions that will "contribute **significantly** to nonattainment in . . . any other State") (emphasis added); *id.* § 7426(a)(1)(B) (providing for notification of nearby states if a source is being constructed that "may **significantly** contribute" to violation of the NAAQS in such other state) (emphasis added); *id.* § 7511a(h)(2) (providing that an area may be treated as a rural transport area if its emission sources "do not make a **significant** contribution" to ozone concentrations in that area or any other area) (emphasis added). It is a well-established rule that "when the legislature uses certain language in one part of the statute and different language in another, the court assumes different meanings were intended." *Sosa v. Alvarez-Machain*, 542 U.S. 692, 711 n.9 (2004) (quoting 2A N. Singer, Statutes and Statutory Construction § 46:06, at 194 (6th rev. ed. 2000)). As the Supreme Court stated in *EPA v. EME Homer City Generation, LP* when analyzing NAAQS-related provisions of the Clean Air Act, "[w]e do not lightly assume that Congress has omitted from its adopted text requirements that it nonetheless intends to apply, and our reluctance is even greater when Congress has shown elsewhere in the same statute

that it knows how to make such a requirement manifest." 572 U.S. 489, 510 (2014) (quoting *Jama v. Immigration and Customs Enforcement*, 543 U.S. 335, 341 (2005)). After all, in a situation like the present, *any* emissions increase has the potential to cause or contribute to a NAAQS violation.

In its responses to comments, the Division cites EPA guidance to justify its reliance on SILs to disregard the interference of the modifications with the NAAQS. RTC-CBD at 14–15; RTC-C&CG at 43. First, the Division did not even bother to do an analysis of whether the vast majority of the modifications would, by themselves, cause impacts above the Division's arbitrary SILs. Second, even assuming the Division could usurp the Commission's rulemaking authority and rely on provisions that are not in the SIP and which are contrary to the plain language of the Clean Air Act, EPA has issued guidance containing potential interim SILs for one-hour NO_2 and SO_2 NAAQS, this guidance is clear that "[t]he application of any SIL that is not reflected in a promulgated regulation should be supported by a record in each instance that shows the value represents a *de minimis* impact on the 1-hour [] standard." EPA, General Guidance for Implementing the 1-hour SO_2 National Ambient Air Quality Standard in Prevention of Significant Deterioration Permits, Including an Interim 1-hour SO_2 Significant Impact Level, at 5 (Aug. 23, 2010), https://www.epa.gov/sites/default/files/2015-07/documents/appwso2.pdf. The Division did not do so here.

* * * * *

For the reasons discussed above, the Proposed Permit does not assure compliance with the applicable SIP requirement prohibiting modifications that cause or contribute to a NAAQS violation because (1) modeling shows NAAQS violations, and (2) the Division's decision to not require modeling for the modifications was not adequately justified and the Division failed to offer any other reasoned basis for determining that the modifications will not cause or contribute to a NAAQS violation.

3. Minor Modifications Should Have Been Treated as Major Modifications

a. OBJECTION 7: EPA Must Object Because the Proposed Permit Violates Applicable Requirements by Applying Outdated Significance Thresholds for Determining Whether a Modification Is Major

The Proposed Permit incorporates several modifications that the Division improperly deemed minor by relying on incorrect significance thresholds.

For facilities in a nonattainment area, Colorado's SIP only allows the Division to grant a permit for a major modification" if the Division concludes, among other things, that "[t]he proposed source will achieve the lowest achievable emission rate for the specific source category." 5 C.C.R. § 1001-5:D.V.A.2. A "major modification"

for NSR purposes is defined as "[a]ny physical change in or change in the method of operation of a major stationary source that would result in a significant emissions increase of a regulated NSR pollutant and a significant net emissions increase of that pollutant from the major stationary source." *Id.* § 1001-5:D.II.A.23. Any significant increase in emissions for VOCs or NO_x are "considered significant for ozone." *Id.* § 1001-5:D.II.A.23.a. The SIP also identifies the level of emissions of each pollutant that are deemed "significant" for triggering the major NSR provisions. *Id.* § 1001-5:D.II.A.44. Any operating permit modification reflecting a "major modification" under the NSR regulations is deemed a "Significant Permit Modification," and is not eligible for minor permit modification procedures. *Id.* § 1001-5:C.I.A.7.

The applicable significance threshold for evaluating whether the modifications in the Proposed Permit trigger major NSR requirements is 25 tons per year for both VOCs and NO_x. The Colorado SIP sets these thresholds for emissions in any serious ozone nonattainment area. *Id.* § 1001-5:D.II.A.44.a. On January 27, 2020, EPA downgraded the Denver Metro-North Front Range ozone non-attainment area status to serious. Finding of Failure to Attain and Reclassification of Denver Area for the 2008 Ozone National Ambient Air Quality Standard, 84 Fed. Reg. 70,897 (Dec. 26, 2019) (effective date Jan. 27, 2020). This downgrade reduced the significance thresholds for VOCs and NO_x from 40 tpy to 25 tpy. However, the Division improperly applied the higher 40 tpy threshold for modifications incorporated into the Proposed Permit. This failure meant that the Division improperly processed at least two modifications as minor when they were, in fact, major.

Modification 1.28 added new equipment to allow miscellaneous process vents to be routed to the Main East Plant Flare. Proposed TRD at 78–80. The same project also resulted in an increase in VOC emissions of 28.08 tpy. Proposed TRD at 80; *see also* RTC-C&CG at 73 (identifying modification 1.28 as exceeding the 25 tpy threshold). The Division applied a 40 tpy significance threshold and concluded that major NSR did not apply, RTC-C&CG at 73, but because the VOC emissions increase exceeds the 25 tpy significance threshold, major NSR applies to this modification.

Modification 1.33 requested a change in emissions calculation, throughput, and emission limits for the LPG loading rack. *See* Proposed TRD at 104. As described in the Proposed TRD, the LPG loading rack fell below major source level when it was constructed. *See id.* If the change in permitted emissions exceeds the significance level, the LPG loading rack would be subject to major NSR requirements as a relaxation of enforceable requirements. *See id.* at 104–05; 5 C.C.R. § 1001-5:D.V.A.7.b. The modification resulted in an emissions limit of 39.51 tpy of VOCs. *See* Proposed TRD at 105; *see also* Supplemental Comments at 36 (identifying modification 1.33 as improperly relying on 40-tpy significance threshold for VOCs). Because the 39.51 tpy of VOC emissions exceeds the 25 tpy significance threshold, major NSR applies to the LPG loading rack. However, the Division improperly applied the 40 tpy threshold and processed Modification 1.33 as minor. *See* Proposed TRD at 105.

i. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements.

First, by relying on a significance threshold of 40 tpy for VOCs, the Proposed Permit violates the applicable requirement that the Division apply a 25 tpy significance threshold for VOCs when the source is located in a serious ozone nonattainment area.

Second, by incorporating Modifications 1.28 and 1.33 into the Proposed Permit as minor modifications, the Proposed Permit violates the requirement that a major modification may only be granted if "[t]he proposed source will achieve the lowest achievable emission rate for the specific source category." 5 C.C.R. § 1001-5:D.V.A.2.

Third, by incorporating Modifications 1.28 and 1.33 into the Proposed Permit as minor modifications, the Proposed Permit violates the applicable requirement that no significant permit modification may use the minor permit modification procedures. 5 C.C.R. § 1001-5:C.I.A.7.

Fourth, the permitting record fails to contain an adequate statement justifying the Division's decision to apply minor modification procedures to the modifications. 40 C.F.R. § 70.7(a)(5).

The conditions of the Proposed Permit that are impacted by this objection are: (i) Modification 1.28 (Section I, Cond. 5.1; Section II, Cond. 8.1, 8.6, 8.8, 8.11, 18); and (ii) Modification 1.33 (Section I, Cond. 5.1; Section II, Cond. 9.1, 9.5, 9.7.

ii. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised this issue with specificity in timely comments filed on the Draft Permit. Supplemental Comments at 35–36.

iii. The Division's Response to Comment Are Meritless

The Division makes four arguments to justify applying the outdates significance threshold; each fails.

First, the Division argues that "[s]ince sources can proceed with projects that qualify for the Title V minor modification upon submittal of a complete application, it is appropriate to rely on the significance level at the time of a complete application submittal in order to assess whether or not the projects trigger PSD and/or NANSR review." RTC-C&CG at 71 (citing Reg. 3, Part C, Section X.I (5 C.C.R. § 1001-5:C.X.I);

id. Part B, Section II.A.6 (5 C.C.R. § 1001-5:B.II.A.6)). The Clean Air Act does not permit such "grandfathering." The plain language of the Act "requires EPA to apply the regulations in effect **at the time of the permitting decision**." *Sierra Club v. EPA*, 762 F.3d 971, 979 (9th Cir. 2014) (emphasis added); *see Ziffrin, Inc. v. United States*, 318 U.S. 73, 78 (1943) (an agency must apply the law as it currently exists). The Division recognized this rule in its response to comments, explaining that "[f]or significant modifications, the Division relies on the significance level at the time of permit issuance," rationalizing the difference because sources cannot make significant modifications "until permit issuance." RTC-C&CG at 72. But there is no support for this discrepancy in either the CAA or the SIP.

As explained in Section III.E.1.a., above, the minor modifications incorporated into the Proposed Permit are not final because they have not been subject to public comment or submitted to EPA for approval. The Division may only act on a minor permit modification after the EPA 45-day period and it may only then choose among four possible actions on the modification application:

1. "Issue the minor permit modification as proposed," 5 C.C.R. § 1001-5:C.X.H.1;

2. "Deny the minor permit modification application," *id.* § 1001-5:C.X.H.2;

3. "Determine that the requested modification does not meet the minor permit modification criteria and should be reviewed under the significant modification procedures" *id.* § 1001-5:C.X.H.3; or

4. "Revise the draft minor permit modification and transmit to the Administrator the new proposed minor permit modification as required in this Regulation Number 3, Part C, Section V.B.5," *id.* § 1001-5:C.X.H.4.

Indeed, the minor permit modification provisions in the SIP warn the source that if it chooses to make the proposed changes before issuance of a modification, it does so at its own risk that the Division or EPA will deny the modification. *Id.* § 1001-5:C.X.I ("If the source elects to make such changes, and until the Division issues its final determination in accordance with Sections X.H.1. through X.H.4., the source must comply with both the applicable requirements governing the change and the Proposed Permit terms and conditions."). There's no evidence in the permitting record that the Division took any of these four steps or even sent the modifications to EPA for review until the current permitting proceeding.

Second, the Division appears to argue that if it sent "a completeness letter . . . confirming that the application did qualify as a Title V minor modification and that the application was complete as received," then the project was "approved as a Title V minor modification," *e.g.*, RTC-C&CG at 39. This argument fails for the same reason as stated above—a completeness letter is not a modification approval, and the modification could not have been final under federal or Colorado regulations. The fact Suncor was entitled to make the modification after filing the application is irrelevant.

Third, for Modification 1.33, the Division argues that while the permitted emissions were 39.51 tpy, the change in actual emissions was only 13.52 tpy—less than the current 25 tons per year threshold. RTC-C&CG at 73. But the Division's argument ignores that, as explained above and on page 104 of the TRD, if the permitted emissions exceed the significance level, the relaxation restriction triggers major NSR.

Fourth, for Modification 1.28, the TRD argues that the modification "included equipment for the Plants 1 and 3 equipment and . . . the February 28, 2018 revised permit Plants 1 and 3 (96OPAD120) included the MPV requirements." However, approval of actions for other permits is irrelevant to whether *this* permit is in compliance with applicable requirements. The major NSR provisions are applicable requirements, and the Proposed Permit fails to include major NSR requirements for the new components and impacted Main East Plant Flare.

b. <u>OBJECTION 8:</u> EPA Must Object Because the Proposed Permit Fails to Apply Major New Source Review Requirements to Modification 1.29 by Improperly Disaggregating It from Substantially Related Projects to Upgrade Refinery Flares to Comply with MACT CC Regulations

The Proposed Permit (i) does not apply major NSR standards to Modification 1.29 despite evidence that its emissions should have been aggregated with emissions from related modifications, and (ii) does not adequately justify its determination that the projects were not substantially related.

When determining whether emission increases from a modification are significant for major NSR applicability, *see* 40 C.F.R. 52.21(b)(2)(i), the Division must evaluate whether the emissions increase should be aggregated with increases from other changes at the facility. *See* Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Aggregation and Project Netting, 74 Fed. Reg. 2376, 2377 (Jan. 15, 2009) ("Aggregation Policy"). EPA's 2009 Aggregation Policy set outs the factors to be considered in the aggregation decision.

The aggregation decision is based on whether the supposedly separate changes are "substantially related." *Id.* at 2379. The substantial relationship analysis is highly case-specific. *Id.* "To be 'substantially related,' there should be an apparent interconnection—either technically or economically—between the physical and/or operational changes, or a complementary relationship whereby a change at a plant may exist and operate independently, however its benefit is significantly reduced without the other activity." *Id.* at 2378. However, nominally separate changes are not required to be dependent on one another to be substantially related. "Technical or economic dependence may be evidence of a substantial relationship between changes, though projects may also be substantially related where there is not a strict

dependence of one on the other." *Id.* "The test of a substantial relationship centers around the interrelationship and interdependence of the activities, such that substantially related activities are likely to be jointly planned (i.e., part of the same capital improvement project or engineering study) and occur close in time and at components that are functionally interconnected." *Id.* at 2378.

Here, Modification 1.29 was intended to bring the Main East Plant Flare into compliance with the December 1, 2015, Refinery Sector Rule revisions and, in particular, with the update to MACT CC, 40 CFR Part 63 Subpart CC. *See* Proposed TRD at 90. The December 2015 regulatory revisions updated MACT CC to require, among other things, that regulated flares maintain a minimum heating value for the flare combustion zone. *Id.* at 90–91; *see also* 40 C.F.R. § 63.670(e). These requirements would increase emissions at the flare because Suncor needed to (i) burn additional supplemental gas to maintain the required combustion zone heat content, and (ii) install additional piping components.

The Division questioned whether the changes to the East Plant's Main Flare should be aggregated with changes to other flares at the refinery that needed to be brought into compliance with the updated MACT CC standards. *See* Proposed TRD at 97. In the same period as the East Plant's Main Flare modification, Suncor was also updating several flares covered under Suncor's West Plant permit to comply with MACT CC, specifically the Plant 1, Plant 3, and GBR flares. Proposed TRD at 97–98. After some discussion with Suncor, the Division acquiesced and agreed that the modifications were separate and were not required to be aggregated. Proposed TRD at 98. The Division's decision was incorrect.

First, the changes occurred very close in time. Suncor filed the applications for all the flare updates within a few months of each other. Proposed TRD at 97–98.

Second, there is evidence that the changes were "jointly planned." All the modifications were made to comply with the same revision to MACT CC flare requirements. Proposed TRD at 97–98. Suncor's application for the Modification 1.29 indicates that it had created a RSR Flare Project, which it identified as a capital project, to coordinate updates to all of the flares. Letter from Wes McNeil, Suncor to Jackie Joyce, CDPHE re *Suncor Energy (U.S.A.) Inc. - Commerce City Refinery Title V Operating Permit 95OPAD108 Minor Modification #37 Plant 2 Main Plant Flare Refinery Sector Rule Compliance Project* (July 5, 2017), available at Ex. 36 at 592–93. While Suncor later submitted information indicating that the modifications were funded under two separate capital projects—(i) one approval for Plant 2 (East Plant) and Plant 3 (West Plant) flares, and (ii) one approval for the Plant 1 (West Plant) and GBR flares, Proposed TRD at 98—Suncor's representations make clear that the projects were all being planned together. Indeed, the initial approval for expenditure (AFE) for the Main East Plant Flare upgrade, which Suncor submitted as evidence of separate funding for the different projects, named the project: "P1,2,3 Units RSR Rule Flare." Suncor, *Initial Funding Request for RSR Flare Projects*, Ex. 36 at 472.

Therefore, it is clear that the projects were planned jointly even if they were ultimately funded separately.

Third, the flares are physically interconnected. The Division indicates in the TRD that "more than one flare may receive waste streams from a specific refinery process unit." Proposed TRD at 98. The Division further explained in its response that "excess hydrogen from the Plants 1 and 2 reformers and the hydrogen plant (part of Plant 1) . . . can be routed to the GBR flare, in lieu or either the Plant 1 or Plant 2 flares." RTC-C&CG at 70.

Fourth, the flare projects are also practically interrelated. Suncor relies on each of the flares as control devices to limit emissions from its various units. *See, e.g.*, Proposed Permit at 4–5 (identifying emissions controlled by flares). The 2015 MACT CC standards applied to all flares acting as control devices for Suncor's gasoline loading racks, miscellaneous process vents, storage vessels, and equipment leaks. *See* 40 C.F.R. § 63.640(c). Suncor had two choices to address the rule revisions: Suncor could either shift waste gases from one flare to another or it could update each of its flares to comply with those standards. Suncor took both routes. It shifted gasoline loading away from the East Plant railcar rack to avoid MACT CC applicability to the East Plant Railcar Dock Flare, and it upgraded the Plant 1, East Plant Main Flare, Plant 3, and GBR flares. *See* Proposed TRD at 114–115. Had Suncor chosen not to upgrade any of those flares, it would have needed to route the regulated waste gases to the other flares, thereby increasing the emissions of those flares.

In fact, the emissions from Suncor's other project to comply with MACT CC revisions were aggregated. Modification 1.28 involved project to connect various miscellaneous process vents that were newly subject to control requirements to the refinery flares. *See* Proposed TRD at 78–79. Suncor installed various flare connection systems and purge manifolds from existing equipment to all four flares. *Id.* So, like Modification 1.29, the MPV updates in Modification 1.28 (i) involved connections to all four flares, (ii) were made to comply with the December 2015 updates to MACT CC, and (iii) were jointly planned. However, by contrast to Modification 1.29, Suncor and the Division appropriately aggregated the emissions increases for all four flares to evaluate major NSR applicability. *See id.* at 79–80. Treating Modification 1.29 differently is unjustifiable.

Had the emissions increases for the flare upgrades been aggregated, they would have triggered major NSR requirements. The Division's applicability analyses for the four flares indicate that VOC emission increases were 28.78 tons per year,[74] which is greater than the 25 tpy significance threshold for VOCs. *See* Section III.E.3, above.

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[74] The individual emission increases were: (i) 1.8 tpy for Plant 2 (TRD at 96), (ii) 1.3 tpy for Plant 1 (West Plant Draft TRD at 57), (iii) 8.25 tpy for Plant 3 (West Plant Draft TRD at 41), and (iv) 17.43 tpy for GBR flare (West Plant Draft TRD at 47).

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i. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements:

First, by incorporating Modification 1.29 into the Proposed Permit as a minor modification, the Proposed Permit violates the requirement that a major modification may only be granted if "[t]he proposed source will achieve the lowest achievable emission rate for the specific source category." 5 C.C.R. § 1001-5:D.V.A.2.

Second, by incorporating Modification 1.29 into the Proposed Permit as a minor modification, the Proposed Permit violates the applicable requirement that no significant permit modification may use the minor permit modification procedures. *Id.* § 1001-5:C.I.A.7.

Third, the permitting record fails to contain an adequate statement justifying the Division's decision to apply minor modification procedures to the modifications. 40 C.F.R. § 70.7(a)(5).

The conditions of the Proposed Permit that are impacted by this objection are: Section I, Cond. 5.1; Section II, Cond. 8.1, 8.6, 8.8, 18.

ii. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised this issue with specificity in timely comments filed on the Draft Permit. Supplemental Comments at 34–35.

iii. The Division's Response to Comment Are Meritless

None of the Division's arguments in its response to comments resolves this issue.

First, the Division takes issue with Petitioners' characterization of the Division's aggregation decision, noting that it considered the following factors in deciding whether to aggregate Modification 1.29 with the other MACT CC projects: (i) the funding decision, (ii) the timing of the projects, and (iii) the goal of the projects. RTC-C&CG at 69. The Division's argument is beside the point. As explained above, the flare projects should be aggregated because (i) the projects were conducted close in time, (ii) the projects were jointly planned, (iii) the record indicates that the flares are interconnected, and (iv) the flare projects are practically interrelated.

Second, the Division argues that the flare projects "do not rely either technically or economically on the other flare projects to be viable." RTC-C&CG at 70.

As explained above, EPA's Aggregation Policy does not require strict dependence for projects to be substantially related. 74 Fed. Reg. at 2378.

Third, the Division also argues: "The flare RSR projects are not expected to increase the production at the refinery, nor is the refinery expected to receive any economic benefit from the projects." RTC-C&CG at 70. But, again, this argument is beside the point. EPA's Aggregation Policy does not require that projects improve capacity or benefit Suncor. Instead, the only question under the aggregation policy is whether the projects are "substantially related." 74 Fed. Reg. at 2378–79. They are.

Finally, the Division attempts to downplay the interconnection of the Plant 1 and Main East Plant Flares with the GBR flare as involving only "a very specific waste stream," RTC-C&CG at 70. Regardless of the Division's attempt to limit them, the record demonstrates that the three flares are interconnected and can receive waste streams from one another. Also, as noted above, the Division does not assert that the connections between the hydrogen reformers and flares is the only interconnection between the flares.

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For these reasons, the permitting record strongly supported aggregating Modification 1.29 with the other flare upgrades, and the Division's decision not to aggregate is unsupported.

4. <u>OBJECTION 9:</u> EPA Must Object Because EPA Has Already Determined That the Permitting Record for the Minor Modifications Is Inadequate

EPA must object to the Proposed Permit because EPA has already concluded that the permitting record is insufficient to support the Division's decision to incorporate the modifications into the Proposed Permit. As EPA explained in its prior recommendations, "[t]he record supporting a minor NSR permitting action must include the preliminary analysis addressing the elements described in section III.B.5; must state the Division's determinations as to compliance with NAAQS, applicable regulations, and other required elements; and **must contain sufficient information to support those determinations**." Ex. 20, Encl. B at 4 (emphasis added) (citing 5 C.C.R. § 1001-5:B.III.B.5; *id.* §§ 1001-5:B.III.D.1, 1001-5:B.III.F, 1001-5:C.III.C.12).

Here, EPA concluded that "the permit record provided for some of these actions does not appear to sufficiently demonstrate that these projects will meet applicable ambient air quality standards." Ex. 20, Encl. B at 2. EPA further recommended that the Division reevaluate whether modifications processed as minor should have been processed as such. *See id.* at 3. EPA further explained that "the state does not provide the record for the minor NSR permit determinations to EPA, but instead provides

only the minor NSR construction permit application and (where applicable) the title V minor modification used to process the application." *Id.* at 4.

EPA has already determined that the permitting record provided to EPA was insufficient to justify the Division's decision to incorporate the minor modifications into the Proposed Permit; therefore, EPA must object.

i. Requirements Not Met by the Proposed Permit

The Proposed Permit does not meet the following requirements

First, the Proposed Permit violates the requirement that the permitting record make determinations concerning compliance with NAAQS, applicable regulations, and all other required elements to provide sufficient information to support the determinations. 5 C.C.R. §§ 1001-5:B.III.B.5, 1001-5:3B.III.D.1, 1001-5:3B.III.F, 1001-5:3C.III.C.12; 40 C.F.R. §§ 70.8(a)(1), 70.7(a)(5).

Second, the Proposed Permit violates the applicable requirement that the Division must "[s]ubmit any information necessary to review adequately the proposed permit." 40 C.F.R. § 70.8(c)(3)(ii); 5 C.C.R. § 1001-5:C.V.B.6.c.

ii. Petitioners Are Excused from Raising This Issue in Its Public Comments Because It Arose After Public Comments Were Due and Because It Would Have Been Impracticable to Do So

Petitioners are excused from raising this issue in its public comments under 40 C.F.R. § 70.8(d) because (i) the ground arose after the public comment period, and (ii) it would have been impracticable to raise the issue during the period.

First, this objection is based on EPA's conclusions made in its objection sent to the Division on March 25, 2022. The public comment period on the Draft Permit closed on May 11, 2021. Therefore, the grounds arose after the public comment process.

Second, this objection would have been impracticable to raise during the public comment process because it is also based on the scope of information on the minor modifications that the Division sent **to EPA**. Until EPA submitted its Objection, Petitioners could not have known the scope of information that the Division sent to EPA.

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iii. The Division Did Not Respond to EPA's Recommendations

The Division did not respond to EPA's Recommendations from its Objection. Instead, in its response to EPA's Objection, the Division stated the following:

> CDPHE takes EPA's recommendations in Enclosure B very seriously and will continue to work with EPA to better understand and address those issues. However, we need additional time beyond the 90-day statutory requirement for the objections to consider how those recommendations may be best addressed within the framework of Colorado law. Therefore, this letter only addresses the objections included in Enclosure A.

Letter from Michael Ogletree, Director, Air Pollution Control Division, to Kathleen Becker, Regional Administrator, EPA (May 25, 2022) (Ex. 37).

F. The CAM Plans Incorporated into the Proposed Permit Cannot Satisfy the CAM Rule

The CAM plans implemented by the Division in response to EPA's Objection are insufficient to satisfy the CAM Rule. After EPA's Objection, the Division added CAM plans for, in pertinent part, the Railcar Dock Flare and the Main East Plant Flare. However, as explained in Petitioners' comments to the Revised Permit, these CAM plans do not satisfy the CAM Rule because they (i) do not provide "reasonable assurance of compliance," 40 C.F.R. § 64.3(a), (ii) the Division fails to justify the adequacy of the monitoring in the plans, and (iii) they do not include the "operational requirements and limitations that assure compliance with all applicable requirements." 40 C.F.R. § 70.6(a)(1); 5 C.C.R. § 1001-5:C.V.C.1.

1. Objections Regarding the Main East Plant Flare

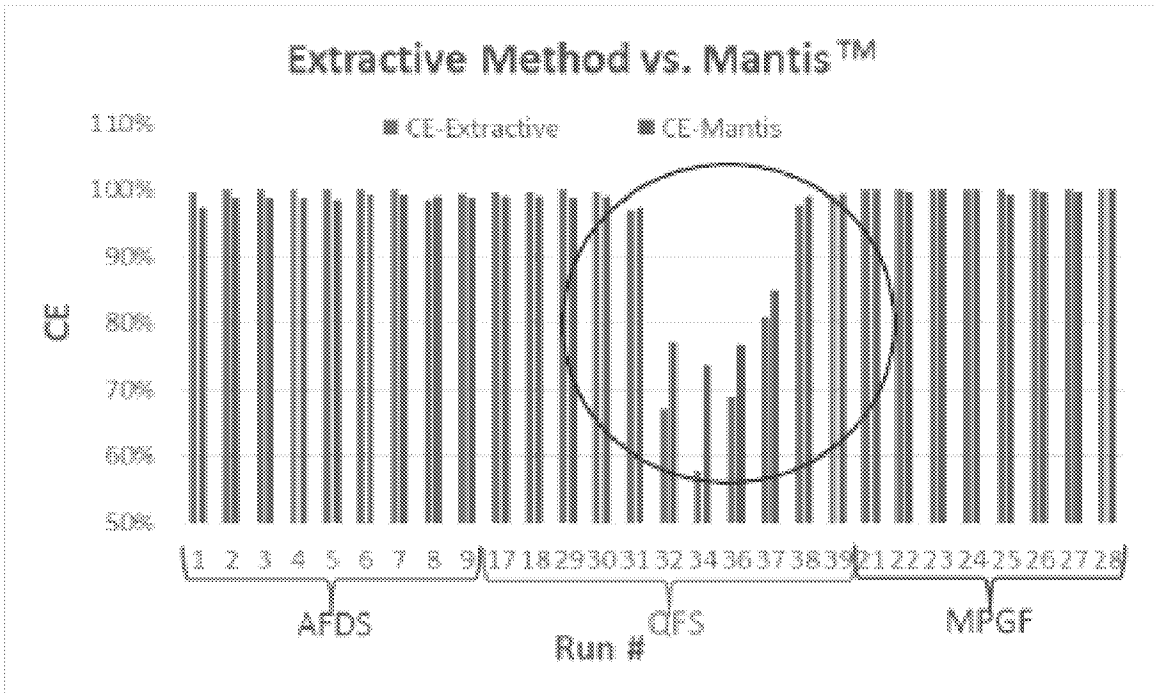
a. <u>OBJECTION 10:</u> The CAM Plan for the East Plant's Main Flare Does Not Meet Applicable Requirements Because Flares Are Not Appropriate Control Devices and the Division Has Not Justified Its Assumed 98% VOC Destruction Efficiency

The CAM plan for the Main East Plant Flare violates requirements because the variability in destruction efficiency of an open-stack flare cannot provide a "reasonable assurance of compliance." 40 C.F.R. § 64.3(a).

The performance of open-stack flares varies substantially with conditions and cannot provide reliable emissions reductions. As explained in the comments of Dr. Ranajit (Ron) Sahu that were attached to Petitioners' comments on the Draft Permit, flares are "thermally-based air pollution control device[s]," which rely on two primary

factors to destroy waste gas molecules: "(i) a certain minimum temperature (which varies by chemical or pollutant); and (ii) a minimum amount of time (sometimes called the residence time) at or above the minimum temperature."[75] The ability of flares to combust pollutants can vary significantly based on several factors, including "over-steaming, excess aeration, high winds, and flame lift-off." *Id.* at 3 (citing EPA, Parameters for Properly Designed and Operated Flares, Report for Flare Review Panel (April 2012), *available at* https://www3.epa.gov/airtoxics/flare/2012flaretechreport.pdf)).

The following chart from a study of flare control efficiency demonstrates the problem:[76]



As the chart shows, even under controlled conditions a flare's control efficiency ("CE"), and by extension destruction efficiency, can drop to very low values (55% or so in this case). So, the Division's simple assumption that destruction efficiencies will be 98%, Proposed Permit § II, Cond. 8.1, is not realistic and the evidence establishes that achieving such rates is not consistently achievable, such as with rapidly varying flow rates and waste gas compositions.

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[75] Dr. Ranajit (Ron) Sahu, Comments on the Use of Stack Flares at the Refinery, at 1 (June 8, 2022) ("Sahu Report") (Ex. 38) (previously accompanying Petitioners' Comments on Revised Permit (Ex. 22) as Attachment A).

[76] Excerpted from controlled testing performed on flares to compare CE using two techniques—extractive sampling and Video Imaging Spectral Radiometry (VISR), using a product called MANTIS. *See* Providence Photonics, https://www.providencephotonics.com/flare-monitoring (last visited July 12, 2022).

Similarly, EPA has done "as found" testing of flares at oil and gas well pads in Wyoming. The testing found that some flares have actual combustion efficiency of less than 20%.[77] The Division is well aware of this fact and has explicitly stated that it something it should consider in permitting and compliance work.[78] Further, some brand-new enclosed combustion devices have not been able to achieve 98% destruction efficiency levels even when they are brand new.[79]

Even small inaccuracies in flare efficiencies will cause substantial emissions increased. For example, the Main East Plant Flare has a VOC emission limit of 84.8 tons per year, which assumes a 98% destruction efficiency. Proposed Permit § II, Cond. 8. If the flare's average destruction efficiency was, instead, 97%, that 1% difference would increase VOC emissions 50% to 127.2 tons per year. If the destruction efficiency dropped to 95%, the VOC emissions in this instance would rise to 212 tons per year—a 150% increase.

Therefore, as Dr. Sahu concludes, "no open-flame stack flare is designed to meet the basic thermally-based air pollution control device requirements of minimum temperature and minimum residence time at or above this minimum temperature" because "in <u>any</u> open-flame flare, there is no way to assure that the flame region will provide assurances of stable combustion conditions (under all ambient weather and atmospheric conditions, including strong cross-winds at height)." Sahu Report at 2.

Indeed, even EPA's Objection questioned the Division's assumption that the Main East Plant Flare would achieve a 98% control efficiency for VOCs. Ex. 20, Encl. A at 3–4.

For these reasons, flares are inadequate control devices for meeting emission limitations, and Suncor's use of flaring should be subject to the following conditions:

1. Suncor should be required to minimize flaring to the extent possible;

2. Flaring should be limited to emergency situations, which should be exceedingly rare, and any causes of emergency flaring should be resolved and not allowed to recur;

3. Emissions estimates for any flaring should be based on measurements at the refinery, not unreliable emission factors;

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[77] U.S. Env't Prot. Agency, *Measuring Enclosed Combustion Device Emissions Using Portable Analyzers* 9 (May 14, 2020) (Attachment F to Initial Comments).
[78] Email from Christopher Laplante, CDPHE, to Jennifer Mattox et al. (June 2, 2020) (included as Attachment G to Initial Comments (Ex. 6)).
[79] PDC Energy, *Leffler 8-21, Donn 1-21 Pad: Enclosed Combustion Devices Initial Compliance Tests* (May 27, 2020) (included as Attachment H to Initial Comments (Ex. 6)).

4. Waste gases should be diverted and recovered through enhanced flare gas recovery systems (FGRS) for use in the refinery's fuel gas system, to the extent not already done; and

5. Any remaining waste gases should be disposed of in properly designed devices such as thermal oxidizers, vapor combustors, or potentially catalytic oxidizers that can be appropriately monitored.

i. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements:

First, the Proposed Permit does not comply with the CAM Rule that the CAM plan provide "reasonable assurance of compliance." 40 C.F.R. § 64.3(a); 5 C.C.R. § 1001-5:C.XIV.A.1 (incorporating CAM Rule requirements into state regulations).

Second, the Proposed Permit does not meet the requirement to include the "operational requirements and limitations that assure compliance with all applicable requirements." 40 C.F.R. § 70.6(a)(1); 5 C.C.R. § 1001-5:C.V.C.1.

Third, the permitting record fails to contain a sufficient "statement that sets forth the legal and factual basis for the draft permit conditions" justifying the use of unreliable AP-42 emission factors." 40 C.F.R. § 70.7(a)(5); *see also Valero* Order at 62 (grating petition to object where "the permit record, including [] statement of basis and [response to comments], does not contain sufficient information to conclude that there is adequate monitoring to assure compliance with relevant emission limits.").

The provision of the Proposed Permit that is impacted by this objection is Appendix J.

ii. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft and Revised Permit

Petitioners raised this issue with specificity in timely comments filed on both the Draft Permit and the Revised Permit. Initial Comments at 22–26; Supplemental Comments at 24, and Comments on Revised Permit at 1–3, 10–11.

iii. The Division's Response to Comment Are Meritless

The Division refused to address Petitioners' argument about the adequacy of flares as control devices under CAM, *see* RTC-REV at 4, but the Division did respond

to Petitioners' arguments about the validity of assuming a 98% destruction efficiency for the East Plant's Main Flare. None of the Division's responses address the issue.

First, the Division cites multiple EPA filings related to the December 2015 updates to MACT CC standards as support for assuming a 98% destruction efficiency. *See* RTC-C&CG at 26–27. The Division further stated that even though MACT CC standards were promulgated to address emissions of Hazardous Air Pollutants ("HAPs"), a far smaller class of compounds than VOCs, relying on MACT CC standards is appropriate for all VOCs because Petitioners did not identify VOCs likely to be emitted from Suncor that "that are not the same or similar to the HAPs already regulated under MACT CC." RTC-REV at 8–9. The Division concludes that "the heat content, rather than the composition of the materials combusted is more important in ensuring that those pollutants are destroyed in the flare." *Id.* at 9.

The Division's response again attempts to inappropriately shift the burden onto Petitioners. The Division has the burden to include a CAM Plan that provides a reasonable assurance of compliance, monitoring requirements that assure compliance, 40 C.F.R. § 64.3(a); 5 C.C.R. § 1001-5:C.XIV.A.1, and to adequately justify the monitoring chosen, 40 C.F.R. § 70.7(a)(5). Petitioners have raised legitimate questions regarding the adequacy of the Division's assumption that 98% of VOCs will be destroyed by MACT CC compliant flares—concerns that EPA has echoed, Ex. 20, Encl. A at 4—and as such, the burden is on the Division to now justify why the monitoring provisions are adequate, *Valero* Order at 62. If the Division believes that any VOCs emitted from Suncor are sufficiently similar to the HAPs addressed in MACT CC, the Division must support that assumption. It has not done so.

Second, the Division cites one sentence from AP-42 to argue that EPA has already concluded that MACT CC monitoring is sufficient to meet 98% flare efficiency, RTC-C&CG at 26; Proposed Permit App. J at 10 (quoting AP-42 at 13.5-4); RTC-REV at 19.[80] The Division attempted to further justify this citation in its Revised Permit Response by arguing that since AP-42 Section 13.5 does identify any emission factors for HAPs, the "notation may be a guide to specify appropriate monitoring for flares to ensure that flares at facilities other than refineries may be able to achieve similar levels of control." RTC-REV at 19 (PDF page 20). However, the quoted language from AP-42 does not support the Division's interpretation. It does not mention VOCs at all. From context, the quoted language is intended merely as an example of EPA studies on flare efficiency. In fact, the language appears at the end of a paragraph listing examples of tests "attempt[ing] . . . to characterize elevated flare emissions," and the quoted language cites directly to the MACT CC rulemaking.

[80] The Division's Revised Permit Response is incorrectly paginated. The original document's discussion is at page 19, which is labeled page 9 in the document. That page is available at PDF page 20 of Ex. 18. Further citations to the Revised Permit Response reference the correct page numbers and the PDF page numbers.

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See AP-42 § 13.5 at 13.5-4 (citing 80 C.F.R. 75183). The fact that Section 13.5 "does not include emission factors for HAP emissions" does not support its conclusion that MACT CC's control efficiency must be sufficient to control all VOCs.

Third, the Division quotes the following language from EPA's July 20, 2021, decision in *In re BP Amoco Chemical Company, Texas City Chemical Plant*, Order on Petition No. VI-2017-6 ("*BP Amoco* Order"): "The EPA promulgated regulations for petroleum refineries (regulated under 40 C.F.R. part 63, subpart CC) designed to assure that steam- and air-assisted flares actually achieve a 98 percent VOC destruction efficiency." RTC-C&CG at 27; Proposed Permit App. J at 10–11. The Division attempted to bolster this citation in its Revised Permit Response by noting that EPA also explained that the monitoring at the BP Amoco flare does not meet all MACT CC requirements and provided examples. RTC-REV at 19–20 (PDF pages 20–21) (quoting *BP Amoco* Order at 24).

But the Division's reliance on the *BP Amoco* Order is not justifiable. As noted above, the MACT CC regulations, on their face, apply only to certain HAPs, not all VOCs. The *BP Amoco* Order was not applying MACT CC; in fact, the BP Amoco plant was not subject to MACT CC. Instead, the Order was explaining why BP Amoco's reliance on Section 60.18 was insufficient to assure a 98% control efficiency for VOCs for its flare. *See BP Amoco* Order at 24. EPA's resolution of the question is also important. The Order did not state that complying with MACT CC would be sufficient to assure a 98% destruction efficiency for VOCs. Instead, the Order directed the Texas Council for Environmental Quality to evaluate what monitoring would be necessary to achieve 98% control efficiency. *Id.*

EPA itself ordered the Division to ensure that it justified the MACT CC requirements "are appropriate for a 98% control efficiency assumed for VOC emissions." Proposed Permit, App. J at 10, and the Division's cherry-picked citations to single sentences in unrelated documents are insufficient to meet its burden.

b. <u>OBJECTION 11:</u> The CAM Plan for the Main East Plant Flare Does Not Comply with the CAM Rule Because the Division Does Not Adequately Justify the Monitoring Requirements and Improperly Relies on "Presumptively Acceptable Monitoring"

Even if the Main East Plant Flare were a proper control device, the CAM Plan is insufficient to provide a reasonable assurance of compliance with VOC emissions limitations because it improperly relies on the monitoring provisions of MACT CC, 40 C.F.R. § 63.640 *et seq.* The Division concludes that the CAM Plan qualifies as "presumptively acceptable monitoring" under 40 C.F.R. § 64.4(b), reasoning: (i) the monitoring provisions of MACT CC qualify as "presumptively acceptable monitoring," (ii) the Division has incorporated the monitoring provisions of MACT CC into the

CAM Plan, and (iii) therefore, the CAM Plan is sufficient. *See* Proposed Permit App. J at 9–11. The Division's reasoning is flawed.

The CAM Rule requires that the owner or operator of a covered emissions source design monitoring that "provides a reasonable assurance of ongoing compliance with emission limitations or standards for the anticipated range of operating conditions." 40 C.F.R. § 64.3(a)(1)–(2). The owner/operator must "submit a justification for the proposed elements of the monitoring" including, among other things, "any data supporting the justification." *Id.* § 64.4(b). The Rule includes an exception for "presumptively acceptable monitoring" which requires "no further justification for the appropriateness of that monitoring . . . other than an explanation of the applicability of such monitoring to the unit in question, unless data or information is brought forward to rebut the assumption." *Id.* The Rule identifies several categories of "presumptively acceptable monitoring," including in pertinent part here: "Monitoring included for standards exempt from this part pursuant to § 64.2(b)(1)(i) or (vi) to the extent such monitoring is applicable to the performance of the control device (and associated capture system) for the pollutant-specific emissions unit." *Id.* § 64.4(b)(4).

Even if the Division is correct that the MACT CC monitoring requirements are sufficient to qualify as "presumptively acceptable monitoring" for the Main East Plant Flare, the Division failed to incorporate all applicable MACT CC monitoring requirements into the CAM Plan. Monitoring provisions incorporated into a CAM Plan from other standards only qualify as "presumptively acceptable monitoring" if the permit incorporates all monitoring in the other standards that is "applicable to the performance of the control device (and associated capture system) for the pollutant specific emission unit." 40 C.F.R. § 64.4(b)(4). Here, the Division expressly recognizes that "[t]here is additional monitoring specified in MACT CC (e.g. visible emissions monitoring, and monitoring for flare tip velocity) to which this flares [sic] is subject to, and must comply," but decides not to incorporate those requirements as CAM requirements. *See* Proposed Permit App. J at 9. Instead, the Division, without explanation, states that it "considers that monitoring for the presence of the flare pilot flame, and the net heating value of the flare combustion zone gas, are the most important parameters to ensure, the flare is well operated and meeting the destruction and removal or control efficiency that was relied upon to set the VOC emission limit." *Id.* By failing to incorporate all applicable MACT CC monitoring requirements, the CAM Plan does not qualify as "presumptively acceptable monitoring," and the Division has failed to sufficiently justify the monitoring in the CAM plan.

In addition, the Division's conclusion that pilot flame presence and net heating value are the most important parameters conflicts with MACT CC itself. When it promulgated MACT CC, EPA concluded that the net heating value requirements were sufficient "to 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)." Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards, 80 Fed. Reg. 75,178, 75,211 (Dec. 1, 2015) (emphasis added). Therefore, the MACT CC standards rely on *all incorporated monitoring*, not simply pilot flame presence and net heating value.

i. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements

The Proposed Permit does not comply with the CAM Rule that the CAM plan provide "reasonable assurance of compliance." 40 C.F.R. § 64.3(a); 5 C.C.R. § 1001-5:C.XIV.A.1 (incorporating CAM Rule requirements into state regulations).

The provision of the Proposed Permit that is impacted by this objection is Appendix J.

ii. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Revised Permit

Petitioners raised this issue with specificity in timely comments filed on the Revised Permit. *See* Comments on Revised Permit at 12–13.

iii. The Division's Arguments for Rejecting Petitioners' Comments Are Meritless

The Division perfunctorily responded, without support of citation, that "there is no requirement that all of the monitoring for a standard that is exempt from CAM need to be included in the CAM plan order for the monitoring to be considered 'presumptively acceptable,'" and noted that "[t]he refinery flare is subject to all of the monitoring in MACT CC whether or not it is identified in the CAM plan." RTC-REV at 17 (PDF page 18). The Division's interpretation of the CAM Rule is at odds with the Rule's language.

The CAM Rule requires that CAM Plans include monitoring sufficient "[t]o provide a reasonable assurance of compliance with emission limitations or standards," 40 C.F.R. § 64.3(a), and to specifically justify the adequacy of those measures, *id.* § 64.4(b). The exemption for "presumptively acceptable monitoring" cited by the Division is narrow. It applies only to the monitoring required for applicable other standards (like MACT CC) "to the extent such monitoring is applicable to the performance of the control device (and associated capture system) for the pollutant-specific emissions unit." *Id.* § 64.4(b)(4). The MACT CC standard that the Division relies upon includes all the monitoring identified above, and EPA

has made clear that all of those elements are important for the performance of the flare under MACT CC.

The CAM plan for the Main East Plant Flare does not qualify as "presumptively acceptable monitoring," and therefore, the Division's reliance on "presumptively acceptable monitoring" to satisfy its obligation to justify the monitoring in the CAM Plan renders the CAM insufficient on its face.

2. OBJECTION 12: The Railcar Dock Flare CAM Plan Does Not Comply with the CAM Rule Because It Does Not Adequately Assure Compliance with VOC Emissions Limitations

The Division's CAM Plan for the Railcar Dock Flare requires only that Suncor continuously monitor for the presence of a pilot flame using a thermocouple or heat-sensing device. Proposed Permit App. J at 4. The Division asserts that this monitoring (i) "is consistent with the monitoring in" 40 C.F.R. § 60.18 and the MACT R standards, 40 C.F.R. § 63.427(a)(4), and therefore, (ii) it is "presumptively acceptable monitoring" under 40 C.F.R. § 64.4(b). *Id.* at 5–6. Even assuming that the Railcar Dock Flare is an appropriate control device, the CAM Plan is inadequate because (i) it does not qualify as "presumptively acceptable monitoring" under 40 C.F.R. § 64.4(b), and (ii) the Division does not otherwise justify that the monitoring is sufficient to assure compliance. Therefore, the permit does not comply with the justification requirement of 40 C.F.R. § 64.4(b).

a. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements

The Proposed Permit does not comply with the CAM Rule that the CAM plan provide "reasonable assurance of compliance." 40 C.F.R. § 64.3(a); 5 C.C.R. § 1001-5:C.XIV.A.1 (incorporating CAM Rule requirements into state regulations).

The provision of the Proposed Permit that is impacted by this objection is Appendix J.

b. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Revised Permit

Petitioners raised this issue with specificity in timely comments filed on the Revised Permit. *See* Comments on Revised Permit at 4–6.

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c. The Division's Responses to Comment Are Meritless

i. The CAM Plan Does Not Satisfy the Requirements of 40 C.F.R. § 60.18

The Proposed Permit improperly states that the monitoring in the Railcar Dock CAM Plan qualifies as "presumptively acceptable monitoring" because "[t]he monitoring for the rail rack flare is consistent with the monitoring in 40 CFR Part 60 Subpart A, § 60.18, which requires monitoring for the presence of a pilot flame (see 60.18(f)(2))." Proposed Permit App. J at 5. However, even if Section 60.18 qualifies as "presumptively acceptable monitoring," the CAM Plan's monitoring requirements do not satisfy Section 60.18. The CAM Plan only requires Suncor to monitor for the presence of a pilot flame, *see* Proposed Permit App. J at 4, but Section 60.18 requires Suncor to monitor several factors, including:

1. presence of a flame, (c)(2);
2. presence of visible emissions, (c)(1);
3. heat content of the gas, (c)(3); and
4. tip velocity of the flare, (c)(4).

The Division recognizes these requirements elsewhere in the Revised Proposed Permit, *e.g.,* Rev. Prop. Permit § II, Conds. 9.11, 43.1–43.9, but it does not include the provisions in the CAM Plan for the Railcar Dock Flare. Therefore, the Division cannot rely on compliance with Section 60.18 to qualify as "presumptively acceptable monitoring."

The Division argues in its response that 60.18 only requires continual monitoring of flare presence while the remaining requirements only require a one-time performance test. RTC-REV at 7. This interpretation is false and flatly contradicted by the Proposed Permit itself. Monitoring for the presence of visible emissions is a continuing requirement, and the Proposed Permit sets out a daily procedure that Suncor must follow to satisfy this requirement. *See* Proposed Permit § II, Cond. 43.9. Similarly, 60.18 set heat content limits for the gases going through the flare, and it says nothing about a one-time performance test. Indeed, the Proposed Permit requires Suncor to monitor the heat content of the gas to the flare. *See, e.g.*, Proposed Permit § II, Cond. 9.14.

ii. The Division Cannot Rely on MACT R

The Division next asserts that the CAM Plan qualifies as "presumptively acceptable monitoring" because "[t]he monitoring for the flare is consistent with the monitoring in 40 CFR Part 63 Subpart R, 'National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations'

(MACT R), for units that rely on a flare (see 63.427(a)(4))." Proposed Permit App. J at 6. However, the MACT R standards also fail to support the Railcar Dock Flare CAM Plan.

First, as the Division states expressly, MACT R does not apply to the Railcar Dock Flare because it is no longer a gasoline-loading rack. *Id.* Therefore, MACT R monitoring is not "applicable to the performance of the control device (and associated capture system) for the pollutant-specific emissions unit" as required to qualify as "presumptively acceptable monitoring." 40 C.F.R. § 64.4(b)(4).

In response to Petitioners' comments, the Division asserts that "[i]t is not necessary for the underlying regulation to apply to the subject equipment in order for the monitoring to be justified for CAM." RTC-REV at 7–8. The Division argues that because MACT R applies to flares at gasoline loading racks, it is sufficient for the Railcar Dock Flare. *Id.* at 8. The Division is incorrect for the reasons described in the preceding section: (i) the "presumptively acceptable monitoring" exception on its face applies only to monitoring from standards applicable to the same unit, and (ii) if MACT R did apply to the Railcar Dock Flare, it would actually impose the more stringent flare monitoring requirements of MACT CC.

Second, even if MACT R did apply, the CAM Plan does not satisfy the monitoring requirements of MACT R because it limits monitoring to the presence of a pilot flame. MACT R expressly incorporates the requirements of 40 C.F.R. § 63.11(b). *See* 40 C.F.R. § 63.427(a)(4). Section 63.11(b) contains effectively the same substantive requirements as Section 60.18, and, as explained in the preceding section, the CAM Plan does not incorporate all of the monitoring requirements of Section 60.18. Therefore, the CAM Plan monitoring is **not** consistent with MACT R's monitoring requirements.

Meanwhile, the Division's Response regarding whether the MACT R requirements are met echoes its arguments regarding Section 60.18 above, *see* RTC-REV at 8, and are wrong for the same reasons.

* * * * *

For these reasons, the Division's CAM Plan for the Railcar Dock Flare is not justified and is insufficient to assure compliance with the VOC emissions limit.

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G. Miscellaneous Grounds for Objection

1. OBJECTION 13: Monitoring Provisions for the Main East Plant Flare Are Insufficient to Assure Compliance Because They Are Based on Unsupported Assumptions About Destruction Efficiencies

The VOC monitoring requirements for the East Plant's Main Flare, Proposed Permit § II, Cond. 8.1, cannot assure compliance with emissions limits because it assumes that the flare will destroy 98% of VOCs. As described in the discussion of the East Plant's Main Flare CAM plan, *see* Section III.F, above, the destruction efficiency of flares is unreliable, and the Division has not justified its assumption of a 98% destruction efficiency. For this reason, the Proposed Permit does not comply with the requirement that monitoring and operational provisions are sufficient to assure compliance, 40 C.F.R. §§ 70.6(a)(1), (c)(1), and the Proposed Permit does not adequately justify the monitoring provision, 40 C.F.R. § 70.7(a)(5) (statement of basis provision).

i. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements

First, the Proposed Permit does not comply with the requirement that the permit contain operational provisions, testing, and monitoring requirements that will "assure compliance" with the permit's requirements, including emissions limitations. 40 C.F.R. §§ 70.6(a)(1), (c)(1).

Second, the permitting record fails to contain a sufficient "statement that sets forth the legal and factual basis for the draft permit conditions" justifying the use of unreliable AP-42 emission factors." 40 C.F.R. § 70.7(a)(5); *see also Valero* Order at 62 (grating petition to object where "the permit record, including [] statement of basis and [response to comments], does not contain sufficient information to conclude that there is adequate monitoring to assure compliance with relevant emission limits.").

The condition of the Proposed Permit that is impacted by this objection are Section II, Cond. 8.

ii. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft Permit

Petitioners raised this issue in their comments, as described in Section III.F, above.

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iii. The Division's Response to Comment Are Meritless

Petitioners addressed the Division's Responses on this issue in Section III.F, above.

2. <u>OBJECTION 14:</u> The Proposed Permit Improperly Incorporates a Startup, Shutdown, and Modification Exemption to RACT Requirements for the FCCU

The Proposed Permit and the Division's Response to Comment are vague concerning whether the Proposed Permit includes an illegal SSM exemption to RACT requirements for CO emissions from the FCCU.

In their Supplemental Comments, Petitioners requested that the Division clarify that a condition exempting certain emissions limits during SSM events, Condition 2.13, did not apply to the CO limit established by Colorado RACT requirements. *See* Supplemental Comments at 49–50. As explained more fully below, a 2009 construction permit (i) imposed the RACT requirement for CO on the FCCU, and (ii) determined that a pre-existing emissions limit from a 2005 consent decree was sufficient to satisfy the RACT requirement. The Proposed Permit incorporated the RACT and related emission limitation provisions from the construction permit. However, the Proposed Permit also incorporated an SSM exemption for CO limits created by the 2005 consent decree. The way the Proposed Permit is worded, it is ambiguous whether the Division is interpreting the SSM exemption to apply to the CO RACT provision.

Construction Permit 09AD0961 imposed a CO RACT requirement: "RACT applies for PM_{10}, CO, VOC and NO_x (VOC and NO_x are ozone precursors). The following have been determined to satisfy the RACT requirements: . . . For CO, the emission limitations specified in **Condition[] . . . 19**." Colo. Dep't of Pub. Health & Env't, Suncor Energy (U.S.A.), Inc. Construction Permit No. 09AD0961, at Cond. 16 (Oct. 1, 2009) (Ex. 39) (emphasis added).

Condition 19 of the Construction Permit, meanwhile, adopts an emission limit from a 2005 consent decree: "The permittee shall limit CO emissions from the FCCU to 500 ppmvd (at 0% 0 2), measured as a one-hour block average (Reference: **Consent Decree No. SA-05-0569, entered November 23, 2005, paragraph 94**)." Ex. 39 (emphasis added).

The Proposed Permit adopts the RACT requirement and emissions limit from the Construction Permit.

Condition 2.15 states in pertinent part: "The FCCU reactor-regenerator (P004) is **subject to RACT requirements** for PM_{10}, VOC, CO and NO_x (VOC and NO_x are ozone precursors). (Construction Permit 09AD0961) **RACT has been determined**

to be the following: . . . . **For CO, the emission limitations in Condition[] . . . 2.12**." Proposed Permit § II, Cond. 2.15.4.

Meanwhile, Condition 2.12 includes the emission limitation itself:

> Carbon monoxide (CO) emissions from the FCCU reactor-regenerator (P004) shall not exceed 500 ppmvd, at 0% O2, on a 1-hr block average. (**Construction Permit 09AD0961 and Consent Decree, No. SA-05-CA-0569, entered November 23, 2005, paragraph 94**) Compliance with the CO emission limitations shall be monitored using the continuous emission monitoring system (CEMS) required by Condition 2.17. (As provided for under the provisions in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7, III.B.7 and V.C.5 to include Consent Decree requirements related to the monitoring of the FCCU CO limit. Consent Decree, No. SA-05-CA-0569, entered November 23, 2005, paragraph 94).

Proposed Permit § II., Cond. 2.12 (emphasis added).

While none of these conditions are problematic, a problem arises because the Proposed Permit also incorporates other provisions of the Consent Decree that the Construction Permit and the Proposed Permit cite for the emission limit that satisfies RACT requirement. More specifically, Condition 2.13 of the Proposed Permit states:

> **The CO, opacity and particulate limits established pursuant to the Consent Decree shall not apply during periods of startup, shutdown or malfunction of the FCCUs** or malfunction of the applicable CO or particulate control equipment, if any, provided that during startup, shutdown or malfunction, the permittee, shall, to the extent practicable, maintain and operate the relevant affected facility, include associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions (**Construction Permit 09AD0961 and Consent Decree No. SA-05-0569, entered November 23, 2005, paragraph 102**).

Proposed Permit § II, Cond. 2.13.

Because Condition 2.13 adopts an SSM exemption for CO limits "established pursuant to the Consent Decree" and Condition 2.15 and the Construction Permit rely on an emissions limit in the Consent Decree to satisfy the CO RACT requirement, it is unclear whether the Division is intending to apply a SSM exemption to the CO RACT requirement established by Condition 2.15.

However, it would violate the Clean Air Act to apply SSM exemptions to RACT requirements. Colorado's SIP requires:

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> Minor sources in designated nonattainment or attainment/maintenance areas that are otherwise not exempt pursuant to Section II.D. of this Part, shall apply Reasonably Available Control Technology for the pollutants for which the area is nonattainment or attainment/ maintenance.

5 C.C.R. § 1001-5:D.III.D.2.a. Nothing in the regulations indicate that SSM emissions are exempt from RACT requirements. Moreover, RACT requirements cannot include SSM exemptions because RACT is an "emission limitation" required to be included in Colorado's state implementation plan (SIP), 86 Fed. Reg. 61,071, 61,073 (Nov. 5, 2021) (RACT definition); 42 U.S.C. § 7502(c)(1) (requiring RACT in SIPs), and SIP emission limitations must "limit the quantity, rate, or concentration of emissions of air pollutants on a **continuous** basis." 42 U.S.C. 7402(k) (emphasis added); *see also* 80 Fed. Reg. 33,840, 33,977 (June 12, 2015) (EPA SSM SIP Call) ("[A]utomatic or discretionary exemption provisions applicable during SSM events are impermissible in SIPs.").

i. Requirements Not Met by the Proposed Permit and Permit Conditions Impacted by This Failure

The Proposed Permit does not meet the following requirements

The Proposed Permit does not meet the applicable requirement that the Proposed Permit incorporate Reasonably Available Control Technology for CO. 5 C.C.R. § 1001-5:D.III.D.2.a.

The conditions of the Proposed Permit that are impacted by this objection are Section II, Conds. 2.15, 2.12.

ii. Petitioners Raised the Issue with Reasonable Specificity in Comments on the Draft Permit

This issue was timely raised in the Supplemental Comments to the Draft Permit, at pages 49–50.

iii. The Division's Response to Comment Are Meritless

As noted above, the Supplemental Comments requested that the Division clarify that SSM exemptions do not apply to the CO RACT requirements in Condition 2.15, but the Division did not directly address that request. Instead, the Division's response merely states that "[t]he CO RACT requirement include in Construction Permit 09AD0961 (issued October 1, 2009) refers to the CO emission limit in the Consent Decree (No. SA-05-0569, paragraph 94), which is the limit in Condition 2.12." RTC-C&CG at 90. This statement is accurate, but it does nothing to address the

provisions of the Proposed Permit that can be interpreted to apply an SSM exemption to RACT requirements.

IV. Additional Concerns

In addition to the grounds for objection above, Petitioners raise the following additional issues to EPA's attention.

A. EPA Should Take Immediate Action to Limit Unlawful SSM Provisions That Apply to Suncor

EPA should take action to remove provisions that contain illegal exemptions from emissions standards and limitations. Suncor's Proposed Permit contains numerous provisions that allow Suncor to evade applicable emission standards and limitations during startup, shutdown, or malfunction/force majeure (SSM) events. *See* Supplemental Comments at 36–40. As explained in Petitioners' Supplemental Comments, the removal of these SSM exemptions from the CO SIP, consent decrees, and the Title V permit itself is long overdue and necessary to prevent significant and needless harm to the community. *Id.*

The SSM exemptions riddled throughout the Draft Permit violate the Clean Air Act. Under the Act, emissions standards and limitations must apply continuously, including during SSM events. A mere "general duty" to minimize emissions during SSM events violates the Act. *Sierra Club v. EPA*, 551 F.3d 1019, 1028 (D.C. Cir. 2008) ("Because the general duty is the only standard that applies during SSM events—and accordingly no section 112 standard governs these events—the SSM exemption violates the CAA's requirement that some section 112 standard apply continuously."); *see also* EPA, *State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction*, 80 Fed. Reg. 33840, 33976 ("In order to be permissible in a SIP, an emission limitation must be applicable to the source continuously, i.e., cannot include periods during which emissions from the source are legally or functionally exempt from regulation."). By the same token, facilities cannot escape continuous compliance with an emission limit by complying with other work-practice standards if those standards do not assure compliance with the applicable limit. Similarly, the Act does not allow EPA to limit civil penalties via affirmative defenses. *Nat. Res. Def. Council v. EPA*, 749 F.3d 1055, 1063 (D.C. Cir. 2014); *accord U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 607 (D.C. Cir. 2016) (explaining that affirmative defenses are "impermissible intrusion on the judiciary's role"), *reh'g granted on remedy*, 844 F.3d 268 (D.C. Cir. 2016) (changing remedy to remand instead of vacatur).

In addition to being inconsistent with the plain language of the Clean Air Act, there are fundamental public interest reasons to remove emergency SSM exemptions

from Title V permitting. Excess air pollution from upsets is a chronic public health problem across the nation, and Suncor is no exception. SSM events can result in bursts of massive amounts of pollution—sometimes emitting several times a source's permitted emission limit—over a period of several hours. Given the well-established public health impacts associated with short-term exposure to PM, SO_2, and NO_x, these SSM events have the potential to seriously impact local communities regardless of attainment status. Moreover, an attainment designation is not an ironclad assessment of air quality in any particular location because of the limited and sometimes haphazard air monitoring networks used to determine attainment. Further, SSM exemptions apply to technology-based emission limitations which apply to non-NAAQS air pollutants, including many HAPs. Thus, even in an area appearing to meet NAAQS, residents are exposed to highly dangerous pollutants emitted during SSM events. As such, EPA acknowledges that removal of the Title V affirmative defense provisions—one type of SSM exemption—from operating permits "could potentially result in improved air quality for communities living near sources of air pollution as well as the broader population." EPA, Removal of Title V Emergency Affirmative Defense Provisions From State Operating Permit Programs and Federal Operating Permit Program, 81 Fed. Reg. 38,645, 38,654 (June 14, 2016).

Indeed, Suncor has attributed the majority of its pollution exceedances to SSM conditions. For example, in recent years, the Division has recorded at least 108 malfunctions at the refinery.[81] As another example, from 2017 to 2020, SSM exemptions allowed Suncor to skirt applicable opacity limits for the East Plant FCCU at least 15 times, resulting in roughly 65 hours of opacity exceedances.[82] This astonishing number of excess emission events degrades the air quality in the surrounding communities, threatening public health.

1. EPA Should Seek to Remove Unlawful SSM Exemptions from the Valero Consent Decree

Several of the Title V permit's SSM exemptions originate from a decades-old consent decree. *See United States v. Valero Refining Co.*, Case No. 5:05-CV-00569-WRF, Consent Decree (June 16, 2005) (entered Nov. 23, 2005) (Ex. 41).

EPA should take immediate action to remove SSM provisions from the Valero Consent Decree. The types of SSM exemptions contained in the consent decree have since been found to violate the Clean Air Act. These conditions are therefore *ultra vires*, and EPA should immediately seek to reopen the consent decree to remove all such exemptions. These include:

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[81] Bruce Finley, Long-Awaited Report on Suncor Malfunctions Does Little to Quell Calls for Refinery's Closure, Denver Post (Apr. 17, 2021), https://www.denverpost.com/2021/04/17/suncor-permit-renewal-air-pollution/.

[82] Summary of Opacity Events at FCCU for Suncor Refinery Plant 2 (East) (May 11, 2021) (Ex. 40) (originally attached as Exhibit 7 to Petitioners' Supplemental Comments (Ex. 16)).

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Paragraph 102: Paragraph 102 creates an SSM exemption for the CO, opacity, and particulate limits established by the consent decree for the FCCU. The permit incorporates these exemptions at Condition 2.13.

Appendix E, Paragraph 5.a.iii: Appendix E, Paragraph 5.a.ii creates an SSM exemptions for SO_2 emission limits established by the consent decree. The permit incorporates this exemption at Condition 2.10.2.[83]

In its response to comments, the Division argues that the Title V permit proceeding is not the proper forum to seek to reopen the Valero Consent Decree. RTC-C&CG at 74. Yet these unlawful SSM provisions, derived from a decades-old consent decree, continue to linger in Suncor's Title V permit—which is meant to be a "source-specific bible for Clean Air Act compliance." *Virginia v. Browner*, 80 F.3d 869, 873 (4th Cir. 1996). Given that the SSM provisions contravene existing law, *see generally Sierra Club*, 551 F.3d at 1028, and impose severe health impacts on disproportionately impacted communities, it is imperative that EPA take action to amend the Valero Consent Decree. Amending the Valero Consent Decree now would allow for subsequent Title V permits to remove the SSM exemptions.

Critically, EPA has the authority to seek to reopen the Valero Consent Decree and remove the SSM exemptions. In fact, EPA previously reopened a similar consent decree for the Suncor West Plant that *added* SSM exemptions, which should also now be removed. *See United States v. Conoco, Inc.*, Case No. H-01-4430, Consent Decree (Dec. 2001) (entered April 2002), available at https://www.epa.gov/enforcement/consent-decree-conoco-inc; *United States v. Conoco, Inc.*, Case No. H-01-4430, First Amendment to Consent Decree (June 2003) (entered August 2003), available at https://www.epa.gov/enforcement/first-amendment-consent-decree-conoco-inc-civil-action-no-h-0-1-4430; *United States v. Conoco, Inc.*, Case No. H-01-4430, Second Amendment to Consent Decree (2006), available at https://www.epa.gov/sites/default/files/documents/conoco-secondamend-cd.pdf.EPA should use its authority to take the opposite tack here, by seeking to remove SSM exemptions from the Valero consent decree.

B. EPA Should Coordinate with the Division to Combine the Title V Permits for the East Plant and West Plant into One Permit

The Suncor Refinery currently has two permits—one for the East Plant and another for the West Plant. This bifurcation reflects the fact that, decades ago, the plants were under different ownership. But this bifurcation is no longer appropriate. Suncor owns and operates both the East Plant and the West Plant. These plants have significant interconnections, and both the West and East Plants rely on operations at the other. The current two-permit scheme improperly circumscribes the review of Suncor's operations and, in effect, shields important context necessary to a

[83] Other SSM exemptions that EPA should seek to remove from the Valero Consent Decree include the exemptions at paragraphs 110 and 122.

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meaningful and comprehensive review of Suncor's operations—a review that lies at the heart of Title V. Additionally, the duplicative two-permit scheme impedes public participation in the permitting process by doubling the number of public comment periods and hearings that community members must engage with. EPA should accordingly coordinate with the Division to combine the Title V permits for the East Plant and West Plant into a single permit.

The East Plant and West Plant qualify as a single "major source" under the Clean Air Act, which defines "major source" to include "any group of stationary sources located within a contiguous area and under common control." 42 U.S.C. § 7661(2); *see also* 40 C.F.R. § 70.2 (defining "major source" as "any stationary source (or any group of stationary sources that are located on one or more continuous or adjacent properties, and are under common control of the same person (or persons under common control) belonging to a single major industrial grouping"). The Act envisions that a single facility will receive a single permit as "a source-specific bible for Clean Air Act Compliance. *Virginia v. Browner*, 80 F.3d 869, 873 (4th Cir. 1996). It is well-recognized that "[t]he permit is crucial to the implementation of the Act: it contains, in a single, comprehensive set of documents, all CAA requirements relevant to the particular polluting source." *Id.* A single permit for a single refinery gives clarity to the permittee, assists the permitting and enforcement authorities, facilitates the public's review and understanding, and helps assure compliance with clean air requirements.

Suncor operates the East Plant and West Plant as a single refinery, and combining the two Title V permits would facilitate meaningful public review and engagement. The artificial bifurcation of the permits limits much-needed context. For example, the refinery operates one interconnected wastewater treatment system. At the East Plant, process wastewater drains are ultimately being routed to the West Plant's wastewater treatment plant. Letter from Wes McNeil, Suncor, to Jackie Joyce, CDPHE, at 1 (May 25, 2012) (regarding Suncor Energy (U.S.A.) Inc. — Commerce City Refinery, Title V Operating Permit (95OPAD108) Minor Modification 22 Commerce City Refinery (Plant 2) — Wastewater 40 C.F.R. § 60.690 Subpart QQQ Applicability 1) (Ex. 42). Further demonstrating the interconnectivity of the two plants, a 2021 technical support document discusses a 2011 mixed butanes project at the East Plant that has significant linkages with the West Plant. The discussion specifically states that

> [t]he purpose of this modification is to add and modify process piping to allow a portion of the n-butane/isobutane product stream from the propane-butane splitter (W-69) to be fed into the Plant 2 de-isobutanizer (DIB) column (T-298). The n-butane/isobutane stream **is an intermediate stream produced at Plant 1**..." and that there may be "...a slight increase in emissions [as a result of this project in Plant 2] from final product storage tanks and the **Plant 1 Truck Rack**....

Proposed TRD at 30 (emphases added).

Indeed, the Division and Suncor already consider the West Plant and the East Plant to be a single source. For example, the PSD/NNSR calculations are combined for the plants. Section 3.3 of the Proposed Permit states: "The following Operational Permit is associated with this facility for purposes of determining applicability of NANSR and PSD regulations: 96OPAD120 for Suncor Energy (U.S.A.) Inc. Plants 1 and 3 (West Plant)." Proposed Permit at § I, Condition 3.3.

Yet, at this juncture, only a small sliver of Suncor's wastewater treatment operations is subject to public scrutiny, and this scrutiny is seriously curtailed because the public is unable to consider the full context of Suncor's wastewater operations, the bulk of which appear to happen at the West Plant. The Title V permit for the West Plant is on a different track. This bifurcation of the wastewater treatment system prevents the public from meaningfully considering how the wastewater treatment systems at the plants interact and, in turn, what might be needed to ensure that Suncor's monitoring and reporting requirements assure that Suncor is continuously complying with its emissions limits.

Bifurcating Suncor's Title V permit places an unnecessary and unwarranted burden on the general public—and especially on the disproportionately impacted communities harmed by Suncor—seeking to engage in the Title V permit review process. Under the current regime, to effectively participate in the review of Suncor's Title V permit, the public must take part in two distinct comment periods and attend hearings specific to both the East and West Plants. Issuing a single permit would alleviate the duplicative burden placed on the public and invite more meaningful engagement by impacted communities.

Bifurcation here conflicts with the broader purpose of Title V to compile all requirements for a major source into a single document. Accordingly, the Division has signaled a willingness to merge the bifurcated processes. At the May 19, 2022 meeting of the Colorado AQCC, Division Director Michael Ogletree stated that "combining [the] two [permits] into one larger permit" is an option that the Division "could potentially consider." Colorado AQCC, *May 19, 2022 Meeting Recording*, at 3:54:26 (May 19, 2022), https://drive.google.com/drive/folders/1GDEVv76nQK2ps6UkMCoxXjs3jqfqqgpb (select 051922). EPA should therefore coordinate with the Division to combine the Title V permits for the East Plant and the West Plant into a single permit.

V. Conclusion

For the foregoing reasons, EPA should grant this petition and object to the Proposed Permit.

Respectfully submitted,

On behalf of the Elyria and Swansea Neighborhood Association, Cultivando, Colorado Latino Forum, GreenLatinos, Center for Biological Diversity, and Sierra Club

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