February 2, 2026

VIA EMAIL

US EPA
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VIA EMAIL

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VIA EMAIL

Suncor Energy (U.S.A.), Inc.
c/o Bernd Haneke
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Re: **Colorado Department of Public Health and Environment's Clean Air Act (CAA) Reopening of Title V Permit 95OPAD108 Suncor Energy, Inc. Plant 2 (East Plant)**

Pursuant to 40 C.F.R. §§ 70.8(d), 70.12, Cultivando, 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") Reopened 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 issued on December 5, 2025 ("Reopened Permit").

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I. Introduction

This is the second Title V petition that Petitioners have submitted on the same permit. A second petition is necessary because the Reopened Permit still fails to impose adequate permit requirements on the Suncor refinery, despite EPA objecting to the same permit not once, but twice. The renewal of this Title V permit should have been finalized more than 15 years ago. After egregious delay, the Colorado Department of Public Health and Environment finally issued a draft renewal permit for Suncor's East Plant (Plant 2) in 2021—but with significant deficiencies. Recognizing those serious flaws, EPA first objected during its 45-day review period. After CDPHE submitted a slightly revised permit ("2022 East Plant Permit"), EPA granted Petitioners' first Title V petition in 2023.

CDPHE issued the Reopened Permit at issue here in response to EPA's 2023 East Plant Order granting Petitioners' first petition. That order granted, at least in part, several of Petitioners' claims, including four claims relevant to this Petition:

- Claim 3: EPA found that CDPHE had failed to adequately justify its reliance on an AP-42 factor to monitor compliance with particulate matter ("PM") emission limits on several units.[1]

- Claim 6: EPA found that CDPHE had failed to justify its determination that minor modifications would not cause a National Ambient Air Quality Standard ("NAAQS") exceedance without performing ambient air modeling.[2]

- Claim 8: EPA found that CDPHE had failed to justify its decision not to aggregate Suncor's project to upgrade four refinery flares.[3]

- Claim 14: EPA found that CDPHE must amend the permit or permit record to confirm that a reasonably available control technology ("RACT") requirement was not subject to an exemption during startup, shutdown, and malfunction events ("SSM").[4]

And the 2023 East Plant Order is not the only petition that EPA has granted regarding the Suncor Refinery. In 2024, EPA granted a second Title V petition, on

[1] Env't Prot. Agency, *Order Granting in Part and Denying in Part Petitions for Objection to a Title V Operating Permit, Permit No. 95OPAD108* at 37 (July 31, 2023) ("2023 East Plant Order") (Ex. 61).

[2] *Id.* at 62.

[3] *Id.* at 76–77.

[4] *Id.* at 92.

largely similar grounds, on Suncor's other Title V permit covering the remainder of the refinery.[5]

Also, in the timeframe since EPA granted Petitioners' first petition,[6] events at the refinery have only underscored the continuing mismanagement and harm to local communities:

- A fire broke out at the refinery, injuring two workers, shutting the refinery down for three months, and triggering a fine from OSHA;[7]
- Suncor failed to meet its statutory deadlines for instituting a fenceline monitoring system by over a year and sued CDPHE to water down the refinery's obligations under the law;[8]
- EPA issued a report finding Suncor has far more violations than most other similar refineries in the country;[9]
- CDPHE has entered into a second, consecutive "record" enforcement settlement with Suncor;[10]
- EPA conducted an inspection and issued an extensive Notice of Violation for Suncor;[11]

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[5] Env't Prot. Agency, *Order Granting in Part and Denying in Part a Petition for Objection to a Title V Operating Permit, Permit No. 96OPAD120* (Dec. 30, 2024) ("2024 West Plant Order") (Ex. 65).

[6] We use "Petitioners" to describe the organizations petitioning here as well as those that petitioned in the 2022 East Plant Petition, because each of the organizations petitioning here were also parties to the first East Plant Petition. The 2022 East Plant Petition additionally included two other organizations. *See* Earthjustice, *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)* ("2022 East Plant Petition") (October 11, 2022) (Ex. 60).

[7] *See, e.g.,* Noelle Phillips, *OSHA fines Suncor $15,000 over December fire at Commerce City refinery that injured 2 workers*, Denver Post (June 23, 2023), https://www.denverpost.com/2023/06/23/suncor-commerce-city-refinery-fire-osha-investigation-fine/.

[8] *See* Earthjustice, *Colorado Reaches Settlement with Suncor Energy on Fenceline Monitoring Lawsuit* (Feb. 5, 2024), https://earthjustice.org/press/2024/colorado-reaches-settlement-with-suncor-energy-on-fenceline-monitoring-lawsuit.

[9] EPA, *Suncor Refinery Consent Decree Reportable Incident Analysis* (May 12, 2023), https://www.epa.gov/system/files/documents/2023-06/TD20-Suncor-CD-Incident-Analysis-2023-05-12.pdf.

[10] CDPHE, *Colorado announces largest state enforcement package against a single facility for air pollution violations to Suncor refinery in Commerce City* (Feb. 5, 2024), https://cdphe.colorado.gov/press-release/colorado-announces-largest-state-enforcement-package-against-single-facility.

[11] EPA, *Federal, state inspections indicate Suncor refinery violated air quality regulations* (July 8, 2024), https://www.epa.gov/newsreleases/federal-state-inspections-indicate-suncor-refinery-violated-air-quality-regulations.

- Community and environmental groups sued Suncor in federal court for its extensive violations of the Clean Air Act;[12]

- A peer-reviewed article has been released documenting previously unknown emissions of radioactive gas and particles from the Suncor refinery;[13]

- Suncor has reported more than 1,000 exceedances of its permit limits;[14]

- Suncor's parent company has reported over $17 billion in profits and returned over $12 billion to its shareholders.[15]

Despite three rounds of objections from EPA and continual violations, CDPHE has brazenly refused to comply with EPA's directives and instead issued a Reopened Permit that retains many of the same deficiencies.

First, instead of justifying its reliance on the PM emission factor or requiring stack testing—as EPA directed—CDPHE argues for the first time that it was not required to justify the PM monitoring because the emission factor was included in the preconstruction permit for the relevant units.

Second, instead of reevaluating its original decision that two modifications would not cause a NAAQS exceedance or modeling those modifications, CDPHE claims, without including any further data in the Reopened Permit Record, that current ambient air monitoring shows no NAAQS exceedances.

Third, CDPHE refuses to reevaluate its decision not to aggregate Suncor's projects to upgrade its flares, which, if aggregated, would trigger major new source review, and CDPHE has not provided any further justification for that decision, primarily arguing that it simply disagrees with EPA's conclusion in the 2023 East Plant Order.

Fourth, CDPHE flatly refuses to update the permit or permitting record to confirm that SSM exemptions do not apply to the RACT requirement for carbon

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[12] Michael Booth, *Suncor sued in federal court by environmental groups seeking hundreds of millions in fines*, The Colorado Sun (Aug. 7, 2024), https://coloradosun.com/2024/08/07/suncor-lawsuit-colorado-air-pollution-violations/

[13] *See* Detlev Helmig et al, *Elevated airborne radioactivity downwind of a Colorado oil refinery*, 74 J. Air & Waste Mgmt. Ass'n 920 (2024), *available at* https://www.tandfonline.com/doi/pdf/10.1080/10962247.2024.2393194?download=true.

[14] *See* Suncor Excess Emissions Reports, *available at* https://oitco.hylandcloud.com/CDPHERMPop/docpop/docpop.aspx?KT647_0_0_0=001-0003&clienttype=html&cqid=157.

[15] Suncor Energy, Inc, *2023 Annual Report* at 1, https://www.suncor.com/-/media/project/suncor/files/investor-centre/annual-report-2023/2023-annual-report-en.pdf

monoxide ("CO"), despite EPA's direct order to do so, made in light of EPA's conclusion that applying the exemption would violate the Clean Air Act.

For these reasons, and as described in detail below, CDPHE failed to resolve EPA's objections from the 2023 East Plant Order, and EPA should grant this petition for the reasons set forth here, in the 2023 East Plant Order, and in the 2024 West Plant Order.

II. Background

A. The Refinery and Its Emissions

The Suncor refinery is a 98,000-barrel-per-day refinery that produces gasoline, diesel fuel and paving-grade asphalt.[16] The refinery includes 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.[17] Suncor has a long history of violating air pollution limits and has been subject to repeated enforcement actions.[18] 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.[19]

The 2022 Permit and Reopened Permit allow 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 CO, and 374 tpy of volatile organic compounds ("VOCs") each year.[20] 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.[21]

First, some of these increases come from CDPHE allowing Suncor to emit even more pollutants into the already burdened neighborhoods around the refinery.

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[16] Suncor, *Refining*, https://www.suncor.com/en-ca/about-us/refining (last visited Feb. 1, 2026).

[17] 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/.

[18] *See, e.g.*, Colo. Dep't of Pub. Health & Env't, *Actions Against Suncor to Enforce Air Quality Requirements*, https://cdphe.colorado.gov/enforcement-actions-against-suncor (last visited Feb. 1, 2026).

[19] 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.

[20] Colo. Dep't of Pub. Health & Env't, Technical Review Document for Renewal/Modifications to Operating Permit 95OPAD108 at 4 (Sept. 1, 2022) ("2022 TRD") (Ex. 63)

[21] *Id.* at 174 (Ex. 63).

Second, other increases stem from CDPHE's approval of updated emission factors and calculation methodologies.[22] These increases reflect CDPHE'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 CDPHE 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 CDPHE allows it. Accurate emission factors based on performance tests and adjustments for excess emissions released during startup, shutdown, and malfunction 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 CDPHE continues to fail to impose the measures necessary to accurately monitor Suncor's compliance with applicable emissions limits, in defiance of EPA's directives.

B. 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.[23] 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.[24] Superfund sites are just blocks from people's homes and less than half a mile from an elementary school.[25] 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

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[22] *See, e.g.*, *id.* at 16–18 (Modification 1.5, revising emission factors for the Main East Plant Flare).

[23] *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.

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

[25] EPA, *Superfund Sites in Reuse in Colorado*, https://www.epa.gov/superfund-redevelopment/superfund-sites-reuse-colorado (last visited Feb. 1, 2026); EPA, *Superfund Site Information: ASARCO, Inc. (Globe Plant)* https://cumulis.epa.gov/supercpad/cursites/ccontinfo.cfm?id=0800078 (last visited Feb. 1, 2026); EPA, *Superfund Site: Vasquez Boulevard and I-70 Denver, CO*, https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0801646 (last visited Feb. 1, 2026).

facility.[26] 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.[27] Three heavily trafficked highways, Interstate 70, Interstate 270 and Interstate 25, bisect the neighborhoods, and further exacerbate air pollution problems.[28] Overall, industrial and commercial uses cover more than 70% of the neighborhoods, twice as much as the Denver average.[29] Independent community air 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.[30] 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.[31]

The communities surrounding the Suncor Refinery are considered "Disproportionately Impacted Communities" under Colorado's Environmental Justice Act, H.B. 21-1266, Colo. Rev. Stat. ("C.R.S.") § 24-4-109(2)(b)(ii).[32] Indeed, at least 85 percent of communities in Colorado are less environmentally burdened than those surrounding the Suncor Refinery according to the Colorado EnviroScreen Tool.[33] According to EPA's recent analysis of the area around the Suncor Refinery, 69,570 residents live within a five-kilometer radius,[34] with the nearest residential home less than half a mile from the refinery. EPA determined that 72 percent of those residents are people of color and 37 percent are

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[26] Health Impact Assessment (Ex. 03) at 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.

[27] 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.

[28] Health Impact Assessment (Ex. 03) at 19–21.

[29] *Id.* at 19.

[30] 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/.

[31] *Id.*

[32] *See* Colo. Dep't of Pub. Health & Env't, Disproportionately Impacted Community Map (Nov. 2024), https://www.cohealthmaps.dphe.state.co.us/DICommunity/?page=Page&views=Criteria (last visited Feb. 1, 2026) (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, people of color; as well as EnviroScreen percentile score and within a Jusitce40 census tract).

[33] Colo. Dep't of Pub. Health & Env't, Colorado EnviroScreen, https://www.cohealthmaps.dphe.state.co.us/COEnviroscreen_2/ (Version 2.0, Nov. 2024) (last visited Feb. 1, 2026).

[34] 2023 East Plant Order (Ex. 61) at 7.

economically disadvantaged.[35] Additionally, EPA found that the area falls within some of the highest percentiles on all 13 of EPA's EJScreen Environmental Justice Indicators: (1) Particulate Matter, 96%; (2) Ozone, 89%; (3) Diesel Particulate Matter, 95%; (4) Air Toxics Cancer Risk, 97%; (5) Air Toxics Respiratory Hazard, 97%; (6) Toxic Releases to Air, 94%; (7) Traffic Proximity, 87%; (8) Lead Paint, 92%; (9) Superfund Proximity, 96%; (10) RMP Facility Proximity, 96%; (11) Hazardous Waste Proximity, 96%; (12) Underground Storage Tanks, 89%; and (13) Wastewater Discharge, 91%.[36] Further, a recent study demonstrated that people of color in Denver are exposed to higher levels of air pollution.[37] These inequities in North Denver, where people of color are disproportionately burdened by air pollution, are driven by decades of inequitable city planning practices such as redlining and other exclusionary zoning laws.[38]

In one analysis, the 80216 zip code, which includes the Elyria, Swansea, and Globeville neighborhoods, as well as part of south Commerce City, was ranked the most polluted zip code in the United States.[39] Emissions from the Suncor Refinery are a major contributor to the pollution in North Denver and Commerce City. In 2020 alone, the refinery emitted approximately 20 tons of hazardous air pollutants, 500 tons of CO, 650 tons of NOx, 125 tons of PM, 450 tons of VOCs, and 230 tons of SO_2.[40] Of the pollutants for which more recent data is available, Suncor's emissions have largely increased since 2020: for example, between 2020 and 2024, total hazardous air pollutant emissions have increased by more than 25%; ozone precursors have increased by more than 30%; and total air toxics have increased by nearly 30%.[41] Certain pollutants increased by even more, such as propylene, of which Suncor emitted a whopping 55% more in 2024 than in 2020.[42] The health risks created by these pollutants threaten the already susceptible nearby residents who have among the highest rates of several diseases associated with air pollution, including asthma, cardiovascular disease, and diabetes.[43]

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[35] *Id.*

[36] *Id.*

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

[38] *Id.* at 4232–33.

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

[40] Enforcement and Compliance History Online, *Air Pollutant Report*, Env't Prot. Agency, (last visited January 28, 2026), https://echo.epa.gov/air-pollutant-report?fid=110032913024.

[41] *See id.* (compare 2024 values of TRI Air Toxics, TRI HAPs, and TRI Ozone Precursors to 2020 values).

[42] *Id.*

[43] Health Impact Assessment (Ex. 03) at 16–17.

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 CDPHE 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.

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 NAAQS. The area has been in nonattainment with the federal standards for well over a decade. It is currently designated as a "severe" nonattainment area for the 2008 75 parts per billion (ppb) ozone standard, triggering a lower significance threshold of 25 tpy VOC and NO_x.[44] In addition, Colorado plans to request voluntary redesignation to "severe" status for the 2015 70 ppb standard, as the state's own modeling could not show future attainment for the nonattainment area.[45] Further ozone status downgrades are likely, as design values continue to exceed even the less-stringent 75 ppb standard.[46] Suncor's permitted emissions 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 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. 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 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

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[44] *Determinations of Attainment by Attainment Date, Extensions of the Attainment Date, and Reclassification of Areas Classified as Serious for the 2008 Ozone National Ambient Air Quality Standards*, 87 Fed. Reg. 60926 (Oct. 7, 2022) (Ex. 04).

[45] Colo. Dep't of Pub. Health & Env't, *Federal ozone pollution standards and Colorado nonattainment areas* (last visited Jan. 28, 2026) ("Colorado announced plans to submit a request to EPA for a voluntary reclassification from a "serious" to a "severe" nonattainment area under the 2015 standard."), https://cdphe.colorado.gov/nonattainment-federal-ozone-pollution-standards.

[46] Regional Air Quality Council, *Denver Metro/North Front Range Area – 2025 8-Hour Ozone Summary* (Sept. 28, 2025), https://raqc.egnyte.com/dl/CWRPkGpbJ9Gb.

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 used 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 monitored more than 50 air pollutants, including benzene, hydrogen cyanide, sulfur dioxide, and hydrogen sulfide.

2. 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.

3. 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.

4. 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 800,000 members nationwide, and more than 20,000 members in Colorado.

C. 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. For example, in the six and half years from 2016 through July 2022, Suncor reported exceedances of the allowable concentration of carbon monoxide ("CO") in the Fluid Catalytic Cracking Unit ("FCCU") Regenerator vent that totaled at least 417 hours.[47] These 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).[48] 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.[49]

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[47] *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 CDPHE has failed to provide a Quarterly Excess Emission Report for 2019 Q1 and the Report is not available on CDPHE's public database, despite Petitioners raising the issue in their initial comments on Suncor's original East Plant Title V renewal permit. 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)* at 8 n.24 (Mar. 19, 2021) ("2021 East Plant Initial Comments") (Ex. 06). CDPHE has since acknowledged that "[t]here are no records available for 2019 Q1 RPT." Email from Records and Information Unit, Air Pollution Control Division, to Ava Farouche, Earthjustice (July 14, 2022) (Ex. 08).

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

[49] 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).

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[50]		500 ppmv, corrected to 0% O_2, 1-hr average basis[51]		20% six-minute block average basis[52]	
Year	**No.**	**Hours**	**No.**	**Hours**	**No.**	**Hours**
2022[53]	6	28	8	38	4	1.8
2021	13	65	14	87	48	25.7
2020	6	60	13	73	17	6.6
2019[54]	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

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—have recorded even more exceedances and deviations. Suncor's problems with failing to comply with its permit conditions continue, showing no sign of abating. For example, EPA's July 2, 2024 Notice of Violation to Suncor identifies a slew of violations that occurred between 2020 to 2023,[55] and CDPHE has issued two more compliance advisories since then covering incidents up to June 30, 2024.[56] However, Suncor has yet to show that it is capable of operating within existing permit limits.

Suncor also reports more frequent upsets—specifically, consent decree reportable incidents—than many comparable refineries, according to a recent

[50] Per NSPS Subpart Ja.

[51] Per Consent Decree and NSPS Subpart Ja.

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

[53] Data reported here includes only Quarters 1 and 2 of 2022.

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

[55] EPA & CDPHE, *Notice of Violation to Suncor Energy (U.S.A.), Inc.* (July 2, 2024), https://www.epa.gov/system/files/documents/2024-07/redacted-7-2-2024-suncor-notice-of-violation.pdf.

[56] *See* CDPHE, *Actions Against Suncor to Enforce Air Quality Requirements*, https://cdphe.colorado.gov/actions-against-suncor-to-enforce-air-quality-requirements (last visited Jan. 28, 2026).

analysis from EPA.[57] 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.[58] 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.[59] Several refineries that are considerably larger than Suncor had zero incidents.[60] And for hydrocarbon flaring, Suncor reported 17 incidents over the 5-year period.[61]

D. Permitting History

EPA approved the Colorado operating permit program on August 16, 2000.[62] The Air Pollution Control Division ("Division") of the Colorado Department of Public Health and Environment ("CDPHE") 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).

CDPHE 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 then revised on June 15, 2009. The permit was therefore set to expire on October 1, 2011. Suncor submitted a Title V permit renewal application on October 1, 2010. On February 17, 2021—after more than 10 years of delay—CDPHE issued a draft Title V renewal for public comment. Since the 2009 revision, Suncor requested, and CDPHE approved, dozens of modifications to the permit.

EPA objected to CDPHE's proposed permit on March 25, 2022, citing deficiencies in the permit's Compliance Assurance Monitoring analyses for the Main East Plant Flare and Railcar Dock Flare, and also raised additional concerns about minor modifications, NAAQS compliance, and environmental justice problems at

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[57] EPA, Suncor Refinery Data Analysis (obtained by Earthjustice on Aug. 25, 2022) (Ex. 10); *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).

[58] *See* Suncor Refinery Data Analysis (Ex. 10) at 1 (reporting Suncor's operable capacity as 103,000 bpcd and El Dorado's as 162,000 bpcd).

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

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

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

[62] 65 Fed. Reg. 49919.

Suncor.[63] On June 22, 2022, CDPHE submitted a revised proposed permit to EPA which became the final 2022 East Plant Permit on September 1, 2022 when EPA did not object during its 45-day review period. Petitioners timely filed a petition to object with EPA on October 11, 2022.[64]

On July 31, 2023, EPA granted the petition, in part, objecting again to CDPHE's 2022 Permit ("East Plant Order").[65] On September 27, 2024, CDPHE issued a Draft Reopened Permit to address EPA's objection.[66] Petitioners timely submitted comments on the proposed revisions on December 14, 2024.[67]

EPA also timely submitted comments on the Draft Reopened Permit.[68] EPA's comments focused exclusively on "issues of the Suncor permit that are not related to issues raised in the" West Plant Petition, which was submitted to EPA on September 6, 2024.[69] The comments did, however, discuss "some areas in which the draft permit does not fully respond to EPA's direction in the [East Plant] Order."[70] For example, EPA explained that with respect to Claims 5 and 6,[71] CDPHE's Draft Reopened TRD "does not directly answer the direction in EPA's Order."[72] EPA goes on to explain that the Draft Reopened TRD's explanation is "unclear" and that CDPHE's apparent reasoning—that a 2018 action was intended to establish title I requirements for Plants 1 and 3—does not offer "any basis to conclude that the *Plant 2* portion of the MPV project went through title I permitting."[73] Accordingly, EPA concluded that the Draft Reopened Permit "does not satisfy the direction in the Order with respect to claims 5 and 6."[74] EPA also expressed concerns involving "the sufficiency of the information made available to the public," and urged CDPHE to "ensure that the publicly available technical review document . . . provided a clear

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

[64] 2022 East Plant Petition (Ex. 60).

[65] 2023 East Plant Order (Ex. 61).

[66] *See* Colo. Dep't of Pub. Health & Env't, Technical Review Document for Draft Reopening of Operating Permit 95OPAD108 (Sept. 27, 2024) ("Draft Reopened TRD") (Ex. 62), which accompanied the Draft Reopened Permit.

[67] Community & Conservation Groups, *Public Comments on Notice of Proposed Reopening of a Title V Permit for Suncor Energy (U.S.A.), Inc. – Commerce City Refinery – Plant 2 (East) – Adams County (95OPAD108)* (Dec. 14, 2024) ("C&CG Comments") (Ex. 67).

[68] Letter from Adrienne Sandoval, EPA, to Michael Ogletree, CDPHE (Dec. 13, 2024) ("EPA 2024 East Plant Comments") (Ex. 64).

[69] *Id.* at 1.

[70] *Id.*

[71] *See* Section IV.B.1.d.iii, below.

[72] EPA 2024 East Plant Comments (Ex. 64) at 5.

[73] *Id.* at 6.

[74] *Id.* at 7.

explanation."[75] With respect to Claim 14, EPA advised CDPHE to conduct an "independent, transparent assessment of aggregation," "includ[ing] discussion of all facts and factors relevant to its assessment" and "clearly marked as such."[76]

On October 20, 2025, CDPHE issued a response to Petitioners' and EPA's comments ("RTC"),[77] and submitted the Draft Reopened Permit to EPA. EPA did not object to the Draft Reopened Permit within its 45-day review period, which ended on December 4, 2025. CDPHE then issued the Reopened Permit on December 5, 2025. This Petition to Object is timely filed within 60 days of EPA's failure to raise objections during its review period.[78]

III. Standard of Review

Under the Clean Air Act, "any person" may petition EPA to object to the issuance of a permit "within 60 days after the expiration of [EPA's] 45-day review period."[79] 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."[80] 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]."[81]

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."[82] When deciding whether a petitioner has met this demonstration requirement, EPA will evaluate the entirety of the permit

[75] *Id.* at 8.

[76] *Id.* at 9.

[77] Colo. Dep't of Pub. Health & Env't, *Response to Specific Public Comments on the Draft Title V Operating Permit Reopening* (Oct. 20, 2025) ("RTC") (Ex. 69). CDPHE's RTC lacks page numbers. Petitioners have added page numbers to Exhibit 69 for convenience.

[78] *See* 42 U.S.C. § 7661d(b)(2).

[79] *Id.* § 7661d(b)(2); *see also* 40 C.F.R. § 70.8.

[80] 40 C.F.R. § 70.8(d).

[81] *Id.* § 70.12(a)(2).

[82] 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.").

record, including the statement of basis (referred to as the Technical Review Document, or TRD, by CDPHE) and Response to Comments.[83]

If EPA grants an objection after the permitting authority has issued the permit, EPA "shall modify, terminate, or revoke such permit."[84] The permitting authority "the permitting authority may thereafter issue only a revised permit that satisfies EPA's objection."[85]

IV. Grounds for Objection

As explained in detail in the subsections below, Petitioners request that EPA object to the Permit on several grounds because EPA already granted a Title V petition on those grounds in 2023, and CDPHE's Reopened Permit does not resolve those objections.

First, the Permit improperly relies on AP-42 Section 1.4 emissions factors to calculate compliance with particulate matter emission limits without any reasonable analysis of their reliability. CDPHE now takes the unsupportable position that it is not required to ensure that the PM emission factors are sufficient to assure compliance because the emission factors were included in preconstruction permits.

Second, the Permit improperly incorporates minor modifications that (1) were not properly evaluated for NAAQS compliance, and/or (2) should have been treated as major modifications. CDPHE failed to model two modifications or provide any other basis for NAAQS compliance, and now it improperly attempts to rely on current ambient air monitoring to show compliance. Also, CDPHE failed to aggregate substantially related modifications to the refinery's flares, relying on a justification that EPA has already rejected.

Third, CDPHE claims that it can apply a startup, shutdown, malfunction (SSM) exemption to a reasonably available control technology (RACT) requirement despite EPA's express conclusion that doing so violates the Clean Air Act.

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[83] *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").

[84] 42 U.S.C. § 7661d(b)(3).

[85] 40 C.F.R. § 70.8(d).

A. Objections Related to CDPHE's Failure to Justify That Its Reliance on AP-42 Emission Factors for Monitoring Is "Sufficient to Assure Compliance with All Applicable Requirements"

The permitting record for the East Plant Permit, as well as the West Plant Permit, demonstrates that CDPHE merely accepted Suncor's requests to rely on AP-42 emission factors without analyzing whether use of the factors is "sufficient to assure compliance with all applicable requirements" as required by Title V regulations.[86] To estimate emissions and assess compliance with pollutant limits, the Permit relies extensively on default emission factors from EPA's AP-42, Compilation of Air Pollutant Emissions Factors (5th ed. 1995), [hereinafter "AP-42"]. EPA has explicitly acknowledged that there are many flaws and shortcomings inherent to the use of AP-42; EPA accordingly cautions users to take those flaws into account. These caveats, however, are neither recognized nor acknowledged in the permit renewal by CDPHE, and as a result, the emissions estimates derived from the use of AP-42 factors—the critical foundation of the permit—are deeply flawed.

EPA has stated that AP-42 should not be used for permitting except as a last resort. 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."[87] 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)."[88] As a result, "approximately half of the subject sources will have emission rates greater than the emission factor," meaning that "a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance."[89] 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

[86] *Id.* § 70.6(c)(1); 5 C.C.R. § 1001-5:C.V.C.16.a.

[87] EPA, Introduction to AP-42 8–10 (5th ed. 1995), https://19january2021snapshot.epa.gov/sites/static/files/2020-09/documents/c00s00.pdf; *see also* 2023 East Plant Order (Ex. 61) at 24 ("With respect to emission factors based on AP-42, the Petitioners correctly observe that EPA generally does not recommend using AP-42 emission factors for compliance demonstrations, and EPA has characterized such use as a "last resort.").

[88] EPA, Introduction to AP-42 1–2 (5th ed. 1995) (emphasis added), https://19january2021snapshot.epa.gov/sites/static/files/2020-09/documents/c00s00.pdf.

[89] *Id.* (emphasis added).

> 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.[90]

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.[91] 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."[92] 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."[93] 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."[94] 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."[95] EPA declared: "**Remember, AP-42 emission factors should only be used as a last resort.**"[96]

Despite all of these warnings and caveats, CDPHE continues to provide no justification for concluding that AP-42 factors are adequate to assure compliance at the Suncor refinery.

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[90] *Id.* at 3 (emphasis added).

[91] 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") (Ex. 68), https://www.epa.gov/sites/production/files/2021-01/documents/ap42-enforcementalert.pdf.

[92] *Id.* at 1.

[93] *Id.*

[94] *Id.*

[95] *Id.*

[96] *Id.* (emphasis in original).

1. <u>OBJECTION 1:</u> 2023 East Plant Order Claim 3 - EPA Must Object to the Permit's Reliance on the AP-42 Section 1.4 Emission Factor for Particulate Matter Because EPA Has Already Determined That CDPHE Had Not Justified Reliance on this Factor to Assure Compliance with Applicable Requirements and the Reopened Permit Does Not Resolve EPA's Objection

EPA must object because (1) EPA already objected that CDPHE had not adequately justified its reliance on AP-42 Section 1.4 emission factors for particulate matter emissions, and (2) nothing in the Reopened Permit record resolves EPA's objection.

The emissions units and conditions subject to this objection are set forth in Section IV.A.1.e.

a. Claim 3 of the 2023 East Plant Order Instructed CDPHE to "amend the permit record and/or Permit to ensure that the Permit assures compliance with the relevant PM emission limits on the [relevant units]"

In the 2022 Petition, Petitioners argued that CDPHE should not rely on the Section 1.4 emission factors for particulate matter emissions because (1) the emissions factors in Section 1.4 are for natural-gas fired combustion sources, while the units identified burn refinery fuel gas, and (2) AP-42 itself gives the total PM emission factor a "D" rating.[97] EPA granted Petitioners' request for objection on these bases.[98]

First, EPA agreed with Petitioners that refinery fuel gas may differ significantly from natural gas and, as a result, "emissions of PM (and other pollutants) may vary significantly between natural gas and refinery fuel gas."[99] Specifically, EPA noted PM emissions could vary based on several factors, including "sulfur content in the refinery fuel gas" and "presence of other emission controls on individual combustion units, both of which could contribute to increased condensable PM formation."[100]

Second, EPA rejected CDPHE's justification for concluding that the PM factor was "conservative."[101] EPA noted that while CDPHE claimed that past performance

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[97] 2022 East Plant Petition (Ex. 60) at 38.

[98] 2023 East Plant Order (Ex. 61) at 37, 99.

[99] *Id.* at 37.

[100] *Id.*

[101] *Id.*

tests for Title V permits showed PM emissions below the Section 1.4 factor, (1) CDPHE did not "identify or describe any of the data," and (2) the data was not necessarily relevant because the past performance tests relied on units burning natural gas instead of refinery fuel gas.[102]

Third, EPA noted that the total PM emission factor in AP-42 is rated "D" in large part due to condensable PM emissions, and "condensable PM emissions are most likely to be impacted by any differences between natural gas combustion and refinery fuel gas combustion."[103]

Finally, EPA noted that CDPHE's general justification that it relies on AP-42 factors because of "the infeasibility of conducting stack tests" is not necessarily applicable to the fuel gas combustion devices at issue in the requested objection.[104] Specifically, EPA explained that "[i]t seems likely that stack testing may be possible for at least some of the affected units, and the record contains no explanation for why CDPHE rejected this approach for these units."[105]

Ultimately, EPA ordered CDPHE to "amend the permit record and/or Permit to ensure that the Permit assures compliance with the relevant PM emission limits on the [relevant units]," including instructing CDPHE to "consider whether it is necessary to revise the Permit to include additional stack testing or other means of obtaining a more representative emission factor."[106]

b. Claims 1, 2, and 3 of the 2024 West Plant Order Further Support This Objection

Claim 1 in EPA's 2024 West Plant Order granted a substantively identical objection to CDPHE's reliance on the AP-42 Section 1.4 PM emission factor for units at the West Plant.[107] EPA Ordered CDPHE to "amend the permit record and/or Permit to ensure that the Permit assures compliance with the relevant PM and PM10 emission limits."[108] EPA explained that CDPHE "may be able to accomplish this by further explaining why the AP-42 emission factor for PM in Section 1.4, Table 1.4-2 is sufficiently representative of emissions from the relevant emission units" and "CDPHE should consider whether it is necessary to revise the Permit to

[102] *Id.*

[103] *Id.*

[104] *Id.*

[105] *Id.*

[106] *Id.*

[107] *See* 2024 West Plant Order (Ex. 65) at 11–15.

[108] *Id.* at 14–15.

include additional stack testing or other means of obtaining a more representative emission factor."[109]

In addition to the PM emission factor, the West Plant Order also granted Petitioners' request to object to CDPHE's reliance on AP-42 emission factors for NO_x, VOCs, and CO.

In response to Petitioners' West Plant Claim 2, EPA concluded that:

> In sum: (i) CDPHE has not sufficiently addressed evidence suggesting that NO_x emissions from boilers and heaters at Suncor are likely to exceed the levels predicted by AP-42 Section 1.4 emission factors; (ii) CDPHE provides no further evidence indicating that the AP-42 Section 1.4 emission factors applicable to Heaters H-6 and H-13 are representative of emissions from those or similar units; and (iii) CDPHE's justifications for not imposing stack testing requirements (due to the relatively low emission limits at issue, or feasibility concerns) are incomplete and unconvincing. For these reasons, the record is inadequate for the EPA to determine whether the Permit contains sufficient provisions to assure compliance with the NO_x emission limits on Heaters H-6 and H-13, as reflected in Permit Conditions 11.1 and 14.1. Therefore, the EPA grants the Petition with respect to those permit terms. 40 C.F.R. § 70.8(c)(3)(ii).[110]

Then, in response to West Plant Claim 3, EPA concluded:

> CDPHE's general statements are not responsive to the specific issues raised in public comments regarding VOC and CO emission factors; nor do they otherwise explain why CDPHE considers the AP-42 emission factors sufficient to assure compliance with the relevant VOC and CO limits; nor do they explain why CDPHE rejected requests to impose stack testing for the affected units. CDPHE's RTC is silent regarding the one size-fits-all approach to VOC and CO emission factors.[111]

In sum, the East Plant Order and West Plant Order demonstrate a consistent pattern of CDPHE failing to justify why AP-42 factors it relies on are sufficient to assure compliance with the relevant terms.

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[109] *Id.* at 15.

[110] *Id.* at 20.

[111] *Id.* at 22.

c. CDPHE Has Not Revised the Permit or the Permit Record to Resolve EPA's Claim 3 Objection

In its Response to Comments on the Draft Reopened Permit,[112] CDPHE argues for the first time that it has no obligation to evaluate whether the PM emission factors addressed in Claim 3 are adequate to assure compliance with the underlying PM emission limits.[113] Specifically, CDPHE argues that "[t]he PM emission factors for each of the conditions . . . were not created or modified as part of the 2022 permit renewal action; they were established via the underlying construction permit authority," so CDPHE has no obligation to modify those permits as part of the Title V renewal.[114] CDPHE's argument fails.

As an initial matter, CDPHE cites nothing in the permitting record supporting its assertion that the PM emission factors were established as per its construction permit authority. Indeed, the conditions of the Reopened Permit itself only cite the construction permit as imposing the emission limit, not the emission factor or monitoring requirements.[115]

Regardless, CDPHE's argument is legally wrong. As EPA succinctly explained in its 2024 West Plant Order, "[a]ll title V permits must include testing, monitoring, recordkeeping, and reporting requirements that are sufficient to assure compliance with all applicable requirements and permit terms."[116] This requirement is an independent requirement for Title V permits and is independent from any applicable requirements established in preconstruction permits. The permit conditions at issue here include enforceable annual limits on PM emissions from the relevant units.[117] The conditions also state that "compliance with the annual limitations shall be monitored by calculating monthly emissions using the emission factors . . . from AP-42, Section 1.4 . . . Table[] . . . 1.4-2."[118] In the Reopened Permit, CDPHE is relying on that provision to meet its obligation to include adequate monitoring requirements, so CDPHE was required to evaluate whether AP-42 Section 1.4 PM emission factors were sufficient. It has not done so.

EPA's Order in *In the Matter of Yuhuang Chemical Inc. Methanol Plant*, Order on Petition Nos. VI-2017-5 & VI-2017-13 (April 2, 2018), which CDPHE cites,

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[112] CDPHE attempted to provide additional justifications for the emission factors in the Draft and Final TRDs, *see* Draft Reopened TRD (Ex. 62) at 6–7; Reopened TRD at 6–7, but it expressly abandoned those justifications in its Response to Comments, RTC (Ex. 69) at 21.

[113] RTC (Ex. 69) at 20–21.

[114] *Id.*

[115] Reopened Permit Section II, Conds. 1.1, 2.1.1, 3.1, 5.1.1, 8.1.

[116] 2024 West Plant Order (Ex. 65) at 12 (citing 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1); 5 CCR 1001-5, Part C, V.C.16.a.).

[117] *See id.*

[118] *See id.*

actually demonstrates the error of its position. CDPHE quotes the decision as support for its interpretation that it is not obligated to evaluate PM factors if they were identified in a preconstruction permit, arguing that the Title V process is not the time to address "the propriety of a state permitting authority's decisions undertaken in the course of issuing or modifying a duly issued preconstruction permit."[119] But, that portion of *Yuhuang* was discussing whether a petition to object could challenge a permitting authority's decision whether to impose major Prevention of Significant Deterioration ("PSD") permitting requirements.[120] The very next page of that order contrasts such claims with claims challenging the adequacy of monitoring requirements:

> However, the majority of the individual claims raised by the Petitioners challenge the enforceability of emission limits contained within the Permit, through specific allegations regarding the adequacy of monitoring requirements associated with these limits. Inquiries concerning whether a title V permit contains enforceable permit terms, supported by monitoring sufficient to assure compliance with an applicable requirement or permit term (such as an emission limit established in a minor NSR permit), are properly reviewed during title V permitting. The statutory obligations to ensure that each title V permit contains "enforceable emission limitations and standards" supported by "monitoring . . . requirements to assure compliance with the permit terms and conditions," 42 U.S.C. § 7661c(a) and (c), apply independently from and in addition to the underlying regulations and permit actions that give rise to the emission limits and standards that are included in a title V permit. Therefore, the EPA will address those portions of the August 2017 Petition that challenge the enforceability of emission limits and the sufficiency of monitoring conditions in the Permit.[121]

The analysis applies here.

CDPHE's other citations are equally unhelpful.

First, CDPHE's citations all concern whether the Title V permitting process can be used to challenge substantive requirements in pre-construction permits—not whether monitoring provisions are adequate to assure compliance with those substantive requirements. As explained above, the Title V program incorporates an

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[119] RTC (Ex. 69) at 20.

[120] *See In the Matter of Yuhuang Chemical Inc. Methanol Plant*, Order on Petition Nos. VI-2017-5 & VI-2017-13 at 7 (April 2, 2018) ("*Yuhuang* Order"). It is also worth noting that the quoted interpretation from *Yuhuang* cannot be applied to sources within the Tenth Circuit. *Sierra Club v. U.S. Env't Prot. Agency*, 964 F.3d 882 (10th Cir. 2020) (rejecting same interpretation).

[121] *See Yuhuang* Order at 8.

independent requirement for monitoring that is sufficient to assure compliance with permit limits.[122] EPA explained this distinction in the 2023 East Plant Order:

> it is well established that title V permits may be used to create or supplement monitoring requirements when necessary to assure compliance with underlying applicable requirements that do not themselves contain sufficient monitoring provisions. *Sierra Club v. EPA*, 536 F.3d 673, 680 (D.C. Cir. 2008). In this manner, supplemental monitoring has historically been viewed as the primary exception to the general rule that title V does not establish new requirements. *See, e.g.*, *In the Matter of Cargill, Inc. Blair Facility*, Order on Petition No. VII-2022-9 at 14, 20–22 (February 16, 2023) (*Cargill Blair Order*).[123]

Because CDPHE's citations do not address the Title V monitoring requirement, they have no bearing on this objection.

Second, even if requiring use of a different emission factor could be construed as changing substantive provisions from preconstruction permits, CDPHE's citations do not bar that.

Contrary to CDPHE's characterization, the Tenth Circuit's decision in *Sierra Club v. EPA*, which is binding for permits in Colorado, never stated that Title V permits cannot "second-guess" requirements in a preconstruction permit.[124] In that case, the Tenth Circuit evaluated whether EPA's Hunter Order had properly interpreted "applicable requirements" in 40 C.F.R. § 70.2. The Hunter Order interpreted the term as follows: "Where a final preconstruction permit has been issued, whether it is a major or minor NSR permit, the terms and conditions of that permit should be incorporated as "applicable requirements" and the permitting authority and EPA should limit its review to whether the title V permit has accurately incorporated those terms and conditions."[125] The Tenth Circuit held that "the Hunter Order conflicts with the unambiguous regulatory definition" and vacated it.[126] Instead, the Tenth Circuit concluded that all requirements of the Clean Air Act qualify as "applicable requirements" and can therefore serve as the basis for a Title V petition.[127]

While CDPHE is correct that the Fifth Circuit has concluded that "Title V permitting is not the appropriate vehicle for reexamining the substantive validity of

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[122] *See, e.g.*, 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1).

[123] 2023 East Plant Order (Ex. 61) at 14.

[124] 964 F.3d 882 (10th Cir. 2020). The only discussion of "second-guessing" was the Tenth Circuit's rejection of EPA's arguments that the term "applicable requirements" was ambiguous. *Id.* at 893–94.

[125] *Id.* at 887 (quoting Hunter Order).

[126] *Id.* at 899.

[127] *Id.* at 885–86.

underlying Title I preconstruction permits,"[128] the Fifth Circuit relied on the Hunter Order that was expressly rejected by the Tenth Circuit in *Sierra Club*. As such, even if it might be relevant elsewhere, it is inapplicable to the Title V petition here.

d. Even if CDPHE Had Not Expressly Abandoned the Justification in the Reopened TRD, It Still Would Not Have Resolved EPA's Objection

When it issued a draft reopened permit for public comment, CDPHE's technical review document attempted to respond to the EPA's Objection in Claim 3 by raising three arguments.

First, CDPHE quoted EPA's Emissions Estimation Protocol for Petroleum Refineries as stating "[t]he emission factors in AP-42 are the recommended default emission factors, and AP-42 should be consulted to obtain the appropriate emission factors for criteria pollutants[.]"[129]

Second, CDPHE argued that the AP-42 emission factor of 7.6 lb/MMscf is consistent with the only publicly available PM emission factors in EPA's WebFire and RACT/BACT/LAER Clearinghouse databases. Specifically, CDPHE argued that the emission factors from these sources fall between 7.14 and 8.70 lb/MMscf.[130]

Third, CDPHE argued "additional stack testing is not warranted" because (1) there are no EPA approved methods to test the East Plant Flare, and (2) the remaining units covered by Claim 3 have "relatively small PM limits . . . ranging from 0.07 to 4.99 tpy PM" so "it would be an imprudent allocation of resources to impose stack testing."[131] CDPHE noted that requiring regular stack testing for all units "is not feasible due to the resource intensive nature of such requirements."[132] CDPHE also noted that EPA has not issued an approved method for stack testing a flare.[133]

As noted above, CDPHE has expressly abandoned reliance on the TRD's justification.[134] However, even if it had not, the TRD would not resolve EPA's Objection for the reasons described in Petitioners' comments on the Draft Reopened

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[128] *Env't Integrity Project v. EPA*, 969 F.3d 529 (5th Cir. 2020).

[129] Draft Reopened TRD (Ex. 62) at 6.

[130] *Id.* (summarizing Reopened Permit Record (Ex. 44) at 206–26).

[131] Draft Reopened TRD (Ex. 62) at 7. Note: CDPHE's statement is also wrong on the facts. The PM emission limit in Condition 3.1 is 5.4 tons per year.

[132] *Id.* at 7.

[133] *Id.* at 7.

[134] RTC (Ex. 69) at 21 (describing the Reopened TRD discussion as "not required to support the renewal or reopening permit actions, and is considered to be informational in nature").

Permit,[135] which are largely reproduced in the following subsections for completeness. CDPHE did not respond to these arguments.[136]

i. EPA's Emissions Estimation Protocol for Petroleum Refineries Undermines CDPHE's Position

The EPA Emissions Estimation Protocol for Petroleum Refineries cited by CDPHE undermines CDPHE's position. That Refinery Protocol states that default emission factors are a last resort for calculating emissions from combustion sources at refineries.[137] It further warns that AP-42 factors does not include factors for combusting refinery fuel gas.[138]

Moreover, EPA expressly stated in the 2023 East Plant Order that while the Refinery Protocol used AP-42 factors to estimate emissions from combusting refinery fuel gas, "this may not be appropriate in all contexts, as emissions of PM (and other pollutants) may vary significantly between natural gas and refinery fuel gas combustion."[139] If the Refinery Protocol could support CDPHE's use of the AP-42 PM emission factor, EPA would not have objected.

ii. The Other Emission Factors Cited by CDPHE Do Not Support Continuing to Rely on the PM AP-42 Emission Factor

The emission factors from EPA's databases that CDPHE cites provide no greater support for CDPHE's reliance on the AP-42 factor. CDPHE cites two sets of emission factors, but neither support their argument.

To begin with, the emission factors taken from EPA's Webfire database[140] are irrelevant because they expressly state that they are taken from the AP-42 factors, and they assume that emission factors between natural gas and refinery gas will be the same.[141] The fact that EPA copied information from AP-42 does nothing to support the reliability of the PM AP-42 factors to estimate emissions from Suncor.

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[135] C&CG Comments (Ex. 67) at 38–43.

[136] RTC (Ex. 69) at 20–21.

[137] Emissions Estimation Protocol for Petroleum Refineries, Ver. 3, 4-11 (April 2015) ("Refinery Protocol"), available at https://www.epa.gov/sites/default/files/2020-11/documents/protocol_report_2015.pdf.

[138] *Id.* ("It is important to note that AP-42 does not include emission factors for all fuels (notably refinery fuel gas and coke).").

[139] 2023 East Plant Order (Ex. 61) at 36–37.

[140] Reopened Permit Record (Ex. 44) at 222–26.

[141] *Id.* at 224.

The only new evidence CDPHE cites are emission factors used by the Texas Commission on Environmental Quality for the Lyondell Citgo Refinery.[142] It identifies that the Refinery uses a PM emission factor from fuel gas combusting units of 0.0070 lb/MMBtu.[143] However, these emission factors similarly do not support CDPHE's conclusion that the PM AP-42 factor is adequate to assure compliance at the affected units.

First, there is nothing in the record regarding how the emission factor was actually developed. Is it merely converted from the AP-42 factors? Did the refinery conduct stack tests? What assumptions went into development of the emission factor?

Second, and relatedly, CDPHE does not even attempt to explain why it believes the Lyondell refinery is an adequate analog for the Suncor refinery, and there are good reasons to question the analogy. For one, a condition of the emissions limit and factor at the Lyondell refinery is that the fuel gas must have a H_2S concentration of no more than 0.1 gr/dscf over a 3-hour rolling basis.[144] While the same numeric limitation applies to the units in Claim 3, it is not a condition on using the PM emission factor or meeting the PM limit. Also, Suncor has an extensive history of violating its H_2S limit on fuel gas,[145] so there's no reasonable way to conclude that the AP-42 emission factor could be reliable on that basis.

This sulfur limit is significant both to CDPHE's reliance on the Lyondell refinery and the AP-42 factor's use at all. EPA noted in its order that sulfur content of gases is an important component in PM emissions.[146] But the AP-42 factor does not take sulfur content of the gas burned into account for its PM emission factor.[147] In fact, AP-42 Section 1.4 indicates that for its SO_2 emission estimates, it is assuming that natural gas has a sulfur content of 2000 gr/MMScf,[148] which is 50 times lower than the 0.1 gr/Scf limit for the units at Suncor.

Third, CDPHE ignores contrary PM emission factors identified by Commenters when they reviewed the RACT/BACT/LAER Clearinghouse database. The Lyondell Refinery itself has other examples of units that use a 0.0130

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[142] *Id.* at 206–21.

[143] *Id.* at 206–21.

[144] *See, e.g.*, *id.* at 209–10 (stating the control method for the PM emission limit is limiting the H_2S content of the fuel gas).

[145] *See* Amended Complaint at Ex. B, GreenLatinos v. Suncor Energy (U.S.A.) Inc., No. 24-cv-02164 (D. Colo Oct. 29, 2024), ECF No. 8 (Ex. 59) (summarizing Suncor's H_2S exceedances).

[146] 2023 East Plant Order (Ex. 61) at 37.

[147] *See* EPA, AP-42: Compilation of Air Pollutant Emissions Factors (5th ed.) § 1.4, https://www.epa.gov/sites/default/files/2020-09/documents/1.4_natural_gas_combustion.pdf.

[148] *Id.* § 1.4, tbl. 1.4-2 n.d.

lb/MMBtu PM emission factor.[149] CDPHE does not include these other emission factors in the permit record or explain why they are not applicable. Similarly, the Marathon Garyville Refinery uses a 0.01 lb/MMBtu PM emission factor for a fuel-gas fired unit,[150] but CDPHE does not address that example either.

Finally, EPA rejected this same argument from CDPHE in its West Plant Order:

> This additional information provided by CDPHE could *potentially* support CDPHE's decision to rely on this AP-42 emission factor for purposes of demonstrating compliance, particularly if the underlying data represented actual stack test results from refinery process heaters and boilers that were similar in design to those at Suncor and which combusted refinery fuel gas with similar characteristics as the gas combusted at Suncor. However, as the Petitioners indicate, neither the EPA nor the public can assess whether the data upon which CDPHE relies is representative of emissions from Suncor's combustion units at issue here, since CDPHE did not provide the data in the permit record. From CDPHE's description of the data, it seems unlikely that all of the data would support CDPHE's reliance on this emission factor. For example, it is not clear how information from the RBLC clearinghouse—which generally compiles final decisions about *emission limits* established *prior* to the construction or modification of the emission units at issue—would provide any information reflecting *actual stack test* results from similarly situated boilers or heaters.[151]

In sum, to support its reliance on the low-rated PM emission factor in AP-42, CDPHE (1) cites a single example of a refinery using a similar emission factor, without any explanation for the basis of that factor or attempt to show why the facilities' emissions should be similar, (2) ignores contrary emission factors at the same facility, and (3) ignores contrary examples in the same database. This cannot be sufficient to justify CDPHE's reliance on the AP-42 factor.

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[149] RACT/BACT/LAER Clearinghouse, Comprehensive Report, Lyondell – Citgo Refining, LP, (Abridged) (Ex. 58).

[150] RACT/BACT/LAER Clearinghouse, Process Information Details, Marathon Garyville Refinery Vacuum Tower heaters 210-1403 and 210-1404 (Ex. 57).

[151] 2024 West Plant Order (Ex. 65) at 14.

iii. The Cost of Stack Testing Does Not Justify CDPHE's Continued Reliance on PM AP-42 Emission Factors

CDPHE's concern about the resources required for stack testing cannot justify continuing to use the AP-42 emission factor.[152] CDPHE is required to impose monitoring and reporting requirements that are adequate to assure compliance with the PM emissions limits.[153] The fact that stack testing is more expensive than free AP-42 factors cannot render unreliable emission factors adequate to assure compliance. There is nothing in the Clean Air Act that allows CDPHE to decide that accurate emission calculations are not necessary when CDPHE thinks testing would be resource intensive.

Indeed, EPA rejected a very similar argument from CDPHE in the West Plant Order:

> In rejecting the Petitioners' request for continuous monitoring or regular stack testing, CDPHE also contends that these requirements are "not feasible due to the resource intensive nature of such requirements." RTC at 16. But CDPHE does not provide any reasons for why such a stack testing approach would be infeasible or particularly resource intensive, for example due to technical or engineering considerations for Heaters H-6 and H-13. Thus, the EPA cannot adequately evaluate CDPHE's statement that stack tests on combustion units like boilers or heaters are infeasible or particularly "resource intensive."[154]

The fact that CDPHE considers the PM limits on the sources to be too small to justify stack testing does not change that analysis.[155] EPA similarly rejected that argument in the West Plant Order:

> In general, it may be reasonable for a permitting authority to consider, among other things, the magnitude of emissions and the economic and technical feasibility of different testing and monitoring requirements when determining which compliance assurance requirements to impose in a title V permit. *However, any such considerations must be evaluated in the appropriate context: determining which requirements are necessary to assure compliance with all applicable requirements and*

[152] *See* Reopened TRD (Ex. 02) at 7.

[153] 40 C.F.R. § 70.6(a)(1); *see also* 5 C.C.R. § 1001-5:C.V.C.1

[154] 2024 West Plant Order (Ex. 65) at 20.

[155] *See* Reopened TRD (Ex. 02) at 7.

permit terms. *See* 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1); 5 CCR 1001-5, Part C, V.C.16.a.[156]

Even if costs were a relevant consideration for imposing stack testing, it is the resources of the source, not CDPHE, that would be relevant. Sources conduct and pay for stack testing. Suncor is a multi-national oil company with extensive resources. Last year alone, Suncor made a profit of over $8 billion.[157]

iv. Lack of Formally-Approved Stack Testing Protocols for Flares Does Not Justify CDPHE's Reliance on the AP-42 Section 1.4 Emission Factor for the East Plant Flare

CDPHE's comment that there is no EPA-approved stack testing protocol for flares cannot justify its reliance on the AP-42 factor in Section 1.4. In addition to the other inadequacies listed above, the Section 1.4 AP-42 factor is especially inappropriate for the East Plant Flare because Section 1.4 does not purport to establish emission factors for flares at all—it is limited to boilers and heaters.[158] Meanwhile, though traditional stack testing may not be viable for flares, other source-specific testing methods are available. As described in the 2022 East Plant Petition, "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)."[159]

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

The Reopened 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 sufficient to assure compliance with the terms and conditions of the permit."[160]

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[156] 2024 West Plant Order (Ex. 65) at 18 (emphasis in original); *see also id.* at 17–20.

[157] Suncor Energy, Inc, 2023 Annual Report at 1, https://www.suncor.com/-/media/project/suncor/files/investor-centre/annual-report-2023/2023-annual-report-en.pdf.

[158] *See* EPA, AP-42: Compilation of Air Pollutant Emissions Factors (5th ed.) § 1.4, https://www.epa.gov/sites/default/files/2020-09/documents/1.4_natural_gas_combustion.pdf.

[159] 2022 East Plant Petition (Ex. 60) at 35.

[160] 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."[161]

The conditions of the Revised 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)

Third, the Reopened Permit violates the requirement that CDPHE "issue only a revised permit that satisfies EPA's objection."[162]

f. Petitioners Raised the Issue with Reasonable Specificity in Their 2022 Petition and in Their Comments on the Draft Reopened Permit

Petitioners raised this issue with specificity in its 2022 East Plant Petition,[163] and in timely comments filed on the Draft Reopened Permit.[164]

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For the reasons above, EPA must object to CDPHE's reliance on AP-42 Section 1.4 emission factors for PM. Given the lack of any evidence that CDPHE has performed the required fact-specific analysis for applying emission factors,[165] EPA should order CDPHE to require regular performance tests, as discussed above, for each of these units and conditions to determine accurate emission factors supplemented with parametric monitoring.

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[161] 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.").

[162] 40 C.F.R. § 70.8(d).

[163] 2022 East Plant Petition (Ex. 60) at 35–40.

[164] C&CG Comments (Ex. 67) at 35–43.

[165] *See* 2023 East Plant Order (Ex. 61) at 25.

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

As explained in the 2023 East Plant Order, the 2022 East Plant Permit incorporated for the first time an array of purportedly minor modifications that Suncor has made to the East Plant since the last time that CDPHE revised the permit. EPA granted the 2022 East Plant Petition's request to object to several of these modifications, including, as relevant below, Modifications 1.28 and 1.29. However, CDPHE's Reopened Permit does not resolve these objections because, as explained below, (1) CDPHE still fails to perform modeling or provide any alternative reasonable basis for determining that the Modifications 1.28 and 1.29 will not cause a NAAQS violation, and (2) CDPHE still fails to justify its refusal to aggregate emissions from Modification 1.29 with related modifications to the West Plant Permit.

1. OBJECTION 2: East Plant Order Claim 6 - EPA Must Object to the Reopened Permit Because EPA Has Already Determined That CDPHE Failed to Adequately Assess Whether Modifications 1.29 and 1.28 Would Cause a Violation of National Ambient Air Quality Standards and the Reopened Permit Does Not Resolve EPA's Objection

EPA must object to the Reopened Permit because (1) EPA already objected that CDPHE had not adequately supported its conclusion that Modifications 1.29 and 1.28 would not cause a NAAQS violations, and (2) the Reopened Permit does not resolve that objection.

a. Claim 6 of the 2023 East Plant Order Instructed CDPHE to "reevaluate whether it was correct to conclude that SO_2 emissions from Modification 1.28, [and] NO_x emissions from Modification 1.29 . . . would not cause an exceedance of the relevant NAAQS"

In Claim 6 of the 2022 East Plant Petition, Petitioners argued that CDPHE had improperly failed to perform air dispersion modeling on three modifications: Modifications 1.28, 1.29, and 1.36.[166] In refusing to require modeling, CDPHE had relied on its PS Memo 10-01. That policy established a *per se* rule that no modeling was required for short-term SO_2 and NOx where a modification involved a change in emissions below 40 tpy. However, a 2021 state investigation determined that PS Memo 10-01 was not legally justifiable and CDPHE's reliance on it "failed to ensure

[166] 2022 East Plant Petition (Ex. 60) at 58–64. The Community and Conservation Groups also challenged two other modifications, but EPA denied the petition on those modifications.

minor sources will not exceed the 1-hour NAAQS."[167] Petitioners argued that CDPHE could not reasonably rely on PM Memo 10-01 to justify failing to model the modifications.

EPA agreed and granted Petitioners' Claim 6, in part. Specifically, EPA ordered that:

> CDPHE must reevaluate whether it was correct to conclude that SO_2 emissions from Modification 1.28, NO_x emissions from Modification 1.29, and NO_x emissions from Modification 1.36 would not cause an exceedance of the relevant NAAQS, pursuant to 5 CCR 1001-5, Part B, II.A.6 and III.D.1.c–d, and Part C, III.C.12, IV.A, V.B.1, X.A.1, and X.D.5.d. As explained above, CDPHE has some discretion to determine precisely how to satisfy these regulations. At a minimum, however, CDPHE must ensure that the permit record provides adequate documentation for CDPHE's conclusion that these projects will not cause an exceedance of the NAAQS—more specifically, a justification not based on PS Memo 10-01. If CDPHE cannot justify its decision based on the information currently in the permit record, the state may decide that additional modeling is necessary for each of these modifications. If CDPHE is unable to conclude that these modifications would not cause an exceedance of the relevant NAAQS, CDPHE may need to consider imposing unit-specific limits to reduce emissions affecting the NAAQS. Any such limits which would need to be processed through the appropriate NSR permitting process.[168]

b. Claim 5 of the West Plant Order Provides Further Justification for Granting this Objection

EPA granted a substantively identical objection in its 2024 West Plant Order.[169]

c. CDPHE Continues to Fail to Justify Its Conclusion That Modification 1.29 Will Not Cause a NAAQS Exceedance

As explained in Petitioners' 2022 East Plant Petition,

> Modification 1.29 was intended to bring the Main East Plant Flare into compliance with the December 1, 2015, Refinery Sector Rule revisions

[167] 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).

[168] 2023 East Plant Order (Ex. 61) at 62.

[169] 2024 West Plant Order (Ex. 65) at 29–32.

> 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.[170]

Standing alone, Modification 1.29 increased the Main East Plant Flare's NOx emissions by 2.1 tpy, or 0.47 lb/hour.[171]

Between the Reopened TRD and the Response to Comments, CDPHE provides differing rationales for concluding the Modification 1.29 will not cause a NAAQS exceedance, but neither set of rationales adequately responds to EPA's objection.

i. CDPHE Incorrectly Argues That It Was Not Required to Model Impacts of Modification 1.29 Because the NO_x Increase Is Below Colorado's Current Modeling Guideline Level

In the Reopened TRD, CDPHE argued that it was not required to model the impact of Modification 1.29 on the NAAQS because the increase in NO_x emissions falls below modeling thresholds established in the state's 2023 Modeling Guideline.[172] This argument fails for at least two reasons.

First, to the extent that the state's modeling guidance is relevant, it is the guidance that existed at the time the permitting decision was made.[173] Here, the permitting decision was made when the 2022 renewal permit was issued.[174] The 2022 Modeling Guideline in effect at that point set a threshold of 0.46 lb/hour, which Modification 1.29 exceeded, standing alone. Indeed, EPA relied on that very guidance when it denied the related Claim 2 in the 2022 East Plant Petition, noting that CDPHE had backed up its reliance on the 0.46 lb/hour threshold with technical

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[170] 2022 East Plant Petition (Ex. 60) at 69.

[171] Reopened TRD (Ex. 02) at 10.

[172] Reopened TRD (Ex. 02) at 10.

[173] *See, e.g.,* 40 C.F.R. § 70.6(a)(1) (permits must contain "operational requirements and limitations that assure compliance with all applicable requirements *at the time of permit issuance*.") (emphasis added); *Sierra Club v. U.S. E.P.A.*, 762 F.3d 971, 979 (9th Cir. 2014) (EPA must apply NAAQS compliance requirements in effect at the time of the final permitting decision)..

[174] *See* 2023 East Plant Order (Ex. 61) at 70 (date of a modification is the date of permit issuance).

analysis.[175] CDPHE provides no justification in the Reopened TRD or Response to Comments for now attempting to rely on the 2023 Modeling Guideline.

Second, even if the projected NO_x emission increases from Modification 1.29, standing alone, were below relevant modeling thresholds, Modification 1.29 should have been aggregated with modifications at the West Plant for the reasons described in Claim 8, discussed below.[176]

ii. CDPHE's Argument Concerning Stack Release Parameters Is Too Cursory and Unsupported to Respond to EPA's Objection

In the Reopened TRD, CDPHE also argues that under both the 2022 and 2023 modeling guidelines, CDPHE has discretion to consider other factors in deciding whether to require modeling, including dispersion characteristics.[177] CDPHE argues that "it has evaluated the stack release parameters associated with Modification 1.29 and determined that they are indicative of adequate dispersion characteristics for SO_2 and NO_x."[178] CDPHE's argument is flawed for three reasons.

First, CDPHE misstates what is included in its own guidance. The 2022 Modeling Guideline does not describe circumstances where CDPHE may choose to forgo modeling based on dispersion characteristics. Instead, it describes "[c]ircumstances where modeling may be required despite being below the long-term thresholds" including where sources have "poor dispersion characteristics."[179] The 2023 Modeling Guideline has substantially similar language.[180]

Second, to the extent that the 2022 Modeling Guideline allows a source with emissions above the short-term threshold to avoid modeling, it requires the source to "obtain a written determination from the [modeling unit] that modeling is not required based on the factors set forth in the 'Notes' section of Table 1."[181] CDPHE did not include such a written determination in the permitting record or any other explanation for why this modification is an unusual circumstance.

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[175] 2023 East Plant Order (Ex. 61) at 60.

[176] Petitioners raised this argument in their comments on the Draft Reopened Permit. C&CG Comments (Ex. 67) at 46, 51–77. CDPHE's Response to Comments refers to its Response on Claim 8. RTC (Ex. 69) at 22.

[177] Reopened TRD (Ex. 02) at 10.

[178] Reopened TRD (Ex. 02) at 11.

[179] Colo. Dep't of Pub. Health & Env't, Interim Colorado Air Quality Modeling Guideline for Air Quality Permits at 17 (May 2022) ("2022 Modeling Guideline") (Ex. 70).

[180] Colo. Dep't of Pub. Health & Env't, Colorado Minor NSR Source Modeling Guideline for Air Quality Permits at 12 (May 2023) ("2023 Modeling Guideline").

[181] 2022 Modeling Guideline (Ex. 70) at 15–16.

Petitioners raised this argument in its comments on the Draft Reopened Permit,[182] and in its Response to Comments, CDPHE responded that "the comment does not specify any regulatory or statutory requirement that would require such a written determination."[183] CDPHE's response misses the point. If CDPHE is going to rely on the Modeling Guideline to justify its conclusion that Modification 1.29 will not cause an exceedance of the NAAQS, then it must follow the requirements of that Guideline. Here, it failed to do so.

Third, CDPHE's explanation of dispersion characteristics is wholly inadequate to justify its conclusion that Modification 1.29 will not cause a violation of the NAAQS. CDPHE does not explain what the stack release parameters associated with Modification 1.29 are or why they are indicative of adequate dispersion characteristics. Similarly, CDPHE says nothing about its evaluation of the existing quality of ambient air and why the additional pollutants are unlikely to cause an exceedance of the NAAQS.

In its Response to Comments, CDPHE appears to withdraw this justification, stating that "[a]lthough [CDPHE] does not necessarily agree that the [CDPHE]'s analysis of the stack release parameters is insufficient, [CDPHE] is choosing to address the comment now by evaluating NAAQS for Modification 1.28 based on current ambient monitoring information."[184]

iii. CDPHE's Ambient Air Monitoring Data Does Not Justify Its Conclusion That Modification 1.29 Will Not Cause an Exceedance of the NO_x NAAQS

As noted above, in its Response to Comments, CDPHE changed its rationale for concluding that the NO_x emission increases from Modification 1.29 will not cause a NAAQS exceedance.[185] Specifically, CDPHE argues that current ambient air monitoring efforts in the area around the Suncor refinery "show values that are well below the 1-hr SO_2 and NO_2 NAAQS."[186] It justifies its reliance on air monitoring, instead of modeling, by arguing that "[t]he attainment status of an area for a specific NAAQS is generally determined through ambient monitors, not through modeling."[187] CDPHE's argument does not support its conclusion.

First, CDPHE provides no explanation for why ambient air monitoring data from 2026 is relevant to justify a permitting decision made in 2022. As EPA

[182] C&CG Comments (Ex. 67) at 46–48.

[183] RTC (Ex. 69) at 22.

[184] RTC (Ex. 69) at 22.

[185] *Id.* (incorporating discussion at RTC 8–9).

[186] *Id.* at 8.

[187] *Id.*

explained in its 2023 East Plant Order, the date of the relevant permitting decision here was the date that the 2022 Renewal Permit was issued.[188] CDPHE needed to justify its decision as of that date.

Second, even if current ambient air monitoring were relevant for evaluating a source-specific NAAQS impact decision made in 2022, the ambient air monitoring is not in the record here. CDPHE did not amend the permitting record to include the ambient monitoring data on which it purports to rely, so it cannot serve as the basis for its decision.

Third, CDPHE provides no justification for relying on ambient air monitoring data to evaluate an individual source's potential impact on the NAAQS. EPA is clear that air dispersion modeling is by far the most preferred method for demonstrating that a source will not cause a NAAQS exceedance.[189] CDPHE is correct that air dispersion modeling relies on a source's maximum allowable emissions, not its actual emissions,[190] but that is a feature and not a bug. A primary purpose of air dispersion modeling is to determine the worst-case impact that a source or modification could have on ambient air quality and NAAQS compliance,[191] which allows regulators to determine whether lower enforceable emissions limits are necessary.[192]

While CDPHE is correct that ambient air monitoring is generally used to evaluate an overall area's compliance with the NAAQS,[193] EPA has been clear that it is normally insufficient for source-specific emissions analyses:

> Air quality measurements are routinely used to characterize ambient concentrations of criteria pollutants throughout the nation but are rarely sufficient for characterizing the ambient impacts of individual sources or demonstrating adequacy of emissions limits for an existing source due to limitations in spatial and temporal coverage of ambient monitoring networks.[194]

EPA further reiterates that "air quality monitoring data alone will normally not be acceptable as the sole basis for demonstrating compliance with the NAAQS and PSD increments or for determining emissions limits."[195]

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[188] 2023 East Plant Order (Ex. 61) at 70.

[189] 40 C.F.R. Part 51, App. W § 1.0(b).

[190] RTC (Ex. 69) at 8–9.

[191] *E.g.*, 40 C.F.R. Part 51, App. W §§ 4.2.1(c), 9.2.3(c).

[192] *Id.* § 9.2.1.3.1(a).

[193] RTC (Ex. 69) at 8–9.

[194] 40 C.F.R. Part 51, App. W § 1.0(b).

[195] *Id.* § 9.2.4(a).

Relying solely on air monitoring data to show source compliance with the NAAQS is only appropriate in the "unique circumstances" where an appropriate model is not available or "the performance of the preferred air quality model will be shown to be less than reasonably acceptable when compared with air quality monitoring data measured in the vicinity of an existing source."[196] EPA has set forth a list of factors that "should be considered prior to the acceptance of an analysis of measured air quality data as the sole basis for an air quality demonstration or determining an emissions limit."[197] Those factors are:

> i. Does a monitoring network exist for the pollutants and averaging times of concern in the vicinity of the existing source?
>
> ii. Has the monitoring network been designed to locate points of maximum concentration?
>
> iii. Do the monitoring network and the data reduction and storage procedures meet EPA monitoring and quality assurance requirements?
>
> iv. Do the dataset and the analysis allow impact of the most important individual sources to be identified if more than one source or emission point is involved?
>
> v. Is at least one full year of valid ambient data available?
>
> vi. Can it be demonstrated through the comparison of monitored data with model results that available air quality models and techniques are not applicable?[198]

CDPHE's Response to Comment does not address any of these factors or provide any information in the record to support the factors (in fact, the monitoring data itself is not even included in the record). Therefore, CDPHE cannot rely on air monitoring data to justify its air quality demonstration.

While EPA recognizes that CDPHE has some flexibility in how it makes a determination that a modification will not cause a NAAQS exceedance and that it "may be possible for a permitting authority to use means other than modeling . . . that conclusion must be justified in the supporting record for the permit."[199] Here, CDPHE has provided no such justification.

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[196] *Id.* § 9.2.4(b).

[197] *Id.* § 9.2.4(c).

[198] *Id.* § 9.2.4(c).

[199] 2023 East Plant Order (Ex. 61) at 56.

d. CDPHE Continues to Fail to Justify Its Conclusion That Modification 1.28 Will Not Cause a NAAQS Exceedance

Modification 1.28 added new equipment to allow miscellaneous process vents ("MPVs") to be routed to the Main East Plant Flare. It increased SO_2 emissions from the East Plant Flare by 13.6 tpy,[200] which is more than 3 lbs/hour. This total is well above the short-term modeling threshold in any iteration of CDPHE's Modeling Guideline, but CDPHE continues to refuse to model the increase in emissions or otherwise justify its conclusion that this increase will not cause an exceedance of the SO_2 NAAQS.

i. CDPHE's Ambient Air Monitoring Data Does Not Justify Its Conclusion That Modification 1.28 Will Not Cause an Exceedance of the SO_2 NAAQS

While the Draft Reopened TRD attempted to justify CDPHE's refusal to model Modification 1.28 for NAAQS compliance (or otherwise demonstrate that the increase would not cause a NAAQS exceedance),[201] CDPHE appears to have abandoned that justification in its Response to Comments. There, CDPHE does not respond to any of Petitioners' detailed comments on the Draft Reopened Permit and Reopened TRD.[202] Instead, CDPHE merely incorporates the same argument that current ambient air monitoring is below the NAAQS that is addressed in Section IV.B.1.c.iii, above.[203] This justification fails for the same reasons described in that Section.

ii. CDPHE's Abandoned Justifications in the Reopened TRD Also Cannot Justify Its Conclusion That Modification 1.28 Will Not Cause an Exceedance of the SO_2 NAAQS

Despite CDPHE's apparent abandonment of its justification from the TRD, and its failure to respond to Petitioners' comments, Petitioners include the following refutation of the TRD justification, originally submitted as comments to CDPHE. CDPHE argues in the TRD that Modification 1.28 is legally unreviewable because it has effectively already been eligible for court review.[204] Specifically, CDPHE argues that (1) the modification to the East Plant Flare in Modification 1.28 was part of a project that also involved modifications to flares at the West Plant, (2) the West

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[200] 2022 TRD (Ex. 63) at 82.

[201] *See* Section IV.B.1.d.ii, below.

[202] *See* C&CG Comments (Ex. 67) at 43–51.

[203] RTC (Ex. 69) at 22 (incorporating discussion at RTC 8–9).

[204] *Id.* at 9–10.

Plant modifications have already been incorporated into a revision to that Permit and have already been eligible for court review, and therefore, (3) Modification 1.28 cannot be reopened. CDPHE concludes that because the project as a whole has already been finalized in a permitting action, that applies to the East Plant modifications even though they have not been previously approved.

CDPHE's argument fails for the following reasons.

First, the 2018 West Plant Permit issuance cannot bar review of whether the modification violates the short-term SO_2 NAAQS because an earlier Title V permit cannot bar a validly raised objection to a Title V permit. In *Sierra Club v. EPA*, the Tenth Circuit vacated EPA's denial of a Title V petition, holding that the public may submit petitions to EPA (1) where the petition challenges whether the Title V permit ensures compliance with "applicable requirements," and (2) "applicable requirements" includes "all requirements in the state implementation plan."[205] Specifically, the court concluded that Sierra Club's Title V petition could challenge Utah's failure to require major new source review ("NSR") for a modification at an industrial plant because the new source review requirements were part of the SIP.[206] In reaching that conclusion, the court rejected an argument from Utah and the source that, because the modification at issue had already been incorporated into an earlier Title V permit, Sierra Club was barred.[207]

The *Sierra Club* analysis applies equally here. The Community and Conservation Groups timely raised in their Title V petition that CDPHE had improperly refused to model Modification 1.28 and did not properly support its conclusion that the modification would not cause an exceedance of the short-term SO_2 NAAQS.[208] The requirement that modifications can only be approved when they do not cause a NAAQS exceedance is a requirement of Colorado's SIP and is, therefore, an "applicable requirement."[209] Therefore, any previous permitting action cannot bar review of Modification 1.28.

Second, even if an earlier permitting decision could foreclose review in a Title V petition and subsequent reopening, no permitting decision was made on the modifications to the East Plant Flare when CDPHE finalized the 2018 West Plant Permit. Under Colorado's SIP, a source making a modification must apply for a modification to a construction permit, unless an exception applies.[210] CDPHE can only approve a construction permit if it makes a determination that the

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[205] *Sierra Club*, 964 F.3d at 885.

[206] *Id.* at 885–86.

[207] *Id.* at 887 (explaining permitting history), 898–99 (denying timeliness argument).

[208] 2023 East Plant Order (Ex. 61) at 54–55 ("EPA agrees with the Petitioners that the present title V renewal permit appears to be the first such permit action in which these issues are reviewable.").

[209] *Id.* at 55–56.

[210] 5 C.C.R. § 1001-5:B.II.A.1.

modification will not cause a violation of a National Ambient Air Quality Standard.[211] One exception available is to sources with Title V permits, which may apply for a minor permit modification under certain circumstances.[212] However, CDPHE must still make a determination that the modification will not cause a NAAQS exceedance.[213] The NAAQS determination is made at the time of the permitting decision.[214] The permitting decision on the modification to the East Plant Flare was made at the time the September 1, 2022 East Plant Permit was finalized,[215] not when the 2018 West Plant Permit was issued.

Indeed, Suncor submitted separate modification applications for the East Plant Flare and the West Plant Flares.[216] In issuing the 2018 permit, CDPHE approved the modification application for Plants 1 and 3, but not the East Plant Flare.

Third, and finally, this conclusion is further supported by the fact that the SO_2 increases at the East Plant Flare, alone, fall above the short-term SO_2 modeling threshold in CDPHE's modeling guidance. Modification 1.28 increased emissions at the East Plant Flare alone by 13.62 tons per year, which is over 3 lbs/hour. The short-term modeling threshold for SO_2 in CDPHE's 2022 Interim Modeling Guideline was 0.46 lbs/hour—less than 1/6th of the SO_2 increase at the East Plant Flare. The increase at the East Plant Flare is even 30% higher than the current modeling threshold of 2.28 lbs/hour.[217]

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[211] *Id.* § 1001-5:B.III.D.1.c.

[212] *Id.* § 1001-5:B.II.A.6.

[213] *Id.*

[214] 2023 East Plant Order (Ex. 61) at 65; *see also* Memorandum from Stephen D. Page, EPA, *Applicability of the Federal Prevention of Significant Deterioration Permit Requirements to New and Revised National Ambient Air Quality Standards* (April 1, 2010), *available at* https://www.epa.gov/sites/default/files/2015-07/documents/psdnaaqs.pdf ("EPA generally interprets the CAA and EPA's PSD permitting program regulations to require that each final PSD permit decision reflect consideration of any NAAQS that is in effect at the time the permitting authority issues a final permit. As a general matter, permitting and licensing decisions of regulatory agencies must reflect the law in effect at the time the agency makes a final determination on a pending application."); *Ziffrin, Inc. v. United States,* 318 U.S. 73, 78 (1943); *Sierra Club v. EPA*, 762 F.3d 971, 979 (9th Cir. 2014); *Alabama* v. *EPA,* 557 F.2d 1101, 1110 (5th Cir. 1977); *In re Dominion Energy Brayton Point, LLC,* 12 E.A.D. 490, 614–616 (EAB 2006); *In re Phelps Dodge Corp.,* 10 E.A.D. 460, 478 n. 10 (EAB 2002).

[215] 2023 East Plant Order (Ex. 61) at 71.

[216] *See* Title V Operating Permit 95OPAD108 Minor Modification #36, Refinery Sector Rule Miscellaneous Process Vent Compliance Project 2 (Feb. 10, 2017) ("Minor Mod. 36") (Ex. 66) ("A separate permit modification application will be concurrently filed for Title V Operating Permit 96OPAD120 for proposed changes at Plants 1 and 3.").

[217] Colorado Minor NSR Source Modeling Guideline for Air Quality Permits 12 (May 2023) (Ex. 71).

iii. In Fact, EPA Already Largely Rejected the TRD Rationale in Its Comments on the Draft Reopened Permit

In its comments, EPA found that "CDPHE's technical review document for the Suncor Plant 2 title V reopening does not directly answer the direction in EPA's Order for Claim 5-6 with respect to SO_2 emissions from Modification 1.28."[218] While it recognizes that CDPHE was attempting to rely on the 2018 permitting action from the West Plant, EPA concluded that "it is unclear how CDPHE is relying on the prior permit issuance as a means of resolving the issue identified in EPA's Order."[219] In doing so, EPA noted the following:

- The 2022 East Plant Order found that "the NAAQS assessment requirements related to the MPV project were subject to EPA's review because of the unique aspect of Colorado's title V regulations that attaches certain NAAQS-related requirements to the issuance of a particular type of title V permit," and determined that the "permit record did not sufficiently support the state's conclusion that the MPV project would not cause SO2 violations, and, therefore, directed the state to reevaluate whether its conclusion was correct."[220]

- It's unclear if the Reopened TRD "intended to suggest that in the 2018 action CDPHE employed Colorado's unique permitting procedures to authorize construction for any or all aspects of the MPV project via the Title V permit."[221]

- If the 2018 action was a Title I action for the West Plant, "we do not see any basis to conclude that the *Plant 2* portion of the MPV project went through title I permitting."[222] There was no public notice that it was a Title I action or "or that it would be used to establish requirements or authorize construction for processes at Plant 2."[223] In fact, the record expressly said that the East Plant equipment would be addressed in a separate permitting action.[224]

EPA concluded that it "does not agree with CDPHE's suggestion that the Plant 2 MPV project was subject to 'an official public comment period for this

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[218] EPA 2024 East Plant Comments (Ex. 64) at 5.

[219] *Id.*

[220] *Id.* at 5-6 (citing 2022 East Plant Order (Ex. 61) at 61-62).

[221] *Id.* at 6.

[222] *Id.* 6.

[223] *Id.*

[224] *Id.* at 6–7.

permit revision' (Technical Review Document For Draft Reopening of Operating Permit 95OPAD108, p. 9) and can therefore not be used to satisfy EPA's Order."[225]

e. Requirements Not Met by the Reopened Permit and Permit Conditions Impacted by This Failure

The Reopened Permit does not meet the following requirements:

First, the Reopened Permit violates the requirement that CDPHE cannot approve an operating permit application unless the applicant submits a complete application that includes "[d]ata necessary to allow [CDPHE] to determine whether the source complies with . . . [a]ny applicable ambient air quality standards and all applicable regulations."[226]

Second, the Reopened Permit violates the applicable SIP requirement that CDPHE may only approve a modification if "[t]he proposed source or activity will not cause an exceedance of any National Ambient Air Quality Standards."[227]

Third, the Reopened Permit violates the requirement that CDPHE may only use minor permit modification procedures "for those permit modifications that . . . Do not violate any applicable requirement."[228]

Fourth, the permitting record fails to contain an adequate statement justifying CDPHE's decision to incorporate the modifications without modeling their impact on NAAQS compliance.[229]

Fifth, the Reopened Permit violates the requirement that CDPHE "issue only a revised permit that satisfies EPA's objection."[230]

The conditions of the Reopened 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, 8.11, 18).

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[225] *Id.* at 7 (quoting Draft Reopened TRD (Ex. 62).

[226] 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.

[227] *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.").

[228] 5 C.C.R. § 1001-5:C.X.A.1.

[229] 40 C.F.R. § 70.7(a)(5).

[230] *Id.* § 70.8(d).

f. Petitioners Raised the Issue with Reasonable Specificity in Their 2022 Petition and in Their Comments on the Draft Permit

Petitioners raised this issue with specificity in their 2022 East Plant Petition and their timely Comments on the Draft Reopened Permit.[231]

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For these reasons and the reasons in the 2023 East Plant Order at pages 59 to 62 and the 2024 West Plant Order at 29 to 32, the permitting record does not support CDPHE's conclusion that Modifications 1.28 and 1.29 will not cause a NAAQS exceedance.

2. <u>OBJECTION 3:</u> East Plant Order Claim 8 - EPA Must Object Because CDPHE Still Fails to Justify Disaggregating Substantially Related Projects to Upgrade the Refinery Flares to Satisfy MACT CC Requirements for Control Devices

The Reopened Permit does not apply major new source review to Modification 1.29 despite exceeding the significance threshold when it is correctly aggregated with substantially related modifications, and it does not adequately justify its determination that the projects were not substantially related.

EPA must object because (1) EPA already objected that CDPHE had not adequately justified its decision not to aggregate modifications to several refinery flares; (2) CDPHE explicitly concedes that its reopened permit record does not include any new information or analysis to support its decision not to aggregate; (3) CDPHE's treatment of the various aggregation factors is arbitrary and unreasonable; and (4) a reasonable assessment of the aggregation factors shows that the projects are substantially related.

a. Background to Objection

When determining whether emission increases from a modification are significant for major NSR applicability,[232] CDPHE must evaluate whether the emissions increase should be aggregated with increases from other changes at the facility.[233] Major NSR applies to any "project" at a major stationary source that qualifies as a "major modification" by exceeding the relevant significance

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[231] 2022 East Plant Petition (Ex. 60) at 58–64; C&CG Comments (Ex. 67) at 43–51.

[232] *See* 40 C.F.R. § 52.21(b)(2)(i)

[233] *See* Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Aggregation and Project Netting, 74 Fed. Reg. 2376, 2377 (Jan. 15, 2009) ("2009 Aggregation Policy").

threshold.[234] Because major NSR imposes more stringent emission control requirements, sources have an incentive to characterize related changes as separate projects to avoid exceeding the significance threshold.[235] Therefore, in issuing guidance on aggregation analyses, "EPA's focus . . . has been to ensure that NSR is not circumvented through some artificial separation of activities."[236] To counter this kind of gamesmanship, EPA requires CDPHE to evaluate whether modifications that the source characterizes as separate projects should be treated as one project and their emissions increases aggregated together.[237]

EPA's 2009 Aggregation Policy sets out the factors to be considered in the aggregation decision. The aggregation decision is based on whether the supposedly separate changes are "substantially related."[238] "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."[239] 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."[240] "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."[241]

While CDPHE is required to consider the scope of a project to determine whether major NSR applies, EPA's 2009 Aggregation Policy is not, itself, binding on CDPHE.[242] Instead, as EPA explained in the 2023 East Plant Order,

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[234] *See, e.g.*, 40 C.F.R. § 52.21(a)(2)(iv)(A).

[235] *See* Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR): Aggregation; Reconsideration, 83 Fed. Reg. 57324, 57325–26 (Nov. 15, 2018) ("[A] source could conceivably carve up a higher-emitting project into two or more lower-emitting 'projects' and avoid triggering major NSR requirements. 'Project aggregation,' therefore, ensures that nominally-separate projects occurring at a source are treated as a single project for NSR applicability purposes where it is unreasonable not to consider them a single project.").

[236] *Id.* at 57326; *see also id.* at 57326 n.6 ("It is not permissible to seek to circumvent NSR by securing several minor NSR permits for individual projects with the effect of avoiding major NSR requirements for what is actually a single project.").

[237] *Id.*

[238] 74 Fed. Reg. at 2379.

[239] *Id.* at 2378.

[240] *Id.*

[241] *Id.*

[242] 2023 East Plant Order (Ex. 61) at 75.

> the relevant question is whether the Petitioners demonstrated that "the state's exercise of discretion . . . was unreasonable or arbitrary" or that the state's decision was not based "on reasonable grounds properly supported on the record." *Appleton Order* at 5. CDPHE's failure to consider or provide a rational basis for dismissing a potentially relevant fact could present a basis for EPA's objection to the permit.[243]

Even though EPA's guidance is not binding on CDPHE, it is still appropriate to rely on the factors from the 2009 Aggregation Policy in analyzing CDPHE's reasoning because CDPHE itself purports to rely on that policy and other EPA guidance on aggregation.[244]

Here, Modification 1.29 was part of Suncor's plan to comply with EPA's December 1, 2015 revisions to the Refinery Sector Rule, and specifically the revisions to MACT CC. Among other requirements, the Refinery Sector Rule required that organic hazardous air pollutant ("HAP") emissions from specific regulated sources, including reformer vents, pressure relief devices, and MPVs, be controlled with a flare, or another "control device," such as "absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters."[245] Suncor chose to comply with the MPV requirements by routing the MPV emissions to four flares at the refinery—the East Plant Main Flare, as well as the Plant 3 Flare, GBR Unit Flare, and Plant 1 Flare at the West Plant—instead of one of the other control device options.[246] To install the required connections between the MPVs and the flare headers, Suncor completed the MPV Project, consisting of Modification 1.28 in the East Plant Permit and related modifications to the West Plant Permit.[247] As explained in Section IV.B.2.g. below, Suncor and CDPHE aggregated the MPV Project's emissions increases, which stemmed from the new connections to <u>all</u> the flares.[248]

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[243] *Id.* (quoting *In the Matter of Appleton Coated, LLC*, Order on Petition Nos. V-2013-12 & V-2013-15 at 5 (October 14, 2016) ("*Appleton* Order")).

[244] *See id.* at 74 ("Both the Petition and CDPHE's justification follow EPA's interpretations and policies concerning this topic, which recommend considering whether changes are "substantially related.").

[245] 40 C.F.R. § 63.643(a*)* (MPV requirement); *id.* § 63.641 (defining "control device"); *see* Title V Operating Permit 95OPAD108 Minor Modification #37, Refinery Sector Rule Miscellaneous Process Vent Compliance Project at 17 (July 5, 2017) ("Minor Mod. 37") (Ex. 72) (summarizing rule requirements).

[246] Suncor made a different control device choice for its gasoline loading rack. Instead of upgrading the gasoline loading rack flare to comply with MACT CC control device requirements, Suncor chose to install a vapor combustor. 2022 TRD (Ex. 63) at 114 (explaining that Suncor replaced the Plant 1 rail rack flare with a vapor combustor and shifting all gasoline loading to Plant 1 rail rack to avoid upgrading Plant 2 rail rack flare to comply with MACT CC).

[247] Minor Mod. 36 (Ex. 66).

[248] *See* 2023 East Plant Order (Ex. 61) at 73.

Modification 1.29 was part of the follow-on project, described by Suncor as the RSR Flare Project,[249] for Suncor to upgrade all four above-mentioned flares to comply with MACT CC for control devices. Refinery flares are not, themselves, regulated emission points under MACT CC. Instead, MACT CC only establishes requirements for flares that the refinery chooses to use as control devices for regulated emission points, like MPVs. The December 1, 2015 Refinery Sector Rule established enhanced requirements for flares used as control devices to ensure that they destroy a sufficient percentage of hazardous air pollutants. For example, the Rule requires that regulated flares maintain a minimum heating value for the flare combustion zone.[250] The Rule's requirements would increase emissions at the flares used as control devices because Suncor needed to (i) burn additional supplemental gas to maintain the required combustion zone heat content, and (ii) install additional piping components.

Suncor submitted separate modification applications for the various flare upgrades (together, the "Flare RSR Activities"), and CDPHE initially questioned whether the changes to these four flares should be aggregated together.[251] After some discussion with Suncor, CDPHE acquiesced and agreed that the modifications were separate and were not required to be aggregated.[252] CDPHE's decision was incorrect.

b. Claim 8 of the East Plant Order Determined That CDPHE Failed to Justify Its Decision to Not Aggregate the MACT CC Flare Upgrade Projects

In the East Plant Order, EPA granted Petitioners' request to object to CDPHE's decision not to aggregate the Flare RSR Activities to bring four of Suncor's flares into compliance with MACT CC requirements.[253]

In its Order, EPA analyzed whether CDPHE's refusal to aggregate the modifications was "unreasonable or arbitrary" or was "not based 'on reasonable grounds properly supported on the record.'"[254] EPA rejected the justifications that CDPHE proffered in the 2022 TRD and 2022 Response to Comments. Specifically, EPA

- addressed CDPHE's determination that the modifications were not technically or economically dependent, finding that CDPHE's conclusion

[249] Letter from Wes McNeil, Suncor to Jackie Joyce, CDPHE at 2 (July 5, 2017) (Ex. 54) (referring to upgrades to all flares as the "RSR Flare Project").

[250] 2022 TRD (Ex. 63) at 91; *see also* 40 C.F.R. § 63.670(e).

[251] 2022 TRD (Ex. 63) at 97.

[252] 2022 TRD (Ex. 63) at 98.

[253] 2023 East Plant Order (Ex. 61) at 74–77.

[254] *Id.* at 75 (citing *Appleton* Order at 5).

was undermined by (1) evidence that the flares were physically interconnected, allowing waste gases to be routed between them, and (2) the fact that failure to upgrade one of the flares to comply with MACT CC would have necessitated sending its waste gases to a flare that had been upgraded.[255]

- explained that the appropriate inquiry is whether projects have an "economic *interrelationship*," not whether there is an "economic *benefit*."[256] It also noted that the modifications may provide an "indirect economic benefit" by "collectively providing a means of complying with [MACT CC] requirements and thereby avoiding penalties for noncompliance."[257]

- further noted that "the NESHAP required Suncor to make similar changes to similar units on a similar timeframe," the projects "were initially contemplated together during early stages of Suncor's planning process," and that other MACT CC projects around miscellaneous process vents had been aggregated.[258] Meanwhile, CDPHE failed to explain why it was persuaded by Suncor's explanation that projects were separately funded and why the two types of modifications were treated differently.

In particular, EPA noted that the Petitioners had "appear[ed] to demonstrate a technical interrelationship, interdependence, or interconnection between the flare upgrade projects associated with Modification 1.29."[259] EPA therefore ordered CDPHE to "further explain" its reasoning, explaining that "[t]he most relevant issue to EPA appears to be the potential physical interrelationship, interdependence, or interconnection between the flares that potentially serve the same process stream(s)."[260]

c. Claim 7 in EPA's West Plant Order Further Determined That CDPHE Failed to Justify Its Decision to Not Aggregate the MACT CC Flare Upgrade Projects

The same issue arose in an action concerning the West Plant (Plants 1 & 3 Permit) operating permit renewal, which included minor modifications to three of the four flares at issue.[261] EPA again granted the request to object to CDPHE's

[255] 2023 East Plant Order (Ex. 61) at 75.

[256] *Id.* at 76 (emphasis in original).

[257] *Id.*

[258] *Id.*

[259] *Id.* at 75.

[260] *Id.* at 76–77.

[261] 2024 West Plant Order (Ex. 65) at 36.

decision not to aggregate the modifications.[262] EPA reiterated the East Plant Order's findings of:

(i) "the lack of support for CDPHE's conclusion that changes to the flares at issue are not technically dependent on each other, given that the flares at issue are physically interconnected at least with respect to one waste stream;"

(ii) "the lack of support regarding the absence of economic benefits or interrelationships, given that the upgrades provide an indirect benefit of avoiding noncompliance with revised subpart CC NESHAP requirements;" and

(iii) "the lack of support regarding various other issues associated with the fact that all of the changes were motivated by updates to a NESHAP, including that the changes were initially planned together and involved similar changes to similar units on a similar timeframe."[263]

EPA further noted that, beyond the "common regulatory compliance motivation," "there are various other facts and factors that the EPA previously identified that might . . . establish a substantial relatedness."[264] EPA therefore ordered CDPHE to "further explain its conclusions" and recommended that "the project aggregation analysis be clearly marked as such so it can be easily identified."[265]

d. The Reopened Permit Fails to Resolve EPA's Objection Because CDPHE Concedes That It Has Not Added Any New Analysis or Explanation to the Permitting Record

As an initial matter, CDPHE's analysis is unreasonable and arbitrary, and EPA must object, because CDPHE openly admits that it fails to offer any new information or analysis. Without new information or analysis, CDPHE has not complied with the 2023 East Plant Order.

The 2023 East Plant Order repeatedly finds fault in the permit record because CDPHE's conclusions were either unsupported or unexplained.[266] Ultimately, EPA found that the permit record did not include "a rational basis to support" CDPHE's aggregation decision.[267] EPA therefore ordered CDPHE to

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[262] *Id.* at 37.

[263] *Id.*

[264] *Id.* at 38.

[265] *Id.*

[266] *See, e.g.*, 2023 East Plant Order (Ex. 61) at 76 (CDPHE's factual assertion "not clear from the record;" CDPHE's discussion "not sufficient to support its non-aggregation decision"); *id.* at 75 ("[t]he record does not provide sufficient support for [CDPHE's] conclusion").

[267] *Id.* at 76.

"further explain its conclusions" and engage in "further analysis" to determine whether the projects should have been aggregated.

Instead of supplementing the record, offering additional analysis and explanation, or revising its aggregation conclusion, CDPHE defends its original analysis despite EPA's Order finding deficiencies in that analysis. Neither the TRD nor the RTC included a new, "clearly marked" project aggregation analysis setting forth which factors CDPHE considered and how those factors weighed against each other.[268] Instead, CDPHE explicitly rejects EPA's conclusions, arguing against EPA's Order and directives. For example, CDPHE:

- "disagrees that the technical and economic interdependence of the projects was not sufficiently addressed in the TRD and permit record for the renewed permit."[269]

- asserts that its "original review in the TRD for the 2022 renewal permit was sufficient, independent, and transparent."[270]

- summarizes its findings by concluding that, "[i]n summary, the original TRD for the renewal permit included a sufficient and correct project aggregation analysis for the flare upgrade projects."[271]

- proffers four pages of block quotes from Suncor's modification application and later memo to CDPHE (out of a total of seven pages of reasoning on this claim), but explains that that the block quotes were included "in an effort to help EPA understand that sufficient information was *already in* the existing permit record,"[272]—and CDPHE declares that those sections are "not intended to provide a new or different analysis; it was intended to assist EPA with review of the existing record."[273]

The block quotes are doubly unpersuasive because EPA did, in fact, consider those portions of the record in its original Order. EPA noted the "several submissions from the company," which were referenced in the original TRD and Petition,[274] but nevertheless concluded that CDPHE's "basis for [its] apparent change in position is not sufficiently documented in the permit record, nor is it

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[268] 2024 West Plant Order at 38 (Ex. 65); *see also* EPA 2024 East Plant Comments at 9 (Ex. 64).

[269] RTC (Ex. 69) at 11; *see also id* at 25 (CDPHE "disagrees that the merits of [its] conclusion are not properly addressed in the permit record.").

[270] *Id.* at 10.

[271] *Id.* at 30 (emphasis added).

[272] *Id.* at 11.

[273] *Id.* at 11.

[274] 2023 East Plant Order (Ex. 61) at 76.

otherwise clear that there is rational basis to support that conclusion."[275] Because EPA already considered those documents, simply repasting sections from those submissions does nothing to address EPA's concern about CDPHE's position and the basis for that position.

In summary, CDPHE's explanation is unreasonable and arbitrary as it utterly fails to address, and instead simply dismisses, EPA's East Plant Order. CDPHE does not have authority under the Clean Air Act to contradict EPA's conclusions in the East Plant Order. Both federal and state regulations require that, after an EPA objection, the state "may thereafter issue only a revised permit that satisfies EPA's objection."[276] CDPHE cites no legal authority allowing it to refuse to follow EPA's Objection.

e. CDPHE Does Not Resolve EPA's Objection Because It Arbitrarily Applies Inconsistent Standards

CDPHE's justification for disaggregation is also unsupported because CDPHE purports to apply one standard for determining whether the flare modifications are substantially related, while simultaneously applying a conflicting standard, and thereby ultimately fails to define what criteria it is actually using.

As EPA noted in the 2023 East Plant Order, CDPHE's justification for not aggregating the Flare RSR Activities "follow EPA's interpretations and policies concerning this topic, which recommend considering whether changes are 'substantially related.'"[277] EPA further explained the "substantially related" test a 2018 action that affirmed its 2009 Aggregation Policy.[278] Indeed, throughout the Reopened TRD and Response to Comments, CDPHE repeatedly discusses "substantial relatedness" and cites to EPA's 2009 Aggregation Policy.[279]

Yet CDPHE simultaneously misapplies this test. In addressing the technical and economic relationship between the projects, CDPHE heads its section with "Interdependence,"[280] asserting that it "evaluated the potential dependency of the

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[275] *Id.*

[276] 40 C.F.R. § 70.8(d); 5 C.C.R. § 1001-5:C.VI.H.3; *see also* 40 C.F.R. § 70.7(g)(4) ("The permitting authority shall have 90 days from receipt of an EPA objection to resolve any objection that EPA makes and to terminate, modify, or revoke and reissue the permit in accordance with the Administrator's objection.").

[277] 2023 East Plant Order (Ex. 61) at 74.

[278] 83 Fed. Reg. 57324 (Nov. 15, 2018); 74 Fed. Reg. 2376 (Jan. 15, 2009).

[279] *See, e.g.*, Reopened TRD (Ex. 02) at 25 ("Under EPA's available guidance on aggregation, the Division finds that compliance with MACT CC does not conform with EPA's 'substantially related' test such that these modifications should be aggregated."); RTC (Ex. 69) at 23 (claiming that Suncor's aggregation analysis was based on EPA's 2009 Aggregation Policy); *id.* at 24 (discussing "substantial relatedness").

[280] Reopened TRD (Ex. 02) at 19.

projects,[281] and extensively citing documents from Suncor that similarly rely on the incorrect standard. The lengthy block quote from Suncor's original modification application[282] is based on proposed guidance that was never adopted by EPA—the quote relies heavily on the factors of "technical and economic dependence," and frames EPA's 2009 guidance as asking "whether the proposed projects are technically or economically dependent."[283] Suncor's application concludes that "it is clear that the upgrade of one flare system does not necessitate or depend upon the upgrade of a separate flare system,"[284] and that "there is no economic dependence between the separate scopes to upgrade each affected flare."[285]

But EPA's final guidance expressly rejected a strict "dependence" standard, concluding that that "the proposed definitions for economic and technical dependence/viability were overly prescriptive," and that "the terms 'dependence' and 'viability' . . . should not be adopted as regulatory 'bright lines' regarding whether to aggregate activities."[286] Instead, EPA concluded that the key question is whether projects have a "substantial relationship." [287]

Under EPA's guidance, "[t]o 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."[288] 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."[289] "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

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[281] *Id.*

[282] Reopened TRD (Ex. 02) at 20–21. Notably, CDPHE itself initially rejected that application's reasoning, further undermining the persuasive value of the block quotes. CDPHE explained in detail why multiple factors supported a conclusion of aggregation. Email from Jackie Joyce, CDPHE, to Bernd Haneke, Suncor (Feb. 6, 2018) (Ex. 55). CDPHE has still not identified any specific flaws in its initial rejection or explained "the basis for this apparent change in position." 2023 East Plant Order (Ex. 61) at 76.

[283] Reopened TRD (Ex. 02) at 21 (quoting 2018 Suncor memo); *see id.* at 20 (Suncor modification application quoting EPA's rejected guidance at 71 Fed. Reg. 54235 (Sept. 14, 2006)).

[284] *Id.* at 20.

[285] *Id.* at 21 (emphasis added).

[286] 74 Fed. Reg. at 2,378 (emphasis added).

[287] *Id.* at 2,377.

[288] *Id.* at 2378 (emphasis added).

[289] *Id.* (emphasis added).

improvement project or engineering study) and occur close in time and at components that are functionally interconnected."[290]

EPA thus notes that dependence is a "relevant factor," but explicitly concludes that "projects may also be substantially related where there is not a strict dependence of one on the other."[291]

In response, CDPHE states only that the relevant EPA guidance is not binding, and that the agency "has discretion to evaluate project aggregation issues using other criteria."[292]

But CDPHE does not identify what "other criteria" it is applying to the aggregation analysis. In fact, CDPHE's analysis in both the 2022 TRD and the Reopened TRD draws on the same guidance as Petitioners—EPA's 2009 Action applying the "substantial relatedness" test,[293] which EPA later confirmed and clarified in a 2018 Finalization. In contrast, CDPHE does not apply the five criteria stemming from EPA's pre-2009 letters.[294]

Regardless of which test or criteria CDPHE applies, it must base its decision "on reasonable grounds properly supported on the record," and its "exercise of discretion" cannot be "unreasonable or arbitrary."[295] It is the height of unreasonableness to purport to apply EPA's 2009 Aggregation Policy, but misapply that same guidance. At minimum, CDPHE must identify what "other criteria" it has applied, if it indeed is *not* following EPA's 2009 Aggregation Policy.[296] CDPHE's failure to actually explain what test it is applying and how it is balancing various factors fails to comply with EPA's direction to "include discussion of all facts and

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[290] *Id.*

[291] *Id.* at 2,378 (emphasis added); *see also* Letter from Monica Morales, EPA, to Carissa Money, CDPHE at 3 (July 13, 2022) ("EPA West Plant Comments") (Ex. 49) (addressing CDPHE's aggregation analysis of the flare RSR projects and explaining that "CDPHE's analysis of the projects . . . focuses on the technological and economic dependence aspects of the project, but does not describe the interrelationship and apparent interconnection of these projects," as expected under the "substantially related" test).

[292] RTC (Ex. 69) at 25.

[293] 2022 TRD at 98 (Ex. 63) (discussing elements of the "substantially related" test, including technical and economic independence); Reopened TRD (Ex. 02) at 19 (discussing aspects of "substantially related" test, including technical and economic interdependence); RTC (Ex. 69) at 25, 29 (directly quoting EPA's 2009 guidance); *see* 2023 East Plant Order (Ex. 61) at 74 ("Both the petition and the CDPHE's justification follow EPA's interpretations and policies concerning this topic, which recommend considering whether changes are 'substantially related.'").

[294] *See* RTC (Ex. 69) at 23 (identifying five criteria stemming from the "3M Maplewood Memo"; *see also id.* (failing to apply those five criteria).

[295] *Appleton* Order at 5.

[296] RTC (Ex. 69) at 25.

factors relevant to its assessment and be clearly marked as such so it can be easily identified by the public."[297]

f. CDPHE Does Not Resolve EPA's Objection Because It Fails to Justify Why CDPHE Concluded That the Common Purpose of the Projects Under MACT CC Does Not Support Aggregation

Aa threshold matter, the fact that the MACT CC requirements drove the modifications to all four flares is clearly relevant to the "substantially related" test, yet CDPHE incorrectly interprets EPA guidance and interpretations as excluding that fact. A proper examination of the Flare RSR Activities' common purpose weighs in favor of a finding of aggregation.

i. Contrary to CDPHE's Argument, EPA Guidance and Title V Petition Orders Support Concluding That Regulatory Compliance Obligations Are Relevant to Aggregation

CDPHE states, without citation, that "EPA's current guidance is that any individual emission units might share regulatory requirements is a common fact separate from their technical or economic relationship."[298] But EPA has issued no such guidance. Indeed, CDPHE simultaneously acknowledges that "EPA has not provided guidance on how . . . projects undertaken, at least in part, to pursue regulatory compliance . . . should be considered for aggregation."[299]

Moreover, EPA has, in fact, offered interpretations highlighting the potential relevance of regulatory compliance, which CDPHE ignores.

First, in its Objection, EPA explained that the "fact that the flare changes are all subject to the NESHAP provisions may suggest an interrelatedness between the activities, as compliance with that rule potentially depends on the performance of all the flares."[300] In addition, "the NESHAP required Suncor to make similar changes to similar units on a similar timeframe"[301]—similarities that support aggregation.

Second, in a separate letter to CDPHE concerning these same modifications, EPA explicitly noted that "[t]he fact that all of these projects had a joint purpose—i.e., to bring the facility into compliance with MACT CC—may weigh in favor of a

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[297] EPA 2024 East Plant Comments (Ex. 64) at App'x B p.9.

[298] Reopened TRD (Ex. 02) at 26.

[299] *Id.* at 25.

[300] 2023 East Plant Order (Ex. 61) at 76 (emphasis added).

[301] *Id.*

finding that some or all of the projects are substantially related."[302] CDPHE simply ignores these interpretations from EPA.

Third, EPA's 2007 letter to United Refinery further supports the proposition that projects undertaken to comply with regulatory requirements should be aggregated. In the Reopened TRD, CDPHE cites to EPA's 2007 United Refinery letter regarding the aggregation of multiple projects at the United Refinery in Pennsylvania.[303] But that letter does not support CDPHE's determination, and, in fact, strongly supports Petitioners' argument that a highly relevant factor in the aggregation analysis is the Flare RSR Activities' joint purpose of complying with regulatory standards.

In the letter, EPA opined to the state regulator that all of the modifications made to the refinery to satisfy a new regulation should be aggregated.[304] United Refinery had undertaken activities related to complying with EPA's Tier 2/Gasoline Sulfur Standards.[305] The 2007 letter explained that United Refining "has pursued a number of modifications at its facility related to its ultimate compliance with the Tier 2 standards."[306] EPA also noted that although the "project is composed of many different aspects," the "overall scope of the project was known in 2002."[307] EPA explained that it therefore "strongly believes" that United Refining has commenced a single, on-going project since 2002," and that "[s]plitting up this project into separate plan approvals . . . could be characterized as circumvention."[308]

EPA's conclusion in the 2007 letter is consistent with the substantial relationship standard that CDPHE purports to have applied here.[309] In fact, EPA has stated that the 2007 letter underpins its 2009 guidance.[310]

CDPHE tries to turn this conclusion on its head by cherry-picking one example in the letter where EPA stated projects should be aggregated if one project increases throughput to another unit that the refinery is also modifying.[311] But EPA's letter only said that the evidence of increased throughput means that

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[302] EPA West Plant Comments at 3 (Ex. 49) (emphasis added).

[303] Draft Reopened TRD (Ex. 62) at 24 (citing Letter from David J. Campbell, Chief, Permits and Technical Assessment Branch, EPA Region 3 to Matthew Williams, Pennsylvania Department of Environmental Protection (PDEP) Regarding United Refinery Ultra Low Sulfur Gas Project; Proposed Plan Approval (Feb. 21, 2007) ("United Refinery Letter") (Ex. 50)).

[304] United Refinery Letter (Ex. 50) at 1.

[305] *Id.* at 2.

[306] *Id.* at 1.

[307] *Id.* at 2.

[308] *Id.*

[309] *See* Section IV.B.2.e, above.

[310] EPA West Plant Comments (Ex. 49) at 3.

[311] Draft Reopened TRD (Ex. 62) at 24.

aggregation is appropriate—the letter never stated, let alone implied, that an impact to throughput is necessary to establish substantial relatedness. If anything, that example further supports aggregation of the Flare RSR Activities. The example concerned a modification that "may not be directly related to United Refining's plans to comply with the [new regulation]," yet even then, EPA concluded that the modification should be considered part of the overall project because it was affected by the related compliance-based modifications.[312]

Here, as there, the "overall scope of the project was known" at a single point in time, early in the project development.[313] And the issue here is even more clearcut than in the United Refinery letter. Suncor has pursued all four flare projects "related to its ultimate compliance with" EPA's standards, so CDPHE need not consider the substantial relatedness of a project that "may not be directly related to [the refinery's] plans to comply with the" requirements.[314]

CDPHE's cited authority thus does not provide a reasoned basis for disaggregating the flare projects, and in fact, supports aggregation. CDPHE's reliance on the United Refinery letter is also unreasonable and arbitrary because the agency did not respond to Petitioners' specific comments on the applicability of the United Refinery letter.

ii. The Flare RSR Activities' Shared Purpose, Joint Planning, and Timing All Weigh in Favor of Aggregation

If CDPHE had attempted to meaningfully discuss MACT CC, it would have had a very difficult time refusing to aggregate.

As explained in Section IV.B.2.a, above, Suncor's primary obligation under the 2015 revisions to MACT CC was to control HAP emissions from regulated sources, including pressure relief devices, reformer vents, and MPVs, by routing them through one or more control devices.[315] Suncor *chose* to satisfy this obligation by routing the regulated emissions through flares instead of using other control devices. It further chose to use four of its flares to meet that obligation, instead of routing the regulated emissions through a smaller number of flares. By choosing to use these four flares as its control devices, that triggered an obligation to upgrade

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[312] United Refinery Letter (Ex. 50) at 2.

[313] *Id.*; *see also* Letter from Bernd Haneke, Suncor, to Jackie Joyce, CDPHE at 1 (June 12, 2018) (Ex. 46) (describing complete scope of flare upgrade activities and describing Suncor's planning process as evolving from initially considering six flares and one vapor combustor unit to removing "from the project scope" two flares and the vapor combustor unit).

[314] United Refinery Letter (Ex. 50) at 1–2.

[315] *See* Minor Mod. 37 (Ex. 72) at 2-1.

the four flares to meet the MACT CC requirements for flares used as control devices.[316]

CDPHE ignores this regulatory structure and incorrectly states that "the flares in question could be subject to separate MACT CC regulations; e.g., a separate MACT for main refinery flares and a separate MACT for refinery loading rack flares."[317] In fact, these requirements apply equally to any "flare used as a control device," regardless of whether the flare is a main flare or a refinery loading rack flare.[318]

CDPHE also asserts that considering the joint purpose of compliance with MACT CC would be "akin to the timing-based presumption that EPA declined to adopt in the 2009" guidance."[319] But this is a false comparison. Unlike a "timing alone" presumption, here, the fact that the project served a common purpose—complying with MACT CC—is combined with the fact that the project was implemented over a short time period. Other projects conducted at Suncor over the same time period that were unrelated to the MACT CC requirements may not be aggregated based on "timing alone," but the Flare RSR Activities stand in contrast because they served a joint purpose and were close in timing. Further, EPA has stated that timing is a relevant indicator, and EPA has never suggested that the timing indicator should be entirely dismissed solely due to the fact that a source is attempting to comply with regulatory requirements.[320]

In addition, there is evidence that the Flare RSR Activities were "jointly planned." All of the Flare RSR Activities were designed to comply with the same revisions to MACT CC. The MACT CC requirements and Suncor's resulting activities must be viewed in context. The MACT CC rule did not mandate changes to these four flares. Instead, it mandated the use of control devices meeting specific standards in order to reduce HAPs. That is why Suncor's planning for its project "initially considered six flares and one vapor combustor"—because the project entailed ensuring proper control of hazardous emissions as required by MACT CC.[321] That planning process then evolved, when "two flares and one vapor combustor were removed from the project scope," again indicating a single planning process for all of the flare upgrade activities.[322] Indeed, Suncor's application for Modification 1.29 indicated that it had created an "RSR Flare Project," which it

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[316] 40 C.F.R. §§ 63.640, 63.670, 63.671.

[317] Reopened TRD (Ex. 02) at 26.

[318] 40 C.F.R. § 63.670.

[319] Reopened TRD (Ex. 02) at 26.

[320] 74 Fed. Reg. at 2,380 ("[T]iming may be one . . . indicator of whether a technical or economic relationship exists.")

[321] Letter from Bernd Haneke, Suncor, to Jackie Joyce, CDPHE at 1 (June 12, 2018) (Ex. 46).

[322] *Id.*

identified as a capital project, to coordinate updates to all of the flares.[323] 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[324]—Suncor's representations make clear that the projects were all being planned together. Indeed, the initial approval for expenditure ("AFE") for the East Plant Flare upgrade named the project: "P1,2,3 Units RSR Rule Flare."[325] Therefore, the Flare RSR Activities were planned jointly. In fact, CDPHE initially concluded that this factor weighed in favor of aggregation, and no new evidence has been offered to show that the planning process for these activities proceeded separately.[326]

Thus, considered together, the Flare RSR Activities' joint purpose, joint planning, as well as the Activities' timing, weigh in favor of a finding of aggregation. Specifically, EPA has already explained that Flare RSR Activities' joint purpose "may weigh in favor of a finding that" that the projects are substantially related.[327] And the Activities occurred very close in time: Suncor filed the applications for all the flare updates within a few months of each other—a factor that CDPHE initially cited in favor of aggregation, and which has not been refuted by other evidence.[328]

g. CDPHE Does Not Resolve EPA's Objection Because It Fails to Justify the Disparate Treatment of Modification 1.28 and Modification 1.29

In the East Plant Order, EPA faulted CDPHE for failing to explain the "disparate treatment of the potentially similar changes at issue in Modification 1.29 (the subject of this claim) and Modification 1.28 (which were similarly motivated by the subpart CC NESHAP revisions, and which were aggregated as a single project)."[329]

In its Draft Reopened TRD, CDPHE yet again did not even attempt to explain why it aggregated one set of MACT-CC-required modifications (the "MPV RSR Activities" or "Modification 1.28") but not the other (the Flare RSR Activities). CDPHE instead asserted that the changes at issue in Modification 1.28 "were

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[323] Minor Mod. 37 at 2 (Ex. 72).

[324] Letter from Bernd Haneke, Suncor, to Jackie Joyce, CDPHE at 3 Tbl. 2 (June 12, 2018) (Ex. 46).

[325] *Id.* at 2.

[326] Email from Jackie Joyce, CDPHE, to Bernd Haneke, Suncor at 2 (Feb. 6, 2018) (Ex. 55) ("[T]he source's plans indicate that the RSR flare projects are actually a single project.").

[327] EPA West Plant Comments at 3 (Ex. 49) (emphasis added).

[328] Email from Jackie Joyce, CDPHE, to Bernd Haneke, Suncor (Feb. 6, 2018) (Ex. 55).

[329] 2023 East Plant Order (Ex. 61) at 76.

aggregated as a single project," but that evaluation was a "separate, fact-specific analysis."[330]

This argument (which CDPHE abandoned in its Response to Comments, as discussed below, yet "still stands by"[331]) is unpersuasive. Simply stating that the Modification 1.28 analysis was "separate" and "fact-specific," without identifying what facts distinguish the two decisions, fails to "explain the state's disparate treatment" of the similar changes at issue in Modification 1.29 and Modification 1.28.[332] The MACT CC revisions included requirements for flares used as control devices as well as new requirements on miscellaneous process vents at refinery flares. Suncor undertook projects to address all of these requirements and submitted a lengthy explanation as to why the MPV projects should not be aggregated with the flare upgrade projects.[333] For the MPV upgrades, CDPHE approved a single, aggregated project, the MPV RSR Activities, designated as Modification 1.28 in the East Plant Permit. Like Modification 1.29, the MPV RSR Activities (i) involved all four flares at issue; (ii) were designed to comply with the December 2015 updates to MACT CC, and (iii) were jointly planned.[334] CDPHE is thus wrong to assert that there is no specific information to explain why the approach to Modification 1.28 should or should not apply to Modification 1.29[335]— the approach for Modification 1.28 should apply to Modification 1.29 because of their apparent similarities. CDPHE has still not offered any distinguishing factors to justify why Modification 1.29 is treated as a separate project from the related flare upgrades when the similar Modification 1.28 MPV upgrades were aggregated as a single project.[336]

Now, first the first time, CDPHE abandons its "fact-specific" argument and instead asserts in its Response to Comments and final Reopened TRD that it never actually determined that the MPV RSR Activities should be aggregated. CDPHE claims that the Draft Reopened TRD "is in error" and CDPHE "did not make any project aggregation determinations with respect to the MPV projects," because such a determination was unnecessary.[337] CDPHE's backpedaling arises for the first time after issuance of the 2021 draft TRD, the 2022 TRD, the 2022 Response to Comments, and the more recent Draft Reopened TRD. In light of the multiple

[330] Draft Reopened TRD (Ex. 62) at 25.

[331] RTC (Ex. 69) at 26.

[332] 2023 East Plant Order (Ex. 61) at 76.

[333] *See* Minor Mod. 37 (Ex. 72) at 4-4 to 4-7.

[334] *See* 2022 East Plant Petition (Ex. 60) at 70.

[335] Draft Reopened TRD (Ex. 62) at 25.

[336] *See* 2023 East Plant Order (Ex. 61) at 76 (CDPHE "does not explain the state's disparate treatment of the potentially similar changes at issue in Modification 1.29 . . . and Modification 1.28").

[337] RTC (Ex. 69) at 27.

opportunities CDPHE has had to address the MPV RSR Activities issue, CDPHE cannot now rely on this late-breaking position.

In any event, Suncor itself treated the aggregation decisions in these two modifications differently, and CDPHE has provided no explanation as to why this disparate treatment does not implicate the gamesmanship that EPA has sought to avoid. Suncor treated the MSV RSR Activities as substantially related in its modification application, and therefore aggregated the changes: "Emissions as a result of the RSR MPV Compliance Project are considered in a single, aggregate analysis for both Title V Operating Permits even though separate permit applications are being filed."[338] But Suncor treated the near-identical circumstances of the flare projects as unrelated, and CDPHE—despite initial misgivings—acquiesced.[339] Suncor's own assessment of project interrelation in its project applications must not be dismissed, as the refinery does not typically submit aggregated analyses for otherwise unrelated projects. As an example, Suncor has submitted two minor modification applications on the same date.[340] When combined, those projects' emissions together fall well below the significance thresholds.[341] Yet the modification applications were submitted separately, and approved separately, without any aggregation analysis, because the projects were unrelated. In contrast, the MPV RSR Activities were submitted jointly and approved jointly with an aggregate analysis. It is unreasonable for CDPHE to attach no importance to the fact that Suncor itself treated the MPV RSR Activities as a single, cohesive project for planning, funding, and permitting purposes; then, it treated the Flare RSR Activities as a single, cohesive project for planning, and (initially) funding (only later backtracking), yet split apart projects for permitting purposes. The attempt to avoid emissions controls via an "artificial separation of activities" here could not be clearer.[342]

Finally, CDPHE's newfound explanation only further underscores the point that aggregation is warranted for the flare upgrade projects. The only reason,

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[338] Minor Mod. 36 (Ex. 66) at 2-3 (emphasis added).

[339] *See* 2023 East Plant Order (Ex. 61) at 76 ("Overall, the permit record indicates that CDPHE initially approached this project aggregation issue with a healthy degree of skepticism, raising various concerns that now form the basis of this Petition claim. CDPHE then engaged in a deliberate back-and-forth with Suncor to obtain more information. Based on several submissions from the company, CDPHE was eventually convinced to abandon its concerns and conclude that the projects were not substantially related. However, the basis for this apparent change in position is not sufficiently documented in the permit record, nor is it otherwise clear that there is a rational basis to support that conclusion.")

[340] Title V Operating Permit 95OPAD108 Minor Modification No. 13, East Plant Security Center Emergency Generator (May 13, 2010) ("Minor Mod. 13") (Ex. 47); Title V Operating Permit 95OPAD108 Minor Modification No. 12, East Plant Crude Furnace Permit Modification (May 13, 2010) ("Minor Mod. 12") (Ex. 48).

[341] *See* Minor Mod. 13 (Ex. 47) at 2; Minor Mod. 12 (Ex. 48) at 6.

[342] 83 Fed. Reg. at 57,326.

CDPHE asserts, that an aggregation analysis was unnecessary for the MPV RSR Activities was that "the emission increases from the individual projects, if summed together, were below the significance threshold."[343] CDPHE has thus confirmed that the *only* distinguishing factor between the MPV RSR Activities and the Flare RSR Activities is that the flare upgrade projects, when aggregated, surpass the major source threshold, while the MPV RSR Activities do not. This type of gamesmanship is precisely what the aggregation analysis process is meant to prevent: "EPA's focus . . . has been to ensure that NSR is not circumvented through some artificial separation of activities."[344]

The permitting history with respect to Modification 1.28 therefore supports aggregation of the Flare RSR Activities.

h. CDPHE Does Not Resolve EPA's Objection Because It Fails to Justify Why the Physical Interconnections and Practical Relationships Between the Flares and Flare RSR Activities Do Not Support Aggregation

In its Order, EPA explained that Petitioners had "appear[ed] to demonstrate a technical interrelationship, interdependence, or interconnection between the flare upgrade projects associated with Modification 1.29."[345] EPA further explained that the "most relevant issue" is the "potential physical interrelationship, interdependence, or interconnection between the flares that potentially serve the same process stream(s)."[346]

The Reopened Permit does not resolve this objection. CDPHE commits numerous errors in its justification for finding a lack of technical interrelation: the agency dismisses evidence that there are physical connections between the flares at issue; fails to address the fact that the various Flare RSR Activities were jointly dependent on each other; inappropriately claims that it cannot address so-called 'hypothetical' scenarios, despite EPA's clear instructions; and relies on justifications from Suncor, which conflict with EPA's guidance and which EPA has already considered and rejected as sufficient justification in the 2023 East Plant Order. Each error is addressed in turn below.

[343] RTC (Ex. 69) at 27.

[344] 83 Fed. Reg. at 57,326.

[345] 2023 East Plant Order (Ex. 61) at 75.

[346] *Id.* at 76–77.

i. The Flares at Issue Are Both Physically and Practically Connected

CDPHE has still not adequately addressed the physical and practical interconnections between the flares and the Flare RSR Activities.

As the East Plant Order explained, there are physical connections between the flares at issue.[347] A shared hydrogen waste stream can be routed to either the East Plant or West Plant's flare(s).[348] Specifically, "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."[349]

CDPHE dismisses the shared waste stream, stating that it is not "created or altered by the flare RSR projects."[350] But the relevant question for aggregation is not whether the project was designed to create new interconnections between the flares: it is whether there is an "apparent interconnection . . . between the physical and/or operational changes," creating a "substantial relationship."[351] There is evidently an "apparent connection," as the flares share a waste stream. And as Petitioners have argued, if Suncor had chosen not to modify one of the flares, it likely would have been forced to route the gases to another flare.[352]

CDPHE next asserts that these shared waste streams do not demonstrate technical dependence because "the choice to route the stream to one flare vs the other is optional."[353] CDPHE argues that the fact the routing pathway is optional means that the proper operation of each flare is independent of where the excess hydrogen stream is routed to.[354]

As explained above, CDPHE has applied the wrong standard: the issue is not technical dependence, but rather interconnection.[355] In any event, the optional routing pathway demonstrates that the flares <u>are</u> dependent on one another. The

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[347] *Id.* at 76.

[348] *Id.*

[349] *Id.* at 73.

[350] Reopened TRD (Ex. 02) at 24.

[351] 74 Fed. Reg. at 2,378.

[352] 2023 East Plant Order (Ex. 61) at 75; *see also* Sections IV.B.2.h.ii and IV.B.2.h.iii, below.

[353] RTC (Ex. 69) at 25. Note again that CDPHE here applies the incorrect standard, which is "substantial relationship"—a relationship that can occur even "where there is not a strict dependence of one of the other." 74 Fed. Reg. at 2,377, 2,378; *see also* EPA West Plant Comments (Ex. 49) at 3 (addressing CDPHE's aggregation analysis of the flare upgrade projects and explaining that "CDPHE's analysis of the projects . . . focuses on the technological and economic dependence aspects of the project, but does not describe the interrelationship and apparent interconnection of these projects," as expected under the "substantially related" test).

[354] RTC (Ex. 69) at 26.

[355] *See* Section IV.B.2.e, above.

routing pathways allow Suncor to divert a waste stream to a different flare in the event that the first flare cannot accept that waste stream. In other words, the flares operate as backup devices to each other.[356] Therefore, contrary to CDPHE's arguments, the fact that rerouting waste streams is optional does not diminish the fact that the flares are both interconnected and dependent on one another. CDPHE has not responded to the fact that the flares act as backup devices to one another.

In addition to the hydrogen waste stream, other emission units may also be routed to different flares at different times: CDPHE has refused to offer a detailed explanation of which emission units are routed to which flare, explaining in a separate proceeding that "[i]t is difficult to give a precise list of emission units and conditions for flare venting because many of the emission units which are controlled by plant flares (e.g., tanks) may be vented or routed depending on operational conditions."[357] In addition, the West Plant Permit adopts a single Compliance Assurance Monitoring plan for the Plant 3 Flare and GBR Unit Flare, indicating that "[v]apors from multiple process vents, pressure relief devices and other tie-ins are routed to both the Plant 3 and GBR flares."[358] CDPHE has not addressed these additional physical interconnections.

ii. The Flare RSR Activities' Outcome as a Whole Depended on the Implementation of Each Individual Activity, Demonstrating Technical Interrelationship

The relationship between the flares is further underscored when considered in light of Suncor's planning process for the Flare RSR Activities, which necessarily examined each of the Activities <u>together</u>, not individually. As noted, Suncor relies on the flares as control devices to limit emissions from its various units, and 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.[359] Suncor had several choices to address the rule revisions: Suncor could shift waste gases from one flare to another, install different control devices that comply with MACT CC, or update each of its flares to comply with those standards. Suncor took all three routes. It shifted gasoline loading away from the East Plant railcar

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[356] *See* Letter from Jackie Joyce, CDPHE, to Bernd Haneke, Suncor (July 24, 2018) (Ex. 56) ("[T]he Division believes there is overlap in the Plant 1 flare and the GBR flare, since both flares receive or may receive streams from the Plant 1 reformer and hydrogen plant and there is also overlap in the Plant 2 and GBR flare since both flares receive or may receive streams from the Plant 2 reformer. As an example of flare overlap, in the Title V semi-annual report for the Plants 1 and 3 permit received on March 1, 2018, Suncor notes that deviations for both the Plant 1 and GBR flare were due to the shutdown of the No. 4 HDS (excess H2 was sent to the GBR flare).").

[357] Colo. Dep't of Pub. Health & Env't, Response to Earthjustice Comments on Draft Renewal Operating at 61 (May 24, 2022) ("West Plant RTC") (Ex. 53).

[358] West Plant Draft Renewal Permit, 96OPAD120, App'x N at 8 (May 24, 2024) (Ex. 52).

[359] *See* 40 C.F.R. § 63.640(c).

rack to avoid MACT CC applicability to the East Plant Railcar Dock Flare; it replaced another rail rack flare with a thermal oxidizer; and it upgraded the Plant 1, East Plant Main Flare, Plant 3, and GBR flares.[360]

The planning process therefore needed to consider all four flares jointly as one project. This conclusion is supported by the record, which shows that Suncor, in a project it named the "P1, 2, 3 Units RSR Rule Flare" project, "initially considered six flares and one vapor combustor," but ultimately "removed from the project scope" two flares and the vapor combustor (leaving behind a "project scope" of four flares).[361] In other words, Suncor had various options to comply with MACT CC, and it chose this option—upgrading four flares—in a single decision to address the single underlying purpose of controlling HAPs from MPVs. Suncor's planning process necessarily encompassed these activities as a whole in order to assure compliance with MACT CC, and these facts support a finding that the Flare RSR Activities are technically interrelated.

In its planning process, had Suncor chosen not to upgrade any of the remaining flares, it could have instead complied by routing the regulated waste gases to the other flares, thereby increasing the emissions of those flares. In fact, Suncor is now attempting to do just that. On October 29, 2024, Suncor submitted a construction permit application for the "Plant 1 Flare Reroute Project," which would "decommission the Plant 1 Flare, including connecting the existing Plant 1 Flare relief header and flare gas recovery system (FGRS) to the GBR Flare header, and rerouting the existing waste gases from the Plant 1 refinery process unit (RPU) emissions units to the GBR Flare for destruction."[362] CDPHE's theory of aggregation produces absurd results where the relative timing of the flare reroute project is the determining factor on whether the earlier project (the MACT CC modifications) should have been subject to major NSR requirements—if the reroute had occurred before the Flare RSR Activities, then a subsequent upgrade of the GBR Flare to comply with MACT CC would have resulted in proportionally larger emissions and could have triggered major NSR.

Instead, the MACT CC modifications increased emissions at Flare 1 and the GBR Flare before the Reroute Project. CDPHE, by deciding not to aggregate the Flare RSR Activities, treated those emission increases as separate and unrelated. Now, though, those emissions will be combined, but Suncor insists that for the new reroute project, those emissions should still be considered separate and unrelated.[363] Suncor asserts that "the GBR Flare must not be viewed as a standalone emissions unit for the purposes of determining the applicability of NSR

[360] Letter from Bernd Haneke, Suncor, to Jackie Joyce, CDPHE (June 12, 2018) (Ex. 46).

[361] *Id.*

[362] Construction Permit Application, Plant 1 Flare Reroute Project 1 (Oct. 29, 2024) (Ex. 51).

[363] *Id.* at 6-5 ("[G]ases combusted to support the operation of the flare are considered separately.").

and PSD."[364] Instead, Suncor's application looks at each waste stream separately—including the waste stream that currently goes to Flare 1, the waste stream that currently goes to the GBR Flare, and the excess hydrogen waste stream that variably goes to different flares.[365] Suncor cannot have it both ways. If the proper emissions unit for consideration is each waste stream, then the Flare RSR Activities' applications should have looked at emission increases attributable to each waste stream, and the aggregation analysis should have considered whether the increases attributable to each emission stream were "substantially related."

Viewed through the lens of the waste streams as emission units, the interconnection between the Flare RSR Activities becomes even clearer. Each waste stream's emissions increases are caused by changes to the four flares precipitated by MACT CC, but several of the waste streams' increases were not caused by changes to any single flare. The emissions increase to the hydrogen waste stream, for example, was caused by the changes to the GBR Flare, the Plant 1 Flare, and the East Plant Flare, because that stream "can be routed to the GBR flare, in lieu or [sic] either the Plant 1 or Plant 2 flares."[366] Similarly, the emissions increase for the waste stream consisting of "[v]apors from multiple process vents, pressure relief devices and other tie-ins" that "are routed to both the Plant 3 and GBR flares" are linked to both the Plant 3 and the GBR flare upgrades.[367] Further overlaps may exist, as "[i]t is difficult to give a precise list of emission units and conditions for flare venting because many of the emission units which are controlled by plant flares (e.g., tanks) may be vented or routed depending on operational conditions."[368] The emission increases from several distinct waste streams are thus attributable to not just one, but multiple, flares: and, therefore, to multiple flare projects.

Put another way, because a single waste stream is shared between more than one flare, Suncor needed to upgrade multiple flares in order to achieve the singular purpose of controlling HAP emissions from the waste stream. And the record indicates that there are multiple waste streams that are shared in this manner, leading to even greater interconnectedness. This factor therefore weighs heavily in favor of technological and practical interrelatedness. In its RTC, CDPHE simply ignored the relevance of the waste streams and of Suncor's representations as part of its Plant 1 Flare Reroute Project. CDPHE did not respond to Petitioners' comments regarding the relevance of Suncor's approach to waste streams, rather than individual flares, as emission units.

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[364] *Id.*

[365] *Id.* at 6-6.

[366] Colo. Dep't of Pub. Health & Env't, Response to Comments submitted on behalf of the Conservation & Community Groups at 70 (Feb. 8, 2022) (Ex. 18).

[367] West Plant Draft Renewal Permit, 96OPAD120, App'x N (Ex. 52) at 8.

[368] West Plant RTC (Ex. 53) at 6.

iii. The Record Demonstrates That the Flare RSR Activities' Benefits Would Be Significantly Diminished Had Some of the Activities Not Proceeded, Warranting Aggregation, and CDPHE's Dismissal of This Point as a "Hypothetical Scenario" Is Unjustified and Directly Conflicts with EPA Guidance

Further, CDPHE asks the wrong question by focusing exclusively on whether the flares operate independently, and ignoring whether the projects operate independently. As CDPHE quotes from EPA, "[t]he terms 'technically dependent' and 'technical dependence' describe the interrelationship between projects such that one project is incapable of performing as planned in the absence of the other project.'"[369] Here, again, the relevance of the project's purpose—to comply with MACT CC—is key. The hydrogen waste stream could likely could not have been optionally routed to either flare (without violating MACT CC) unless both flares were upgraded. [370] Thus, had one project proceeded in the absence of the other, Suncor's ability to route the hydrogen stream to its preferred flare at a given time could have been eliminated (lest it violate MACT CC), thereby limiting the utility of project. In other words, had one project proceeded alone, without the other projects, the utility of the flares to act as backup devices to each other would have been severely diminished.[371] Upgrading the East Plant Flare's "benefit is significantly reduced without the other activity" of upgrading or otherwise addressing the HAP waste streams and control devices.[372]

CDPHE attempts to dodge this point, arguing that it is "not clear how to decide which hypothetical scenarios warrant evaluation."[373] But it is perfectly clear that this situation warrants evaluation, because EPA has already established that this example "appears to demonstrate a technical interrelationship, interdependence, or interconnection," warranting consideration by CDPHE.[374]

CDPHE also asserts—in defiance of EPA's East Plant Order—that it is "improper to evaluate hypothetical equipment configurations," citing to EPA's 2006

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[369] RTC (Ex. 69) at 25 (quoting 71 Fed. Reg. at 54245) (emphasis added).

[370] EPA has already acknowledged the relevance of this precise issue, explaining that "if Suncor had *not* upgraded the East Plant main flare to conform with the subpart CC NESHAP, then it likely would have been necessary to route the shared waste stream at issue to a flare that *had* been upgraded." 2023 East Plant Order (Ex. 61) at 75 (emphasis in original).

[371] "The terms "'technically dependent' and 'technical dependence' describe the interrelationship between projects such that one project is incapable of performing as planned in the absence of the other project." 71 Fed. Reg. at 54245.

[372] 74 Fed. Reg. at 2,378.

[373] RTC (Ex. 69) at 28.

[374] 2023 East Plant Order (Ex. 61) at 75.

proposed guidance.[375] CDPHE's reliance on the 2006 proposed guidance is badly misplaced, as the specific quotation directly refutes CDPHE's position.[376] The proposed guidance explains that technical dependence "describe[s] the interrelationship between projects such that one project is incapable of performing as planned in the absence of the other project," meaning that, "absent another project, the process change cannot operate without significant impairment . . . or it that operates in a manner that results in a product of inferior quality."[377] In other words, the guidance directs agencies to consider the "hypothetical" or counterfactual situation of what would occur if one project proceeded "absent another project" moving forward.[378] That possibility is precisely the "hypothetical" discussed above,[379] and is therefore clearly relevant to the aggregation analysis.

Indeed, CDPHE appears to admit that the Flare RSR Activities may not have been able to proceed independent of each other, stating that "[t]here is no information . . . to demonstrate that the hypothetical situation is even technically feasible."[380] If this is CDPHE's position, then the agency must find that the Activities are, in fact, not just technically interrelated (which is sufficient for a finding of substantial relatedness) but fully technically dependent on each other—if it was technically infeasible for one project to "perform[] as planned in the absence of the other," then technical dependence is the only possible conclusion.[381]

iv. CDPHE's Reliance on Block Quotes from Suncor Is Misplaced and Cannot Justify CDPHE's Decision Not to Aggregate

Finally, CDPHE quotes extensively from Suncor in support of its position. Again, these block quotes cannot address EPA's objection, as the documentation was already considered and rejected as insufficient by EPA.[382] Regardless, the block quote is substantively unpersuasive because it incorrectly asserts that (1) the Flare RSR Activities' "only interrelationship is that Suncor must perform the work to comply with an emissions standard," and (2) "the standard applies separately to each flare and not to the aggregate of flares as a collection."[383] Both assertions are wrong.

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[375] RTC (Ex. 69) at 28.

[376] Again, EPA's final guidance rejected the technical dependence standard that CDPHE cites to for this proposition. *See* Section IV.B.2.e, above.

[377] RTC (Ex. 69) at 29 (quoting 71 Fed. Reg. 54245) (emphasis added).

[378] *Id.*

[379] *See* Section IV.B.2.h.ii, above.

[380] RTC (Ex. 69) at 28.

[381] *Id.* at 29 (quoting 71 Fed. Reg. 54245) (emphasis added).

[382] *See* Section IV.B.2.d, above.

[383] Reopened TRD (Ex. 02) at 22 (quoting 2018 Suncor memo).

To the first point, EPA has already determined that it "is not clear from the record that the 'only' relationship between these flare changes is that they were all motivated by the subpart CC NESHAP revisions."[384] In fact, there are multiple relationships between the flares, as explained above. EPA also ordered CDPHE to "explain why it does not view this common motivation relevant to assessing substantial relatedness," which Suncor's 2018 memo does not address.[385]

The second point is also false: the MACT CC standard applies to all flares that are used as control devices from various emission units, and Suncor could have either upgraded the flares to comply with the rule or re-routed emissions from affected units to a flare that did comply with the rule.[386] As explained above, "if Suncor had *not* upgraded the East Plant main flare to conform with the subpart CC NESHAP, then it likely would have been necessary to route the shared waste stream at issue to a flare that *had* been upgraded."[387] Neither the 2018 Suncor memo nor CDPHE "acknowledge or rebut this possibility, which appears to demonstrate a technical interrelationship, interdependence, or interconnection between the flare upgrade projects."[388]

i. CDPHE Does Not Resolve EPA's Objection Because It Fails to Justify Why the Flare Upgrades Are Not Economically Interrelated

EPA has also explained that activities may be "substantially related" on the basis of an economic interconnection.[389] CDPHE asserts that "neither the [2022 East Plant Petition] nor the [East Plant Order] address CDPHE's evaluation of the funding and expenditure issues."[390] This is incorrect; both documents addressed CDPHE's evaluation of funding and economic issues. The 2022 East Plant Petition directly addressed how Suncor funded the projects and CDPHE's treatment of the funding issue. The 2022 East Plant Petition explained that the four modifications were funded under two projects and therefore were still combined to a degree ("one approval for Plant 2 (East Plant) and Plant 3 (West Plant) flares"[391]) and that despite being broken up into two capital projects, "Suncor's representations make

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[384] 2023 East Plant Order (Ex. 61) at 76 (emphasis added).

[385] *Id.* (emphasis added).

[386] *See id.* at 73.

[387] *Id.* at 75 (emphasis in original).

[388] *Id.*

[389] 83 Fed. Reg. at 57327 ("[T]o be 'substantially related,' there should be an apparent interconnection—either technically or economically) (quoting 74 Fed. Reg. at 2378) (emphasis added)).

[390] Reopened TRD (Ex. 02) at 23.

[391] 2022 East Plant Petition (Ex. 60) at 69.

clear that the projects were all being planned together. . . . [I]t is clear that the projects were planned jointly even if they were ultimately funded separately."[392]

In addition, the East Plant Order noted that CDPHE had stated that it "did not base its decision on funding factors.[393] EPA's Objection therefore focused on the justifications that CDPHE did offer.[394] EPA nevertheless observed that "it is unclear whether or why CDPHE found the separate funding decision to be persuasive."[395] This lack of clarity stems from CDPHE's 2022 TRD, where CDPHE noted that while Suncor initially claimed that "the projects are funded as a single project,"[396] Suncor later informed CDPHE that "the flare projects had been funded under separate capital projects."[397] But CDPHE never offered an explanation in the 2022 TRD as to why it found that separate capital projects warranted disaggregation of the projects. And in fact, in its original 2022 response to comments, CDPHE completely disavowed the funding issue, stating: "CDPHE did not base its decision to consider the various projects . . . as separate projects because of funding decisions."[398]

CDPHE still fails to explain in the Reopened TRD and the Response to Comments whether or why CDPHE found the funding decision to be persuasive. Instead, in its Response to Comments, CDPHE only states that it "relied on multiple factors," not funding alone.[399] But that explanation does not shed light on why CDPHE was persuaded that the funding factor outweighed other countervailing factors. Specifically, CDPHE has still not explained why (a) it found Suncor's second representation—that the projects were funded separately—more persuasive than Suncor's original documentation showing that projects were planned and funded jointly; and (b) why separate funding is more persuasive than the planning history, which shows that "the projects proceeded along similar timeframes and were initially contemplated together during early stages of Suncor's planning process."[400]

To the extent that CDPHE now (unlike in the 2022 TRD) relies on the project's funding structure to justify disaggregation of the projects, that rationale is

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[392] *Id.* at 70. Further evidence of joint planning, including Suncor's references to the Flare RSR Activities as a single project in its initial application documents and own internal documents, is discussed in Section IV.B.2.f.ii, above.

[393] RTC (Ex. 69) at 69.

[394] *See* 2023 East Plant Order (Ex. 61) at 75 (listing three justifications offered by CDPHE).

[395] *Id.* at 76.

[396] 2022 TRD (Ex. 63) at 97.

[397] *Id.* at 98.

[398] Colo. Dep't of Pub. Health & Env't, Response to Comments submitted on behalf of the Conservation & Community Groups 69 (Feb. 8, 2022) (Ex. 18).

[399] RTC (Ex. 69) at 30.

[400] 2023 East Plant Order (Ex. 61) at 76.

arbitrary and unreasonable because the funding and planning history, as well as expected economic benefits, all demonstrate that the projects were, in fact, substantially related:

First, some of the projects were jointly funded. Suncor's initial AFE for the East Plant Flare upgrade shows that the Plant 2 flare and Plant 3 flare were funded jointly.[401] The Plant 1 Flare and the GBR Flare were similarly funded jointly.[402] In addition, Suncor's modification application stated that "[t]he separate RSR Flare project scopes, including the Plant 2 MP Flare RSR Compliance Project, are funded under the same capital funding decision."[403]

Second, the Flare RSR Activities were jointly planned, as described above.[404]

Third, the Flare RSR Activities will result in an indirect economic benefit to the refinery, by collectively providing a "means of complying with EPA's subpart CC NESHAP requirements and thereby avoiding penalties for noncompliance."[405]

These factors therefore support aggregation of the Flare RSR Activities.

j. CDPHE Has Failed to Meaningfully Address the Issues Raised in EPA's Objection

The Community and Conservation Groups have collected CDPHE's errors here, as a summary. CDPHE failed to adequately respond to these issues and thus has failed to demonstrate that its decision is based "on reasonable grounds properly supported on the record," because CDPHE has not "consider[ed] or provide[d] a rational basis for dismissing a potentially relevant fact."[406]

EPA Issue	CDPHE Deficiency
"[I]f Suncor had not upgraded the East Plant main flare to conform with the subpart CC NESHAP, then it likely would have been necessary to route the shared	CDPHE continues to not acknowledge or rebut this possibility, and instead outright refuses to consider it,[408] despite the

[401] Letter from Bernd Haneke, Suncor, to Jackie Joyce, CDPHE at 3 Tbl. 2 (June 12, 2018) (Ex. 46).

[402] *Id.*

[403] Minor Mod. 37 (Ex. 72) at 4-6.

[404] *See* Section IV.B.2.f.ii, above.

[405] 2023 East Plant Order (Ex. 61) at 76.

[406] *Id.* at 75.

[408] RTC (Ex. 69) at 29 ("A project aggregation analysis is clearly meant to be an analysis of projects. Colorado Regulation No. 3, Part D, contains the following definition of "project": . . . Hypothetical scenarios that were never requested in a permit application and/or did not occur at a source do not meet the regulatory definition of project, nor the plain meaning of the term "project" within the context of the guidance.").

EPA Issue	CDPHE Deficiency
waste stream at issue to a flare that had been upgraded (like one of the West Plant flares). CDPHE's record does not acknowledge or rebut this possibility, which appears to demonstrate a technical interrelationship, interdependence, or interconnection between the flare upgrade projects associated with Modification 1.29."[407]	East Plant Order highlighting the importance of this issue.
"[T]he purported absence of an economic *benefit* from the collective flare upgrades does not necessarily support a conclusion that the individual changes to flares are not 'substantially related' to each other. EPA's guidance, which CDPHE purports to follow, highlights the importance of an economic *interrelationship* between different changes."[409]	CDPHE does not discuss the economic interrelationship between the Flare RSR Activities, and instead only asserts that it is "related" to the "requirement to comply with MACT CC," and then addresses the latter issue.[410] But EPA clearly identified these as distinct issues to be considered. The fact that the issues are "related" does not excuse CDPHE's consideration of all issues raised by EPA.
"Moreover, it is not clear that CDPHE's conclusion regarding the absence of economic benefits is sound. Although the projects at issue may not increase production at the Suncor refinery (providing a direct economic benefit), they collectively provide a means of complying with EPA's subpart CC NESHAP requirements and thereby avoiding penalties for noncompliance (providing an indirect economic benefit). Thus, CDPHE's discussion of economic impacts is not	Again, CDPHE does not discuss this issue except to say that it is "related" to the requirement to comply with MACT CC.[412] The fact that the issues are "related" does not excuse CDPHE's consideration of all issues raised by EPA.

[407] 2023 East Plant Order (Ex. 61) at 75.

[409] *Id.* at 76.

[410] Reopened TRD (Ex. 02) at 24.

[412] *Id.*

EPA Issue	CDPHE Deficiency
sufficient to support its non-aggregation decision."[411]	
"Moreover, the NESHAP required Suncor to make similar changes to similar units on a similar timeframe. CDPHE acknowledges that the projects proceeded along similar timeframes and were initially contemplated together during early stages of Suncor's planning process. . . . CDPHE apparently discounts these facts based on Suncor's subsequent clarification that the projects were separately funded . . . but it is unclear whether or why CDPHE found the separate funding decision to be persuasive."[413]	CDPHE still does not explain "whether or why" it found Suncor's subsequent funding clarification to be persuasive. CDPHE instead avers that funding was not the "sole determinative factor," but does not explain the role that the funding factor played in its determination.[414] CDPHE also block-quotes sections of Suncor's materials and refers to the 2022 TRD, which, as explained above, were included in the record that EPA concluded was deficient, and do not explain CDPHE's position. In particular, CDPHE fails to explain why it found the funding decision to be persuasive in light of the fact that the Plant 2 flare project was initially jointly funded and jointly planned with the West Plant flare projects.[415]
"Additionally, CDPHE does not explain the state's disparate treatment of the potentially similar changes at issue in Modification 1.29 (the subject of this claim) and Modification 1.28 (which were similarly motivated by the subpart CC NESHAP revisions, and which were aggregated as a single project)."[416]	As explained in Section IV.B.2.g. above, CDPHE's response on this point is wholly inadequate and CDPHE still fails to offer any rational basis for treating the two modifications differently.
"Based on several submissions from the company, CDPHE was eventually	As before, CDPHE has still not explained why it changed

[411] 2023 East Plant Order (Ex. 61) at 76.

[413] *Id.*

[414] RTC (Ex. 69) at 30.

[415] Letter from Bernd Haneke, Suncor, to Jackie Joyce, CDPHE at 3 Tbl. 2 (June 12, 2018) (Ex. 46) (noting funding for Project No. 09-01010, which covered multiple flares).

[416] 2023 East Plant Order (Ex. 61) at 76.

EPA Issue	CDPHE Deficiency
convinced to abandon its concerns and conclude that the projects were not substantially related. However, the basis for this apparent change in position is not sufficiently documented in the permit record, nor is it otherwise clear that there is a rational basis to support that conclusion."[417]	positions—or what part of Suncor's responses it found so convincing that it outweighed CDPHE's initial opinion that the aggregation criteria support aggregation.[418] CDPHE only asserts that its initial opinion was never official or finalized,[419] but that still does not explain what aspects of Suncor's responses CDPHE found persuasive enough to "abandon its concerns."[420]

* * *

Presented with Petitioners' application of EPA's guidance to the aggregation analysis,[421] CDPHE did not identify particular deficiencies or suggest that Petitioners' application and conclusions are inconsistent with EPA's guidance. Instead, CDPHE states only that the agency "has discretion to evaluate project aggregation issues using other criteria" beyond non-binding EPA guidance.[422] But, as described above, CDPHE itself purported to rely on the same guidance invoked by Petitioners.[423] CDPHE cannot dismiss Petitioners' discussion of EPA's 2009 Aggregation Policy on the grounds it is not binding while it invokes *that same guidance*, because CDPHE's "exercise of discretion" cannot be "unreasonable or arbitrary."[424]

For the foregoing reasons, the flare projects must be aggregated, which would have triggered major NSR requirements with a VOC increase of 28.78 tpy, greater than the 25 tpy significance threshold for VOCs.[425]

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[417] *Id.*

[418] Email from Jackie Joyce, CDPHE, to Bernd Haneke, Suncor (Feb. 6, 2018) (Ex. 55).

[419] RTC (Ex. 69) at 27–28.

[420] 2023 East Plant Order (Ex. 61) at 76.

[421] *See* C&CG Comments (Ex. 67) at 69–76. The affirmative reasons for aggregation discussed in Petitioners' comments to CDPHE are presented throughout this Objection, but Petitioners also incorporate by reference the discussion included in the comments to CDPHE.

[422] RTC (Ex. 69) at 25.

[423] *See* Section IV.B.2.e, above.

[424] *Appleton* Order at 5.

[425] *See* 2023 East Plant Order (Ex. 61) at 74.

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

The Reopened Permit does not meet the following requirements:

First, by incorporating Modification 1.29 into the Reopened Permit as a minor modification, the Reopened 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."[426]

Second, by incorporating Modification 1.29 into the Reopened Permit as a minor modification, the Reopened Permit violates the applicable requirement that no significant permit modification may use the minor permit modification procedures.[427]

Third, the permitting record fails to contain an adequate statement justifying CDPHE's decision to apply minor modification procedures to the modifications.[428]

Fourth, the Reopened Permit violates the requirement that CDPHE "issue only a revised permit that satisfies EPA's objection."[429]

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

l. Petitioners Raised the Issue with Reasonable Specificity in Their 2022 Petition and in Their Comments on the Draft Permit

Petitioners raised this issue with specificity in their 2022 East Plant Petition and in timely comments filed on the Draft Reopened Permit.[430]

* * * * *

For these reasons and the reasons in the 2023 East Plant Order at pages 74 to 76 and the 2024 West Plant Order at 36 to 38, the permitting record strongly supports aggregating Modification 1.29 with the other flare upgrades at the West Plant, and CDPHE's decision not to aggregate is unsupported.

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[426] 5 C.C.R. § 1001-5:D.V.A.1.

[427] *Id.* § 1001-5:C.I.A.7.

[428] 40 C.F.R. § 70.7(a)(5).

[429] *Id.* § 70.8(d).

[430] 2022 East Plant Petition (Ex. 60) at 68–72; C&CG Comments (Ex. 67) at 51–77.

C. Additional Grounds for Objection

1. OBJECTION 4: East Plant Order Claim 14 - The Reopened Permit Does Not Resolve EPA's Objection Because It Continues to Improperly Incorporate a Startup, Shutdown, and Malfunction (SSM) Exemption to RACT Requirements for the FCCU Against EPA's Express Direction and Clean Air Act Requirements

EPA must object because (1) EPA already objected that the 2022 East Plant Permit failed to clarify that a SSM exemption could not apply to the RACT limit in Condition 2.15, and (2) CDPHE claims that the SSM exemption does apply to the RACT, in violation of the Clean Air Act.

a. Claim 14 of the East Plant Order Determined That SIP-based RACT limits, Including the Permit's CO RACT limit for the FCCU, Must Apply at All Times and Cannot Be Subject to Exemptions

In the East Plant Order, EPA objected to the 2022 Permit because it could have been interpreted to violate the Clean Air Act. EPA directed CDPHE to "ensure that the Permit does not contain an exemption" to the carbon monoxide ("CO") RACT requirements for the FCCU in Condition 2.15.[431]

EPA explained that SIP-based RACT limits "must apply at all times and cannot be subject to exemptions."[432] Specifically, if a numeric emission limit does not apply during a so-called "start up, showdown, or malfunction" (SSM) event, "there must be an alternative limit that applies during periods of SSM and satisfies RACT."[433]

EPA then explained that the 2022 Permit was ambiguous and two different interpretations were available. As EPA summarized:

> [T]he Permit establishes RACT limits by way of cross-referencing limits established in an underlying preconstruction permit and CD. Specifically, Condition 2.15 (the RACT requirement itself) references the CO limitations in Condition 2.12.120 Condition 2.12 contains the relevant limit: 500 ppmvd CO, at 0% O2, on a 1-hr block average. Neither of these permit terms establish any exemption or qualification on the limit's applicability. However, Condition 2.12 indicates that this limit *originated in a 2005 CD* (a point CDPHE affirms, RTC at 90). The

[431] 2023 East Plant Order (Ex. 61) at 92.

[432] *Id.* at 91 (citing 80 Fed. Reg. 33840, 33842 (June 12, 2015) ("EPA SSM SIP Call"); 42 U.S.C. § 7402(K), 7502(c)(1); 5 Colo. Code Regs. 1001-5, Part D, III.D.2.a).

[433] *Id.*

> next permit term, Condition 2.13, includes the SSM exemption and specifies that the exemption applies to "[t]he CO, opacity and particulate limits *established pursuant to the Consent Decree*." Final Permit at 26 (emphasis added). Thus, it seems that the SSM exemption in Condition 2.13 applies to the CO limit in Condition 2.12.
>
> This presents two possible interpretations of the Permit: First, one could read the Permit such that the RACT requirement in Condition 2.15 simply incorporates the CO limit in Condition 2.12 without the attached exemption contained in Condition 2.13 (since neither Condition 2.15 nor Condition 2.12 reference the exemption in Condition 2.13). This interpretation would be consistent with the CAA. Second, the Permit could be read such that the exemption in Condition 2.13 applies to the limit in Condition 2.12, *and by extension, to any other permit terms that reference or rely on that limit, including the RACT requirement in Condition 2.15*. The problem is not that the exemption applies to the limit in Condition 2.12 itself, but that the exemption might carry over to the RACT requirement embodied in Condition 2.15 (which incorporates Condition 2.12). This would create an exemption to RACT, contrary to the CAA.[434]

EPA concluded that CDPHE must resolve the ambiguity by clarifying that the Permit adopts the first interpretation—in other words, that the limits in Condition 2.15 apply continuously. Specifically, EPA directed CDPHE to "ensure that the Permit does not contain an exemption" to "the RACT limit on CO from the FCCU."[435] EPA directed CDPHE to either (a) respond to the public comment and amend the permit records to clarify that the RACT limit on CO does not contain an exemption; or, (b) amend the Permit itself to specify that the exemption in Condition 2.13 does not apply to the CO RACT limit on FCCU.[436]

b. CDPHE Refuses to Comply with the East Plant Order, Continuing to Improperly Apply the SSM Exemption to RACT Requirements

CDPHE responded to EPA's directive by flatly refusing to comply. EPA directed CDPHE to clarify that the SSM exemption in Condition 2.13 (which applies to the construction permit's CO limit) does not apply to the later-established CO RACT limit, either by amending the permit records or the Permit itself. Instead, CDPHE asserted that the CO RACT limit "was intended to inherit" the exemptions in Condition 2.13.[437] In other words, CDPHE adopted the second interpretation

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[434] *Id.* at 91–92 (emphasis in original).

[435] *Id.* at 92.

[436] *Id.*

[437] Reopened TRD (Ex. 02) at 28.

explained above—that the CO RACT limit *is*, in fact, subject to exemptions, and therefore is "contrary to the [Clean Air Act]."[438]

i. CDPHE Unlawfully Ignored EPA's Clear Directive

As a threshold matter, CDPHE does not have authority under the Clean Air Act to override EPA's conclusions in its Objection; CDPHE *must* comply with EPA's directives. Both federal and state regulations require that, after an EPA objection, the state "may thereafter issue only a revised permit that satisfies EPA's objection."[439] In its Reopened TRD, CDPHE cited no legal authority allowing it to refuse to follow EPA's objection. In its Response to Comments, CDPHE failed to respond to this argument or identify any such legal authority.

ii. CDPHE's Interpretation of the CO RACT Provision Is Unsupported and Wrong

CDPHE's position is based on an incorrect and unsupported interpretation, proffered for the first time, of the 2009 construction permit provision (Condition 19 of the construction permit) that underpins Condition 2.15 of the Reopened Permit at issue here. In its draft TRD, CDPHE unreasonably claims that CDPHE always intended for the CO RACT limit to include the unlawful SSM exemption.[440] Specifically, CDPHE asserted that (1) the appropriate RACT was "determined to be the existing limits from the Consent Decree," which was issued in 2005;[441] (2) the Consent Decree limit did not apply during SSM events; so (3) the RACT limit "was intended to inherit the same exemption."[442] But CDPHE's interpretation is unsupported by either the text of the construction permit or any contemporaneous evidence of intent.

Contrary to CDPHE's description, the 2009 construction permit does not state that "RACT was determined to be the existing limits from the Consent Decree," including SSM exemptions.[443] Instead, as explained in the 2022 East Plant Petition, the 2009 construction permit states that "the emissions limitations specified in Condition[] . . . 19" are "determined to satisfy the RACT

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[438] 2023 East Plant Order (Ex. 61) at 92.

[439] 40 C.F.R. § 70.8(d); 5 C.C.R. § 1001-5:C.VI.H.3; *see also* 40 C.F.R. § 70.7(g)(4) ("The permitting authority shall have 90 days from receipt of an EPA objection to resolve any objection that EPA makes and to terminate, modify, or revoke and reissue the permit in accordance with the Administrator's objection." (emphasis added)).

[440] Reopened TRD (Ex. 02) at 27–28.

[441] *United States v. Valero Refining Co.*, Case No. 5:05-CV-00569-WRF, Consent Decree (June 16, 2005) (entered Nov. 23, 2005) ("*Valero* Consent Decree") (Ex. 41).

[442] Reopened TRD (Ex. 02) at 27–28.

[443] *Id.*

requirements."[444] Condition 19 of the construction permit, for its part, limits FCCU CO emissions to 500ppmvd (at 0% O2).[445] While Condition 19 offers paragraph 94 of the Consent Decree as "reference," Condition 19 does not assert that the Consent Decree's SSM exemptions apply to the RACT standard. Moreover, paragraph 94 of the Consent Decree only includes the same numeric limit set out in Condition 19; it does not contain an SSM exemption.[446] Only a later paragraph of the Consent Decree establishes a general SSM exemption that applies to various limits.[447] Therefore, at most, there is an ambiguity regarding the construction permit intent; no reasonable person could conclude that the permit unambiguously applies the SSM exemption to the RACT requirement.

This is effectively the same ambiguity that EPA already identified with respect to the 2022 Permit—the internal cross-references of the construction permit could lead to a possible interpretation that the SSM exemption unlawfully applies to the CO RACT limit, just as the internal cross-references of the 2022 (and Reopened) Permit could lead to that same conclusion. [448] CDPHE cites to no evidence—such as contemporaneous documentation—supporting its newfound interpretation to the contrary. The permit provision therefore remains ambiguous, and ambiguous interpretations must be interpreted to confirm with binding law.[449] As EPA concluded, CDPHE's interpretation of the permit is "contrary to the [Clean Air Act]."[450] Thus, a fair reading of the 2009 construction permit would conclude that the permit was written to comply with the Clean Air Act by including a continuous RACT limit.[451] EPA must therefore object to CDPHE's unlawful interpretation and order CDPHE, again, to comply with EPA's initial Objection and amend the permit record or the Permit to reflect the lawful interpretation: that the

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[444] Colo. Dep't of Pub. Health & Env't, Suncor Energy (U.S.A.), Inc. Construction Permit No. 09AD0961 at Cond. 16c (Oct. 1, 2009) (Ex. 39); *see also* 2022 East Plant Petition (Ex. 60) at 86–89.

[445] Colo. Dep't of Pub. Health & Env't, Suncor Energy (U.S.A.), Inc. Construction Permit No. 09AD0961 at Cond. 19 (Oct. 1, 2009) (Ex. 39)

[446] *Valero* Consent Decree (Ex. 41) ¶ 94.

[447] *Id.* ¶ 102; *see, e.g.*, Reopened Permit (Ex. 01) § 2, Cond. 2.13 (explicitly incorporating Consent Decree provision regarding SSM exemptions).

[448] 2023 East Plant Order (Ex. 61) at 92.

[449] *See, e.g.*, C.R.S. § 2-4-203(1) (explaining that, in resolving ambiguities, courts should look to the "object sought to be attained" and the "consequences of a particular construction."); *see also id.* § 2-4-201(1) ("In enacting a statute, it is presumed that: (a) Compliance with the constitutions of the state of Colorado and the United States is intended; . . . (c) A just and reasonable result is intended . . . ."); *cf. United States v. Jin Fuey Moy*, 241 U.S. 394, 401 (1916) ("A statute must be construed, if fairly possibly so as to avoid not only the conclusion that it is unconstitutional, but also grave doubts upon that score."); Kevin M. Stack, *The Enacted Purposes Canon*, 105 Iowa L. Rev. 283, 326 (2019) (concluding that courts generally abide by the principle that "[a]n agency should not receive deference for an interpretation that negates the statute's enacted purposes").

[450] 2023 East Plant Order (Ex. 61) at 92.

[451] Notably, in its Reopened TRD and Response to Comments, CDPHE does not dispute EPA's conclusion that SSM exemptions to RACT limits violate the Clean Air Act.

RACT requirement "simply incorporates the CO limit in Condition 2.12 without the attached exemption . . . consistent with the [Clean Air Act]."[452]

CDPHE did not reply to Petitioners' comments that CDPHE's interpretation of the 2009 construction permit was unsupported and incorrect.[453] CDPHE did not offer any contemporary or additional support for its interpretation that "the RACT determination was intended to inherit the same" SSM exemptions.[454] CDPHE also did not respond to Petitioners' comments concerning the ambiguity of the provision or the requirement to adopt a lawful interpretation of an ambiguous provision.

iii. CDPHE Can and Must Revise the Permit to Comply with the Clean Air Act

Even if the 2009 construction permit's ambiguity could be interpreted to include an unlawful SSM exemption to the CO RACT limit, CDPHE is wrong in arguing that it cannot revise the condition to comply with the Clean Air Act.[455] In fact, CDPHE was *required* to revise the condition in this proceeding. The fact that the CO RACT limit originated in a 2009 permit does not interfere with that requirement. And CDPHE ignores the requirements applicable to minor modifications.

First, Regulation 3 requires CDPHE to "reopen[] and revise[]" a permit if "[CDPHE] or the Administrator determines that the permit contains a material mistake" or if "[CDPHE] or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements."[456] And the proceeding following the East Plant Order was, in fact, a reopening for cause.[457] CDPHE was therefore required to revise the permit to comply with the applicable federal requirements—a continuous CO RACT limit.

CDPHE did not acknowledge or respond to Petitioners' comment regarding Regulation 3's requirements to revise the permit in order to assure compliance with the applicable requirements of the Clean Air Act.[458]

Second, the CO RACT limit's origins in a 2009 construction permit have no bearing on CDPHE's obligation to revise the unlawful provision. CDPHE incorrectly

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[452] 2023 East Plant Order (Ex. 61) at 92.

[453] C&CG Comments (Ex. 67) at 17–21; RTC at 16–17 (Ex. 69).

[454] Reopened TRD (Ex. 02) at 28.

[455] *Id.* (asserting that the provision "should not be subjected to re-evaluation" because it was included in a construction permit issued in 2009); RTC (Ex. 69) at 16 (reaffirming the TRD).

[456] 5 C.C.R. § 1001-5:C.XIII.A.3, 4 (requiring that a permit "shall be reopened and revised" under those circumstances).

[457] Reopened TRD (Ex. 02) at 1.

[458] *See* RTC (Ex. 69) at 16–17.

argues that the CO limit, originating in the construction permit, "should not be subject to re-evaluation when it is incorporated into the Title V permit . . . [b]ecause Construction Permit 09AD961 was issued as a final NSR permit subject to the appropriate public notice and judicial review opportunity."[459] But the Tenth Circuit has made clear that Title V permits may only be renewed "if they ensure 'compliance with' all of the 'applicable requirements,'" and that the "definition of 'applicable requirements' includes all requirements in the state's implementation plan."[460] Here, the Colorado SIP includes requirements for RACT.[461] The Clean Air Act requires any RACT limits to "limit the quantity, rate, or concentration or emissions of air pollutants on a continuous basis."[462] CDPHE does not claim that its SIP allows non-continuous RACT limits, which would violate the Clean Air Act. Therefore, the SIP includes a requirement for continuously-applicable RACT—and that "applicable requirement" is reviewable during the Title V process.[463]

CDPHE did not acknowledge or respond to Petitioners' comment regarding applicable Tenth Circuit case law requiring the agency to assure that the Title V permit complies with the Colorado SIP, notwithstanding when the underlying construction permit was issued.[464]

Even if the underlying construction permit's requirements could not ordinarily be reviewed as part of the Title V permit renewal, another avenue exists for CDPHE to revisit the CO RACT requirement and ensure that it complies with the Clean Air Act. This Title V permit renewal included a minor modification to the FCCU.[465] Because of CDPHE's "unique" procedures for processing minor modifications, EPA has concluded that the Title V permit renewal is the correct time to review the minor modifications.[466] That review looks at whether "the permitting decision was not in compliance with the requirements of the Act, including the requirements of the SIP."[467] While "EPA lacks authority to take

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[459] Reopened TRD (Ex. 02) at 28.

[460] *Sierra Club v. EPA*, 964 F.3d 882, 885 (10th Cir. 2020) (quoting 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.7(a)(1)(iv)); *see also* Section IV.A.1.c, above (discussing application of *Sierra Club*).

[461] 5 C.C.R. § 1001-5:B.III.D.2.

[462] 42 U.S.C. § 7602(k) (emphasis added); *see also* EPA SSM SIP Call, 80 Fed. Reg. at 33977 ("[A]utomatic or discretionary exemption provisions applicable during SSM events are impermissible in SIPs."); *see also* 2023 East Plant Order (Ex. 61) at 92.

[463] *Sierra Club*, 964 F.3d at 885. Although CDPHE need not reopen the underlying 2009 permit, the Community and Conservation Groups note that if CDPHE believed that step was necessary, it has had more than two years since EPA's objection to undertake that process, which would be required because the "Administrator [has] determine[d] that the permit must be revised or revoked to assure compliance with the applicable requirements." 5 C.C.R. § 1001-5:C.XIII.A.3, 4.

[464] *See* RTC (Ex. 69) at 16–17.

[465] Title V Operating Permit 95OPAD108 Minor Modification #44, No. 2 Fluidized Catalytic Cracking Unit (FCCU) Cold Resid Feed Project (Dec. 20, 2018) (Ex. 45).

[466] 2023 East Plant Order (Ex. 61) at 46–47.

[467] *Id.* at 48 (quoting *Appleton* Order at 5).

corrective action merely because the Agency disagrees with a State's lawful exercise of discretion in making [RACT]-related determinations," that "discretion is bounded . . . by the fundamental requirements of administrative law that agency decision not . . . be beyond statutory authority."[468] EPA therefore reviews these actions under a "clearly erroneous" standard.[469]

Colorado's SIP explains that minor modifications are subject to "all applicable requirements that are . . . set forth in Sections III.D.1.a. through III.D.1.g of this Part B."[470] Those enumerated sections allow CDPHE to issue a permit only if the "activity will meet . . . all applicable regulations."[471] In particular, the applicable sections explain that "[p]ermit approval shall not relieve any owner or operator of *the responsibility to comply fully with applicable provisions of the state implementation plan* and any other requirements under local, state, or federal law."[472] As explained above, the requirement for continuous RACT limits is an applicable requirement of the SIP.[473]

Thus, even if CDPHE were correct that the 2009 permit included an SSM exemption to the CO RACT requirement, *and* that CDPHE cannot revisit that permit's limit in this proceeding, CDPHE was nonetheless clearly erroneous in approving the 2018 minor modification to the FCCU without imposing a SIP-compliant RACT limit (*i.e.*, a continuous limit). The 2018 minor modification therefore cannot be granted without ensuring that the underlying FCCU unit "compl[ies] fully" with the RACT provisions[474]—and because that minor modification was under review as part of the Title V renewal process,[475] CDPHE must revise the permit to ensure that the CO RACT limit applies continuously.

CDPHE did not acknowledge or respond to Petitioners' comment that it was required to revise the CO RACT limits to comply with the Clean Air Act as part of its review of the 2018 minor modification.[476] Instead, CDPHE stated that "[i]f a *future* modification occurs for the FCCU," CDPHE will issue a "new RACT determination [that] will not allow exemptions during periods of SSM."[477] CDPHE thereby acknowledges that, upon modifying the FCCU, the agency must revise the

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[468] *Id.* at 49 n.66 (quoting In the Matter of Roosevelt Regional Landfill, Order on Petition at 9 (May 4, 1999)).

[469] *Id.* (citing In the matter of East Kentucky Power Cooperative, Inc., Hugh L. Spurlock Generating Station, Order on Petition at 4–5 (August 30, 2007)).

[470] 5 C.C.R. § 1001-5:B.II.A.6.

[471] *Id.* § 1001-5:B.III.D.1.d.

[472] *Id.* § 1001-5.B.III.D.1.g.

[473] *See id.* § 1001-5.B.III.D.2. (requiring RACT for CO for minor modifications).

[474] *Id.* § 1001-5.B.III.D.1.g.

[475] 2023 East Plant Order (Ex. 61) at 46–47.

[476] *See* RTC (Ex. 69) at 16–17.

[477] *See id.*

RACT conditions. But CDPHE does not explain why it did not or could not make those revisions as part of the 2018 minor modification, which was reviewed during this Title V permit proceeding.[478]

iv. The 2021 SIP Call Is Irrelevant and Does Not Interfere with CDPHE's Obligation and Ability to Revise the Permit

In its RTC, CDPHE does not attempt to defend the RACT limit's compliance with the Clean Air Act. And instead of responding to any of Petitioner's specific comments explaining the agency's obligation and various procedural pathways available for remedying the CO RACT limit's deficiency, CDPHE discussed an unrelated action by EPA—a 2015 final rule action that identified legal shortcomings in Colorado's SIP.[479] That rulemaking does not impact the permit provision at issue here.

EPA's June 2015 SIP call required Colorado to remove affirmative defense provisions from Colorado's Common Provision Regulation.[480] As CDPHE explains, the SIP call did not address SSM exemptions for RACT limits.[481] In fact, Colorado's SIP did not and does not contain SSM exemptions for RACT limits: nothing in Colorado's 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,[482] and SIP emission limitations must "limit the quantity, rate, or concentration of emissions of air pollutants on a **continuous** basis."[483] Indeed, CDPHE acknowledges that, although the SIP has not changed, "new RACT determination will not allow exemptions during periods of SSM."[484]

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[478] In its TRD, CDPHE noted that future modifications to construction permit 09AD0961 will not be subject to RACT requirements for CO, because the maintenance period has concluded. Reopened TRD (Ex. 02) at 28. But the conclusion of the maintenance period is irrelevant, as this issue concerns past permit modifications that occurred during a maintenance period, not future modifications. Regardless, EPA has not yet approved Colorado's adopted changes. *See* EPA, *EPA Approved Statutes and Regulations in the Colorado SIP*, https://www.epa.gov/air-quality-implementation-plans/epa-approved-statutes-and-regulations-colorado-sip (last visited Jan. 26, 2026). CDPHE did not acknowledge Petitioners' comment on this point in its Response to Comments.

[479] RTC (Ex. 69) at 16–17 (discussing EPA SSM SIP Call, 80 Fed. Reg. 33840).

[480] 80 Fed. Reg. at 33970; *see also* RTC (Ex. 69) at 16.

[481] RTC (Ex. 69) at 16.

[482] 86 Fed. Reg. 61071, 61073 (Nov. 5, 2021) (RACT definition); 42 U.S.C. § 7502(c)(1) (requiring RACT in SIPs).

[483] 42 U.S.C. 7402(k) (emphasis added); 2023 East Plant Order (Ex. 61) at 91; *see also* 5 Colo. Code. Reg. 1001-5:D.III.D.2.a.

[484] RTC (Ex. 69) at 17.

In fact, the problem here is not Colorado's SIP—because Colorado's SIP does not allow SSM exemptions to RACT limits, the 2015 SIP call did not find a deficiency with that portion of Colorado's SIP. CDPHE recognizes that the SIP is not the source of the problem, acknowledging that the exemption "at issue in this particular permit did not originate from an exemption in the SIP."[485] The 2015 SIP call is therefore irrelevant.

The problem here is that CDPHE's newfound and unsupported interpretation of the 2009 construction violates Colorado's SIP, as well as the Clean Air Act. RACT limits must comply with the SIP, and Colorado's SIP—in compliance with the Clean Air Act—does not allow SSM exemptions from RACT limits. CDPHE appears to be arguing that, in fact, the SSM exemption at issue was a mistake that the agency now lacks the power to correct.[486] CDPHE is wrong for each of the reasons explained above: the agency is *required* to correct the problem, and it has multiple procedural pathways to doing so. As noted above, CDPHE has offered no response to those particular comments.

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

The Reopened Permit does not meet the following requirements:

First, the Reopened Permit does not meet the applicable requirement that the Reopened Permit incorporate Reasonably Available Control Technology for CO.[487]

Second, the Reopened Permit violates the requirement that CDPHE "issue only a revised permit that satisfies EPA's objection."[488]

The conditions of the Reopened Permit that are impacted by this objection are Section II, Conds. 2.15.4, 2.12.

d. Petitioners Raised the Issue with Reasonable Specificity in Their 2022 Petition and in Their Comments on the Draft Reopened Permit

Petitioners raised this issue with specificity in their 2022 East Plant Petition and in timely comments filed on the Draft Reopened Permit.[489]

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[485] *Id.*

[486] *See, e.g.*, *id.* (noting that future RACT determinations will not allow exemptions during periods of SSM, but asserting that no action to modify the existing RACT limit is required).

[487] 5 C.C.R. § 1001-5:B.III.D.2.a.

[488] 40 C.F.R. § 70.8(d).

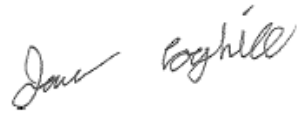
[489] 2022 East Plant Petition (Ex. 60) at 86–89; C&CG Comments (Ex. 67) at 15–23.

V. Conclusion

For the foregoing reasons, EPA should grant this petition and object to the Reopened East Plant Permit.

Respectfully submitted,

On behalf of Cultivando, GreenLatinos, Center for Biological Diversity, and the Sierra Club



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