BOARD MEETING DATE: October 7, 2022 AGENDA NO. 21

REPORT: Report to Legislature and CARB on South Coast AQMD Regulatory Activities for Calendar Year 2021

SYNOPSIS: South Coast AQMD is required by law to submit a report to the Legislature and CARB on its regulatory activities for the preceding calendar year. The report is to include a summary of each rule and rule amendment adopted by South Coast AQMD, number of permits issued, denied, or cancelled, emission offset transactions, budget and forecast, and an update on the Clean Fuels program. Also included is the Annual RECLAIM Audit Report, as required by RECLAIM Rule 2015 - Backstop Provisions.

COMMITTEE: No Committee Review

RECOMMENDED ACTIONS:
Receive and file the attached report and direct staff to forward the final report to the Legislature and CARB.

Wayne Nastri
Executive Officer

DA:LTO:RAR:HC

**Background**

South Coast AQMD is subject to several internal and external reviews of its air quality programs. These include an annual review of South Coast AQMD's proposed operating budget for the upcoming fiscal year and compliance program audits.

In 1990, the Legislature directed South Coast AQMD to provide an annual review of its regulatory activities (SB 1928, Presley), and specified the type of information required (Health and Safety Code § 40452). Many of the required elements overlap with other requirements of separate legislation. For example, information on South Coast AQMD's

Clean Fuels Program is a requirement of this report but is also a separate requirement under legislation passed in 1999 (SB 98, Alarcón). The purpose of this report is to provide additional data needed to compile a comprehensive regulatory overview. Most of the information included in this report is not new but is a compilation of information previously seen by the Board.

The specific requirements of this report include:

- A summary of each major rule and rule amendment adopted by the Board;
- The number of permits to operate or permits to construct that were issued, denied, cancelled or not renewed;
- Data on emission offset transactions and applications during the previous year;
- The budget and forecast of staff increases or decreases for the following fiscal year;
- An identification of the source of all revenues used to finance the South Coast AQMD's activities;
- An update on the South Coast AQMD's Clean Fuels program; and
- The annual RECLAIM Audit Report.

**Attachment**
Report to the Legislature on the Regulatory Activities of the South Coast AQMD for Calendar Year 2021.

# Report to the Legislature on the Regulatory Activities of the South Coast Air Quality Management District

**Pursuant to**
**Chapter 1702, Statutes of 1990 (SB 1928)**

## August 2022

Cleaning the Air that We Breathe…

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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Wayne Nastri
Executive Officer

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# EXECUTIVE SUMMARY

**Introduction**
South Coast Air Quality Management District (South Coast AQMD) is subject to internal and external reviews of its air quality programs. These include annual reviews of South Coast AQMD's budget, forecast and proposed operating budget for the upcoming fiscal year, and compliance program audits. In addition, South Coast AQMD is required to submit to the California Air Resources Board (CARB) and State Legislature an annual review of its regulatory activities for the preceding calendar year (CY). The attached report satisfies this latter requirement, which is mandated pursuant to Chapter 1702, Statutes of 1990 (SB 1928, Presley), Section 40452 of the California Health and Safety Code.

**Rule Development Projects Approved in 2021 and CEQA Alternatives**
This section contains a summary of each rule adoption, amendment, rescission, and other projects approved by the South Coast AQMD Governing Board in 2021. Each summary contains information about the estimated emission reductions, cost-effectiveness, alternatives considered pursuant to the requirements in the California Environmental Quality Act (CEQA), socioeconomic impacts, and sources of funding.

South Coast AQMD operates under a regulatory program certified by the Secretary for Resources pursuant to Public Resources Code Section 21080.5, CEQA Guidelines Section 15251(l) and implemented pursuant to South Coast AQMD Rule 110. The adoption, amendment, or rescission of rules and regulations are subject to South Coast AQMD's certified CEQA program. Since the adoption, amendment or rescission of plans, such as the AQMP, are not covered under the certified CEQA program, they are still subject to CEQA. Having a certified regulatory program means that the South Coast AQMD can incorporate its environmental analyses into CEQA documents other than environmental impact reports (EIRs), negative declarations (NDs), or mitigated NDs (MNDs) without being subject to certain CEQA requirements identified in Public Resources Code Section 21080.5. Instead, all CEQA documents prepared by South Coast AQMD pursuant to its certified regulatory program are either called an Environmental Assessment (EA), or some variant of an EA such as a Subsequent or Supplemental EA, or Addendum to an EA.

In 2021, the South Coast AQMD Governing Board adopted, amended, or rescinded the following rules for which public workshops were conducted:

- Adopted Rules: 118.1, 218.2, 218.3, 316, 429.1, 1109.1, 1147.1, 1150.3, 1407.1, and 2305;
- Amended Rules: 218, 1111, 1304, 1426, 1466, 1469, 1469.1, 1470, and 2005; and
- Rescinded Rule: 1109.

Refer to Chapter I for more details regarding these approved major rule/regulation projects.

**Socioeconomic Impact Assessments**

Health and Safety Code Section 40440.8 requires that South Coast AQMD perform socioeconomic impact assessments for its rules and regulations that will significantly affect air quality or emissions limitations. Prior to implementing the requirements of Health and Safety Code Section 40440.8, South Coast AQMD staff has been evaluating the socioeconomic impacts of its actions pursuant to a 1989 Governing Board Resolution. Additionally, South Coast AQMD staff assesses socioeconomic impacts of CEQA alternatives analyzed for rules with significant cost and emission reduction impacts.

The elements of socioeconomic impact assessments include direct effects on various types of affected industries in terms of control costs and cost-effectiveness as well as public health benefits associated with Air Quality Management Plans (AQMPs). Additionally, South Coast AQMD staff uses an economic model developed by Regional Economic Models, Inc. (REMI) to analyze the potential direct and indirect socioeconomic impacts of South Coast AQMD rules on Los Angeles, Riverside, Orange, and San Bernardino Counties. These impacts include, but are not limited to, regional employment and competitiveness.

In 2021, the South Coast AQMD identified and analyzed potential socioeconomic impacts of six new rules (Rules 1407.1, 1150.3, 2305, 1147.1, 118.1, and 1109.1), five amended rules (Rule 218 Series, 1426 (combined rule development with 1469), 1466, 1469.1, and 1111), and Regulation III – Fees. Significant socioeconomic impacts were identified for Rule 1407.1, the Rule 218 Series, Rule 2305, and Rule 1109.1 and these are described in more detail in Chapter 1. Chapter 1 also includes a summary of the associated socioeconomic impacts of Rule 320 because it contains a requirement for an automatic annual California Consumer Price Index (CPI) adjustment that has associated socioeconomic impacts.

**Engineering and Permitting**

Background

Section 40452 of the California Health and Safety Code requires that the South Coast AQMD submit an annual report to both the state board and legislature that summarizes its regulatory activities for the preceding calendar year. Paragraph (b) of Section 40452 requires that the annual report include data on "the number of permits to operate or to construct, by type of industry, that are issued and denied, and the number of permits to operate that are not renewed." Paragraph (c) of Section 40452 requires that the annual report also includes data on emissions offset transactions and applications during the previous fiscal year, including an accounting of the number of applications for permits for new or modified sources that were denied because of the unavailability of emission offsets. In addition, South Coast AQMD Rule 2015 requires submittal of the annual Regional Clean Air Incentives Market (RECLAIM) Audit Report for the 2020 Compliance Year to the Legislature.

The following paragraphs provide a summary for each report.

Permitting Data – Calendar Year 2021

During CY 2021, South Coast AQMD dispositioned a total of 5,485 applications. CY 2021 was the first full year of the COVID-19 pandemic, which affected incoming permit applications

numbers. Most of these applications were for Permits to Operate (2,376), Area Sources & Certified/ Registrations (885), and Changes of Operators (815). Also, 1,097 permits were not renewed. This data is summarized in Table 1 on page 30.

Table 2, beginning on page 31, contains a breakdown of permits dispositioned (in the nine categories) and permits not renewed, by type of industry. The type of industry was based on North American Industry Classification System (NAICS) codes, which were provided by the applicant at the time of application filing. The top three NAICS codes were 447110/447190 – Gasoline Service Stations, 324110 – Petroleum Refineries, and 811121 - Automotive Body, Paint, and Interior Repair and Maintenance.

Emission Offset Transactions Data – Fiscal Year 2020/2021

During fiscal year 2020-2021, a total of 27 emission offset transactions were completed, which included 21 transactions for reactive organic gases (ROG), 3 transactions for oxides of nitrogen (NOx), and 3 transactions for particulate matter with an aerodynamic diameter less than 10 microns (PM10). There were no transactions for carbon monoxide (CO) or for oxides of sulfur (SOx). The amounts of emissions offsets transferred, by pollutant, include 393 pounds per day of ROG, 5 pounds per day of NOx, and 11 pounds of PM10 (see Table 3 on page 60). No banking applications resulting in the issuance of new emission offsets for ROG, NOx, SOx, CO or PM10 were processed. Additionally, no applications were denied for a permit for a new source because of a failure to provide the required emission offsets. (See page 61 for details).

RECLAIM Audit Report

The REgional CLean Air Incentives Market (RECLAIM) program was adopted in 1993 to provide facilities with flexibility in achieving the same emissions reduction goals as would have been achieved under the traditional command and control approach, while lowering the cost of compliance. To ensure RECLAIM is achieving its goal, South Coast AQMD Rule 2015 - Backstop Provisions, requires preparation of an annual audit report on the program. This Annual RECLAIM Audit Report assesses emission reductions, availability of RECLAIM Trading Credits (RTCs) and their average annual prices, job impacts, compliance issues, and other measures of performance. The results of the annual audit show that RECLAIM continues to meet its aggregate emission goals and all other specified objectives.

As discussed in more detail in the audit report (see Chapter V), a total of 240 facilities were in the RECLAIM program at the end of Compliance Year 2020. Total NOx emissions from RECLAIM facilities were 27% less than the aggregate NOx allocations, and SOx emissions were 35% less than the aggregate SOx allocations for the program. The vast majority of RECLAIM facilities complied with their allocations during the 2020 compliance year (93% of NOx facilities and 100% of SOx facilities).

A total of over $1.56 billion in RTCs has been traded since the adoption of RECLAIM, of which $20.0 million occurred in CY 2021 (compared to $18.2 million in CY 2020), excluding swaps. The annual average prices of discrete-year NOx and SOx RTCs and infinite-year block (IYB –

trades that involve blocks of RTCs with a specified start year and continuing in perpetuity) NOx and SOx RTCs traded in January 2022 and April 2022 show that the average 12-month and 3-month rolling average price for Compliance Year 2022 NOx RTCs exceeded the applicable Rule 2002 price thresholds and annual price per ton threshold for Compliance Years 2021, 2022, and 2023 exceeded Rule 2015 thresholds (annual price per ton of $18,846, $33,085 and $37,808 for Compliance Years 2021, 2022 and 2023, respectively, each exceeding the Rule 2015 threshold of $15,000 per ton). As such, the provisions of Rule 2002 (f)(1)(H) and Rule 2015 (b)(6) triggered assessments of the RECLAIM program including recommendations to the Board. These efforts are in progress.

In Compliance Year 2020, RECLAIM facilities reported a net loss of 3,687 jobs, representing 4.0% of their total employment. The RECLAIM program also met other applicable requirements including meeting the federal offset ratio under New Source Review and having no significant seasonal fluctuation in emissions. Additionally, there is no evidence that RECLAIM resulted in any increase in health impacts due to emissions of air toxics.

Refer to Chapter V for the "Annual RECLAIM Audit Report for 2020 Compliance Year."

**Budget and Work Program**

Refer to Chapter II for the Fiscal Year 2022-2023 Budget Report.

**Clean Fuels Programs**

**2021 Annual Report**

In CY 2021, the South Coast AQMD Clean Fuels Program executed 19 new contracts, projects or studies and modified five continuing projects increasing investment in toward research, development, demonstration and deployment projects, as well as technology assessment and transfer of alternative fuel and clean fuel technologies. South Coast AQMD's Clean Fuels Program contributed over $10.6 million in partnership with other governmental organizations, private industry, academia and research institutes, and interested parties, with total project costs of approximately $253 million. The $10.6 million includes over $4.3 million recognized into the Clean Fuels Fund as pass- through funds from project partners to facilitate project administration. Additionally, in CY 2021, the Clean Fuels Program continued to leverage other outside funding opportunities, securing new awards totaling $48.7 million from federal, state and local funding opportunities. The significant project scope of a few key contracts executed in 2021 resulted in higher than average leveraging of Clean Fuels dollars. Typical leveraging is $4 for every $1 in Clean Fuels funding. In 2021, South Coast AQMD exceeded this upward trend with nearly $39 leveraged for every $1 in Clean Fuels funds. Leveraging dollars and aggressively pursuing funding opportunities is critical given the magnitude of needed funding identified in the 2016 AQMP to achieve federal ozone air quality standards.

The projects or studies executed in 2021 included a diverse mix of advanced technologies. The following core areas of technology advancement for 2021 executed contracts (in order of funding percentage) include:

1. Electric and Hybrid Vehicle Technologies and Related Infrastructure (emphasizing electric and hybrid electric trucks developed by Original Equipment Manufacturers (OEMs) and container transport technologies with zero emission operations);
2. Hydrogen and Mobile Fuel Cell Technologies and Infrastructure;
3. Engine Systems/Technologies (emphasizing alternative and renewable fuels for truck and rail applications);
4. Technology Assessment and Transfer/Outreach;
5. Fuel/Emission Studies; and
6. Stationary Clean Fuels Technology

A "technology portfolio" strategy enables South Coast AQMD to leverage state and federal funding while also addressing the specific needs of the Basin. Projects included:

- Battery electric and hybrid electric technologies and infrastructure to develop and demonstrate medium- and heavy-duty vehicles in support of transitioning to near-zero and zero emissions goods movement;
- Development, demonstration and deployment of large displacement natural gas and ultra-low emissions engines; and
- Demonstration of emissions control technologies for heavy-duty engines; and natural gas and renewable natural gas deployment and support.

In 2021, the following were completed: 24 executed contracts and projects; 24 research, development, demonstration and deployment projects or studies; and, seven technology assessment and transfer contracts. As of January 1, 2022, there were 109 open contracts in the Clean Fuels Program.

In accordance with California Health & Safety Code Section 40448.5.1(d), this annual report regarding the clean-burning fuels program was submitted to the state legislature by March 31, 2022, after approval by the South Coast AQMD Governing Board.

**2022 Plan Update**

The Clean Fuels Program is evaluated annually to develop the annual Plan Update based on a reassessment of the technology progress and direction for the agency. The Program continually seeks to support the development and deployment of cost-effective clean fuel technologies with increased collaboration with OEMs to achieve large scale deployment. The design and implementation of the Clean Fuels Program Plan must balance the needs in the various technology sectors with technology readiness on the path to commercialization, emission reduction potential and co-funding opportunities. For several years, the state has focused on climate change and petroleum reduction goals, but South Coast AQMD has remained committed to developing, demonstrating, and commercializing technologies that reduce criteria pollutants, specifically NOx and Toxic Air Contaminants (TACs). Most of these technologies address the Basin's need for NOx and TAC reductions and reduce greenhouse gases (GHG) and petroleum use. Due to these co-benefits, South Coast AQMD has been successful in partnering with the state and public/private partnerships to leverage its Clean Fuels funding extensively.

South Coast AQMD engages in outreach and networking efforts to identify technology and project opportunities where funding can make a significant difference in deploying cleaner technologies in the Basin. These activities range from close involvement with state and federal collaboratives, partnerships, and industrial coalitions, to the issuance of Program Opportunity Notices (PONs) to solicit project ideas and concepts and Requests for Information (RFIs) to determine the current state of various technologies and their development and commercialization challenges. Additionally, unsolicited proposals from OEMs and other clean fuel technology developers are regularly received and reviewed. Potential development, demonstration and certification projects resulting from these outreach and networking efforts are included conceptually within the Draft 2022 Plan Update. Relatedly, Assembly Bill (AB) 617 requires reduced exposure to communities most impacted by air pollution. The Technology Advancement Office (TAO) conducted outreach to AB 617 communities regarding available zero and near-zero emission technologies and incentives to accelerate the deployment of cleaner technologies. Cleaner technologies such as near-zero and zero emission heavy-duty trucks are now included in the Community Emission Reduction Plans (CERPs) for these AB 617 communities, and an RFP for zero emission heavy-duty truck program will be released in 2022.

CARB adopted two critical milestone regulations for reducing emissions from on-road heavy-duty mobile sources in 2020, the Advanced Clean Truck (ACT) regulation, which mandates an increasingly higher percentage of zero emission truck sales starting in 2024, and the Omnibus Low NOx regulation, which requires lower exhaust NOx standards on heavy-duty engines starting in 2024. CARB is also working on the Heavy-Duty Vehicle Inspection and Maintenance Program as well as the Advanced Clean Fleets regulation for Board consideration in 2022.

Despite these major efforts, NOx emission reductions in the South Coast AQMD are still expected to fall short of the levels necessary to meet ozone attainment deadlines.

The Plan Update includes near- to long-term projects to develop, demonstrate and commercialize a variety of technologies that are intended to provide emission reductions over the next five to ten years. Areas of focus include:

- Technologies to reduce emissions from goods movement and port-related activities, including near-zero and zero emission drayage trucks and infrastructure;
- Ultra-low NOx, gaseous and liquid renewable fueled, large displacement/high efficiency engines and heavy-duty zero emission engine technologies;
- Advanced, low-NOx natural gas and propane engines as well as near-zero and zero emission technologies for high horsepower applications;
- Renewable fuels, such as renewable natural gas, diesel and hydrogen as well as other renewable fuels and waste streams to mitigate criteria pollutant emissions;
- Transportation fuels and energy from renewable and waste stream sources;
- Developing and demonstrating electric-drive (fuel cell, battery, plug-in hybrid and non-plugin hybrid) technologies across light-, medium- and heavy-duty platforms;
- Large-scale hydrogen refueling and electric vehicle (EV) charging infrastructure to support light-, medium- and heavy-duty zero emission vehicles;
- Ultra-fast charging for heavy duty battery electric vehicles; and

- Zero emission microgrids that utilize electric energy storage systems and onsite clean power generation to support transportation electrification demands associated with goods movement and freight handling activities

Potential projects across nine core technologies by funding priority:

1. Hydrogen/Mobile Fuel Cell Technologies and Infrastructure (especially large-scale refueling and production facilities) and stations that support medium and heavy-duty vehicles;
2. Engine Systems/Technologies (emphasizing alternative and renewable fuels for truck and rail applications);
3. Electric/Hybrid Vehicle Technologies and Infrastructure (emphasizing electric and hybrid electric trucks and container transport technologies with zero emission operations);
4. Fueling Infrastructure and Deployment (predominantly renewable natural gas and renewable fuels);
5. Stationary Clean Fuel Technologies (including microgrids that support electric vehicle (EV) and Hydrogen infrastructure and renewables);
6. Fuel and Emission Studies;
7. Emission Control Technologies that support low emitting diesel engines;
8. Health Impact Studies within disadvantaged communities; and
9. Technology Transfer/Assessment and Outreach.

These potential projects for 2022 total $21.8 million of Clean Fuels funding, with the anticipation of total project costs of $167.5 million, leveraging more than $4 for every $1 of Clean Fuel funds spent. Some proposed projects may also be funded by other sources, such as state and federal grants for clean fuel technologies, incentive programs such as AB 617 Community Air Protection, Volkswagen Mitigation and Carl Moyer VOC and NOx mitigation funds.

# CHAPTER I

# RULE DEVELOPMENT, CEQA, and SOCIOECONOMIC IMPACT ANALYSES

## RULE DEVELOPMENT PROJECTS APPROVED IN 2021 AND CEQA ALTERNATIVES

This section summarizes each rule adoption, amendment, and rescission projects approved by the South Coast AQMD Governing Board in the preceding CY (e.g., 2021). Each summary provides information about the estimated emission reductions, cost-effectiveness, alternatives considered, if applicable, pursuant to the requirements in the California Environmental Quality Act (CEQA), socioeconomic impacts, and sources of funding.

Projects undertaken by public agencies are subject to CEQA. Rules and regulations promulgated by South Coast AQMD must first be reviewed to determine if they are a "project" as defined by CEQA. For any proposal that is either not a "project" or determined to be exempt from CEQA, no further action is required. If the project has the potential to create significant or less than significant adverse effects on the environment, then an environmental analysis is necessary. New rules being adopted, or existing rules being amended or rescinded typically require a comprehensive CEQA document that contains an environmental impact analysis which includes the following:

- Identification of potentially significant adverse environmental impacts evaluated based on environmental checklist topics;
- Identification of feasible measures, if any, to mitigate significant adverse environmental impacts to the greatest extent feasible;
- If necessary, a discussion and comparison of the relative merits of feasible project alternatives that generally achieve the goals of the project, but may generate fewer or less severe adverse environmental impacts; and,
- Identification of environmental topics not significantly adversely affected by the project.

If significant adverse environmental impacts are identified, feasible mitigation measures, if any, and alternatives must be identified and an analysis of the relative merits of each alternative is required. However, if the CEQA document concludes that no significant adverse environmental impacts would be generated by a proposed project, neither the identification of feasible mitigation measures nor an analysis of CEQA alternatives to the project is required. Still, even if a project is determined not to have significant environmental impacts, the CEQA document will contain a focused analysis of the potential environmental impacts.

South Coast AQMD operates under a regulatory program certified by the Secretary for Resources pursuant to Public Resources Code Section 21080.5 and CEQA Guidelines Section 15251(l) and implemented pursuant to South Coast AQMD Rule 110. The adoption, amendment, or rescission of rules and regulations are subject to South Coast AQMD's certified CEQA program. The adoption, amendment or rescission of plans such as the AQMP are not included in the South Coast AQMD's certified CEQA program, but are still subject to CEQA. South Coast AQMD's certified regulatory program enables the agency to incorporate its environmental analyses into CEQA documents other than environmental impact reports (EIRs), negative declarations (NDs), or

mitigated NDs (MNDs) without being subject to a limited number of specific CEQA requirements identified in Public Resources Code Section 21080.5. All CEQA documents prepared by South Coast AQMD pursuant to its certified regulatory program are either called an Environmental Assessment (EA), or some variant of an EA such as a Subsequent or Supplemental EA, or Addendum to an EA.

The following section identifies all major rules/regulations and rule/regulation amendments that were adopted by the South Coast AQMD Governing Board in 2021, in sequential order according to the month of project approval. Alternatives are summarized only for those projects identified as having potentially significant impacts requiring an alternatives analysis pursuant to CEQA.

**JANUARY 8, 2021**

One project was approved by the South Coast AQMD Governing Board in January:

1. **Rule 1407.1 – Control of Toxic Air Contaminant Emissions from Chromium Alloy Melting Operations:** Rule 1407.1 was adopted to reduce metal toxic air contaminant emissions from melting operations of metals containing greater than 0.5 percent chromium, including, but not limited to, alloy steel, chromium non-ferrous alloys, stainless steel, superalloys, and chromium alloys. Rule 1407.1 contains collection efficiency requirements and hexavalent chromium mass emission limits to control point source emissions; housekeeping requirements and building enclosure provisions to limit fugitive emissions; and source testing, material testing, parameter monitoring, and recordkeeping requirements. A Final EA was prepared for the project and the analysis concluded that there would be no significant adverse environmental impacts; thus, no alternatives analysis was required.

   *Estimated Emission Reductions*: Not quantified reductions of point source and fugitive emissions of metal toxic air contaminants (e.g., hexavalent chromium, arsenic, cadmium, and nickel). *Cost-Effectiveness*: Not applicable. *CEQA Alternatives*: Not required. *Socioeconomic Impact*: Yes, see Socioeconomic Impact Assessments section. *Source(s) of Funding*: Permit Fees, Emission Fees, Annual Operating Fees, and AB617.

**FEBRUARY 5, 2021**

One project was approved by the South Coast AQMD Governing Board in February:

1. **Rule 1150.3 – Emissions of Oxides of Nitrogen from Combustion Equipment at Landfills:** Rule 1150.3 was adopted to establish: 1) NOx and CO emission limits for boilers, process heaters, and turbines located at Municipal Solid Waste landfills and

landfill gas to energy facilities; and 2) emissions monitoring, reporting and recordkeeping requirements. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

*Estimated Emission Reductions*: 0.15 ton of NOx per day. *Cost-Effectiveness*: $27,200 per ton of NOx reduced. *CEQA Alternatives*: Not required. *Socioeconomic Impact*: Yes, see Socioeconomic Impact Assessments section. *Source(s) of Funding*: Permit Fees, Emission Fees, Annual Operating Fees, and AB617.

**MARCH 5, 2021**

One project was approved by the South Coast AQMD Governing Board in March:

1. **Rule 218 Series comprised of Amended Rule 218 – Continuous Emission Monitoring, Rule 218.2 – Continuous Emission Monitoring System: General Provisions, and Rule 218.3 – Continuous Emission Monitoring System: Performance Specifications:** Rule 218 was amended to incorporate a phase-out provision requiring an owner or operator of any Continuous Emission Monitoring System (CEMS) subject to Rules 218 and 218.1 to transition to comply with Rules 218.2 and 218.3 in accordance with the implementation schedule as specified in subdivision (d) of either Rule 218.2 or Rule 218.3, as applicable. Rules 218.2 and 218.3 were adopted to establish requirements and specifications for installation and operation for CEMS at non-RECLAIM and former RECLAIM facilities. Specifically, Rule 218.2 focuses on CEMS administrative requirements and was developed to: 1) incorporate provisions retained from Rule 218 but with updates to the certification process for CEMS modifications and reporting requirements; and 2) incorporate a new provision that would require the continuous operation of CEMS, except during qualifying CEMS maintenance and repair or when an emission source is offline for at least one week. Rule 218.3 focuses on CEMS performance specifications and was developed to: 1) incorporate provisions retained from Rule 218.1 but with modifications to span range, data acquisition and handling system, relative accuracy test audit, and calibration gas requirements; and 2) incorporate a new provision which provides specifications on data handling methods for data measured below 10 percent or above 95 percent of the upper span value, emission data averaging method, CEMS data availability requirements, and CEMS out-of-control period and alternative data acquisition. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

*Estimated Emission Reductions*: None. *Cost-Effectiveness*: Not applicable. *CEQA Alternatives*: Not required. *Socioeconomic Impact*: Yes, see Socioeconomic Impact Assessments section. *Source(s) of Funding*: Permit Fees, Emission Fees, and Annual Operating Fees.

**APRIL 2, 2021**

One project was approved by the South Coast AQMD Governing Board in April:

1. **Amended Rule 1426 – Emissions from Metal Finishing Operations, and Amended Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations:** Rule 1426 was amended to: 1) reduce fugitive emissions of hexavalent chromium, nickel, cadmium, and lead from metal finishing facilities that have tanks containing one or more of these metals by establishing building enclosure requirements to prevent emissions due to cross drafts; and 2) establish housekeeping requirements and best management practices to minimize or prevent the accumulation of metal toxic air contaminants from tank solutions on. To prevent duplicative requirements and streamline implementation, Rule 1469 was amended to incorporate provisions from Rule 1426 which are applicable to facilities with hexavalent chromium tanks subject to Rule 1469 and other minor administrative amendments. The South Coast AQMD Governing Board determined that the project was exempt from CEQA, therefore, no alternatives analysis was required.

*Estimated Emission Reductions*: Not quantified, reductions in the ambient air concentrations of hexavalent chromium, nickel, cadmium, and lead. *Cost-Effectiveness*: Not applicable. *CEQA Alternatives*: Not required. *Socioeconomic Impact*: Yes for Rule 1426, see Socioeconomic Impacts Assessment section. *Source(s) of Funding*: Permit Fees, Emission Fees, Annual Operating Fees, and AB617.

**MAY 7, 2021**

One project was approved by the South Coast AQMD Governing Board in May:

1. **Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments To Reduce Emissions (WAIRE) Program, and Rule 316 – Fees for Rule 2305:** Rule 2305 was adopted to: 1) either directly reduce emissions of NOx and PM, including diesel PM, or to facilitate local and regional emission reductions of these pollutants from existing and new warehouses with an indoor floor space equal to or greater than 100,000 square feet within a single building and the mobile sources attracted to these warehouses; and 2) subject operators of applicable existing and new warehouses to an annual Warehouse Actions and Investments to Reduce Emissions (WAIRE) Points Compliance Obligation (WPCO) intended to reduce regional and local emissions from warehouse indirect sources and require warehouse operators and/or owners to annually earn a specified number of WAIRE points by completing actions from a menu of emissions reduction measures which included: a) acquiring and/or using near-zero emissions (NZE) and zero-emission (ZE) trucks; b) acquiring and/or using ZE yard trucks; c) installing and/or using ZE charging/fueling infrastructure (e.g., electric charger, hydrogen fuel station) for cars, trucks, and/or

transport refrigeration units; d) installing and/or using onsite energy systems (e.g., solar panels); and e) implementing community benefits (e.g., Minimum Efficiency Reporting Value (MERV 16) or greater filters or filter systems). WAIRE Points may be earned only for "surplus" actions that go beyond existing state and federal regulations. In addition, warehouse operators may apply to earn WAIRE Points through a Custom WAIRE Plan specific to their operations that satisfy prescribed performance metrics, or they can pay an optional mitigation fee to South Coast AQMD that will be used in a mitigation program to achieve the emissions reductions by implementing measures such as subsidizing the purchase of NZE and ZE trucks and/or the installation of charging and fueling infrastructure for ZE trucks. The mitigation program is designed to prioritize use of the mitigation fees in areas near the warehouses using this compliance option.

Rule 316 was adopted to establish fees to be paid by warehouse operators subject to Rule 2305 to fund South Coast AQMD administrative costs associated with: 1) the submittal and review of various notifications and reports; 2) evaluating Custom WAIRE Plans; 3) implementing a program using mitigation fees from warehouse operators that choose to pay a mitigation fee; and 4) implementing compliance activities such as conducting desktop audits, onsite inspections, and reviewing records.

The Final EA concluded that the project had the potential to generate significant and unavoidable adverse environmental impacts for the topics of: 1) aesthetics; 2) agriculture and forestry resources; 3) air quality and greenhouse gas (GHG) emissions; 4) biological resources; 5) cultural resources; 6) energy; 7) geology and soils; 8) hazardous materials; 9) solid and hazardous waste; 10) hydrology and water quality; 10) mineral resources; 11) noise; 12) transportation; and 13) utilities and service systems. The following five alternatives were analyzed:

**Alternative A – No Project:** Alternative A, the no project alternative, consists of what would occur if the project was not approved. Under Alternative A, the WAIRE Program would not be implemented and therefore, the existing and new warehouses located in the South Coast AQMD's jurisdiction that meet the applicability requirements in Rule 2305 would not be required to meet their WPCO. Moreover, the WPCO compliance strategies in the form of WAIRE Menu actions, a Custom WAIRE Plan, and/or the payment of the optional mitigation fee would not be implemented.

**Alternative B – Decreased Emission Reductions:** Alternative B was crafted to result in fewer emission reductions of NOx and PM2.5 through three different approaches: 1) reducing the number of affected warehouses by increasing the warehouse size requirement from "greater than or equal to 100,000 square feet" to "greater than or equal to 200,000 square feet"; 2) postponing the beginning of the initial compliance and reporting dates by one year, such that the regulated warehouses would have a longer time period to plan for and phase in any actions

that they would need to undertake to meet their WPCO; and 3) relaxing the rule stringency, such that the rule stringency factor is less than 0.0025 WAIRE Points per weighted annual truck trips (WATT) and could be as low as 0.0001 WAIRE Points per WATT.

**Alternative C – Increased Emission Reductions:** Alternative C was crafted to result in greater emission reductions of NOx and PM2.5 in two different ways: 1) increasing the number of affected warehouses under WAIRE Program by removing the warehouse size requirement of "greater than or equal to 100,000 square feet" and including all warehouses; and 2) increasing the rule stringency, such that the rule stringency factor is greater than 0.0025 WAIRE Points per WATT and could be as high as 0.0050 WAIRE Points per WATT.

**Alternative D – All Natural Gas Options Only:** Alternative D was crafted to limit the number of actions on the WAIRE Menu that warehouse operators could select and implement to earn WAIRE Points, while maintaining the rule stringency factor of 0.0025 WAIRE Points per WATT. Specifically, the only actions allowed to earn WAIRE Points under Alternative D are related to the use of all-natural gas equipment such as the acquisition and/or use of natural gas trucks, renewable natural gas (RNG) and/or LNG and equipment, and installation and/or use of natural gas infrastructure. Alternative D would limit the range of compliance actions on the WAIRE Menu as constraints. Under Alternative D, the number and types of actions on the Custom WAIRE Plans that warehouse operators could select and implement to earn WAIRE Points would also be limited to the use of all-natural gas equipment, and/or installation and/or use of natural gas infrastructure and would not include non-natural gas options.

**Alternative E – All Electric Options Only:** Alternative E was crafted to limit the number of actions on the WAIRE Menu that warehouse operators could select and implement to earn WAIRE Points, while maintaining the rule stringency factor of 0.0025 WAIRE Points per WATT. Specifically, the only actions allowed to earn WAIRE Points under Alternative E are related to the use of all-electric equipment such as the acquisition and/or use of all-electric trucks and installation and/or use of ZE fueling or charging infrastructure. Alternative E would limit the range of compliance actions on the WAIRE Menu as constraints. Under Alternative E, the number and types of actions on the Custom WAIRE Plans that warehouse operators could select and implement to earn WAIRE Points would also be limited to the use of all electric equipment and would not include non-electric options.

The South Coast AQMD Governing Board certified the Final EA and approved the project as proposed.

*Estimated Emission Reductions*: Approximately 1.5 to 2.5 tons per day of NOx, with emission reductions beginning as early as 2022 but no later than the 2023-2024 period. Over the compliance period from 2022 to 2031, Rule 2305 will result in a total of 3,200 to 8,600 tons of NOx reductions and 48 to 64 tons of PM reductions. No emission reductions

are expected from implementing Rule 316. *Cost-Effectiveness*: -$11,000 - $101,000 per tons of NOx reduced per day. *CEQA Alternatives*: Five alternatives were analyzed, see alternatives described above. *Socioeconomic Impact*: Yes, see Socioeconomic Impacts Assessment section. *Source(s) of Funding*: Permit Fees, Emission Fees, Annual Operating Fees, mobile sources, and AB617.

**JUNE 4, 2021**

Two projects were approved by the South Coast AQMD Governing Board in June:

1. **Amended Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants:** Rule 1466 was designed to minimize the off-site fugitive dust emissions containing toxic air contaminants via dust control measures that can be implemented during earth-moving activities at applicable sites. Specifically, Rule 1466 was amended to further minimize fugitive dust emissions containing toxic air contaminants by: 1) expanding the types of earth-moving activities to include dredging, earth-cutting and filling, and mechanized land clearing; 2) enhancing dust control measures for vehicles, stockpiling, periods of inactivity, and sites adjacent to schools, joint use agreement properties, and athletic areas; 3) removing alternative provisions for dust control measures, ambient dust concentration limits, and other requirements; 4) clarifying and revising monitoring, PM10 calculation methodologies, and dust control measures; 5) adding additional requirements for notifications and recordkeeping; and 6) streamlining provisions for existing fencing and signage. The South Coast AQMD Governing Board determined that the project was exempt from CEQA and, therefore, no alternatives analysis was required.

   *Estimated Emission Reductions*: Not quantified. *Cost-Effectiveness*: Not applicable. *CEQA Alternatives*: Not required. *Socioeconomic Impact*: Yes, see Socioeconomic Impacts Assessment section. *Source(s) of Funding*: Permit Fees, Emission Fees, and Annual Operating Fees.

2. **Amended Rule 1469.1 – Spraying Operations Using Coatings Containing Chromium:** Rule 1469.1 was amended to reduce hexavalent chromium emissions from the spraying of chromate coatings and related activities by: 1) updating point source monitoring ; 2) updating housekeeping, best management practices, and building enclosure requirements ; 3) adding requirements for visual inspections and duct cleaning; 4) revising recordkeeping requirements; 5) adding prohibitions for certain spray booths ; 6) updating definitions ; and 7) revising exemptions. The South Coast AQMD Governing Board determined that the project was exempt from CEQA and, therefore, no alternatives analysis was required.

   *Estimated Emission Reductions*: Not quantified. *Cost-Effectiveness*: Not applicable. *CEQA Alternatives*: Not required. *Socioeconomic Impact*: Yes, see Socioeconomic Impacts

Assessment section. *Source(s) of Funding*: Permit Fees, Emission Fees, Annual Operating Fees and AB617.

**AUGUST 6, 2021**

One project was approved by the South Coast AQMD Governing Board in August:

1. **Rule 1147.1 – NOx Reductions from Aggregate Dryers:** Rule 1147.1 was adopted to reduce NOx emission limits, while limiting CO emissions, from gaseous fuel-fired aggregate dryers previously regulated by South Coast AQMD Rule 1147 – NOx Reductions from Miscellaneous Sources, in the "asphalt manufacturing" category. Rule 1147.1 establishes: 1) emission limits of 30 parts per million (ppm) NOx and 1,000 ppm CO, which represent Best Available Retrofit Control Technology (BARCT); 2) compliance deadlines with an implementation schedule that takes into consideration equipment age, the existing permitted NOx limit, the number of units per facility, and whether facilities have multiple pieces of equipment subject to multiple source-specific command-and-control rules; and 3) monitoring, reporting, and recordkeeping requirements. The South Coast AQMD Governing Board determined that the project was exempt from CEQA and, therefore, no alternatives analysis was required.

*Estimated Emission Reductions:* 0.01 ton of NOx per day by July 1, 2025 and 0.04 ton per day by July 1, 2056. *Cost-Effectiveness:* $46,000 per ton of NOx reduced. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* Yes, see Socioeconomic Impact Assessments section. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees, and AB617.

**OCTOBER 1, 2021**

Two projects were approved by the South Coast AQMD Governing Board in October:

1. **Amended Rule 1111 – Reduction of NOx Emissions from Natural-Gas-Fired, Fan-Type Central Furnaces:** Rule 1111 was amended to: 1) extend the mitigation fee alternative compliance option end date from September 30, 2021 to September 30, 2023 for mobile home furnaces; 2) extend the exemption for condensing and non-condensing furnaces certified at 40 nanograms per Joule (ng/J) for installations in high-altitude areas (e.g., elevations greater than or equal to 4,200 feet) from September 30, 2021 to March 31, 2022); 3) permanently exempt downflow and large-sized (e.g., rated at or greater than 100,000 British thermal units (BTU) per hour) condensing and non-condensing furnaces that are installed in high altitude areas (e.g., elevations greater than or equal to 4,200 feet); and 4) add requirements for recordkeeping and labeling. The South Coast AQMD

Governing Board determined that the project was exempt from CEQA and, therefore, no alternatives analysis was required.

*Estimated Emission Reductions:* A delay in achieving approximately 0.016 ton per day (equivalent to 32 pounds per day) of NOx emission reductions as a result of the delayed compliance date for mobile home furnaces and a negligible amount of NOx emission reductions forgone (e.g., less than one pound per day) as a result of the exemptions for furnaces installed in high-altitude areas. *Cost-Effectiveness:* Not required. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* None. *Source(s) of Funding:* Emission Fees and Annual Operating Fees.

2. **Rule 118.1 – Public Safety Provisions for Stationary Emergency Standby Engines, and Amended Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines:** Rule 118.1 was adopted to: 1) provide critical service facilities that operate emergency standby engines to exclude operating hours during a Public Safety Power Shutoff event (PSPS) as well as during activities associated with a PSPS event the option to exclude these engine operating hours from counting towards an annual operating limit of up to 200 hours; and 2) require notification and summary reports for facilities electing to exclude emergency standby engine operating hours due to a PSPS event. Rule 1470 was amended to: 1) establish alternative testing schedule and maintenance requirements for in-use stationary emergency standby diesel-fueled compression ignition engines rated at greater than 50 brake horsepower at applicable water and sewage facilities located in very high fire hazard severity zones provided they are not located in SB 535 Disadvantaged Communities; 2) allow applicable water and sewage facilities to conduct maintenance and testing according to an alternative schedule provided that the operating permit incorporates the alternative schedule limiting the maintenance and testing to no more than 20 hours averaged over a consecutive three-year rolling period, with no individual calendar year exceeding 30 hours; and 3) include revised definitions of terms for the sake of clarity and consistency throughout the rule. The South Coast AQMD Governing Board determined that the project was exempt from CEQA and, therefore, no alternatives analysis was required.

   *Estimated Emission Reductions:* None. *Cost-Effectiveness:* Not required. *CEQA Alternatives:* Not required. *Socioeconomic Impact:* None. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees, and AB617.

**NOVEMBER 5, 2021**

One project was approved by the South Coast AQMD Governing Board in November:

1. **Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations, Rule 429.1 – Startup and Shutdown Provisions at Petroleum**

**Refineries and Related Operations, Amended Rule 1304 – Exemptions, Amended Rule 2005 – New Source Review for RECLAIM, and Rescinded Rule 1109 – Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum Refineries:** This project is comprised of adopted Rules 1109.1 and 429.1, amended Rules 1304 and 2005, and rescinded Rule 1109. Rule 1109.1 was adopted to implement BARCT requirements to reduce NOx emissions while not increasing CO emissions from petroleum refineries and facilities with operations related to petroleum refineries. Boilers, gas turbines, ground level flares, fluidized catalytic cracking units, petroleum coke calciners, process heaters, sulfur recovery units/tail gas treating units, steam methane reformer (SMR) heaters, SMR heaters with gas turbine, sulfuric acid furnaces, and vapor incinerators are categories of combustion equipment subject to Rule 1109.1.

Rule 429.1 was adopted to establish: 1) new requirements for startup, shutdown, commissioning, and certain maintenance events, including an exemption from the NOx and CO concentration limits in Rule 1109.1 during these events; and 2) notification and recordkeeping requirements for units subject to Rule 1109.1).

Rules 1304 and 2005 were amended to include a narrow best available control technology (BACT) exemption to address potential emission increases associated with the installation of new or the modification of existing post-combustion air pollution control equipment, including but not limited to selective catalytic reduction (SCR) and ultralow NOx burner (ULNB) technology, or other equipment modifications to comply with the NOx emission limits in Rule 1109.1. Lastly, Rule 1109 was rescinded because the requirements in Rule 1109.1 supersede the outdated requirements in Rule 1109.

This project amended the previous BARCT assessments conducted for: 1) facilities in the refinery sector as previously analyzed in the December 2015 Final Program EA (PEA) for Amended Regulation XX – Regional Clean Air Incentives Market (December 2015 Final PEA for NOx RECLAIM); and 2) Control Measure CMB-05 and the entire RECLAIM Transition project in the 2016 Air Quality Management Plan (AQMP) as previously analyzed in the March 2017 Final Program Environmental Impact Report (EIR) for the 2016 AQMP. A Final Subsequent EA (SEA) was prepared for this project and the analysis concluded that there would be more severe potential significant and unavoidable adverse environmental impacts compared to the NOx RECLAIM project analyzed in the December 2015 Final PEA for NOx RECLAIM in terms of construction-related air quality, hazards and hazardous materials associated with ammonia, and hydrology. The Final SEA also concluded that the project is expected to have less severe, but significant impacts for greenhouse gas emissions that were previously examined in the December 2015 Final PEA for NOx RECLAIM. The following four alternatives were analyzed in the Final SEA:

**Alternative A – No Project:** Alternative A, the no project alternative, means that petroleum refineries and facilities related to petroleum refineries would remain

subject to the NOx RECLAIM program and not be subject to a command-and-control rule. Under Alternative A, facilities remaining subject to the RECLAIM program would still be subject to the 12 tons per day NOx RECLAIM Trading Credit (RTC) shave by the end of 2022 and the state law adopted pursuant to AB 617 which requires air districts "in nonattainment for one or more air pollutants to adopt an expedited schedule for the implementation of best available retrofit control technology, as specified." AB 617 applies to each industrial source that, as of January 1, 2017, was subject to a specified market-based compliance mechanism (e.g., CARB's AB 32 Cap-and-Trade program for GHGs) and gives highest priority to those permitted units that have not modified emissions-related permit conditions for the greatest period of time. Thus, facilities would still need to be evaluated under a BARCT analysis and, depending on the outcome of that analysis, would need to take action to comply.

**Alternative B – More Stringent Proposed Project:** Alternative B contemplated more requirements, more stringent emission limits to be achieved, and less flexibility or relief to those subject to the project. Alternative B proposed applying earlier deadlines so that the small heaters would need to achieve nine ppm NOx within five years, and small boilers would need to achieve five ppm NOx within six months of having 25 percent or more of the burners replaced.

**Alternative C – Less Stringent Proposed Project:** Alternative C contemplated fewer requirements, higher (less stringent) emission limits to be achieved, and more flexibility or relief to comply with the project requirements. Under Alternative C, the time frames for operators to submit an I-Plan in order to achieve NOx and CO limits were adjusted to include a two- or three-phase timeline, with reduced percentage reduction targets for each phase.

**Alternative D – Limited Start-up, Shutdown, Malfunction:** Alternative D would allow emissions that occur during start-ups, shutdowns, and malfunctions (SSM), pursuant to the definitions in the Rule 429.1, to not be considered when determining compliance with the NOx emission limits in Rule 1109.1 by limiting the duration and severity (e.g., peak NOx concentration in terms of ppm) of each SSM event.

The South Coast AQMD Governing Board certified the Final SEA and approved the project as proposed.

*Estimated Emission Reductions:* 7 to 8 tons per day of NOx while not increasing CO emissions, with a corresponding regionwide net decrease in annual PM2.5 concentration of 0.11 micrograms per cubic meter. *Cost-Effectiveness:* $32,698 per ton of NOx reduced. *CEQA Alternatives:* Four alternatives were analyzed, see alternatives described above. *Socioeconomic Impact:* Yes, see Socioeconomic Assessments section. *Source(s) of Funding:* Permit Fees, Emission Fees, Annual Operating Fees, and AB617.

## SOCIOECONOMIC IMPACT ASSESSMENTS

California Health and Safety Code Section 40440.8 requires that South Coast AQMD perform socioeconomic impact assessments for its rules and regulations that will significantly affect air quality or emissions limitations. Prior to the requirements of Section 40440.8, South Coast AQMD staff had been evaluating the socioeconomic impacts of its actions pursuant to a 1989 Governing Board Resolution Additionally, South Coast AQMD staff assesses socioeconomic impacts of CEQA alternatives analyzed for rules with significant cost and emission reduction impacts.

The elements of socioeconomic impact assessments include direct effects on various types of affected industries in terms of control costs and cost-effectiveness as well as public health benefits associated with AQMPs. Additionally, South Coast AQMD staff uses an economic model developed by Regional Economic Models, Inc. (REMI) to analyze the potential direct and indirect socioeconomic impacts of South Coast AQMD rules on Los Angeles, Riverside, Orange, and San Bernardino Counties. These impacts include, but are not limited to, employment and competitiveness.

In 2021, the South Coast AQMD identified and analyzed potential socioeconomic impacts of six new rules (Rule 118.1 (with Rule 1470 amendments), 1109.1, 1147.1, 1150.3, 1407.1, and 2305), five amended rules (Rule 218 Series, 1111, 1426 (combined rule development with 1469), 1466, and 1469.1), and Regulation III – Fees. Significant socioeconomic impacts were identified for the Rule 218 Series, Rule 1109.1, Rule 1407.1, and Rule 2305 and these are described in more detail in this section. Additionally, this section includes a summary of the associated socioeconomic impacts of Rule 320 because it contains a requirement for an automatic annual California Consumer Price Index (CPI) adjustment that has associated socioeconomic impacts.

## RULE DEVELOPMENT PROJECTS WITH SIGNIFICANT SOCIOECONOMIC IMPACTS

### Rule 1407.1 – Control of Toxic Air Contaminant Emissions from Chromium Alloy Melting Operations (Adopted January 8, 2021)

Rule 1407.1 was adopted on January 8, 2021, to address toxic air contaminant (TAC) emissions from melting operations of metals that contain greater than 0.5 percent chromium content, including, but not limited to alloy steel, chromium non-ferrous alloys, stainless steel, and superalloys. Rule 1407.1 establishes point source emission limits, housekeeping requirements and building enclosure provisions to address fugitive emissions, source testing requirements, material testing, and monitoring, reporting, and recordkeeping requirements. Staff identified 11 facilities in the manufacturing sector (NAICS 31-33) that are potentially affected by the requirements of Rule 1407.1.

Staff analyzed cost impacts for the following requirements in Rule 1407.1: 1) Baghouses with High Efficiency Particle Arrestors/Ultra Low Particulate Air Systems; 2) Bag Leak Detection Systems (BLDS); 3) Building modifications; 4) Source testing requirements; 5) Smoke Tests; 6) Housekeeping and roof cleaning; 7) Butterfly Cap Installation; and 8) Standards and Calibration Materials. The overall cost of Rule 1407.1 ranges between $39.7 million to $53.8 million, or $2.75 million to $2.79 million annually (between 2021 and 2041), depending on the real-interest rate scenario (1% and 4%, respectively). Job impacts resulting from implementation of Rule 1407.1 were estimated between 98 and 100 jobs foregone on average annually between 2021 and 2041, and the impacts were largest in the manufacturing industry with an average of 27 jobs foregone annually.

### Rule 218 Series (Adopted March 5, 2021) comprised of:

- **Amended Rule 218 - Continuous Emission Monitoring**
- **Amended Rule 218.1 - Continuous Emission Monitoring Performance Specifications**
- **Rule 218.2 - Continuous Emission Monitoring System**
- **Rule 218.3 - Continuous Emission Monitoring System: Performance Specification**

The Rule 218 Series does not impact air quality or emission limitations, and as such a socioeconomic assessment was not statutorily required. Nevertheless, staff prepared a brief potential cost and regional economic impacts assessment for Rule 218 Series. The Rule 218 Series requires affected facilities to purchase data acquisition and handling systems (DAHS) software that controls the CEMS equipment. The universe of affected facilities comprised of a wide range of industries with a large variability in the number of devices per facility. Staff identified 47 different North American Industry Classification System (NAICS) codes in universe of the affected facilities, with the largest number of devices in the Petroleum and Coal Products Manufacturing (NAICS 324) industry. An estimated 765 CEMS devices at 205 facilities were identified as potentially affected by the requirements of the Rule 218 Series.

Staff expects that most of the compliance costs from the Rule 218 Series are one-time costs for software upgrades for each device. The estimated cost per upgrade at refineries is about $21,000 per device, and the largest cost per refinery is $1 million (due to the large number of devices using continuous emission monitoring systems). For non-refinery facilities, staff assumed an upgrade cost of $65,000 per device. The total one-time cost of the Rule 218 series is estimated at $38.1 million. The annualized cost of the proposed rules and amendments in the 218 Series are expected to be from $1.5 to $2.2 million annually between 2024 and 2049, respectively. The 218 Series is expected to result in 44 to 68 jobs foregone annually on average over 25 years of expected useful life of the software upgrades. About 63 percent of the affected facilities are classified as small businesses under the Small Business Association definition.

**Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program, and Proposed Rule 316 – Fees for Rule 2305 (Adopted May 7, 2021)**

Rule 2305 applies to any existing or new warehouse located in South Coast AQMD's jurisdiction with an indoor warehouse floor space equal to or greater than 100,000 square feet within a single building that may be used for warehousing activities by one or more warehouse operators. Rule 2305 requires warehouses subject to the rule to annually take actions which either reduce emissions regionally and/or locally or that facilitate emission reductions.

Staff's analysis expects Rule 2305 to potentially affect 3,995 warehouse operators at 2,902 warehouses classified under a variety of industry codes, mainly in the goods-movement industries of construction (NAICS 23), manufacturing (NAICS 31-33), wholesale trade (NAICS 42), retail trade (NAICS 44-45), and transportation and warehousing (NAICS 48-49). Of the 3,995 warehouse operators potentially affected by Rule 2305, 1,964 are estimated to be in Los Angeles County, 468 estimated to be in Orange County, 470 estimated to be in Riverside County, and 1,093 estimated to be in San Bernardino County.

Staff analyzed the following potential costs for Rule 2305:

- Zero-emission (ZE) and near zero-emission (NZE) Truck Acquisitions (Capital Cost) and Usage (Operating & Maintenance [O&M] Cost)
- ZE and NZE Truck Visits from a Fleet Not Owned by a Warehouse Operator (O&M)
- Electric Vehicle Charger Acquisition (Capital) and Usage (O&M)
- Hydrogen Filling Station Acquisition (Capital) and Usage (O&M)
- ZE Yard Truck Acquisition (Capital) and Usage (O&M)
- Solar Panel Acquisition (Capital) and Usage (O&M)
- High-Efficiency Filter Systems Acquisition (Capital) and Replacement Filters (O&M)
- Transport Refrigeration Units (TRU) Plug Acquisition (Capital) and Usage (O&M)

- Pay Mitigation Fee (O&M)
- Administrative Costs

Staff analyzed 19 different scenarios to show a range of potential outcomes. The cost outcomes are shown in the following table:

| Scenario No. | Equipment | Discounted Total Cost – Net Present Value 4% (in millions) | Average Annual Cost (in millions) | Average Cost per Square Foot per Year |
|---|---|---|---|---|
| Sc1 | NZE Class 8 | $1,103 | $127 | $0.16 |
| Sc2 | NZE Class 8 | $1,220 | $139 | $0.17 |
| Sc3 | NZE Class 8 | $374 | $45 | $0.06 |
| Sc4 | NZE Class 8 | $750 | $94 | $0.12 |
| Sc5 | ZE Class 8 | $942 | $112 | $0.14 |
| Sc6 | ZE Class 6 & 8 | $1,604 | $187 | $0.23 |
| Sc7 | Mitigation Fee | $5,264 | $670 | $0.83 |
| Sc7a | Mitigation Fee | $985 | $114 | $0.14 |
| Sc8 | NZE Class 6 | $1,627 | $184 | $0.23 |
| Sc9 | NZE Class 6 | $468 | $59 | $0.07 |
| Sc10 | ZE Class 6 | -$87 | -$13 | -$0.02 |
| Sc11 | Solar | $9,712 | $979 | $1.21 |
| Sc12 | ZE Class 8 | $7,445 | $837 | $1.04 |
| Sc13 | ZE Class 2b-3 | $753 | $82 | $0.10 |
| Sc14 | ZE Class 2b-3 | $978 | $119 | $0.15 |
| Sc15 | Filter System | $5,057 | $635 | $0.79 |
| Sc16 | Filter | $4,953 | $622 | $0.77 |
| Sc17 | TRU | $46 | $6 | $0.70 |
| Sc18 | Yard Trucks | $1,029 | $120 | $0.15 |

Average annual costs of Rule 2305 range from -$12.6 million/year (or -$0.02/square foot/year) for the lowest cost scenario (Scenario 10: ZE Class 6 Visits from a Non-owned Fleet) up to $979.0 million/year (or $1.21/square foot/year) for the highest cost scenario (Scenario 11: Solar Panel Installations).

Based on the different scenarios, the compliance cost of Rule 2305, and the application of the Regional Economic Models, Inc. (REMI) model, the projected job impact ranges from up to 240 jobs created to up to 11,100 jobs forgone on average annually from 2022 to 2031 in total across all South Coast AQMD industries for the low-cost (Scenario 10) and high-cost (Scenario 7) scenarios, respectively. Scenario 10 assumed all potentially affected warehouse operators comply with Rule 2305 through third party visits from Class 6 zero-emission vehicles, while Scenario 7 assumed all potentially affected warehouse operators comply with Rule 2305 by paying a mitigation fee and not receiving any funds from the mitigation fee for future compliance with Rule 2305.

**Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations (Adopted November 5, 2021)**

Rule 1109.1 was adopted on November 5, 2021, to address NOx emissions from combustion equipment at facilities, including asphalt plants, biofuel plants, hydrogen production plants, petroleum refineries, facilities that operate petroleum coke calciners, sulfuric acid plants, and sulfur recovery plants. Rule 1109.1 is one of the "landing rule" projects that facilitates the transition of the NOx RECLAIM program to a command-and-control regulatory structure. The rule established NOx and CO emission limits to reflect the Best Available Retrofit Control Technologies (BARCT) for most combustion equipment categories at these facilities. Additionally, Rule 1109.1 established provisions for monitoring, recordkeeping, and reporting and provides alternative implementation and compliance approaches including an Implementation Plan (I-Plan), BARCT Equivalent Compliance Plan (B-Plan), and BARCT Equivalent Mass Cap Plan (B-Cap), which provides flexibility and opportunities for facilities to reduce cost impacts. Rule 1109.1 is expected to realize 7 to 8 tons per day in NOx emission reductions.

The majority of the cost impacts affect seven refineries and estimated costs for Selective Catalytic Reduction (SCR) retrofits and upgrade projects on heaters and boilers (using Ultra Low-NOx Burner technology). The total discounted costs range from $2.336 billion to $2.920 billion based on 4% and 1% discount rates, respectively, and the average annual total costs of Rule 1109.1 range from $98.10 million to $132.45 million per year based on the 1% and 4% real interest rate, respectively. Despite incurring most of the total compliance cost, the petroleum and coal products manufacturing industry (NAICS 324) is projected to experience only minor impacts in terms of jobs forgone (14 annually, on average). This is due to the fact that the industry is capital-intensive. As such, less labor would be required to produce the same number of products or services.

## EXISTING RULES WITH ONGOING SOCIOECONOMIC IMPACTS

### Ongoing Implementation of Rule 320 – Automatic Adjustment Based on Consumer Price Index (CPI) for Regulation III Fees

Pursuant to the October 29, 2010, South Coast AQMD Governing Board Resolution, Rule 320 is required to undergo an annual assessment of the increase in fee rates based on the previous year's CPI by March 15. Rule 320 does not affect air quality or emission limits and as such no socioeconomic and cost-effectiveness analyses are required by statute. However, a socioeconomic impact assessment was conducted to assess the cost impacts of the fee increase and to provide background information, such as historical trends of South Coast AQMD revenues from various fees and sectoral distributions of these fees. The 2021 annual assessment of Rule 320 resulted in an across-the-board 1.7-percent increase in fee rates (equivalent to the change in the California CPI from December 2019 to December 2020) which went into effect on July 1, 2021. The fee increase was applied to most fees in Rules 301, 303, 304, 304.1, 306, 307.1, 308, 309, 311, 313, 314, and 315.

Nearly all the facilities regulated by the South Coast AQMD would be affected by the fee increases and these facilities belong to every sector of the economy. The fees examined included emissions fees, permit processing fees, annual permit renewal fees, toxic hot spot fees, source testing fees, and a portion of fees under Rule 2202 – On-Road Motor Vehicle Mitigation Options.

The across-the-board CPI-based fee rate increase was estimated to bring additional revenue totaling $4.57 million to the South Coast AQMD. Based on the fee categories examined in the analysis, the manufacturing sector was shown to experience the largest increase in fees (approximately $1.80 million for about 3,500 facilities), followed by the services sector (approximately $0.72 million for about 10,000 facilities) and the retail trade sector (approximately $0.65 million for about 4,200 facilities). Within the manufacturing sector, the petroleum and coal products manufacturing industry, mostly comprised of refineries, was estimated to experience an increase of approximately $0.67 million.

# CHAPTER II

# ENGINEERING AND PERMITTING ACTIVITIES

## Engineering and Permitting

### Description of Services

Engineering & Permitting (E&P) is responsible for processing applications for Permits to Construct and Operate, and for special services. The permit processing activities involve approximately 340 major facilities that have been issued Title V Federal Operating permits, about 240 facilities in the RECLAIM program, and over 25,000 large and small business operations. In addition, staff also participates in activities with other agencies, assists with Economic Development and Business Retention programs, provides engineering support to other divisions, and evaluates and implements permit backlog reduction and permit streamlining activities, including automation and other permit processing modernization efforts.

**Recent Accomplishments**

- Since the commencement of the backlog reduction effort in July 2016, reduced and maintained reduction of total pending applications by over 50%, from more than 7,300 to less than 3,500 pending applications.
- Continued permit streamlining efforts by:
    - Processing almost 2,100 Permits to Construct and 5,700 applications for Permits, Plans, and ERC during FY 2020-21;
    - Focusing on reducing last remaining aged permit applications to extent possible; and
    - Continuing to focus on reducing pending applications beyond targets established in 2016 Action Plan to create a cushion to help address additional incoming permit applications anticipated from RECLAIM program phase-out over the next one to three years.

- Met the 3,000 pending applications (less RECLAIM transition applications) target for FY 2020-21 by maintaining pending application inventory (excluding Permits to Construct issued).
- Achieved and maintained the timely completion rate for new permit applications by processing over 71 percent of new permit applications within 180 days of being deemed complete.
- Issued over 144 Title V renewal and modification permits in calendar year 2021.
- Continued development of Online Permit Processing tools and other automation efforts, including additional Rule 222 Registration equipment, as well as Forms E-xx. Continued to support online permitting for dry cleaning equipment, gasoline dispensing facilities and automotive refinishing spray booths, as well as three Rule 222 Registration categories. Over 400 permits and registrations were issued online during the 12-month period.
- Maintained Division's Permit Streamlining goal of application delivery to Permitting Teams within 4 business days.
- Continued implementation of EPA Title V Program Audit Findings Action Plan.
- Posted all newly issued Title V permits to the internet for online public access on an ongoing basis.
- Participated in public meetings to address public concerns regarding high toxic risks and emissions.
- Assisted in developing and amending South Coast AQMD Rules and Regulations such

as Reg. III, Reg. XI, Reg. XIV, and other amendments called for under AB 617, including Reg. XX, and incorporating updated Best Available Retrofit Control Technology (BARCT).

- Coordinated with Compliance and Enforcement Division to provide support for incident response and investigate community reports including but not limited to the October 2021 Dominguez Channel Odor Event.
- Provided Pre- and Post-application conferences to help permit applicants.
- Participated, reviewed, and provided permit remedies to permit holders throughout Calendar Year 2021 from Fee Review cases.
- Provided technical support to IM to test and troubleshoot CLASS programs issues.
- Successfully provided engineering support and/or expert testimony in Hearing Board cases throughout calendar year 2021.
- Provided support to 151 existing CPP holders.
- Prepared Federal New Source Review (NSR) Equivalency Determination Reports pursuant to Rule 1315.
- Prepared annual report on the NOx and SOx RECLAIM Program in accordance with Rule 2015.
- Maintained division-wide efficiency while equipping staff with the necessary tools to effectively work from home.
- Onboarded and trained a new class of 14 permit processing engineers in October 2021.

**Anticipated Accomplishments**

- Continue progress in reducing the permit applications inventory by maintaining pending permit applications inventory excluding Permits to Construct issued and RECLAIM transition applications at or near 3,000, and total pending applications inventory to below 3,500.
- Continue to maintain the timely completion rate for new permit applications by processing 75 to 80 percent of new permit applications within 180 days of being deemed complete.
- Monitor and reduce average permit application

**Permitting Data**

During calendar year 2021, South Coast AQMD dispositioned a total of 5,485 applications. Calendar Year 2021 was the first full year of the COVID-19 pandemic which affected incoming permit applications numbers. Most of these applications were for Permits to Operate (2,376 Area Sources & Certified/ Registrations (885), and Changes of Operators (815). Also, 1,097 permits were not renewed. This data, broken down into nine different categories, is summarized in Table 1 on the following page.

| Table - 1<br>Permit Applications Completed Between 01/01/2021 and 01/01/2022 | |
|---|---|
| **Type** | **Count** |
| Permits to Construct | 259 |
| Permits to Operate (PO) | 2,376 |
| Changes of Operator (C/O) | 815 |
| Denials | 13 |
| Cancellations | 433 |
| Emission Reduction Credits (ERCs) | 49 |
| Plans | 504 |
| Title V (TV)/RECLAIM | 151 |
| Area Sources & Certified/Registrations | 885 |
| **Total** | **5,485** |
| | |
| *Permits Not Renewed* | 1,097 |

*This includes 1,606 applications for Permit to Construct that were issued as Permits to Construct/Operate.

Table 2, on the following pages, contains a breakdown of permits dispositioned (in the nine categories) and permits not renewed, by type of industry. The type of industry was based on North American Industry Classification System (NAICS) codes, which were provided by the applicant at the time of application filing. The top three NAICS codes were 447110/447190 – Gasoline Service Stations, 324110 – Petroleum Refineries, and 811121 - Automotive Body, Paint, and Interior Repair and Maintenance.

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| NAIC (Revised) | NAIC Desc (Revised) | Area Source / Registration | C/O | Cancelled | Denial | ERC | PC | Plans | PO | RECLAIM / TV | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **111110** | Soybean Farming | | | 1 | | | 0 | 0 | | | 1 |
| **111219** | Other Vegetable (except Potato) and Melon Farming | | | | | | 0 | 1 | | | 1 |
| **111320** | Citrus (except Orange) Groves | 1 | | | | | 0 | 0 | | | 1 |
| **111332** | Grape Vineyards | | | | | | 0 | 4 | | | 4 |
| **111920** | Cotton Farming | | | | | | 0 | 1 | | | 1 |
| **111998** | All Other Miscellaneous Crop Farming | 1 | 12 | | | | 0 | 8 | 3 | 2 | 26 |
| **112990** | All Other Animal Production | | | | | | 0 | 3 | | | 3 |
| **115114** | Postharvest Crop Activities (except Cotton Ginning) | | | 1 | | | 1 | 0 | 1 | | 3 |
| **211111** | Crude Petroleum and Natural Gas Extraction – crude petroleum extraction | 10 | | 2 | | | 0 | 10 | 13 | 3 | 38 |
| **211112** | Natural Gas Liquid Extraction | | | | | | 0 | 0 | 2 | | 2 |
| **211120** | Crude Petroleum Extraction | 39 | 32 | 1 | | | 0 | 1 | | | 73 |
| **212319** | Other Crushed and Broken Stone Mining and Quarrying | | | | | | 0 | 0 | 2 | 1 | 3 |
| **212321** | Construction Sand and Gravel Mining | | | | | | 0 | 0 | 12 | | 12 |
| **213112** | Support Activities for Oil and Gas Operations | | 1 | | | | 0 | 1 | 12 | | 14 |
| **221111** | Hydroelectric Power Generation | 1 | 1 | | | | 0 | 0 | | | 2 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **221112** | Fossil Fuel Electric Power Generation | | | 22 | | | 6 | 2 | 9 | 7 | 46 |
| **221118** | Other Electric Power Generation | 1 | | 38 | | | 2 | 5 | 27 | 3 | 76 |
| **221122** | Electric Power Distribution | | | | | | 0 | 2 | 2 | | 4 |
| **221210** | Natural Gas Distribution | 2 | | 6 | | | 4 | 1 | 5 | 3 | 21 |
| **221310** | Water Supply and Irrigation Systems | 11 | 2 | 4 | | | 1 | 5 | 45 | | 68 |
| **221320** | Sewage Treatment Facilities | 4 | | | | | 1 | 4 | 8 | | 17 |
| **221330** | Steam and Air-Conditioning Supply | | | 3 | | | 0 | 0 | 4 | 1 | 8 |
| **236115** | New Single-Family Housing Construction (except For-Sale Builders) | 24 | 1 | | | | 1 | 5 | 15 | | 46 |
| **236116** | New Multifamily Housing Construction (except For-Sale Builders) | 1 | | | | | 0 | 0 | | | 1 |
| **236117** | New Housing For-Sale Builders | 1 | | | | | 0 | 0 | 1 | | 2 |
| **236210** | Industrial Building Construction | 1 | 2 | | | | 0 | 0 | | | 3 |
| **236220** | Commercial and Institutional Building Construction | 4 | 1 | | | | 0 | 3 | 8 | | 16 |
| **237110** | Water and Sewer Line and Related Structures Construction | | | 1 | | | 0 | 2 | | | 3 |
| **237120** | Oil and Gas Pipeline and Related Structures Construction | | 1 | | | | 0 | 0 | 1 | | 2 |
| **237210** | Land Subdivision | 2 | 1 | | | | 0 | 2 | 11 | | 16 |
| **237310** | Highway, Street, and Bridge Construction | | | 5 | | | 0 | 6 | 7 | | 18 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **237990** | Other Heavy and Civil Engineering Construction | | | 1 | | | 0 | 0 | 1 | | 2 |
| **238110** | Poured Concrete Foundation and Structure Contractors | | 1 | | | | 0 | 0 | 3 | | 4 |
| **238120** | Structural Steel and Precast Concrete Contractors | | | | | | 0 | 0 | 1 | | 1 |
| **238130** | Framing Contractors | 1 | | | | | 0 | 0 | 1 | | 2 |
| **238160** | Roofing Contractors | 6 | | | | | 0 | 0 | | | 6 |
| **238210** | Electrical Contractors and Other Wiring Installation Contractors | 10 | | 1 | | 1 | 0 | 2 | 1 | | 15 |
| **238320** | Painting and Wall Covering Contractors | | | | | | 0 | 0 | 3 | | 3 |
| **238350** | Finish Carpentry Contractors | | | | | | 0 | 0 | 1 | | 1 |
| **238390** | Other Building Finishing Contractors | | | 2 | | | 0 | 0 | 1 | | 3 |
| **238910** | Site Preparation Contractors | 19 | | | | | 0 | 5 | | | 24 |
| **238990** | All Other Specialty Trade Contractors | 37 | | | | | 0 | 1 | 7 | | 45 |
| **311119** | Other Animal Food Manufacturing | | 1 | | | | 0 | 0 | | | 1 |
| **311211** | Flour Milling | | | | | | 0 | 0 | 2 | | 2 |
| **311352** | Confectionery Manufacturing from Purchased Chocolate | | 2 | | | | 0 | 0 | 1 | | 3 |
| **311411** | Frozen Fruit, Juice, and Vegetable Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **311412** | Frozen Specialty Food Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **311422** | Specialty Canning | | | | | | 0 | 0 | 1 | | 1 |
| **311511** | Fluid Milk Manufacturing | | | 2 | | | 0 | 0 | 2 | | 4 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **311611** | Animal (except Poultry) Slaughtering | | | 1 | | | 0 | 0 | 23 | 1 | 25 |
| **311612** | Meat Processed from Carcasses | | 9 | 1 | | | 3 | 1 | | | 14 |
| **311613** | Rendering and Meat Byproduct Processing | | | | | | 0 | 0 | 6 | | 6 |
| **311812** | Commercial Bakeries | | 7 | 3 | | 2 | 2 | 0 | 8 | 2 | 24 |
| **311824** | Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour | | | | | | 0 | 0 | 2 | 1 | 3 |
| **311919** | Other Snack Food Manufacturing | | | 1 | | | 3 | 1 | 3 | 1 | 9 |
| **311920** | Coffee and Tea Manufacturing | | 5 | | | | 0 | 0 | | | 5 |
| **311930** | Flavoring Syrup and Concentrate Manufacturing | | | 8 | | | 0 | 0 | 4 | 1 | 13 |
| **311942** | Spice and Extract Manufacturing | | 8 | | | 2 | 0 | 0 | | 1 | 11 |
| **311991** | Perishable Prepared Food Manufacturing | | | | | | 4 | 0 | 5 | | 9 |
| **311999** | All Other Miscellaneous Food Manufacturing | | 2 | | | | 0 | 0 | 3 | | 5 |
| **312120** | Breweries | | | 15 | | | 0 | 0 | | | 15 |
| **312140** | Distilleries | | | | | | 0 | 1 | 14 | | 15 |
| **312230** | Tobacco Manufacturing | 1 | | | | 1 | 0 | 0 | 2 | | 4 |
| **313210** | Broadwoven Fabric Mills | | | | | | 3 | 0 | | 1 | 4 |
| **313310** | Textile and Fabric Finishing Mills | | 2 | 3 | | | 2 | 0 | 16 | 3 | 26 |
| **313320** | Fabric Coating Mills | | | | | | 2 | 0 | 3 | | 5 |
| **314999** | All Other Miscellaneous Textile Product Mills | | | | | | 0 | 0 | 2 | | 2 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **315220** | Men's and Boys' Cut and Sew Apparel Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **315240** | Women's, Girls', and Infants' Cut and Sew Apparel Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **316998** | All Other Leather Good and Allied Product Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **321114** | Wood Preservation | | 13 | | | | 0 | 0 | | | 13 |
| **321920** | Wood Container and Pallet Manufacturing | | 3 | 1 | | | 0 | 0 | | | 4 |
| **321991** | Manufactured Home (Mobile Home) Manufacturing | | | 8 | | | 0 | 0 | | | 8 |
| **322130** | Paperboard Mills | | | | | | 0 | 0 | 4 | | 4 |
| **322211** | Corrugated and Solid Fiber Box Manufacturing | | 3 | | | | 1 | 0 | 9 | | 13 |
| **322212** | Folding Paperboard Box Manufacturing | | | | | | 1 | 2 | 2 | | 5 |
| **322220** | Paper Bag and Coated and Treated Paper Manufacturing | | | | | 1 | 11 | 0 | 2 | 1 | 15 |
| **322299** | All Other Converted Paper Product Manufacturing | 1 | | | | | 0 | 0 | | | 1 |
| **323111** | Commercial Printing (except Screen and Books) | | 3 | 11 | | | 2 | 0 | 19 | 1 | 36 |
| **323113** | Commercial Screen Printing | | | | | | 0 | 0 | 1 | | 1 |
| **324110** | Petroleum Refineries | | | 31 | | 6 | 40 | 12 | 42 | 31 | 162 |
| **324121** | Asphalt Paving Mixture and Block Manufacturing | | | 3 | | 2 | 3 | 0 | 17 | 3 | 28 |
| **324122** | Asphalt Shingle and Coating Materials Manufacturing | | 1 | | | | 3 | 1 | 8 | 4 | 17 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **324191** | Petroleum Lubricating Oil and Grease Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **325110** | Petrochemical Manufacturing | | 1 | | | | 0 | 2 | 6 | | 9 |
| **325120** | Industrial Gas Manufacturing | | | | | | 2 | 2 | 3 | 6 | 13 |
| **325180** | Other Basic Inorganic Chemical Manufacturing | | | | | | 0 | 0 | 4 | | 4 |
| **325211** | Plastics Material and Resin Manufacturing | | 13 | 3 | | | 0 | 0 | 5 | 1 | 22 |
| **325212** | Synthetic Rubber Manufacturing | | | 9 | | | 0 | 4 | | | 13 |
| **325311** | Nitrogenous Fertilizer Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **325320** | Pesticide and Other Agricultural Chemical Manufacturing | 2 | | | | | 0 | 1 | 4 | | 7 |
| **325411** | Medicinal and Botanical Manufacturing | 1 | | | | | 0 | 3 | | | 4 |
| **325412** | Pharmaceutical Preparation Manufacturing | 2 | | 6 | | | 0 | 1 | 11 | 1 | 21 |
| **325414** | Biological Product (except Diagnostic) Manufacturing | | | | | | 0 | 1 | 1 | 1 | 3 |
| **325510** | Paint and Coating Manufacturing | | | 3 | | | 2 | 0 | 8 | | 13 |
| **325520** | Adhesive Manufacturing | | | 2 | | | 0 | 2 | 8 | | 12 |
| **325611** | Soap and Other Detergent Manufacturing | 1 | 42 | | | | 0 | 0 | | | 43 |
| **325612** | Polish and Other Sanitation Good Manufacturing | | | | | | 0 | 0 | 2 | | 2 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **325613** | Surface Active Agent Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **325620** | Toilet Preparation Manufacturing | | | | | | 0 | 2 | 26 | | 28 |
| **325910** | Printing Ink Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **325998** | All Other Miscellaneous Chemical Product and Preparation Manufacturing | | | | | | 0 | 0 | 4 | | 4 |
| **326111** | Plastics Bag and Pouch Manufacturing | | | | | | 0 | 1 | 6 | 1 | 8 |
| **326112** | Plastics Packaging Film and Sheet (including Laminated) Manufacturing | | | | | | 2 | 1 | | | 3 |
| **326113** | Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing | | 16 | | | | 0 | 0 | | 1 | 17 |
| **326121** | Unlaminated Plastics Profile Shape Manufacturing | | 10 | | | | 0 | 0 | 1 | 1 | 12 |
| **326122** | Plastics Pipe and Pipe Fitting Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **326140** | Polystyrene Foam Product Manufacturing | 2 | | | | | 0 | 0 | | 1 | 3 |
| **326150** | Urethane and Other Foam Product (except Polystyrene) Manufacturing | | | 1 | | | 0 | 0 | 1 | | 2 |
| **326199** | All Other Plastics Product Manufacturing | | | | | 2 | 1 | 1 | 32 | 2 | 38 |
| **326212** | Tire Retreading | | 6 | | | | 0 | 0 | | | 6 |
| **326299** | All Other Rubber Product Manufacturing | | | | | | 0 | 0 | 4 | | 4 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **327110** | Pottery, Ceramics, and Plumbing Fixture Manufacturing | | | | | | 2 | 0 | 2 | | 4 |
| **327213** | Glass Container Manufacturing | | | | | | 0 | 0 | 4 | 1 | 5 |
| **327215** | Glass Product Manufacturing Made of Purchased Glass | | | 1 | | | 0 | 0 | | | 1 |
| **327310** | Cement Manufacturing | | | 1 | | | 0 | 0 | 3 | | 4 |
| **327320** | Ready-Mix Concrete Manufacturing | | 6 | | | | 2 | 0 | 25 | | 33 |
| **327332** | Concrete Pipe Manufacturing | | | | | | 0 | 0 | | 1 | 1 |
| **327390** | Other Concrete Product Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **327420** | Gypsum Product Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **327991** | Cut Stone and Stone Product Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **331210** | Iron and Steel Pipe and Tube Manufacturing from Purchased Steel | | | | | | 0 | 3 | 12 | | 15 |
| **331221** | Rolled Steel Shape Manufacturing | 1 | | | | | 0 | 0 | 1 | | 2 |
| **331318** | Other Aluminum Rolling, Drawing, and Extruding | | 2 | | | | 0 | 1 | 1 | 1 | 5 |
| **331420** | Copper Rolling, Drawing, Extruding, and Alloying | | | | | | 0 | 0 | 2 | | 2 |
| **331492** | Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum) | 6 | | 2 | | | 3 | 0 | 4 | 1 | 16 |
| **331512** | Steel Investment Foundries | | 3 | | | | 0 | 1 | | | 4 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **331513** | Steel Foundries (except Investment) | | | | | | 0 | 1 | | | 1 |
| **331524** | Aluminum Foundries (except Die-Casting) | | 8 | | | | 0 | 1 | | 1 | 10 |
| **332111** | Iron and Steel Forging | | | 2 | | | 15 | 0 | 2 | | 19 |
| **332112** | Nonferrous Forging | | | | | | 3 | 1 | 11 | 2 | 17 |
| **332117** | Powder Metallurgy Part Manufacturing | | 4 | | | | 0 | 0 | | | 4 |
| **332216** | Saw Blade and Handtool Manufacturing | | | 1 | | | 0 | 1 | 8 | | 10 |
| **332311** | Prefabricated Metal Building and Component Manufacturing | 1 | | | | | 0 | 0 | | | 1 |
| **332312** | Fabricated Structural Metal Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **332313** | Plate Work Manufacturing | | 5 | | | | 0 | 0 | 1 | | 6 |
| **332321** | Metal Window and Door Manufacturing | | | 1 | | | 2 | 0 | 2 | | 5 |
| **332322** | Sheet Metal Work Manufacturing | | | | | | 1 | 1 | 3 | | 5 |
| **332410** | Power Boiler and Heat Exchanger Manufacturing | | 1 | | | | 0 | 0 | | | 1 |
| **332431** | Metal Can Manufacturing | | | | | | 0 | 0 | | 1 | 1 |
| **332510** | Hardware Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **332613** | Spring Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **332710** | Machine Shops | | 7 | 3 | | | 0 | 0 | 7 | | 17 |
| **332722** | Bolt, Nut, Screw, Rivet, and Washer Manufacturing | | | 4 | | | 2 | 0 | 5 | | 11 |
| **332811** | Metal Heat Treating | | | | | | 0 | 0 | 4 | 1 | 5 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **332812** | Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers | | | 1 | | | 1 | 0 | 13 | | 15 |
| **332813** | Electroplating, Plating, Polishing, Anodizing, and Coloring | | 2 | 17 | | | 18 | 4 | 40 | 1 | 82 |
| **332911** | Industrial Valve Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **332912** | Fluid Power Valve and Hose Fitting Manufacturing | | 2 | | | | 0 | 0 | 4 | | 6 |
| **332913** | Plumbing Fixture Fitting and Trim Manufacturing | 1 | | | | | 0 | 0 | 10 | | 11 |
| **332919** | Other Metal Valve and Pipe Fitting Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **332994** | Small Arms, Ordnance, and Ordnance Accessories Manufacturing | | | 4 | | | 0 | 0 | | | 4 |
| **332996** | Fabricated Pipe and Pipe Fitting Manufacturing | | 7 | | | | 0 | 0 | 1 | 1 | 9 |
| **332999** | All Other Miscellaneous Fabricated Metal Product Manufacturing | | | 1 | | | 0 | 0 | 8 | | 9 |
| **333111** | Farm Machinery and Equipment Manufacturing | | | | | | 0 | 0 | 3 | | 3 |
| **333132** | Oil and Gas Field Machinery and Equipment Manufacturing | | | 1 | | | 0 | 0 | 2 | | 3 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **333249** | Other Industrial Machinery Manufacturing | | | 1 | | | 0 | 0 | | | 1 |
| **333314** | Optical Instrument and Lens Manufacturing | | | | | | 1 | 0 | 2 | | 3 |
| **333316** | Photographic and Photocopying Equipment Manufacturing | | | | | | 0 | 2 | | | 2 |
| **333318** | Other Commercial and Service Industry Machinery Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **333414** | Heating Equipment (except Warm Air Furnaces) Manufacturing | 3 | | | | | 0 | 0 | | | 3 |
| **333514** | Special Die and Tool, Die Set, Jig, and Fixture Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **333911** | Pump and Pumping Equipment Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **333924** | Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing | | | | | | 2 | 0 | 2 | | 4 |
| **333994** | Industrial Process Furnace and Oven Manufacturing | | | | | | 0 | 0 | 5 | | 5 |
| **333999** | All Other Miscellaneous General Purpose Machinery Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **334118** | Computer Terminal and Other Computer Peripheral Equipment Manufacturing | | | | | | 0 | 0 | 1 | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **334220** | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing | | | | | | 0 | 0 | 2 | 2 | 4 |
| **334412** | Bare Printed Circuit Board Manufacturing | | 16 | | | | 0 | 0 | 1 | | 17 |
| **334413** | Semiconductor and Related Device Manufacturing | | | | | | 2 | 3 | 12 | | 17 |
| **334418** | Printed Circuit Assembly (Electronic Assembly) Manufacturing | | | 1 | | | 0 | 0 | 2 | | 3 |
| **334419** | Other Electronic Component Manufacturing | | | 2 | | | 2 | 0 | 2 | | 6 |
| **334510** | Electromedical and Electrotherapeutic Apparatus Manufacturing | | | 2 | | 1 | 1 | 3 | 11 | | 18 |
| **334511** | Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **334515** | Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals | 2 | | 23 | | | 0 | 0 | | | 25 |
| **334516** | Analytical Laboratory Instrument Manufacturing | | | 2 | | | 0 | 0 | 13 | | 15 |
| **334519** | Other Measuring and Controlling Device Manufacturing | 3 | | | | | 0 | 0 | 4 | | 7 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **334614** | Software and Other Prerecorded Compact Disc, Tape, and Record Reproducing | | 1 | | | | 0 | 0 | 10 | | 11 |
| **335121** | Residential Electric Lighting Fixture Manufacturing | | | | | | 0 | 0 | | 1 | 1 |
| **335122** | Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing | | | 1 | | | 0 | 0 | | | 1 |
| **335129** | Other Lighting Equipment Manufacturing | | 2 | | | | 0 | 0 | | | 2 |
| **335220** | Major Household Appliance Manufacturing | | | | | | 0 | 0 | 4 | | 4 |
| **335312** | Motor and Generator Manufacturing | | 1 | | | | 0 | 1 | | | 2 |
| **335314** | Relay and Industrial Control Manufacturing | 2 | | | | | 0 | 1 | | | 3 |
| **335911** | Storage Battery Manufacturing | | | 3 | | | 4 | 3 | 10 | | 20 |
| **335931** | Current-Carrying Wiring Device Manufacturing | | | | | | 0 | 0 | 2 | | 2 |
| **335932** | Noncurrent-Carrying Wiring Device Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **335991** | Carbon and Graphite Product Manufacturing | | | 1 | | | 0 | 0 | | | 1 |
| **335999** | All Other Miscellaneous Electrical Equipment and Component Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **336111** | Automobile Manufacturing | | | | | | 0 | 0 | 1 | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **336211** | Motor Vehicle Body Manufacturing | | 2 | | | | 0 | 0 | 3 | | 5 |
| **336390** | Other Motor Vehicle Parts Manufacturing | | | 4 | | | 0 | 0 | 1 | | 5 |
| **336411** | Aircraft Manufacturing | 1 | | 4 | | | 10 | 2 | 21 | 6 | 44 |
| **336412** | Aircraft Engine and Engine Parts Manufacturing | | | | | | 4 | 6 | 9 | 1 | 20 |
| **336413** | Other Aircraft Parts and Auxiliary Equipment Manufacturing | 1 | | 3 | | | 6 | 0 | 10 | | 20 |
| **336414** | Guided Missile and Space Vehicle Manufacturing | | | 1 | | | 0 | 0 | 22 | | 23 |
| **336419** | Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing | | | | | | 1 | 0 | 2 | 4 | 7 |
| **336991** | Motorcycle, Bicycle, and Parts Manufacturing | 1 | | | | | 0 | 0 | 1 | | 2 |
| **337110** | Wood Kitchen Cabinet and Countertop Manufacturing | | 1 | | | | 0 | 1 | 1 | 1 | 4 |
| **337122** | Nonupholstered Wood Household Furniture Manufacturing | | | | | | 1 | 0 | 6 | 1 | 8 |
| **337125** | Household Furniture (except Wood and Metal) Manufacturing | | 1 | | | | 0 | 0 | | | 1 |
| **337212** | Custom Architectural Woodwork and Millwork Manufacturing | | 2 | | | | 0 | 0 | | | 2 |
| **337215** | Showcase, Partition, Shelving, and Locker Manufacturing | | | 1 | | | 1 | 0 | 2 | | 4 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **337910** | Mattress Manufacturing | | | | | | 0 | 0 | 10 | | 10 |
| **339112** | Surgical and Medical Instrument Manufacturing | | | | | | 0 | 1 | 9 | | 10 |
| **339113** | Surgical Appliance and Supplies Manufacturing | 3 | 2 | | | | 0 | 0 | | | 5 |
| **339114** | Dental Equipment and Supplies Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **339115** | Ophthalmic Goods Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **339920** | Sporting and Athletic Goods Manufacturing | | | | | | 0 | 0 | 1 | | 1 |
| **339950** | Sign Manufacturing | | | | | | 2 | 0 | 15 | | 17 |
| **339992** | Musical Instrument Manufacturing | | | | | | 1 | 0 | 2 | | 3 |
| **339999** | All Other Miscellaneous Manufacturing | 42 | | | | | 0 | 0 | 5 | | 47 |
| **423110** | Automobile and Other Motor Vehicle Merchant Wholesalers | | | | | | 0 | 0 | 1 | | 1 |
| **423120** | Motor Vehicle Supplies and New Parts Merchant Wholesalers | | | | | | 0 | 0 | 1 | | 1 |
| **423130** | Tire and Tube Merchant Wholesalers | | | | | | 0 | 0 | 1 | | 1 |
| **423220** | Home Furnishing Merchant Wholesalers | | | | | | 0 | 0 | 1 | | 1 |
| **423310** | Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers | | | | | | 0 | 0 | 4 | | 4 |
| **423320** | Brick, Stone, and Related Construction Material Merchant Wholesalers | 1 | | | | | 0 | 0 | 24 | | 25 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **423420** | Office Equipment Merchant Wholesalers | | | | | | 0 | 1 | | | 1 |
| **423440** | Other Commercial Equipment Merchant Wholesalers | 20 | | | | | 0 | 0 | | | 20 |
| **423450** | Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers | | | | | | 4 | 0 | 1 | | 5 |
| **423510** | Metal Service Centers and Other Metal Merchant Wholesalers | | 12 | | | | 0 | 4 | 2 | 2 | 20 |
| **423610** | Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers | 1 | 1 | | | | 0 | 0 | | | 2 |
| **423690** | Other Electronic Parts and Equipment Merchant Wholesalers | | | | | | 0 | 1 | | | 1 |
| **423720** | Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers | 7 | | 3 | | | 0 | 0 | | | 10 |
| **423740** | Refrigeration Equipment and Supplies Merchant Wholesalers | | | 1 | | | 0 | 0 | | | 1 |
| **423810** | Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers | 3 | | | | | 0 | 0 | 1 | | 4 |
| **423830** | Industrial Machinery and Equipment Merchant Wholesalers | | 1 | 1 | | | 0 | 0 | 1 | | 3 |
| **423840** | Industrial Supplies Merchant Wholesalers | | | | | | 0 | 1 | 1 | | 2 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **423860** | Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers | | | | | | 4 | 0 | | | 4 |
| **423920** | Toy and Hobby Goods and Supplies Merchant Wholesalers | | | 1 | | | 0 | 0 | | | 1 |
| **423930** | Recyclable Material Merchant Wholesalers | | | | | | 0 | 0 | 7 | | 7 |
| **423990** | Other Miscellaneous Durable Goods Merchant Wholesalers | | | | | | 0 | 0 | 2 | 1 | 3 |
| **424110** | Printing and Writing Paper Merchant Wholesalers | | 1 | | | | 0 | 0 | | | 1 |
| **424130** | Industrial and Personal Service Paper Merchant Wholesalers | | | | | | 0 | 0 | 4 | | 4 |
| **424210** | Drugs and Druggists' Sundries Merchant Wholesalers | | | | | | 0 | 4 | 2 | | 6 |
| **424310** | Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers | | 3 | | | | 0 | 0 | | 1 | 4 |
| **424410** | General Line Grocery Merchant Wholesalers | 1 | | | | 5 | 0 | 1 | 2 | | 9 |
| **424420** | Packaged Frozen Food Merchant Wholesalers | | | | | | 0 | 0 | 1 | | 1 |
| **424430** | Dairy Product (except Dried or Canned) Merchant Wholesalers | | | | | | 0 | 0 | 1 | | 1 |
| **424480** | Fresh Fruit and Vegetable Merchant Wholesalers | | | | | | 0 | 0 | 1 | | 1 |
| **424490** | Other Grocery and Related Products Merchant Wholesalers | | | | | | 0 | 0 | 1 | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **424590** | Other Farm Product Raw Material Merchant Wholesalers | | | 1 | | | 0 | 0 | 3 | | 4 |
| **424690** | Other Chemical and Allied Products Merchant Wholesalers | 1 | 2 | | | | 0 | 0 | 5 | | 8 |
| **424710** | Petroleum Bulk Stations and Terminals | | 1 | 2 | | 2 | 3 | 3 | 7 | 3 | 21 |
| **424720** | Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals) | | | | | | 0 | 2 | 6 | | 8 |
| **424810** | Beer and Ale Merchant Wholesalers | | | | | | 0 | 0 | 7 | | 7 |
| **424910** | Farm Supplies Merchant Wholesalers | | | | | | 0 | 0 | 4 | | 4 |
| **424990** | Other Miscellaneous Nondurable Goods Merchant Wholesalers | 1 | | 1 | | | 1 | 0 | | 1 | 4 |
| **441110** | New Car Dealers | | 4 | | | | 0 | 1 | 6 | | 11 |
| **441120** | Used Car Dealers | | | | 2 | | 0 | 0 | 3 | | 5 |
| **441228** | Motorcycle, ATV, and All Other Motor Vehicle Dealers | | | | | | 0 | 0 | 1 | | 1 |
| **441320** | Tire Dealers | | | 1 | | | 0 | 0 | 8 | | 9 |
| **442110** | Furniture Stores | | | | | | 0 | 0 | 2 | | 2 |
| **442210** | Floor Covering Stores | | | 2 | | | 0 | 0 | | | 2 |
| **443142** | Electronics Stores | | | | | | 0 | 3 | 1 | | 4 |
| **444110** | Home Centers | 1 | | | | | 0 | 0 | 2 | | 3 |
| **444130** | Hardware Stores | 1 | | 1 | | | 0 | 1 | 4 | | 7 |
| **445110** | Supermarkets and Other Grocery (except Convenience) Stores | 3 | 2 | 1 | | | 0 | 12 | 9 | | 27 |
| **445120** | Convenience Stores | | 1 | 2 | | | 1 | 0 | 18 | | 22 |
| **445291** | Baked Goods Stores | | | 1 | | | 0 | 0 | | | 1 |
| **445299** | All Other Specialty Food Stores | | 1 | | | | 0 | 0 | | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **445310** | Beer, Wine, and Liquor Stores | | 1 | | | | 0 | 1 | | | 2 |
| **447110** | Gasoline Stations with Convenience Stores | 1 | 203 | 6 | 1 | 1 | 7 | 6 | 149 | 1 | 375 |
| **447190** | Other Gasoline Stations | | 22 | 10 | | | 2 | 4 | 170 | 2 | 210 |
| **448140** | Family Clothing Stores | | | | | | 0 | 1 | 10 | | 11 |
| **448210** | Shoe Stores | | | | | | 0 | 1 | 14 | | 15 |
| **448310** | Jewelry Stores | | | | | | 0 | 0 | 1 | | 1 |
| **451110** | Sporting Goods Stores | | | | | | 0 | 0 | 2 | | 2 |
| **452111** | Department Stores (except Discount Department Stores) | | | | | | 0 | 1 | | | 1 |
| **452112** | Discount Department Stores – insignificant perishable grocery sales | | | | | | 0 | 5 | 1 | | 6 |
| **452210** | Department Stores | | | | | | 0 | 19 | | | 19 |
| **452311** | Warehouse Clubs and Supercenters | | | 3 | | 1 | 1 | 23 | 16 | | 44 |
| **452910** | Warehouse Clubs and Supercenters | | | | | 2 | 0 | 1 | 1 | | 4 |
| **453110** | Florists | | | | | | 0 | 0 | 1 | | 1 |
| **453220** | Gift, Novelty, and Souvenir Stores | | | | | | 0 | 1 | 3 | | 4 |
| **453310** | Used Merchandise Stores | | | | | | 0 | 1 | | | 1 |
| **453991** | Tobacco Stores | | | | | | 0 | 0 | 1 | | 1 |
| **453998** | All Other Miscellaneous Store Retailers (except Tobacco Stores) | | 1 | | | | 0 | 3 | 4 | | 8 |
| **454110** | Electronic Shopping and Mail-Order Houses | 1 | | | | | 0 | 0 | | | 1 |
| **454310** | Fuel Dealers | | 3 | | | | 0 | 0 | 3 | | 6 |
| **454390** | Other Direct Selling Establishments | | | | | | 0 | 0 | 1 | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **482111** | Line-Haul Railroads | | | | | | 0 | 1 | | | 1 |
| **483211** | Inland Water Freight Transportation | | 3 | | | | 0 | 0 | | | 3 |
| **484110** | General Freight Trucking, Local | | | | | | 0 | 0 | 3 | | 3 |
| **484121** | General Freight Trucking, Long-Distance, Truckload | 2 | | | | | 0 | 2 | | | 4 |
| **485112** | Commuter Rail Systems | | | | | | 0 | 0 | 1 | | 1 |
| **485113** | Bus and Other Motor Vehicle Transit Systems | 2 | | | | | 0 | 0 | 1 | | 3 |
| **485310** | Taxi Service | | 4 | | | | 0 | 1 | | | 5 |
| **485999** | All Other Transit and Ground Passenger Transportation | | | | | | 0 | 0 | 1 | | 1 |
| **486110** | Pipeline Transportation of Crude Oil | | 2 | | | | 0 | 2 | 4 | 4 | 12 |
| **486210** | Pipeline Transportation of Natural Gas | 7 | | | | | 11 | 1 | 2 | 4 | 25 |
| **486910** | Pipeline Transportation of Refined Petroleum Products | | | | | | 2 | 2 | 2 | | 6 |
| **487110** | Scenic and Sightseeing Transportation, Land | | | | | | 0 | 0 | 1 | | 1 |
| **488111** | Air Traffic Control | | 9 | | | | 0 | 0 | 2 | | 11 |
| **488119** | Other Airport Operations | | 2 | 1 | | | 0 | 0 | 3 | 1 | 7 |
| **488190** | Other Support Activities for Air Transportation | | | | | | 0 | 0 | 6 | 2 | 8 |
| **488210** | Support Activities for Rail Transportation | | | | | | 0 | 0 | 2 | | 2 |
| **488310** | Port and Harbor Operations | | | | | | 0 | 2 | 3 | | 5 |
| **488320** | Marine Cargo Handling | | | | | | 0 | 0 | 1 | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **488510** | Freight Transportation Arrangement | | | | | | 0 | 2 | 1 | | 3 |
| **488999** | All Other Support Activities for Transportation | 1 | | 2 | | | 1 | 1 | 1 | | 6 |
| **491110** | Postal Service | | | | | | 0 | 2 | | | 2 |
| **492110** | Couriers and Express Delivery Services | | | | | | 0 | 0 | 1 | | 1 |
| **492210** | Local Messengers and Local Delivery | | | | | | 0 | 0 | 2 | | 2 |
| **493110** | General Warehousing and Storage | 6 | 6 | | | | 0 | 0 | 5 | 1 | 18 |
| **493120** | Refrigerated Warehousing and Storage | | 4 | | | | 0 | 0 | | | 4 |
| **493190** | Other Warehousing and Storage | | | | | | 0 | 0 | 8 | | 8 |
| **511210** | Software Publishers | | | | | | 0 | 0 | 1 | | 1 |
| **512110** | Motion Picture and Video Production | 1 | 1 | 2 | | | 0 | 3 | 8 | | 15 |
| **512120** | Motion Picture and Video Distribution | | | | | | 0 | 0 | 3 | | 3 |
| **512131** | Motion Picture Theaters (except Drive-Ins) | | | | | | 0 | 1 | | | 1 |
| **512210** | Record Production | | | | | | 0 | 1 | | | 1 |
| **515112** | Radio Stations | | | | | | 0 | 1 | | | 1 |
| **515120** | Television Broadcasting | | | | | | 0 | 2 | | | 2 |
| **517311** | Wired Telecommunications Carriers | 9 | | | | | 0 | 0 | | | 9 |
| **517312** | Wireless Telecommunications Carriers (except Satellite) | 11 | | | | | 0 | 0 | 3 | | 14 |
| **517911** | Telecommunications Resellers | | | | | | 0 | 3 | 1 | | 4 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **517919** | All Other Telecommunications | 2 | | | | | 0 | 1 | | | 3 |
| **518210** | Data Processing, Hosting, and Related Services | | 8 | | | | 0 | 2 | | | 10 |
| **519120** | Libraries and Archives | | | | | | 0 | 6 | | | 6 |
| **522110** | Commercial Banking | | | | | | 0 | 2 | | | 2 |
| **522130** | Credit Unions | | | | | | 0 | 0 | 1 | | 1 |
| **522292** | Real Estate Credit | | | | | | 0 | 1 | | | 1 |
| **522298** | All Other Nondepository Credit Intermediation | | | | | | 0 | 0 | 1 | | 1 |
| **522310** | Mortgage and Nonmortgage Loan Brokers | | | | | | 0 | 0 | 2 | | 2 |
| **523910** | Miscellaneous Intermediation | | | | | | 0 | 4 | 6 | | 10 |
| **523930** | Investment Advice | | | | | | 0 | 1 | | | 1 |
| **523991** | Trust, Fiduciary, and Custody Activities | 2 | | | | | 0 | 1 | | | 3 |
| **524113** | Direct Life Insurance Carriers | 1 | | | | | 0 | 0 | 1 | | 2 |
| **524114** | Direct Health and Medical Insurance Carriers | 1 | | | | | 0 | 2 | 1 | | 4 |
| **524126** | Direct Property and Casualty Insurance Carriers | | | | | | 0 | 1 | | | 1 |
| **524210** | Insurance Agencies and Brokerages | 1 | | | | | 0 | 0 | 1 | | 2 |
| **525110** | Pension Funds | 1 | | | | | 0 | 0 | | | 1 |
| **525920** | Trusts, Estates, and Agency Accounts | | | | | | 0 | 1 | 2 | | 3 |
| **525990** | Other Financial Vehicles | | | | | | 0 | 1 | 4 | | 5 |
| **531110** | Lessors of Residential Buildings and Dwellings | 2 | 12 | 1 | | | 0 | 3 | 10 | | 28 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **531120** | Lessors of Nonresidential Buildings (except Miniwarehouses) | | 6 | 1 | | | 0 | 2 | 10 | | 19 |
| **531130** | Lessors of Miniwarehouses and Self-Storage Units | 1 | | | | | 0 | 0 | | | 1 |
| **531190** | Lessors of Other Real Estate Property | | | | | | 0 | 1 | 2 | | 3 |
| **531210** | Offices of Real Estate Agents and Brokers | 3 | | | | | 0 | 3 | 9 | | 15 |
| **531312** | Nonresidential Property Managers | | | | | | 2 | 1 | 5 | | 8 |
| **532111** | Passenger Car Rental | | | | | | 0 | 1 | 5 | | 6 |
| **532120** | Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing | | | | | | 0 | 0 | 3 | | 3 |
| **532220** | Formal Wear and Costume Rental | | | 1 | | | 0 | 0 | | | 1 |
| **532412** | Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing | 1 | | | | | 0 | 0 | 2 | | 3 |
| **532490** | Other Commercial and Industrial Machinery and Equipment Rental and Leasing | 9 | | 1 | | | 0 | 0 | 13 | | 23 |
| **541110** | Offices of Lawyers | | | 1 | | | 0 | 1 | | | 2 |
| **541213** | Tax Preparation Services | 2 | | | | | 0 | 0 | | | 2 |
| **541310** | Architectural Services | | | | | | 0 | 0 | 1 | | 1 |
| **541320** | Landscape Architectural Services | 1 | | | | | 0 | 0 | | | 1 |
| **541330** | Engineering Services | 1 | | 6 | | | 4 | 3 | 5 | | 19 |
| **541380** | Testing Laboratories | 8 | | 2 | 2 | | 0 | 1 | 1 | | 14 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **541430** | Graphic Design Services | 1 | | | | | 0 | 0 | 1 | | 2 |
| **541511** | Custom Computer Programming Services | | | | | | 0 | 1 | | | 1 |
| **541512** | Computer Systems Design Services | | | | | | 0 | 1 | | | 1 |
| **541611** | Administrative Management and General Management Consulting Services | 4 | | 2 | | | 0 | 2 | 7 | 1 | 16 |
| **541612** | Human Resources Consulting Services | | | | | | 0 | 0 | 2 | | 2 |
| **541613** | Marketing Consulting Services | | 2 | | | 6 | 0 | 0 | | | 8 |
| **541614** | Process, Physical Distribution, and Logistics Consulting Services | | | | | | 0 | 0 | 1 | | 1 |
| **541618** | Other Management Consulting Services | 1 | | | | | 0 | 5 | 1 | | 7 |
| **541620** | Environmental Consulting Services | 38 | | 1 | | | 0 | 2 | 15 | | 56 |
| **541690** | Other Scientific and Technical Consulting Services | 1 | | | | | 0 | 1 | 5 | | 7 |
| **541711** | Research and Development in Biotechnology – nanobiotechnologies research and experimental development laboratories | 7 | | | | | 0 | 0 | | | 7 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **541712** | Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology) – nanotechnology research and experimental development laboratories | | | | | | 0 | 1 | 8 | | 9 |
| **541713** | Research and Development in Nanotechnology | 1 | | | | | 0 | 0 | | | 1 |
| **541714** | Research and Development in Biotechnology (except Nanobiotechnology) | | 1 | | | | 0 | 0 | | | 1 |
| **541715** | Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) | 2 | | | | | 0 | 1 | | | 3 |
| **541810** | Advertising Agencies | | | 2 | | | 0 | 1 | | | 3 |
| **541940** | Veterinary Services | 1 | | | | | 1 | 0 | 2 | | 4 |
| **541990** | All Other Professional, Scientific, and Technical Services | 63 | 3 | 1 | | | 0 | 3 | | 1 | 71 |
| **551112** | Offices of Other Holding Companies | 2 | 1 | | | | 0 | 0 | 4 | | 7 |
| **561110** | Office Administrative Services | 1 | | | | | 0 | 2 | 12 | | 15 |
| **561210** | Facilities Support Services | 18 | | | | | 0 | 0 | | | 18 |
| **561311** | Employment Placement Agencies | 1 | | 5 | | | 0 | 0 | 2 | | 8 |
| **561312** | Executive Search Services | | | | | | 0 | 1 | | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **561499** | All Other Business Support Services | 1 | | | | 1 | 1 | 3 | 13 | | 19 |
| **561520** | Tour Operators | | 1 | | | | 0 | 0 | | | 1 |
| **561599** | All Other Travel Arrangement and Reservation Services | | | | | | 0 | 1 | 1 | | 2 |
| **561613** | Armored Car Services | | | | | | 0 | 1 | | | 1 |
| **561622** | Locksmiths | 1 | | | | | 0 | 0 | | | 1 |
| **561720** | Janitorial Services | 1 | | | | | 0 | 0 | 4 | | 5 |
| **561790** | Other Services to Buildings and Dwellings | | | | | | 0 | 0 | 1 | | 1 |
| **561990** | All Other Support Services | | | | | | 0 | 0 | 4 | | 4 |
| **562111** | Solid Waste Collection | | | 2 | | | 0 | 0 | 1 | | 3 |
| **562211** | Hazardous Waste Treatment and Disposal | | 4 | | | | 1 | 4 | 5 | | 14 |
| **562212** | Solid Waste Landfill | | | 1 | | 7 | 0 | 7 | 13 | | 28 |
| **562219** | Other Nonhazardous Waste Treatment and Disposal | | | | | | 0 | 0 | 5 | | 5 |
| **562910** | Remediation Services | 76 | | | | | 1 | 0 | 5 | | 82 |
| **562920** | Materials Recovery Facilities | | | 4 | | | 0 | 0 | 7 | | 11 |
| **562991** | Septic Tank and Related Services | | | 1 | | | 0 | 0 | | | 1 |
| **611110** | Elementary and Secondary Schools | 8 | | | | | 0 | 4 | 24 | | 36 |
| **611210** | Junior Colleges | 3 | | | | | 0 | 4 | | | 7 |
| **611310** | Colleges, Universities, and Professional Schools | 2 | | 1 | | | 0 | 25 | 31 | 1 | 60 |
| **611620** | Sports and Recreation Instruction | | | | | | 0 | 0 | 1 | | 1 |
| **621111** | Offices of Physicians (except Mental Health Specialists) | 5 | 1 | 1 | | | 0 | 4 | 4 | | 15 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **621112** | Offices of Physicians, Mental Health Specialists | | | | | | 0 | 0 | 1 | | 1 |
| **621330** | Offices of Mental Health Practitioners (except Physicians) | | | | | | 0 | 1 | | | 1 |
| **621340** | Offices of Physical, Occupational and Speech Therapists, and Audiologists | | | | | | 0 | 0 | 1 | | 1 |
| **621410** | Family Planning Centers | | | | | | 0 | 0 | 1 | | 1 |
| **621420** | Outpatient Mental Health and Substance Abuse Centers | | | | | | 0 | 2 | | | 2 |
| **621491** | HMO Medical Centers | | | | | | 0 | 0 | | 1 | 1 |
| **621498** | All Other Outpatient Care Centers | | | | | | 0 | 0 | 1 | | 1 |
| **621511** | Medical Laboratories | 2 | | | | | 0 | 2 | 3 | | 7 |
| **621610** | Home Health Care Services | | | | | | 0 | 0 | 1 | | 1 |
| **621910** | Ambulance Services | | | | | | 0 | 1 | | | 1 |
| **621991** | Blood and Organ Banks | 2 | | | | | 0 | 0 | 2 | | 4 |
| **621999** | All Other Miscellaneous Ambulatory Health Care Services | 1 | | | | | 0 | 0 | 1 | | 2 |
| **622110** | General Medical and Surgical Hospitals | 7 | 11 | 4 | | | 0 | 19 | 25 | 2 | 68 |
| **622210** | Psychiatric and Substance Abuse Hospitals | | | | | | 2 | 0 | 2 | 2 | 6 |
| **622310** | Specialty (except Psychiatric and Substance Abuse) Hospitals | | | | | | 0 | 1 | | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **623110** | Nursing Care Facilities (Skilled Nursing Facilities) | | 2 | | | | 0 | 0 | 2 | | 4 |
| **623210** | Residential Intellectual and Developmental Disability Facilities | | | | | | 0 | 0 | 1 | | 1 |
| **623311** | Continuing Care Retirement Communities | | | | | | 0 | 1 | 1 | | 2 |
| **623312** | Assisted Living Facilities for the Elderly | 1 | 1 | | | | 0 | 1 | | | 3 |
| **623990** | Other Residential Care Facilities | | | | | | 0 | 0 | 1 | | 1 |
| **624110** | Child and Youth Services | 1 | | | | | 0 | 0 | | | 1 |
| **624120** | Services for the Elderly and Persons with Disabilities | | | | | | 0 | 1 | 1 | | 2 |
| **624190** | Other Individual and Family Services | | | | | | 0 | 1 | 3 | | 4 |
| **624310** | Vocational Rehabilitation Services | | | | | | 1 | 1 | | | 2 |
| **624410** | Child Day Care Services | 1 | | | | | 0 | 0 | 1 | | 2 |
| **711110** | Theater Companies and Dinner Theaters | 1 | 1 | | | | 0 | 0 | | | 2 |
| **711190** | Other Performing Arts Companies | | | | | | 0 | 0 | 1 | | 1 |
| **711211** | Sports Teams and Clubs | 1 | | | | | 0 | 1 | | | 2 |
| **711410** | Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures | 1 | | | | | 0 | 0 | | | 1 |
| **712130** | Zoos and Botanical Gardens | | | | | | 0 | 0 | 1 | | 1 |
| **713110** | Amusement and Theme Parks | | 1 | 1 | | | 5 | 0 | 6 | 1 | 14 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **713910** | Golf Courses and Country Clubs | | 3 | | | | 0 | 0 | 1 | | 4 |
| **713940** | Fitness and Recreational Sports Centers | | | | | | 0 | 3 | 6 | | 9 |
| **721110** | Hotels (except Casino Hotels) and Motels | 3 | 2 | | | | 0 | 5 | 10 | | 20 |
| **722320** | Caterers | 1 | | | | | 0 | 0 | 3 | | 4 |
| **722410** | Drinking Places (Alcoholic Beverages) | | | | | | 0 | 1 | | | 1 |
| **722511** | Full-Service Restaurants | 4 | | 1 | | | 0 | 1 | 7 | | 13 |
| **722513** | Limited-Service Restaurants | 6 | | | 1 | | 0 | 1 | 5 | | 13 |
| **811111** | General Automotive Repair | | 7 | | | | 0 | 0 | 23 | | 30 |
| **811112** | Automotive Exhaust System Repair | | 2 | | | | 0 | 0 | 1 | | 3 |
| **811118** | Other Automotive Mechanical and Electrical Repair and Maintenance | | 1 | | | | 1 | 0 | 2 | | 4 |
| **811121** | Automotive Body, Paint, and Interior Repair and Maintenance | | 54 | 6 | | | 2 | 1 | 69 | 1 | 133 |
| **811192** | Car Washes | | | | 2 | | 0 | 0 | 6 | | 8 |
| **811198** | All Other Automotive Repair and Maintenance | | | | 1 | | 0 | 0 | 1 | | 2 |
| **811211** | Consumer Electronics Repair and Maintenance | | | | | | 0 | 0 | 2 | | 2 |
| **811219** | Other Electronic and Precision Equipment Repair and Maintenance | | | | | | 0 | 0 | 2 | | 2 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **811310** | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | | | | | | 0 | 0 | 5 | | 5 |
| **811412** | Appliance Repair and Maintenance | 2 | | | | | 0 | 0 | 1 | | 3 |
| **811420** | Reupholstery and Furniture Repair | | | | | | 0 | 0 | 1 | | 1 |
| **812210** | Funeral Homes and Funeral Services | | | | | | 1 | 0 | 3 | | 4 |
| **812220** | Cemeteries and Crematories | | 3 | | | | 1 | 0 | 7 | | 11 |
| **812320** | Drycleaning and Laundry Services (except Coin-Operated) | | 15 | | | | 0 | 0 | 60 | | 75 |
| **812921** | Photofinishing Laboratories (except One-Hour) | | | | | | 0 | 7 | | | 7 |
| **812990** | All Other Personal Services | | 1 | | | | 0 | 0 | | | 1 |
| **813110** | Religious Organizations | 1 | | | | | 0 | 3 | 2 | | 6 |
| **813410** | Civic and Social Organizations | 1 | | | | | 0 | 0 | 1 | | 2 |
| **813910** | Business Associations | | | 1 | | | 0 | 0 | | | 1 |
| **813920** | Professional Organizations | | | | | | 0 | 0 | 1 | | 1 |
| **813990** | Other Similar Organizations (except Business, Professional, Labor, and Political Organizations) | 2 | | | | | 0 | 1 | 2 | | 5 |
| **921110** | Executive Offices | 6 | | 1 | 2 | | 0 | 6 | 12 | | 27 |
| **921120** | Legislative Bodies | | | | | | 0 | 1 | | | 1 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **921190** | Other General Government Support | 12 | 3 | | | | 0 | 3 | 13 | 1 | 32 |
| **922110** | Courts | 1 | | | | | 0 | 1 | 2 | | 4 |
| **922120** | Police Protection | 5 | | | | | 0 | 2 | 26 | 1 | 34 |
| **922130** | Legal Counsel and Prosecution | | | | | | 0 | 1 | | | 1 |
| **922140** | Correctional Institutions | | | | | | 0 | 6 | 7 | | 13 |
| **922150** | Parole Offices and Probation Offices | | | | | | 0 | 1 | | | 1 |
| **922160** | Fire Protection | 3 | | | | | 0 | 2 | 1 | | 6 |
| **922190** | Other Justice, Public Order, and Safety Activities | 1 | | | | | 0 | 0 | | | 1 |
| **923120** | Administration of Public Health Programs | | | | | | 0 | 1 | | | 1 |
| **923130** | Administration of Human Resource Programs (except Education, Public Health, and Veterans' Affairs Programs) | | | | | | 0 | 1 | 1 | | 2 |
| **924110** | Administration of Air and Water Resource and Solid Waste Management Programs | | | | 2 | | 0 | 0 | 4 | | 6 |
| **924120** | Administration of Conservation Programs | 1 | | | | | 0 | 0 | 1 | | 2 |
| **925110** | Administration of Housing Programs | 1 | | | | | 0 | 0 | | | 1 |
| **926110** | Administration of General Economic Programs | | | | | | 0 | 1 | | | 1 |
| **926120** | Regulation and Administration of | 3 | | 1 | | | 1 | 1 | | | 6 |

Table 2-Calendar Year 2021-Disposition Type by NAICS Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transportation Programs | | | | | | | | | | |
| **926130** | Regulation and Administration of Communications, Electric, Gas, and Other Utilities | | | 2 | | 2 | 1 | 0 | 4 | 2 | 11 |
| **928110** | National Security | | | | | | 0 | 1 | 6 | | 7 |
| **#N/A** | #N/A | 206 | 102 | 52 | | 4 | 7 | 30 | 217 | 1 | 619 |
| **Grand Total** | | **885** | **815** | **433** | **13** | **49** | **259** | **504** | **2376** | **151** | **5485** |

**Annualized Publication of Emission Reduction Credit (ERC) And Short Term Emission Reduction Credit (STERC) Transactions for Fiscal Year 2020-21[1] (California Health and Safety Code Section 40452)**

Pursuant to paragraph (c) of section 40452 of the California Health and Safety Code, this report summarizes data on emission offset transactions and applications, by pollutant, during the previous fiscal year. Note that during Fiscal Year 2020-21, no applications were denied for a permit for a new source for the reason of failure to provide the required emission offsets.

Table 3 summarizes privately held Emission Reduction Credit (ERC) and Short-Term Emission Reduction Credit (STERC) transactions for Fiscal Year 2020-21, including totals, by pollutant, of the number of emission offset transactions and the quantity of emission offsets transferred in units of pounds per day and tons per year. Table 4 summarizes ERC banking applications processed during Fiscal Year 2020-21, including the number of newly generated STERCs by pollutant in units of pounds per day and tons per year.

Tables 4 and 5 provide details on the amount of each emission offset transaction and processed ERC banking application, respectively.

**Table 3: Emission Offset Transactions – Fiscal Year 2020-21**

| Criteria Pollutant | Number of Emission Offset Transfer Transactions[2] | | | | Quantity of Emission Offsets Transferred[3] (lb/day) | | | | Annualized Quantity of Emission Offsets Transferred[3] (ton/year[4]) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ERC | STERC[5] | STERC[6] | TOTAL | ERC | STERC[5] | STERC[6] | TOTAL | ERC | STERC[5] | STERC[6] | TOTAL |
| ROG | 15 | 6 | 0 | 21 | 349 | 44 | 0 | 393 | 63.7 | 8 | 0 | 71.7 |
| NOX | 3 | 0 | 0 | 3 | 5 | 0 | 0 | 5 | 1 | 0 | 0 | 1 |
| SOX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM10 | 3 | 0 | 0 | 3 | 11 | 0 | 0 | 11 | 2 | 0 | 0 | 2 |

[1] This report does not include RECLAIM Trading Credit (RTC) transactions.
[2] Includes all emission offset certificates that transferred ownership.
[3] Includes the total amount of emission offsets transferred.
[4] Sum of individual transactions in Table 3.
[5] STERC transfer transactions including the long term emission offset, those that have an ending year of 9999.
[6] STERC transfer transactions not including the long term emission offset in which the emission offset with the greatest year is treated like a long term emission offset.

**Table 4: Emission Offset Applications – Fiscal Year 2020-21**

| Criteria Pollutant | Number of Banking Applications Resulting in the Issuance of New STERCs[7] | Quantity of Emission Reductions Achieved (STERCs)[8] (lb/day) | Annualized Quantity of Emission Reductions Achieved[8] (ton/year[9]) |
|---|---|---|---|
| ROG | 0 | 0 | 0 |
| NOX | 0 | 0 | 0 |
| SOX | 0 | 0 | 0 |
| CO | 0 | 0 | 0 |
| PM10 | 0 | 0 | 0 |

**Table 4: Emission Offset Transaction Summary – Fiscal Year 2020-21**
**Sorted by Pollutant and Amount**

| SCAQMD NO. | POLLUTANT | AMOUNT (LB/DAY) | AMOUNT (TON/YR) | TYPE | START YEAR | END YEAR |
|---|---|---|---|---|---|---|
| SC2021-001 | ROG | 2 | 0.4 | ERC | N/A | N/A |
| SC2021-002 | ROG | 13 | 2.4 | ERC | N/A | N/A |
| SC2021-003 | ROG | 4 | 0.7 | ERC | N/A | N/A |
| SC2021-004 | ROG | 6 | 1.1 | ERC | N/A | N/A |
| SC2021-005 | ROG | 4 | 0 | STERC | 2020 | 2020 |
| SC2021-006 | ROG | 4 | 0.7 | STERC | 2021 | 9999 |
| SC2021-007 | ROG | 17 | 3.1 | STERC | 2021 | 9999 |
| SC2021-008 | ROG | 1 | 0.2 | ERC | N/A | N/A |
| SC2021-009 | ROG | 150 | 27.4 | ERC | N/A | N/A |
| SC2021-010 | ROG | 2 | 0.4 | STERC | 2011 | 9999 |
| SC2021-011 | ROG | 11 | 2 | STERC | 2021 | 9999 |
| SC2021-012 | ROG | 1 | 0.2 | ERC | N/A | N/A |
| SC2021-013 | ROG | 1 | 0.2 | ERC | N/A | N/A |
| SC2021-014 | ROG | 5 | 0.9 | STERC | 2021 | 9999 |

[7] Includes all emission offset applications resulting in the generation of new certificates.
[8] Includes the total amount of emission offsets generated.
[9] Sum of individual transactions in Table 4.

| SCAQMD NO. | POLLUTANT | AMOUNT (LB/DAY) | AMOUNT (TON/YR) | TYPE | START YEAR | END YEAR |
|---|---|---|---|---|---|---|
| SC2021-015 | ROG | 5 | 0.9 | STERC | 2021 | 9999 |
| SC2021-016 | ROG | 1 | 0.2 | ERC | N/A | N/A |
| SC2021-017 | ROG | 1 | 0.2 | ERC | N/A | N/A |
| SC2021-018 | ROG | 66 | 12 | ERC | N/A | N/A |
| SC2021-019 | ROG | 33 | 6 | ERC | N/A | N/A |
| SC2021-020 | ROG | 1 | 0.2 | ERC | N/A | N/A |
| SC2021-021 | ROG | 3 | 0.5 | ERC | N/A | N/A |
| SC2021-022 | ROG | 66 | 12 | ERC | N/A | N/A |
| **Total** | | **397** | **71.7** | **N/A** | | |

**Table 4, Continued**

| SCAQMD NO. | POLLUTANT | AMOUNT (LB/DAY) | AMOUNT (TON/YR) | TYPE | START YEAR | END YEAR |
|---|---|---|---|---|---|---|
| SC1920-023 | NOX | 1 | 0.2 | ERC | N/A | N/A |
| SC1920-024 | NOX | 2 | 0.4 | ERC | N/A | N/A |
| SC1920-025 | NOX | 2 | 0.4 | ERC | N/A | N/A |
| **Total** | | **5** | **1** | **N/A** | | |

**Table 4, Continued**

| SCAQMD NO. | POLLUTANT | AMOUNT (LB/DAY) | AMOUNT (TON/YR) | TYPE | START YEAR | END YEAR |
|---|---|---|---|---|---|---|
| N/A | SOX | No Records | | | | |
| **Total** | | **181** | **33** | **N/A** | | |

**Table 4, Continued**

| SCAQMD NO. | POLLUTANT | AMOUNT (LB/DAY) | AMOUNT (TON/YR) | TYPE | START YEAR | END YEAR |
|---|---|---|---|---|---|---|
| N/A | CO | No Records | | | | |
| **Total** | | **0** | **0** | **N/A** | | |

**Table 4, Continued**

| SCAQMD NO. | POLLUTANT | AMOUNT (LB/DAY) | AMOUNT (TON/YR) | TYPE | START YEAR | END YEAR |
|---|---|---|---|---|---|---|
| SC2021-026 | PM10 | 1 | 0.2 | ERC | N/A | N/A |
| SC2021-027 | PM10 | 7 | 1.3 | ERC | N/A | N/A |
| SC2021-028 | PM10 | 3 | 0.5 | ERC | N/A | N/A |
| **Total** | | **11** | **2** | **N/A** | | |

**Table 5: Emission Offset Application Summary – Fiscal Year 2020-21**
**Sorted by Pollutant and Amount**

| SCAQMD NO. | POLLUTANT | AMOUNT[10] (LB/DAY) | AMOUNT[10] (TON/YR) | TYPE | START YEAR | END YEAR |
|---|---|---|---|---|---|---|
| N/A | No Records | | | | | |
| **Total** | | **N/A** | **N/A** | **N/A** | | |

[10] To avoid over counting, only long-term emission offsets, those that have an ending year of 9999, are quantified.

## CHAPTER III
## FISCAL YEAR 2022-2023 BUDGET

*Due to the bulk of these material, Chapter III is available online at Budget Cover Design 2022 (003).pdf (aqmd.gov). Anyone who would like to obtain a hard copy may do so by contacting South Coast AQMD's Public Information Center at (909)396-2001.*

## CHAPTER IV
## CLEAN FUELS PROGRAM 2021 ANNUAL REPORT AND 2022 PLAN UPDATE

*Due to the bulk of these material, Chapter IV is available online at Reports (aqmd.gov). Anyone who would like to obtain a hard copy may do so by contacting South Coast AQMD's Public Information Center at (909)396-2001.*

## CHAPTER V
## ANNUAL RECLAIM AUDIT REPORT FOR 2020 COMPLIANCE YEAR

*Due to the bulk of these material, Chapter V is available online at RECLAIM Annual Reports for each Compliance Year. Anyone who would like to obtain a hard copy may do so by contacting South Coast AQMD's Public Information Center at (909)396-2001.*