

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**Preliminary Draft Staff Report
Proposed Amended Rule 219 - Equipment Not Requiring A Written
Permit Pursuant To Regulation II**

**Proposed Amended Rule 222 - Filing Requirements for Specific
Emission Sources Not Requiring A
Written Permit Pursuant To
Regulation II**

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Deputy Executive Officer

Planning, Rule Development, and Area Sources
Philip Fine, Ph.D.

Acting Assistant Deputy Executive Officer

Planning, Rule Development, and Area Sources
Susan Nakamura

Planning and Rules Manager

Planning, Rule Development, and Area Sources
Tracy A. Goss, P.E.

Author:

Bob Gottschalk - Air Quality Specialist

Reviewed by:

David Ono – Program Supervisor
William Wong – Principal Deputy District Counsel

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EXECUTIVE OFFICER:

WAYNE NASTRI

TABLE OF CONTENTS

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY	ES-1
-------------------------	------

CHAPTER 1 – BACKGROUND ON PROPOSED AMENDED RULE 219

INTRODUCTION	1-1
REGULATORY HISTORY	1-1
AFFECTED INDUSTRIES	1-2

CHAPTER 2: SUMMARY OF PROPOSED AMENDED RULE 219

OVERVIEW: PROPOSED AMENDMENTS TO RULE 219	2-1
ADDITIONS AND MODIFICATIONS	
ENGINES USED AT REMOTE 2-WAY RADIO TRANSMISSION TOWERS	2-2
COMBUSTION EQUIPMENT	2-2
FUEL CELLS	2-3
PERP EQUIPMENT	2-4
SUB-SLAB VENTILATION SYSTEMS	2-5
COOLING TOWERS	2-7
WELDING, OXY/GAS FUEL CUTTING, LASER ETCHING AND ENGRAVING EQUIPMENT	2-8
SHREDDING OF WOOD PRODUCTS	2-9
EQUIPMENT FOR SEPARATING/SEGREGATION OF PLASTIC MATERIALS FOR RECYCLING	2-10
ULTRAVIOLET (UV) AND ELECTRON BEAM COATING AND PRINTING OPERATIONS	2-12
COFFEE ROASTING EQUIPMENT	2-13
CHARBROILERS, BARBEQUE GRILLS AND OTHER UNDERFIRED GRILLS	2-14
EQUIPMENT USED TO BREW BEER	2-14
EQUIPMENT USED TO MANUFACTURE DEHYDRATED MEAT	2-15
VOC-CONTAINING LIQUID STORAGE AND TRANSFER	2-16
STORAGE OF AQUEOUS UREA SOLUTIONS	2-16
NATURAL GAS AND CRUDE OIL PRODUCTION EQUIPMENT	2-17
SURFACE PREPARATION TANKS	2-18
EQUIPMENT USED FOR PLATING, STRIPPING OR ANODIZING	2-19
PAPER, CARPET AND FABRIC OPERATIONS	2-19
EXCEPTIONS TO EXEMPTIONS	2-20
REVISIONS TO EXISTING RULE LANGUAGE	2-21
ADDITIONAL ADMINISTRATIVE CHANGES	2-24
ADDITIONAL COMMENTS BY STAKEHOLDERS	2-24

CHAPTER 3: SUMMARY OF PROPOSED AMENDED RULE 222

OVERVIEW: PROPOSED AMENDMENTS TO RULE 222	3-1
NEW EQUIPMENT TO BE ADDED TO RULE 222 FILING PROGRAM	3-2
CLARIFICATIONS TO AN EXISTING SOURCE CATEGORY	3-6
REVISIONS TO EXISTING RULE LANGUAGE	3-8

TABLE OF CONTENTS

CHAPTER 4: IMPACT ASSESSMENT OF PROPOSED AMENDED RULES 219 & 222

INTRODUCTION	4-1
IMPACT ASSESSMENT	4-1

REFERENCES	R-1
-------------------------	------------

LIST OF TABLES

TABLE ES-1 – SOURCE CATEGORIES PROPOSED FOR AMENDMENT TO PAR 219	ES-1
TABLE 1-1 – EMISSION SOURCES COMPATIBLE WITH THE AQMD RULE 222 FILING PROGRAM	1-2
TABLE 2-1 – EQUIPMENT, PROCESSES AND OPERATIONS PROPOSED FOR ADDITION OR MODIFICATION TO PAR 219	2-1
TABLE 2-2 – PERMIT EXEMPTION CRITERIA FOR UV/EB PRINTING AND COATING CRITERIA	2-12
TABLE 2-3 – PROPOSED PERMIT EXEMPTION CRITERIA FOR UV/EB PRINTING AND COATING CRITERIA	2-13
TABLE 2-4 – STAKEHOLDER REQUESTS TO CONSIDER IN PAR 219 AND PAR 222	2-25

LIST OF FIGURES

FIGURE 2-1 – WASTE STREAM SEPARATION AT A MATERIAL RECOVERY FACILITY	2-11
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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Rule 219 and 222 are linked rules that demark the lower threshold for those sources not requiring a written permit from South Coast Air Quality Management District (SCAQMD). Equipment that emits any air contaminant not subject to a written permit under SCAQMD Regulation II is either exempt pursuant to Rule 219 or subject to a simplified filing process under Rule 222.

Staff is proposing amendments to these rules to simplify and streamline the administration of the permit system. Proposed amendments to Rule 222 enhance the enforceability of the conditions imposed by the filing as well as expand the appeal rights of the holders of the filings. Through these provisions, filings for facilities subject to Rule 222 will function independent of a permit, reducing the burden on both the agency and affected facilities.

Rule 219 – Equipment Not Requiring a Written Permit to Operate Pursuant to Regulation II – is an administrative rule that provides certain equipment that emit small amounts of air contaminants an exemption from SCAQMD permitting requirements under Regulation II - Permits. Proposed Amended Rule (PAR) 219 seeks to include additional equipment for exemption and clarify existing rule language regarding the intent of existing exemptions and editorial corrections to the rule.

Overview of Proposed Revisions to Rule 219

Staff proposes to add exemptions for a number of equipment categories with small criteria pollutant and low toxic emission profiles and limited potential for further reductions from permitting requirements. Table ES-1 lists the equipment, processes, or operations for addition or modification under this proposed amendment:

Table ES-1 – Source Categories Proposed for Amendments to PAR 219

Rule Citation	Source Category	Description of Amendment
(b)(1)	Engines used at remote 2-way radio transmission towers	Add LPG and CNG as allowable fuels in addition to diesel
(b)(2)	Combustion equipment (food ovens)*	Minor clarification
(b)(5)	Fuel cells*	Clarification to restore original intent of exemption
(b)(8) and (r)(1)	PERP equipment	Consolidate all PERP language under paragraph (r)(1)
(c)(11)	Sub-slab ventilation systems	New exemption
(d)(3)	Cooling towers*	Require industrial cooling towers to register under Rule 222

(e)(8)	Welding, oxy/gas fuel cutting, laser etching and engraving equipment excluding alloys containing chromium, cadmium, nickel, or lead	Exempt hand-held equipment. Establish low level for toxic impurities
(g)(2)	Shredding of wood products	Remove treated woods and greenwaste from exemption
(g)(4)	Equipment for separation/segregation of plastic materials for recycling	New exemption
(h)(1)(C), (l)(6)(B), (l)(11)(B)	Ultraviolet (UV) and electron beam coating and printing operations	Establish low concentration limits and total VOC emissions for UV/EB materials and clean-up solvents
(i)(8)	Coffee roasting equipment	Increase allowable size of coffee roasters
(i)(12)	Charbroilers, barbecue grills and other underfired grills	Minor clarification
(i)(13)	Equipment used to brew beer for lower production facilities	New exemption
(i)(14)	Equipment used to manufacture dehydrated meat	New exemption
(m)(9)	VOC-containing liquid storage and transfer	Clarification to prohibit circumvention of existing exemption language
(m)(24)	Storage of aqueous urea solutions*	New exemption
(n)	Natural gas and crude oil production equipment*	Require registration for certain equipment under Rule 222
(p)(4)	Surface preparation tanks	Remove tanks that emit toxics from exemption
(p)(5)	Equipment used for plating, stripping or anodizing	Remove tanks that emit toxics from exemption
(p)(10)	Paper, carpet and fabric operations	Remove recycling operations from exemption
(s)(4)	Exceptions to exemptions	Remove exemptions for equipment subject to Reg XIV; Require certain equipment to be listed on permit

*Subject to registration under PAR 222

Staff also intends to revise some paragraphs of the current rule language to clarify the intent of the existing exemptions and to include minor clarifications and editorial corrections to the rule.

Rule 222 – Filing Requirements for Specific Emission Sources Not Requiring a Written Permit to Operate Pursuant to Regulation II – provides a simplified filing process in lieu of permitting for certain equipment that have a low emissions profile. The proposed amendments to Rule 222

will require operators of some equipment proposed for exemption under Proposed Amended Rule 219 and some other equipment categories to file their information in the Rule 222 filing program in lieu of their written permits. While Rule 222 provides the owners/operators of certain air contaminant emitting equipment with a simplified filing process at reduced cost compared to written permits, it also provides the SCAQMD with the ability to track the operation, location of such equipment and their relative contribution to the emissions inventory; as well provide simplified operating conditions.

The proposed amendment for Rule 222 adds the following equipment categories to the Rule 222 filing program:

- Water cooling towers not used for evaporative cooling of process water or used for evaporative cooling of water from barometric jets or from barometric condensers and in which no chromium compounds are contained, including industrial cooling towers located in a chemical plant, refinery or other industrial facility;
- Natural gas and crude oil production equipment, including: natural gas pipeline transfer pumps; and gas, hydraulic, or pneumatic repressurizing equipment;
- Storage tanks for aqueous urea solutions

In addition to these three equipment categories, staff is also proposing to make changes to an additional three equipment categories. These categories include:

- Food Ovens, with a rated maximum heat input capacity of 2,000,000 Btu per hour or less, are fired exclusively on natural gas and where the process VOC emissions are less than one pound per day;
- Fuel cells
- Internal combustion engines used exclusively for electrical generation at remote two-way radio transmission towers where no utility, electricity or natural gas is available within a ½ mile radius, has a manufacturer's rating of 100 brake horsepower or less, and are fired exclusively on diesel #2 fuel, compressed natural gas (CNG) or liquefied petroleum gas (LPG).

Additionally, staff proposes provisions that would enhance enforceability of conditions included in approval of filings and also include minor clarifications and editorial corrections to the rule.

**RULE 219 – EQUIPMENT NOT REQUIRING A WRITTEN PERMIT PURSUANT TO
REGULATION II**

**RULE 222 – FILING REQUIREMENTS FOR SPECIFIC EMISSION SOURCES NOT
REQUIRING A WRITTEN PERMIT PURSUANT TO REGULATION II**

CHAPTER 1: BACKGROUND ON PROPOSED AMENDED RULES 219 AND 222

- o Introduction
- o Regulatory History
- o Affected Facilities

INTRODUCTION

Rule 219 – Equipment Not Requiring A Written Permit Pursuant To Regulation II - is an administrative rule that identifies equipment, processes, and operations that emit small amounts of air contaminants that do not require written permits, except for equipment, processes and operations subject to subdivision (s) - Exceptions. In addition, an exemption from a written permit requirement provided by this rule is only applicable if the equipment, process, or operation is in compliance with subdivision (t) - Recordkeeping.

Rule 222 - Filing Requirements for Specific Emission Sources Not Requiring A Written Permit Pursuant To Regulation II - provides an alternative to District written permits by allowing certain emission sources that meet predetermined criteria to register the emission source in the Rule 222 filing program. These emission sources, shown in Table 3-1, are the significantly smaller emitters and less complex sources. These sources do not require a written permit but are required to meet the filing requirements pursuant to the Rule 222 filing program and are subject to operating conditions. The filing of these emission sources is typically accompanied by pre-established operating conditions, which limit unnecessary or excessive air contaminants. Additionally, the benefit to the District administration is the simplicity and efficiency in processing the application for the emission sources in the Rule 222 filing program rather than as a traditional written permit, which typically includes permit pre-screening, permit analysis, and permit evaluation before the permit to construct and permit to operate can be issued. In addition, the filing of such equipment allows the District to accurately account for their emissions which is quite useful in determining the emissions inventories for the respective source categories. The benefit to the owner and operator will be the faster turnaround time for processing and the reduced cost compared to a typical written permit.

The current rule requires owners and operators of specific emission sources to submit information regarding emissions, including, but not limited to; (1) a description of the emission source; (2) data necessary to estimate emissions from the emission source; and (3) information to determine whether the emission source is operating in compliance with applicable District, state, and federal rules and regulations.

REGULATORY HISTORY

Rule 219 was adopted on January 9, 1976 and subsequently has been amended eighteen times; this proposed amendment will be the nineteenth amendment to the rule. The most recent amendment was in May 2013.

Rule 222 was adopted on September 11, 1998 and has subsequently been amended four times; this proposed amendment will be the fifth amendment to the rule. The most recent amendment was in May 2013.

AFFECTED INDUSTRIES

Rule 219 affects any industry that uses equipment, processes, or operations that produce small amounts of air contaminants by providing an exemption to written permit for such equipment. These types of equipment, processes, or operations that emit small amounts of air contaminants can be small business operations or large source operations.

Rule 222 applies to owners and operators of emission sources that meet specific criteria to qualify for the District Rule 222 filing program and any equipment that would be otherwise exempt from a written permit pursuant to Rule 219 but was determined by the Executive Officer that it could not operate in compliance with applicable rules and regulations.

Table 1-1 lists the emission sources that are currently required to submit notification under the Rule 222 filing program.

TABLE 1-1 – Emission Sources Compatible with the AQMD Rule 222 Filing Program

SOURCE/EQUIPMENT	EFFECTIVE DATE
Boilers or Steam Generators & Process Heaters with a rated heat input capacity from 1,000,000 up to and including 2,000,000 Btu/hr, excluding equipment subject to Regulation XX – Regional Clean Air Incentives Market (RECLAIM)	1/1/2001
Commercial Charbroilers and associated air pollution control equipment	1/1/1999
Negative Air Machines (Asbestos)	1/1/1999
Oil Production Well Group	1/1/2004
Printing and related coating and/or laminating equipment and associated dryers and curing equipment exempt from written permit pursuant to Rule 219(h)(1)(E)	12/5/2008
Roller to roller coating systems that create 3-dimensional images exempt from written permit pursuant to Rule 219(j)(13)(C)	12/5/2008
Coating or adhesive application, or laminating equipment exempt from written permit pursuant to Rule 219(l)(6)(F)	12/5/2008
Drying equipment such as flash-off ovens, drying ovens, or curing ovens associated with coating or adhesive application, or laminating equipment exempt from written permit pursuant to Rule 219(l)(11)(F)	12/5/2008
Agricultural Diesel-Fueled Engines rated greater than 50 brake horse power used in Agricultural Operations exempt from written permit pursuant to Rule 219(q)(1) and (q)(2), and subject to CARB ATCM	12/5/2008
Equipment, processes, or operations located at a facility holding no written permit and emitting four tons or more of VOCs per year as specified in Rule 219(s)(3)	12/5/2008
Gasoline storage tanks and dispensing equipment with capacity greater than or equal to 251 gallons, and installed on or before July 7, 2006 at agricultural operations	12/5/2008
Asphalt Day Tankers, with a maximum capacity greater than 600 liters (159 gallons) but no more than 18,925 liters (5,000 gallons), equipped with a demister and burner(s) that are designed to fire exclusively on liquefied petroleum gases only.	5/3/2013

Asphalt Pavement Heaters used for road maintenance and new road construction.	5/3/2013
Diesel Fueled Boilers that have a rated maximum heat input capacity of 2,000,000 Btu per hour or less, are fueled exclusively with diesel #2 fuel, and are located more than 4,000 feet above sea level or more than 15 miles offshore from the mainland and have been in operation prior to May 3, 2013.	5/3/2013
Food Ovens with a rated maximum heat input capacity of 2,000,000 Btu per hour or less are fired exclusively on natural gas and where the VOC emissions from yeast fermentation are less than one pound per day.	5/3/2013
Fuel Cells, which produce electricity in an electro-chemical reaction and use phosphoric acid, molten carbonate, proton exchange membrane or solid oxide technologies; and associated heating equipment, including heaters that have a rated maximum heat input capacity of greater than 2,000,000 Btu per hour, provided that the supplemental heat used is 90,000 therms per year or less.	5/3/2013
Internal combustion engines used exclusively for electrical generation at remote two-way radio transmission towers where no utility, electricity or natural gas is available within a ½ mile radius, has a manufacturer's rating of 100 brake horsepower or less, and are fired exclusively on diesel #2 fuel.	5/3/2013
Micro-Turbines, with a rated maximum heat input capacity of 3,500,000 Btu per hour or less, provided that the cumulative power output of all such engines at a facility is less than two megawatts, and that the engines are certified at the time of manufacture with the state of California or were in operation prior to May 3, 2013.	5/3/2013
Storage of odorant for natural gas, propane, or oil of less than 950 liters (251 gallons) and associated transfer and control equipment.	5/3/2013
Internal combustion engines used exclusively for electrical generation at remote two-way radio transmission towers where no utility, electricity or natural gas is available within a ½ mile radius, has a manufacturer's rating of 100 brake horsepower or less, and are fired exclusively on diesel #2 fuel.	5/3/2013
Portable Diesel Fueled Heaters, with a rated maximum heat input capacity of 250,000 Btu per hour or less and are equipped with burner(s) designed to fire exclusively on diesel #2 fuel only.	5/3/2013
Power Pressure Washers and Hot Water or Steam Washers and Cleaners, that are equipped with a heater or burner that is designed to be fired on diesel fuel, has a rated maximum heat input capacity of 550,000 Btu per hour or less, is equipped with non-resettable chronometer, and the maximum NOx emission output of the equipment is less than one pound per day and uses no more than 50 gallons of fuel per day.	5/3/2013
Tar Pots with a maximum storage capacity greater than 600 liters (159 gallons) but no more than 3,785 liters (1,000 gallons) and are equipped with burner(s) designed to fire exclusively on liquefied petroleum gases only.	5/3/2013

**RULE 219: EQUIPMENT NOT REQUIRING A WRITTEN PERMIT PURSUANT TO
REGULATION II**

CHAPTER 2: SUMMARY OF PROPOSED AMENDED RULE 219

- Overview: Proposed Amendments to Rule 219
- Revisions to Existing Rule Language
- Additional Administrative Changes
- Additional Comments from Stakeholders

OVERVIEW: PROPOSED AMENDMENT TO RULE 219

Proposed Amended Rule (PAR) 219 – Equipment Not Requiring A Written Permit Pursuant To Regulation II - is an administrative rule that provides certain equipment, processes, and operations that emit small amounts of air contaminants an exemption from the District permitting requirements under Regulation II - Permits. Staff has identified sources of equipment, processes, and operations that emit small amounts of air contaminants that are proposed to be included in Rule 219 subject to specified conditions. The emissions are further limited using parameters such as maximum fuel usage or hours of operation, and maintain potential risks below one in a million. This staff proposal seeks to include the equipment, processes, or operations listed in Table 2-1 for addition or modification under this amendment:

Table 2-1 – Equipment, Processes and Operations Proposed for Addition or Modification to PAR 219

Description	Rule Citation
Engines used at remote 2-way radio transmission towers	(b)(1)
Combustion equipment	(b)(2)
Fuel cells	(b)(5)
PERP equipment	(b)(8) and (r)(1)
Sub-slab ventilation systems	(c)(11)
Cooling towers	(d)(3)
Welding, oxy/gas fuel cutting, laser etching and engraving equipment	(e)(8)
Shredding of wood products	(g)(2)
Equipment for separation/segregation of plastic materials for recycling	(g)(4)
Ultraviolet (UV) and electron beam coating and printing operations	(h)(1)(C), (l)(6)(B), (l)(11)(B)
Coffee roasting equipment	(i)(8)
Charbroilers, barbeque grills and other underfired grills	(i)(12)
Equipment used to brew beer	(i)(13)
Equipment used to manufacture dehydrated meat	(i)(14)
VOC-containing liquid storage and transfer	(m)(9)
Storage of aqueous urea solutions	(m)(24)
Natural gas and crude oil production equipment	(n)
Surface preparation tanks	(p)(4)
Equipment used for plating, stripping or anodizing	(p)(5)
Paper, carpet and fabric operations	(p)(10)
Exceptions to exemptions	(s)(4)

Additionally, staff intends to make minor clarifications and editorial corrections to the rule.

Engines used at remote 2-way radio transmission towers {219(b)(1)}

For this proposed amendment to PAR 219, one facility submitted an application for an engine located at a remote location that is fueled on liquefied petroleum gas (LPG). The engine is used as back-up power to the primary power for an emergency communications system. The primary power is solar panels combined with batteries. The engine runs when the solar panels and batteries cannot keep up with the power demand. Currently, only diesel fuel is allowed under this exemption. As a result of this request, staff proposes to include cleaner fuels, including compressed natural gas (CNG) and LNG as an alternative to diesel fuel for engines located at remote 2-way radio transmission towers. Emissions of NO_x and particulate emissions from combustion of both LPG and CNG are lower than those from diesel combustion. Therefore, emissions from use of alternative fuels will be lower than under the current exemption. In addition, the remote location of these engines is unlikely to result in any health risk from diesel, CNG or LNG emissions of greater than one in one million.

During the research for the 2013 amendment Rule 219, staff identified 16 additional internal combustion engines that operate at 8 two-way radio transmission towers in the South Coast Air Basin. Each radio transition tower employs two of these engines and they run offset, meaning that one runs for 12 hours and shuts down while the other starts up and runs for 12 hours for an accumulated run time of 24 hours, 7 days per week, 52 weeks per year. All 16 units are solely diesel fueled and operate in remote rural areas where there are no provisions for natural gas, electricity or alternate fuels.

Staff is proposing new rule language to 219 paragraph (b)(1) as follows, with the new language underlined:

“. . . or internal combustion engines, used exclusively for electrical generation at remote two-way radio transmission towers where no utility, electricity or natural gas is available within a ½ mile radius, with a manufacturer’s rating of 100 brake horsepower or less, and are fired exclusively on diesel #2 fuel, compressed natural gas (CNG) or liquefied petroleum gas (LPG).”

Combustion equipment {219(b)(2)}

During the 2013 amendment to Rule 219, the following language was added to clarify that food ovens were exempt under paragraph (b)(2), provided they were rated under 2,000,000 Btu/hr, were fired on natural gas, and where VOC emissions from yeast fermentation are less than one pound per day:

“This exemption does not apply whenever there are emissions other than products of combustion, unless the equipment is specifically exempt under another section of this rule, except for food ovens with a rated maximum heat input capacity of 2,000,000 Btu/hour or

less, that are fired exclusively on natural gas and where the VOC emissions from yeast fermentation are less than one pound per day, . . .”

Staff is proposing to make the language of this exemption more general, to include VOC emissions from all sources, including VOC emissions from the baking process in addition to VOC emissions from yeast fermentation. Staff proposes to strike redundant language from paragraph (b)(2) and add the following new language:

“This exemption does not apply whenever there are emissions other than products of combustion, ~~unless the equipment is specifically exempt under another section of this rule, except for food ovens with a rated maximum heat input capacity of 2,000,000 Btu/hour or less, that are fired exclusively on natural gas and where the process VOC emissions from yeast fermentation are less than one pound per day, and provided a filing pursuant to Rule 222 is submitted to the Executive Officer.~~”

During the 2013 amendment to Rule 219, staff identified 55 permitted food ovens and exempted them from written permit and transitioned these ovens to the more streamlined Rule 222 filing program. Food ovens that are exempt under the more generalized language will continue to be required to submit a filing under the Rule 222 filing program. As those units were no longer subject to Rule 1147 requirements at that time, staff calculated an estimate of NO_x emissions forgone at 24 lb/day. Staff does not anticipate any additional cumulative emissions with this revision, since all VOC emissions are now subject to 1 lb/day limit, not just those from yeast fermentation.

Fuel cells {219(b)(5)}

Fuel cells are used in certain applications in the South Coast Air Basin to produce power from digester gas. Prior to the 2013 amendment to Rule 219, all fuel cells were exempt. Early fuel cells used an electric heater to provide heat input during startup. Subsequent to this, larger fuel cells required more heat input and used a natural gas burner to provide the necessary heat. After Rule 1147 was amended, they were fitted with low-NO_x burners and were still exempt.

During the 2013 amendment to Rule 219, staff provided an exemption for 2 fuel cells that had filed for a written permit and transitioned this equipment to the more streamlined Rule 222 filing program. During that analysis, staff established an exemption for fuel cells with a supplemental heater usage rate of 90,000 therms per year or less, based on the rationale that fuel cells generate power with a much lower emissions profile than central power plants, even when emissions from the supplemental heater use are accounted for. In an effort to encourage the use of such distributed power generation equipment, staff recommended exemption of fuel cells, including their supplemental heaters, from permitting provided that the heater uses less than 90,000 therms per year. Staff based the 90,000 therms per year on a worst case scenario where the total NO_x

emissions for a start-up heater was equivalent to 30 ppm, which is equivalent to 0.0363 lbs per 10⁶ Btu resulting in 326.7 pounds per year of NO_x emissions or less than 1 pound/day.

The intent of the exemption in 2013 was to require a Rule 222 registration for fuel cells using natural gas-fired supplemental heat, but not for fuel cells using electric heaters. However, during implementation, all fuel cells were made to submit a registration. Staff proposes the following language that would restore the original intent - i.e. only natural gas fired fuel cells are required to be registered. In addition, staff proposes to specify that the allowable fuels for supplemental heat include natural gas, methanol, liquefied petroleum gas, or any combination thereof:

“Fuel cells, which produce electricity in an electro-chemical reaction and use phosphoric acid, molten carbonate, proton exchange membrane, or solid oxide technologies; and associated heating equipment, provided the heating equipment:

(A) does not use a combustion source; or

(B) notwithstanding paragraph (b)(2), is fueled exclusively with natural gas, methanol, liquefied petroleum gas, or any combination thereof, including heaters that have a rated maximum heat input capacity of greater than 2,000,000 Btu per hour, provided that the supplemental heat used is 90,000 therms per year or less and provided a filing pursuant to Rule 222 is submitted to the Executive Officer.”

PERP equipment {219(b)(8) & (r)(1)}

The existing exemption under paragraph (b)(8) addresses engines registered under the Statewide Portable Equipment Registration Program (PERP). The existing exemption under paragraph (r)(1) addresses portable equipment registered under PERP more broadly.

The purpose of the PERP program is to *“establish a statewide program for the registration and regulation of portable engines and engine-associated equipment . . . (to) operate throughout the State of California without authorization . . . or permits from air quality management districts. These regulations preempt districts from permitting . . . portable engines . . .”*¹

During this proposed rule amendment, staff is responding to three issues identified with PERP engines:

1. Request from a stakeholder to amend paragraph (b)(8) to allow PERP-registered engines to serve as emergency units while a stationary emergency engine is being repaired or replaced;

¹ <https://www.arb.ca.gov/portable/perp/perpreg.pdf>

2. Request from a stakeholder to amend paragraph (b)(8) to allow PERP-registered engines to operate on platforms located in the Outer Continental Shelf (OCS);
3. Clarification of emission calculation procedures related to the Monitoring, Recordkeeping and Reporting (MRR) protocols in Rules 2010 and 2011.

The PERP regulation is currently being amended by CARB and is currently scheduled to be heard by the CARB Board in March 2017. The stakeholder issues may be directly resolved by the rule amendment. Staff recommends deferring any changes to Rule 219 to address the above issues until CARB issues an amended Final Regulation Order for the PERP regulation to potentially satisfy the stakeholders' request through implementation guidance rather than presumptively making changes to the exemption language in Rule 219. Staff has and will continue to monitor and coordinate with CARB on any amendments to the PERP regulation.

Staff proposes to amend the language of both paragraph (b)(8) and (r)(1): paragraph (b)(8) will refer to the broader language under paragraph (r)(1) and paragraph (r)(1) will be amended to include language formerly in paragraph (b)(8) and add language to address MRR protocols. Staff proposes the following language for paragraph (b)(8):

“Portable ~~internal combustion engines, including any turbines qualified as military tactical support equipment under Health and Safety Code Section 41754 registered pursuant to the California Statewide Portable Registration Program~~ equipment, pursuant to paragraph (r)(1).”

Staff proposes the following language for paragraph (r)(1) Registered Equipment and Filing Program:

“Any portable equipment, including any turbines qualified as military tactical support equipment under Health and Safety Code Section 41754 ~~which is~~ registered in accordance with the Statewide Portable Equipment Registration Program (PERP) adopted pursuant to California Health and Safety Code Section 41750 et seq. PERP registered equipment operated at a RECLAIM Facility, shall be classified as Major Source, Large Source or Process Units in accordance with Rule 2011 (c) and (d) for SOx emissions and Rule 2012 (c), (d) and (e) for NOx emissions for purposes of determining the applicable requirements for Monitoring, Reporting and Recordkeeping (MRR). Use of RECLAIM MRR Protocols for Rule 219 equipment as specified in Rule 2011 (Rule 2011 Protocol, Appendix A, Chapter 3, Subsection F) and Rule 2012 (Rule 2012 Protocol, Appendix A, Chapter 4, Subsection F) is only allowed if the registered PERP equipment also qualifies for an exemption from permit under a separate provision of this Rule.”

Sub-slab ventilation systems {219(c)(11)}

This proposed exemption represents a new category under PAR 219. The purpose of a sub slab ventilation system is to prevent radon or other vapors present in the soil below a concrete slab from migrating into the occupied space above the slab. Air pressure in the lowest level of buildings is usually lower than pressure in the soil beneath the building. Negative pressures that are induced by buildings draw both radon and other airborne soil contaminants into occupied building space where inhalation and human health risk from exposure occurs.² USEPA has guidance for vapor intrusion into buildings.^{3,4}

An air permit is currently required for a sub-slab ventilation system. Staff identified three sub-slab ventilation systems that have been permitted; including two systems that were permitted with air pollution control equipment and one system without control equipment. Control equipment typically consists of a canister containing carbon media. A concern after a sub-slab ventilation system may be installed to address concerns following a building usage change where prior operations may have had toxic substances; for example, where a dry cleaning operation was formerly present in a building.

From the existing permit evaluations, when the sub-slab ventilation system is equipped with a carbon adsorber, emissions of total organic compounds (TOC) were calculated to be extremely low, in the part per billion (ppb) range. In addition, the toxic risk has also been calculated to be very low (MICR $\ll 1 \times 10^{-6}$).

Based on very low potential for VOC emissions and toxics risk, staff proposes to exempt sub-slab ventilation systems that meet certain criteria. These include:

1. System flow rate of less than 200 feet per minute (fpm);
2. Vacuum suction pits do not penetrate more than 18 inches under the slab;
3. Exhaust is vented to a properly sized carbon control system (or equivalent);
4. TOC concentration at the carbon control system inlet is less than 15 parts per million by volume (ppmv), measured as hexane; and
5. The system is located more than 1,000 feet from a school.

Under this proposal, sub-slab ventilation systems that meet the criterion above would be exempt from having to obtain a written permit. However, systems that are not equipped with integral control equipment, are located less than 1,000 feet from a school, have high flow, or that do not meet the prescribed TOC concentration would continue to be required to obtain a written permit.

² Designing Efficient Sub Slab Venting and Vapor Barrier Systems for Schools and Large Buildings, T. Hatton, 2010, Proceedings of 2010 Radon Symposium

³ United States Environmental Protection Agency, March 2008 *Brownfields Technology Primer: Vapor Intrusion Considerations for Redevelopment*, EPA 542-R-08-001

⁴ United States Environmental Protection Agency, February 2004, *User's Guide for Evaluating Subsurface Vapor Intrusion into Building*

This will enable an evaluation of the specific parameters of such systems to ensure they comply with all applicable District rules.

Staff proposes the following language for this exemption:

“Sub-slab Ventilation systems and associated air pollution control with an aggregate flow rate of less than 200 standard cubic feet per minute (scfm) where vacuum suction pits do not penetrate more than 18 inches below the bottom of the slab, provided the inlet total organic compounds concentration does not exceed 15 ppmv, measured as hexane, and provided the ventilations system is connected to air pollution control equipment consisting of a carbon adsorber sized to handle at least 200 scfm, or equivalent air pollution control, and provided such systems are located at least 1,000 feet from a school.”

Cooling towers {219(d)(3)}

Cooling towers at industrial facilities not used for evaporative cooling of water from barometric jets or from barometric condensers and in which no chromium compounds are contained such as refineries or chemical plants, in addition to cooling towers that are used for heating, ventilation and air condition (HVAC) comfort cooling for buildings are currently exempted under paragraph (d)(3).

Proposed 2016 AQMP Control Measure BCM-02 will seek reductions in PM_{2.5} emissions from industrial cooling towers in future years. The proposed control measure will seek to reduce PM emissions from cooling towers by requiring the use of more efficient drift eliminators that keep drift losses to less than 0.001% of the circulating water flow rate.

Drift eliminators are usually incorporated into the design of cooling towers to limit emission of drift droplets from the air stream before air exits the towers. In general, cellular drift eliminators provide the greatest effective surface area for maximum drift removal efficiency at minimum pressure drop. With proper installation, a cellular drift eliminator can keep drift losses to less than 0.001% of the recirculating water flow rate, resulting in water savings as well. In addition, cellular drift eliminators can be trimmed for a tightest fit, hence further improve the drift eliminator efficiency.

Emissions from cooling towers are required to be reported annually under the Annual Emission Reporting (AER) program. To calculate emissions, a default drift rate as a percentage of circulating water flow rate is used for each cooling tower depending on the year of manufacture. These drift rates and emission equations were developed by EPA (AP-42, Chapter 13.4) and refined by SCAQMD. Emissions are reported as total PM and conservatively assumed to be PM₁₀. A comment received from a stakeholder proposes to consider particle size distribution

for drift particles emitted from cooling towers, based on a specific method.⁵ However, staff believes it is better to conduct this analysis during rule development for this source category, and instead proposes to move industrial cooling towers into the filing program under Rule 222 in order to build a current inventory of these cooling towers and collect information that will better allow emissions of PM_{2.5}, PM₁₀ and TSP to be calculated.

Staff proposes to continue to provide an exemption for comfort (i.e. HVAC) cooling towers under paragraph (d)(3). Staff further proposes to limit the exemption for industrial cooling towers by transitioning them into the Rule 222 filing program rather than requiring each cooling tower to obtain a written permit. Staff proposes the following amended language for paragraph (d)(3):

“Water cooling towers and water cooling ponds not used for evaporative cooling of process water or not used for evaporative cooling of water from barometric jets or from barometric condensers and in which no chromium compounds are contained, including:

- (A) Cooling towers used for comfort cooling; and*
- (B) Industrial cooling towers located in a chemical plant, refinery or other industrial facility, provided a filing pursuant to Rule 222 is submitted to the Executive Officer.”*

Welding, oxygen gaseous fuel cutting, laser etching and engraving equipment {219(e)(8)}

Staff proposes to clarify the intent of paragraph (e)(8) by specifying that the existing exemption for welding, oxygen-gaseous fuel cutting, laser etching and engraving does not apply to welding, cutting, etching or engraving of alloys containing chromium, cadmium, nickel or lead where these alloys contain 0.1% by weight or more of chromium, cadmium, nickel or lead.

Concentrations of chromium, cadmium, nickel and lead in excess of 0.1% by weight are required to be reported on safety data sheets (SDS) that are supplied with the alloy, pursuant to the requirements of 29 CFR, §1910.1200—Health Hazard Criteria (Mandatory)⁶. It is not possible for SCAQMD staff to determine whether reportable levels of toxic metals were added at the mill for alloying purposes or are present as impurities in alloys, mild steels, and carbon steels.

Therefore, the proposed language is intended to specify the de minimis level to align with readily accessible reporting concentration values to improve enforceability and improve clarity.

Staff also proposes to add hand-held plasma arc-cutting equipment and hand-held laser cutting equipment to the existing list of exempt equipment under this source category. Hand-held

⁵ <https://www.env.nm.gov/aqb/permit/documents/PermittingGuidanceforCoolingTowerParticulateEmissions.pdf>

⁶ https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10100

equipment is not typically operated in a production environment. Particulate matter emissions from these two types of hand-held equipment are expected to be well below 1 lb/day.

During the 2013 amendment to Rule 219, staff identified 36 laser cutters, engravers and etchers and added this equipment to the exemption under paragraph (e)(8). Staff found these equipment do not process metals such as stainless steel, or alloyed materials that contain chromium, cadmium, nickel or lead; however, these metals when subjected to the intense heat of the laser can emit toxic materials. Lasers that process these type metals must go through a complete engineering evaluation before a written permit is considered.

Staff proposes the following amended language for paragraph (e)(8):

“Welding equipment, oxygen gaseous fuel-cutting equipment, hand-held plasma-arc cutting equipment, hand-held laser cutting equipment, laser etching or engraving equipment, engraving of metal equipment and associated air pollution control equipment. This exemption does not include any plasma-arc cutting or laser cutting equipment that is used to cut stainless steel, or alloys containing 0.1% by weight or more of chromium, nickel, cadmium or lead laser cutters cutting, etching and engraving equipment that are rated more than 400 watts ~~and control equipment venting such equipment.~~”

Shredding of wood products {219(g)(2)}

Staff proposes to clarify the exemption for wood products under paragraph (g)(2). The purpose for this amendment is to ensure that shredding of greenwaste and painted or treated wood waste are not included as exempt operations. Shredding of greenwaste has the potential for nuisance odors and is currently regulated under Rule 1133.1, Chipping and Grinding Activities. The language that staff proposes to include in paragraph (g)(2) is from the definition for greenwaste in Rule 1133.1, as follows: “*any organic waste material generated from gardening, agriculture, or landscaping activities including, but not limited to, grass clippings, leaves, tree and shrub trimmings, and plant remains.*”

Painted or treated woods have the potential for toxics emissions if they are shredded. For example, wood treated for exterior exposure may contain creosote or chromated copper arsenate. In addition, construction and demolition debris from very old homes under renovation may contain lead-based paints. Shredding of these woods may release toxics emissions. Shredding of greenwaste, painted woods or woods treated for exterior exposure are operations that the District has routinely permitted.

Staff proposes the following amended language for paragraph (g)(2):

“Wood Products: Equipment used exclusively for shredding of wood, or the extruding, handling, or storage of wood chips, sawdust, or wood shavings and control equipment”

used to exclusively vent such equipment, provided the source of the wood does not include wood that is painted or treated for exterior exposure, or wood that is comingled with other construction and demolition materials. This exemption does not include internal combustion engines over 50 bhp, which are used to supply power to such equipment. In addition, this exemption does not include the shredding, extruding, handling or storage of any organic waste material generated from gardening, agricultural, or landscaping activities including, but not limited to, leaves, grass clippings, tree and shrub trimmings and plant remains.”

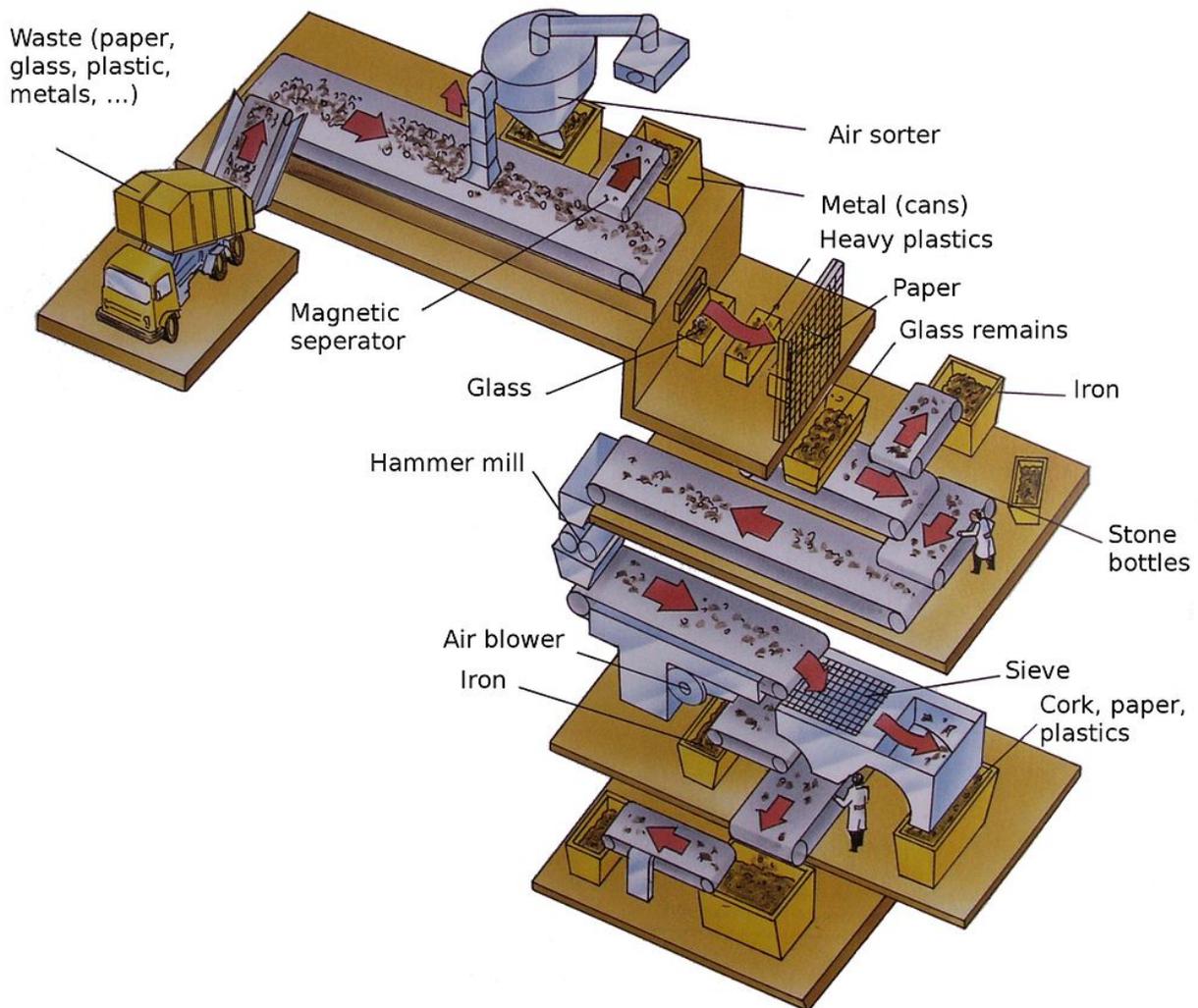
Staff does not anticipate any additional cumulative emissions with this revision.

Equipment for separation/segregation of plastic materials for recycling {219(g)(4)}

This proposed exemption represents a new exemption category for separation and segregation of plastic materials for recycling purposes. Common types of plastics intended for separation include polyethylene terephthalate (PET), high density polyethylene (HDPE), polyvinyl chloride (PVC) and polypropylene (PP) plastics. Material separation from a waste stream may be automated or manual. In addition, the increasing number of plastic resins that can potentially be marketed at high value have made direct-and-route (DAR) systems for plastics very cost-effective. In a DAR system, the properties of the material are first identified with detectors. The information from the sensors concerning the identification and location of the material is stored. Using the identification of the object, the location of the object and the speed of the conveyor, the system removes the object when it reaches an appropriate diversion point.

Types of equipment used for automated separation may consist of the following: conveyors, cyclone separators, air (pneumatic) blowers, screens, sieves, drum separators, air tables and many others. A general view of separation activities at a material recovery facility (MRF) from a co-mingled waste stream is shown in Figure 2-1 below. In general, at a MRF, plastic material is sorted to specification, then baled, shredded, crushed, compacted, or otherwise prepared for shipment to market.

Figure 2-1
Waste Stream Separation at a Material Recovery Facility



Staff believes separation and segregation activities have very limited potential for particulate matter or other criteria pollutant emissions. Staff believes there is potential for nuisance odors emitted during the sorting and segregation of plastic materials; however, these activities are currently addressed in Rule 410, Odors from Transfer Stations and Material Recovery Facilities.

Rule 410 was designed to reduce odors from facilities conducting transfer and sorting of solid waste. Transfer stations are where municipal solid waste, greenwaste, and construction and demolition materials are transferred from small vehicles such as refuse trucks to large transfer trucks for transport to landfills, recycling centers, and other disposal sites. Material recovery facilities sort and separate recyclable materials from solid waste.

During rule development, staff became aware of a facility that recycles clear plastic containers from MRFs. There were odor issues from this facility's practice of shredding and subsequent

outdoor storage of dairy containers and other containers with residual organic material outside. Therefore, the proposed exemption only allows for recycling (i.e. separating and sorting) operations where no mechanical grinding, shredding or cutting takes place.

The intent of this exemption is twofold: 1) provide an exemption for equipment used in simple separation and sorting activities; and 2) limit the exemption such that shredding of plastics is not allowed under the exemption. Shredding of plastic materials intended for recycling is an activity that requires a permit.

Staff proposes the following new language for paragraph (g)(5):

“Equipment used for separation or segregation of plastic materials intended for recycling, provided there is no mechanical cutting, shredding or grinding and where no odors are emitted.”

Ultraviolet (UV) and electron beam coating and printing operations {219(h)(1)(C), (l)(6)(B) and (l)(11)(B)}

Staff has received multiple industry requests over the past several iterations of Rule 219/222 to further recognize printing and coating and adhesive application processes that are based on ultraviolet/electron-beam (UV/EB) curing. Currently, use of such technologies have been incentivized through permit exemption criteria. These criteria are given in Table 2-2:

Table 2-2 – Permit Exemption Criteria for UV/EB Printing and Coating Criteria

Citation	Equipment Permit Exemption Criteria	Other Conditions (Citation)
(h)(1)(C) (l)(6)(B) (l)(11)(B)	Non-solvent-borne and non-water borne UV/EB materials and associated VOC containing solvent use \leq 6 gal/day (\leq 132 gal/mo); or \leq 3 lb/day VOC emissions	<ul style="list-style-type: none"> ▪ Recordkeeping per Rule 219 (t) ▪ Facility-wide < 4 tpy VOC (s)(3)
(h)(1)(E) (l)(6)(F) (l)(11)(F)	All materials \leq 50 g/l VOC and clean-up solvents \leq 25 g/l VOC and < 1 tpy VOC emissions	<ul style="list-style-type: none"> ▪ Registration under Rule 222 ▪ Recordkeeping per Rule 219 (t) ▪ Facility-wide < 4 tpy VOC (s)(3)

One representative from the industry has suggested that the multiple criteria is confusing to regulated facilities and that there should be additional incentive options to promote lower polluting coating and printing technologies that do not rely on the use of additional pollution control equipment or supplemental drying. In addition, this representative has further indicated that the registration component in the current exemption language serves as a deterrent to certain

facility operators to elect a process conversion to UV/EB. The industry representative also requests that the emerging technology based on the use of UV light emitted diode (LED) curing be included in any considerations.

The following exemption pathways listed in Table 2-3 are proposed to address the UV/EB/LED industry.

Table 2-3 – Proposed Permit Exemption Criteria for UV/EB Printing and Coating Criteria

Citation (New)	Proposed Equipment Permit Exemption Criteria	Proposed Other Conditions (Citation)
(h)(1)(C) (l)(6)(B) (l)(11)(B)	UV/EB/LED-cured materials and associated VOC containing solvents ≤ 3 lb/day (≤ 66 lb/mo)	<ul style="list-style-type: none"> ▪ Recordkeeping per Rule 219 (t) ▪ Facility-wide < 4 tpy VOC (s)(3)
(h)(1)(E) (l)(6)(F) (l)(11)(F)	All UV/EB/LED-cured materials ≤ 25 g/l VOC and clean-up solvents ≤ 25 g/l VOC and < 1 tpy VOC emissions	<ul style="list-style-type: none"> ▪ Recordkeeping per Rule 219 (t) ▪ Facility-wide < 4 tpy VOC (s)(3)

The first proposed change is to eliminate the volume use threshold and keep the emission based threshold for UV/EB/LED-cured materials and associated VOC containing solvents. This would address the concern over the multiple subcategories (solvent-borne, water-borne UV/EB). The second proposed change is to remove the registration requirement provided that VOC emissions do not exceed one ton per year and the UV/EB/LED-cured materials and associated clean-up solvents do not exceed 25 g/l, which addresses the industry's concern over use of the registration as a deterrent.

Staff proposes to include the following amended language under subparagraphs (h)(1)(C), (l)(6)(B) and (l)(11)(B):

“Materials cured using ultraviolet-electron beam (UV/EB) or ultraviolet/light emitted diode (UV/LED) processes where the materials contain twenty-five (25) grams of VOC per liter of material and cleanup solvents containing twenty-five (25) grams of VOC per liter or less are exclusively used, and where the total quantity of VOC emissions do not exceed one ton per calendar year. ~~the total quantity of UV or electron beam type (non-solvent based and non-waterborne) inks, coatings, and adhesives, fountain solutions (excluding water) and associated VOC containing solvents (including clean-up) is six (6) gallons per day or less, or 132 gallons per calendar month or less; or~~”

Minor clarifications were made in the paragraphs and subparagraphs subsequent to (h)(1)(C), (l)(6)(B) and (l)(11)(B) to remove the usage thresholds associated with UV/EB materials and

instead rely on the 3 lb/day emissions based threshold contained in (h)(1)(A), (l)(6)(A) and (l)(11)(A) as requested by industry.

Coffee roasting equipment {219(i)(8)}

This proposed exemption represents an increase in capacity for an exemption category under PAR 219. Currently, coffee roasting equipment is limited to 10-pound capacity per batch roasted. Small coffee roasters are commonly sold in sizes up to 15-kg capacity (33 lbs). From permits issued recently the average heat input rating for coffee roasters in that range is 102,000 Btu/hr. NO_x emissions are calculated to be less than a pound per day, even assuming 24 hr/day operation. PM₁₀ and VOC emissions are typically well under a pound per day, even uncontrolled. Coffee roasting equipment up to 15 kg/batch is not used for heavy production. Typical usage for a small roaster is to roast a couple of batches per hour for a few hours per day. Therefore, emissions of NO_x, PM₁₀ and VOC are all expected to be well under 1 lb/day.

Currently, new and relocated roasters are subject to the requirements of Rule 1147. Each is required to be source tested to demonstrate compliance. Most small coffee roasters are operated by small businesses. The cost to source test may be a financial burden on these small businesses, for minimal reductions in NO_x. For example, assuming a 24 hr/day operating schedule for the average 102,000 Btu/hr roaster burner results in only 0.3 lbs/day of NO_x emissions. At the 30 ppm NO_x limit, as required under Rule 1147, the maximum daily emissions are calculated to be 0.1 lbs/day. Thus the reduction in NO_x for a coffee roaster subject to Rule 1147 limits compared to exempting this equipment is negligible. Staff found 10 permitted coffee roasters in the size range from 10 lbs to 15 kg (33 lbs).

Staff proposes the following amended language for paragraph (i)(8):

“Coffee roasting equipment with a maximum capacity of ~~10 pounds~~ 15 kilograms or less, and control equipment used to exclusively vent the equipment.”

Charbroilers, barbeque grills and other underfired grills {219(i)(12)}

This amendment represents a clarification to an existing exemption. The existing language exempts charbroilers “*in multi-family residential units only if used by the owner or occupant of such dwelling*”. Staff proposes to make the exemption more general to include barbecue grills and other underfired grills fired on solid or gaseous fuels consistent with the intent of the current exemption. The existing language of the exemption requires that all charbroilers, barbecue grills and other underfired grills are only used for non-commercial purposes.

Staff proposes the following amended language for paragraph (i)(12):

“Charbroilers, barbecue grills, and other underfired grills fired on solid or gaseous fuels used in multi-family residential units only if used by the owner or occupant of such dwelling for non-commercial purposes.”

Equipment used to brew beer {219(i)(13)}

This exemption represents a new exemption category under PAR 219. The production of beer is comprised of three main stages: brewhouse operations, fermentation, and packaging. VOC is emitted from all three processes although packaging (filling of bottles and kegs) represents the largest contributor. The majority of the VOC emissions from beer brewing operations are from ethanol. Analysis conducted by San Diego APCD on small breweries and reviewed by staff demonstrates that VOC emissions are very low for beer production of less than 1,000,000 gallons per year.

The brewhouse operations generally consist of the mashing, lautering, brewing, and trub separation steps. Mashing is the process where the milled malts are mixed with hot water in a mash tun to convert the grain starches to fermentable sugars. The finished desired product of mashing is a grain slurry called a mash. The mash is transferred to a lauter tun to separate insoluble grain residues or husks from the mash. The desired product without the insoluble grain residues is called the wort. The wort is transferred to a brew kettle to be boiled with hops for flavor and aroma. After the boiling kettle, the wort is transferred to a container to separate the wort from the spent hops and other insoluble material (trub). The wort is cooled and then transferred to fermenters. Yeast is introduced as the cooled wort is transferred into the unheated fermenters. Yeasts react with the sugars in the wort to produce desired ethanol. Fermentation can range from days to weeks depending on the product.

Beer is then filtered to remove any unused yeast and are ultimately transferred to bright beer tanks. The bright beer tanks are used to store the beer until it is ready to be packaged. Packaging consists of filling the beer product into kegs, bottles, or cans. Boilers and silo tanks are also involved in brewing operations, but these equipment are permitted separately.

Staff proposes the following new language for paragraph (i)(13):

“Equipment used to brew beer at breweries that produce less than 1,000,000 gallons of beer per calendar year and associated equipment cleaning provided all equipment used in the manufacturing operation is exempt pursuant to paragraph (b)(2). This exemption does not apply to boilers or silos.”

Staff is working to build an inventory of small beer manufacturers that would be subject to this exemption.

Equipment used to manufacture dehydrated meat {219(i)(14)}

This exemption represents a new exemption category under PAR 219. The processes involved in manufacturing of dehydrated meats represent a small source of emissions of VOC and PM. Low emissions of VOC and PM were demonstrated at two facilities that manufacture dehydrated meats: one facility makes beef and pork jerky for human consumption; the other makes jerky for pets. Source tests conducted at these two facilities demonstrate low emissions of less than 1 lb/day of both VOC and PM emissions in the dehydration process, tumblers that marinate the meat with spices, sugar and soy products and small conveyor grills that char the jerky after the dehydration oven. Staff proposes the following new language for paragraph (i)(14):

“Equipment used to manufacture dehydrated meat for human or pet consumption provided non-combustion VOC and PM emissions including emissions from materials used for cleaning are each one pound per day or less, and the operating temperature is less than 190 degrees Fahrenheit, and provided such equipment is exempt pursuant to paragraph (b)(2).”

VOC-containing liquid storage and transfer {219(m)(9)}

The proposed amendment represents a clarification to an existing exemption for VOC-containing storage tanks. During rule development, staff became aware of a circumstance in which multiple tanks of the same VOC-containing liquid were stored on a mobile platform for a similar purpose to avoid permitting requirements. Staff proposes to re-affirm the intent of this exemption to be such that it applies only to a single tank of a VOC-containing liquid or odorant for natural gas, propane or oil. In situations where multiple tanks of the same VOC-containing liquid or odorant are mounted on a single mobile platform, and the capacity of each tank is less than 251 gallons but if the cumulative capacity is greater than 251 gallons, a permit would be required.

To prevent circumvention of the stated intent of this exemption, staff proposes the following amended language:

“Equipment used exclusively for VOC containing liquid storage or transfer to and from such storage, of less than 950 liters (251 gallons) capacity or equipment used exclusively for the storage of odorants for natural gas, propane, or oil with a holding capacity of less than 950 liters (251 gallons) capacity and associated transfer and control equipment used exclusively for such equipment provided a filing pursuant to Rule 222 is submitted to the Executive Officer. This exemption does not include asphalt. In addition, this exemption does not apply to a group of more than one VOC-containing liquid or odorant tank where the combined storage capacity of all tanks exceeds 950 liters (251 gallons), and where the tanks are mounted on a shared mobile platform and stored at a facility.”

Storage of aqueous urea solutions {219(m)(24)}

This proposed source category represents a new exemption category under PAR 219. During rule development, a stakeholder asked staff to consider an exemption for urea storage tanks. The

requestor uses urea as a reductant for selective catalytic reduction (SCR) for engines fired on digester gas. Urea is safer to store than ammonia, but requires conversion to ammonia through thermal decomposition in order to be used as an effective reductant.⁷ As stored in this application, the urea solution has a boiling point close to that of water. In addition, it has a vapor pressure of less than 1 mmHg at 20 degree C. Staff determined that for a 1,000 gal tank and limited turnovers of the tank per day, ammonia emissions were estimated to be 0.01 lb/day. Some facilities have urea mixing tanks that blend powdered urea and water. For those situations, permit engineering staff applies a fugitive PM emission factor to the tanks for emissions during power loading. These tanks are not included under this exemption and will continue to require a written permit. Only aqueous solutions of urea where it is already mixed with water would be included under the exemption.

Due to the low potential for emissions of ammonia and PM, staff proposes to exempt urea tanks from requiring a written permit and move them to the more streamlined filing program under Rule 222. Staff proposes the following new language:

“Tanks for aqueous urea solutions with a capacity of 6,500 gallons or less, provided a filing pursuant to Rule 222 is submitted to the Executive Officer. This exemption does not include tanks used for blending powdered urea and water.”

Natural gas and crude oil production equipment {219(n)}

The necessity for changes to subdivision (n) arises due to the CARB Proposed Regulation Order for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities (draft regulation).⁸ This draft regulation is currently scheduled to be heard before the CARB Board in the spring of 2017. It will address fugitive and vented emissions from new and existing oil and gas facilities. CARB is currently working with all air districts, including SCAQMD, to develop control strategies and craft ways to implement and enforce the new standards. The draft regulation will also address early detection and emission reductions for large natural gas leaks, such as at Aliso Canyon in 2015 and 2016.

The CARB draft regulation will regulate greenhouse gases, including methane from specific equipment at crude oil and natural gas facilities. Historically SCAQMD has not regulated methane, which is not considered a VOC. However, SCAQMD compliance personnel will inspect equipment addressed by the draft regulation under the proposed regulation. As such, CARB requires that all equipment addressed by the draft regulation be either permitted or registered by the local air district, or be subject to permitting by CARB. Staff believes that nearly all of this equipment is already permitted or registered under Rule 222. However, there

⁷ Steam: Its Generation and Uses. [Babcock & Wilcox](#)

⁸ <https://www.arb.ca.gov/regact/2016/oilandgas2016/oilgasappa.pdf>

may be limited numbers of equipment that have not been subject to either permit or registration. These include equipment exclusively handling natural gas. Staff continues to work with the industry to identify this equipment and identify a strategy to bring it under permit or registration.

Subdivision (n) currently exempts six categories of equipment. Of these six categories, one is required to submit registrations: well heads and well pumps. These are required to be registered in groups of 4 well heads or well pumps.

Staff proposes to bring two other groups of equipment into the Rule 222 filing program, as opposed to requiring a written permit. These groups of equipment are currently exempted under paragraph (n)(2) – natural gas pipeline transfer pumps, and (n)(3) - and includes gas, hydraulic, or pneumatic repressurizing equipment. There is additional discussion of the changes to this equipment group regarding the Rule 222 filing program in Chapter 4.

Staff proposes the following amended language to paragraphs (n)(1) through (n)(3) in subdivision (n) - Natural Gas and Crude Oil Production Equipment:

- “(1) Well heads and well pumps, provided a filing pursuant to Rule 222 is submitted to the Executive Officer.*
- (2) Crude oil and natural gas pipeline transfer pumps, provided a filing pursuant to Rule 222 is submitted to the Executive Officer for natural gas pipeline transfer pumps.*
- (3) Gas, hydraulic, or pneumatic repressurizing equipment, provided a filing pursuant to Rule 222 is submitted to the Executive Officer.”*

Surface preparation tanks {219(p)(4)}

The proposed amendment will limit the exemption for tanks used for surface preparation. During rule development, staff became aware that certain rinse and seal tanks used downstream of heat treating or metal melting operations may contain levels of hexavalent chromium or other toxic metals that create a toxics concern. Many of these tanks are currently exempted under the existing language of paragraph (p)(4), although they would be subject to permitting in accordance with paragraph (s)(2) if the toxic risk exceeds the applicable Rule 1401 – New Source Review of Toxics contaminant threshold.

Staff proposes to clarify the language of subparagraph (p)(4)(F) to remove the existing specific exemption for heated surface preparation tanks containing salt solutions. In addition, staff proposes to add lead to the list of toxic metals that are not allowed under the exemption. There is a concern regarding potential higher toxics emissions from heated tanks in comparison to a non-heated tank. Staff therefore proposes the following language for subparagraph (p)(4)(F):

“salt solutions, except for air-sparged, heated or rectified processes with salt solutions containing hexavalent chromium, chromates, dichromates, nickel, ~~or~~ cadmium or lead;”

In addition, staff proposes to add language to paragraph (p)(4) that clarifies that the exemption does not apply to any surface preparation tank containing chromium, or any tank containing nickel, lead or cadmium that is rectified, sparged or heated. The intent behind removing these tanks from the exemption language is that they must in the future be listed on an SCAQMD permit. For example, dichromate seal tanks at facilities that conduct heat treating operations that may not currently be permitted must now be listed on an SCAQMD permit under this proposal. Staff therefore proposes the following amended language for the last sentence in paragraph (p)(4):

“This exemption does not include chemical milling or circuit board etching using ammonia-based etchants, or any tank that contains chromium, or contains nickel, lead or cadmium and is rectified, sparged or heated.”

Equipment used for plating, stripping or anodizing of metals {219(p)(5)}

The proposed amendment will limit the exemption for equipment used for plating, stripping or anodizing of metals, for the same concerns regarding potential emissions of toxic metals that are expressed in the discussion of surface preparation tanks under paragraph (p)(4). Staff proposes to remove the existing specific exemption for electrolytic plating of lead under subparagraph (p)(5)(A) due to the concern for lead emissions from the electrolytic plating process. When lead was originally included under this exemption, the rationale was that electrolytic lead plating was a very efficient process. However, during rulemaking staff learned of a recent concern regarding potentially high lead emissions from electrolytic plating. Therefore, staff proposes the following language for subparagraph (p)(5)(A):

“electrolytic plating of exclusively brass, bronze, copper, iron, tin, ~~lead~~ zinc, and precious metals;”

In addition, staff proposes to add language to paragraph (p)(4) that clarifies that the exemption does not apply to any tank used for plating, stripping or anodizing that contains chromium, or any tank containing nickel, lead or cadmium that is rectified, sparged or heated. The intent behind removing these tanks from the exemption language is that they must in the future be listed on an SCAQMD permit. Staff therefore proposes the following amended language for the last sentence in paragraph (p)(5):

“This exemption also does not include any tank that contains chromium, or contains nickel, lead or cadmium and is rectified, sparged or heated.”

Paper, carpet and fabric operations {219(p)(10)}

The proposed amendment includes two new operations as exempt: fabric brushing and fabric sueding. Both operations are performed on cotton and cotton/poly fabrics. These operations are mechanical finishing processes in which a fabric is abraded on one or both sides to raise or create a fibrous surface. This fibrous surface improves the fabric appearance, gives the fabric a softer, fuller hand, and can mask fabric construction and subdue coloration. These improved aesthetics can increase the value of a fabric in the marketplace. Sueded fabrics develop a very low pile and the material surface can be made to feel like suede leather.⁹ The material by-products from fabric brushing and sueding operations are larger than PM₁₀ and therefore, is not considered dust. Staff has identified one facility that performs fabric brushing and sueding operations.

Staff identified a single facility that conducts brushing and sueding operations and proposes the following amended language for paragraph (p)(10):

“Paper shredding and carpet and paper shearing, fabric brushing and sueding as well as associated conveying systems, baling equipment, and control equipment venting such equipment. This exemption does not include carpet and fabric recycling operations.”

Exceptions to exemptions {219(s)(4) and (s)(5)}

New paragraph (s)(4) represents a new category for exceptions to exemptions under PAR 219. The basis of the proposed change is that certain equipment may in the future become subject to additional requirement under Regulation XIV – Toxics and Other Non-criteria Pollutants. For example, certain grinding equipment at forging facilities may be subject to source specific requirements under Proposed Rule (PR) 1430 - Control of Emissions from Grinding Operations at Metal Forging Facilities, including additional control measures, pollution control devices or permitting. PR 1430 is currently scheduled to be heard by the SCAQMD Governing Board in 2017. Under the proposed language in PAR 219(s)(4), if PR 1430 is adopted, any grinding equipment that is currently exempted under Rule 219 paragraph (g)(1) will need to be revisited with respect to any requirements to obtain a written permit after the effective date in Rule 1430.

Staff proposes the following amended language for paragraph (s)(4):

“Basic or control equipment subject to permitting requirements pursuant to Regulation XIV - Toxics and Other Non-criteria Pollutants.”

New paragraph (s)(5) is proposed to clarify that any equipment that is an integral part of an existing permitted grouping of equipment must either have a stand-alone SCAQMD permit or must be listed on an existing permit for the grouping of equipment. The rationale behind the

⁹ <http://textilelearner.blogspot.com/2013/01/sueding-machine-specification-of.html>

proposed language is that there is certain equipment that does not currently have a permit, but is part of a larger group of equipment that is permitted. During rulemaking, in conjunction with an extensive compliance check in the city of Paramount where elevated levels of hexavalent chromium were found, staff became aware of equipment that currently is not permitted but has the potential for emissions or toxics risk of concern. An example of this is a rinse tank at a metal melting or heat treating facility that may have the potential for toxics emissions due to contamination from upstream processes. Therefore, staff proposes to require that equipment that is exempt from permit but is part of a larger group of permitted equipment to be listed on the more inclusive permit or obtain a stand-alone permit. This will afford staff the opportunity to evaluate this equipment for emissions and potential toxics risk. Staff proposes to add the following language to paragraph (s)(5):

“Equipment that is an integral part of a series of permitted items, making up one continuous flow, unless it is listed or otherwise identified in an associated permit.”

REVISIONS TO EXISTING RULE LANGUAGE

Staff is proposing several revisions to the current rule language in Rule 219 for purposes of clarifying the intent of the existing rule language.

Revisions to paragraph {219(c)(5)}

Staff proposes to revise the language in Rule 219 paragraph (c)(5) to clarify that the exemption for equipment used in a dwelling does not include non-emergency internal combustion engines that provide prime power to a structure. During rule development, staff became aware of a situation where an internal combustion engine was being used to provide prime power in a residence without having obtained a written permit. The application in this case is to provide power for an elevator in a private residence. Staff proposes to clarify the existing exemption language such that it does not apply to non-emergency internal combustion engines that provide prime power to a structure, because of the higher emissions potential and nuisance potential from such applications. The revised language follows: *“Equipment utilized exclusively in connection with any structure which is designed for and used exclusively as a dwelling for not more than four families, and where such equipment is used by the owner or occupant of such a dwelling. “This exemption does not include non-emergency internal combustion engines used to provide prime power for the structure.”* Staff does not anticipate any additional cumulative emissions with this revision.

Revisions to paragraph {219(e)(14)}

Staff proposes to revise the language in Rule 219 paragraph (e)(14) to clarify that control equipment for solid material cleaning and deburring activities are included in this exemption. The revised rule language is as follows: *“Tumblers used for the cleaning or deburring of solid materials, and associated air pollution control equipment.”* Staff does not anticipate any additional cumulative emissions with this revision.

Revisions to paragraph {219(f)(2)}

Staff proposes to clarify the exemption for manually operated abrasive blast cabinets under paragraph (f)(2). During rule development, staff learned that some abrasive blast cabinets may emit significant levels of toxic arsenic, beryllium, cadmium or lead. It is not known whether these emissions are attributable to blast media used in the cabinet or to the parts being blasted. Therefore, staff proposes to add language to limit this exemption such that it does not apply to abrasive blast cabinets where either the blast media or the parts being blasted contain arsenic, beryllium, cadmium or lead. Staff proposes the following amended language for paragraph (f)(2):

“Manually operated abrasive blast cabinet, vented to a dust-filter where the total internal volume of the blast section is 1.5 cubic meters (53 cubic feet) or less, and any dust filter exclusively venting such equipment, provided materials containing arsenic, beryllium, cadmium or lead are neither used as blast media nor subject to blasting.”

Revisions to paragraph {219(i)(3)}

Staff proposes to revise the language in Rule 219 paragraph (i)(3) to clarify that that confection cookers are exempt from a written permit only if they are also compliant with the requirements of paragraph (b)(2). This means the confection cooker must have a rated maximum heat input capacity of 2,000,000 Btu per hour (gross) or less and be equipped to be heated exclusively with natural gas, methanol, liquefied petroleum gas, or any combination thereof. The revised rule language is as follows: *“Confection cookers where products are edible and intended for human consumption, provided such equipment is exempt pursuant to (b)(2).”* Staff does not anticipate any additional cumulative emissions with this revision.

Revisions to paragraph {219(j)(4)}

Staff proposes to revise the language in Rule 219 paragraph (j)(4) to clarify that recycling of polystyrene is not included under the exemption for equipment used to soften or anneal plastics. This language is necessary to address potential toxics (styrene) emissions during recycling operations. The revised rule language is as follows: *“Equipment used exclusively for softening or annealing plastics, provided such equipment is exempt pursuant to paragraph (b)(2). This exemption does not include equipment used for recycling of expanded polystyrene.”* Staff does not anticipate any additional cumulative emissions with this revision.

Revisions to paragraph {219(j)(6)}

Staff proposes to revise the language in Rule 219 paragraph (j)(6) to make it more readable and understandable. The revised rule language is as follows: *“Injection or blow molding equipment for rubber or plastics where no blowing agent is used, or where ~~other than~~ only compressed air, water or carbon dioxide is used as a blowing agent, and control equipment used to exclusively*

vent such equipment.” Staff does not anticipate any additional cumulative emissions with this revision.

Revisions to paragraph {219(l)(9)}

Staff proposes to revise the language in Rule 219 paragraph (l)(9) to clarify that the exemption for portable coating equipment and pavement stripers was meant to only include operations conducted at ambient temperature. If supplemental heat is added during the process, the operation must obtain a written permit. The revised rule language is as follows: *“Portable coating equipment and pavement stripers used exclusively for the application of architectural coatings, and provided no supplemental heat is added during the coating or pavement striping operation, and associated internal combustion engines provided such equipment is exempt pursuant to subdivision (a) or paragraph (b)(1).”* Staff does not anticipate any additional cumulative emissions with this revision.

Revisions to paragraph {219(o)(3)}

Staff proposes to revise the language in Rule 219 paragraph (o)(3) to clarify that the exemption for cleaning equipment using materials with a VOC content of 25 g/l or less (and associated dryers serving these cleaners) does not include equipment used for cleaning of diesel particulate filters (DPF) which are subject to permitting requirements due to increased toxicity. The revised rule language is as follows: *“Cleaning equipment using materials with a VOC content of twenty-five (25) grams of VOC per liter of material, or less, and associated dryers exclusively serving these cleaners, provided such equipment is also exempt pursuant to paragraph (b)(2). This exemption does not include equipment used for cleaning of diesel particulate filters (DPF) or associated control equipment used to vent such equipment.”* Staff does not anticipate any additional cumulative emissions with this revision.

Revisions to paragraph {219(p)(11)}

Staff proposes to revise the language in Rule 219 paragraph (p)(11) to clarify that the exemption for chemical vapor-type sterilization equipment does not include equipment used for incineration to avoid any mischaracterization of the chemical vapor sterilization process. The revised rule language is as follows: *“Chemical vapor type sterilization equipment where no Ethylene Oxide is used, and with a chamber volume of two (2) cubic feet or less used by healthcare facilities and control equipment exclusively venting the equipment. This exemption does not include equipment used for incineration.”* Staff does not anticipate any additional cumulative emissions with this revision.

Revisions to paragraph {219(q)(2)}

Staff proposes to revise the language in Rule 219 (q)(2) to reflect the November 4, 2016 amendment to Rule 1302 – Definitions, wherein the major source threshold for SO_x was revised to 70 tons per year from 100 tons per year as a result of the recent reclassification in PM_{2.5} attainment status to “serious” nonattainment from “moderate”. The SO_x major source threshold

was changed because it is a pre-cursor for PM_{2.5}. In addition, under Senate Bill 700, air districts in California are restricted from requiring permits for agricultural sources with actual emissions less than “one half of any applicable emissions threshold for a major source. As such, the permit exemption threshold in Rule 219 is proposed to be changed for SO_x from 50 tons per year to 35 tons per year to reflect the change in the associated major source threshold.

Revisions to paragraph {219(s)(2)}

Staff proposes to revise the language in Rule 219 paragraph (s)(2) to explicitly state that the exception applies to non-compliance with Rule 402 – Nuisance, in addition to non-compliance with all other SCAQMD rules. In addition, staff is proposing to separate the language of this paragraph into two subparagraphs to make it easier to read and understand. The revised rule language is as follows:

“Equipment when the Executive Officer has determined that:

- (A) the risk will be greater than identified in subparagraph (d)(1)(A), or paragraphs (d)(2) or (d)(3) in Rule 1401 – New Source Review of Toxic Air Contaminants; or,*
- (B) the equipment may not operate in compliance with all applicable District Rules and Regulations, including but not limited to SCAQMD Rule 402 – Nuisance.”*

ADDITIONAL ADMINISTRATIVE CHANGES

Additionally, staff intends to make minor revisions to the current rule language, including editorial corrections and clarifications.

ADDITIONAL COMMENTS BY STAKEHOLDERS

Staff convened a working group of interested parties for PAR219/222 and has held two meetings to solicit input and inform the group of ongoing efforts to amend this rule. These meetings were held on August 2 and November 10, 2016. At the first working group meeting, staff requested written comments from the stakeholders, to be accompanied by the commenter’s assessment of the number of facilities that may take advantage of the exemption and number of equipment affected by the exemption. Comments on sixteen items were received by staff, nearly all without additional information on facilities and equipment counts required for analysis. A summary of these comments is presented in Table 2-4 below, along with a brief discussion and the current disposition of the requested change.

Table 2-4 - Stakeholder Requests to Consider in PAR 219 and PAR 222

Equipment or Process	Proposal	Discussion	Disposition of Request
Cooling Towers	Consider particle size distribution of drift particles from cooling towers (AP-42 assumes all TDS emitted as PM ₁₀). Follow New Mexico Environmental Dept approach.	Emissions from cooling towers are dependent on particle size distribution. AP-42 assumes all dissolved solids (TDS) in the cooling tower circulation water are emitted as PM ₁₀ . This assumption overestimates PM ₁₀ as it does not account for droplet size. Commenter references a Technical Memorandum from the New Mexico Environmental Department that addresses particle size and establishes emission factors for drift droplet diameter for various concentrations of TDS in the cooling tower circulating water from 1000 ppm to 12,000 ppm.	Did not incorporate recommendation to allow speciation of PM ₁₀ . Instead, require industrial cooling towers to register under Rule 222, but not comfort cooling towers. Emission calculations, including any speciation of droplet size will be left to future rulemaking under the 2016 AQMP.
Cooling Towers	PAR 222 registration for cooling towers should follow format in R1415 where similar equipment is listed on 1 registration form with 1 registration fee for all cooling towers at a facility.	Rule 1415 requires a Registration Plan to be submitted every 2 years with facility and equipment-specific information (# of air conditioners, mfg name, model, serial number, and refrigerant)	Propose to Incorporate suggestion for a single registration. Registration fee to be based on the number of cooling towers.

Table 2-4 - Stakeholder Requests to Consider in PAR 219 and PAR 222

Equipment or Process	Proposal	Discussion	Disposition of Request
Bench Scale	Remove "bench scale" from exemption. Provide an emission limit-based exemption instead. Precedent in SJVAPCD Rule 2020 Section 6.18	SJVAPCD Rule 2020 6.18 exempts <i>"Laboratory testing equipment and quality control testing equipment used exclusively for chemical and physical analysis, provided: 6.18.1 Emissions from such equipment do not exceed 2.0 pounds per day or 75 pounds per year, and 6.18.2 The equipment is not a HAP source."</i>	Did not incorporate proposal. A bench scale standard is readily enforceable in the field. However, using an emission limit based exemption may require extensive recordkeeping, especially for industries such as the commenter, where usage and waste records must be kept for a large number of sources.
Aqueous Ammonia	Add a new exemption to subdivision (m) with the following language: <i>"Equipment used for the storage and transfer of aqueous ammonia less than 20%, and associated control equipment"</i>	Commenter's ammonia tanks are vented to absorber tanks containing water. Absorber tank water is monitored for oversaturation and ammonia removal efficiency. Tanks also have a PRV to guard against over-pressurization. During filling operations, a vapor return line returns vapors to the vendor truck. OSHA PEL for ammonia is 50 ppm (8-hr); NIOSH REL is 25 ppm (10-hr).	Did not incorporate due to toxicity of aqueous ammonia. It is regulated as a toxic, even at 20% solution.

Table 2-4 - Stakeholder Requests to Consider in PAR 219 and PAR 222

Equipment or Process	Proposal	Discussion	Disposition of Request
Chlorine Storage	Exclude chlorine from exemption under (m)(2)(D). Chlorine operations are already strictly regulated by other regulating entities, including the Occupational Safety and Health Administration (OSHA) and Cal/OSHA, United States Environmental Protection Agency (USEPA), California Office of Emergency Services (Cal OES), Local Certified Unified Program Agencies (CUPAs), and the Department of Transportation (DOT).	Basis for proposing this amendment was for CEQA purposes, to be notified of a project even if SCAQMD is not the lead agency. Staff had formerly proposed prior to the first working group meeting to clarify that the existing exemption under clause (m)(2)(D) does not apply to storage and dispensing of products that contain any substance listed in form 400-CEQA, Table 1. Chlorine storage of more than 100 lbs is one such product.	Removed the proposed language under (m)(2)(D). Staff is comfortable with the CEQA protections afforded through the current permit process and other agency jurisdictions.
PERP Engines	Allow use of PERP engines as back up when permanent back-up emergency generator is offline for maintenance or when a new emergency generator is being commissioned.	Historically, PERP engines have not been allowed for this purpose. In addition, PERP guidance document allows local Districts to be more strict.	Did not incorporate request. This is an implementation issue and should be addressed either through the PERP regulation or through a compliance/guidance document by CARB or by SCAQMD Compliance and Enforcement Division.

Table 2-4 - Stakeholder Requests to Consider in PAR 219 and PAR 222

Equipment or Process	Proposal	Discussion	Disposition of Request
Floating Roof Tanks	Provide a new exemption for vapor socks on floating roof tanks, in lieu of guidepole floats on slotted guidepoles. Suggested language 219(c)(11) " <i>Replacement of a slotted guidepole float with a vapor sock on floating roof tanks.</i> " Exemption change would allow radar gauging to be better able to measure liquid level in the tank. This will benefit up to 200 tanks at a number of the commenter's locations - other facilities may take advantage of such an exemption as well.	This change would allow replacement of guide floats with vapor socks without submitting an application for permit modification. Commenter cites tank seal replacement as precedent for this request. Tanks subject to Rule 1178 have more stringent requirements than tanks subject to Rule 463. Storage Tank Emission Reduction Partnership Program (STERRP) agreement seems to indicate equivalency between guide pole floats and vapor socks.	Did not incorporate proposal. Allowing such a change without submitting an application for permit modification would mean the permit would not accurately reflect the physical conditions of the tank and would not allow SCAQMD to conduct an appropriate BACT analysis.
PERP Engines	Expand (b)(8) to include engines operating in the Outer Continental Shelf. Exemption was previously submitted and denied for 2013 amendment. Language proposed to be added to (b)(8) ". . . <i>Including the use of such engines at locations where PERP registrations are otherwise not valid (e.g., within the Outer Continental Shelf) as long as the engines are operated in compliance with all other conditions in the current PERP registrations.</i> " Commenter claims they are at a competitive disadvantage with respect to onshore operators.	Comments and responses from 2013 amendment summarized below: Comment #1 - Include requested language (same as language currently requested). Response #1 - PERP registrations specifically excluded from eligibility include " <i>any [portable] engine or equipment unit operating within the boundaries of the OCS</i> " [PERP §2451 (c)(5)] No PERP conditions exist for the requested use of the engine. Since portable engines are not eligible for operation within OCS, they are subject to AQMD permitting. Comment #2 - Is the exemption for PERP engines valid in the OCS? Response #2 - If a specific condition of a PERP registration precludes a particular use, that use is automatically subject to permitting.	Did not incorporate proposal for the same reasons as stated in the response from the 2013 rule amendment.

Table 2-4 - Stakeholder Requests to Consider in PAR 219 and PAR 222

Equipment or Process	Proposal	Discussion	Disposition of Request
UV/EB/LED Materials	Include the following language in subdivisions (h) and (l): <i>"UV/EB/LED materials containing fifty (50) grams of VOC per liter of material, and using exclusively cleanup solvents containing fifty (50) grams of VOC per liter or less."</i>	Previous discussion focused on 25 g/l for both UV/EB/LED materials and cleanup solvents. Commenter is requesting reinstatement of an exemption from 2006.	Did not incorporate proposal, but staff proposal is to amend subdivisions (h) and (l) to allow a similar exemption for UV/EB/LED materials at 25 g/l and cleanup solvents at 25 g/l, provided VOC emissions are less than 1 ton/year.
Chlorine Storage	Commenter has concerns with excluding chlorine gas from exemption (due to being listed on 400 CEQA, Table 1. Chlorine is already highly regulated under the California Accidental Release Prevention (CalARP) program	Similar issue as raised by another commenter. See discussion above.	See discussion above.
Decarbonators for Advanced Water Treatment	Include a new exemption in subdivision (p) for decarbonators that reduce carbonate in water supplied to a reverse osmosis system. Proposed language: <i>"Equipment adjusting treated effluent pH using a forced air draft decarbonator installed as part of an advanced wastewater treatment facility using reverse osmosis or similar processes at an existing permitted municipal wastewater treatment plant immediately prior to beneficial reuse."</i>	Commenter is adding this system to their Valencia plant for tertiary wastewater treatment and was asked to submit an application for permit modification. Another facility has a similar system, and source test determined very low VOC emissions (<< 1 lb/day, but above 0) and no toxics.	Did not incorporate proposal. R1301(b)(1) applies to new and existing sources that cause ". . . issuance of any . . . air contaminant . . ."

Table 2-4 - Stakeholder Requests to Consider in PAR 219 and PAR 222

Equipment or Process	Proposal	Discussion	Disposition of Request
Control Enclosures	Amend exemption to allow greater than 27 cubic feet, provided a Rule 222 filing is submitted. Proposed language: " <i>Control enclosures with an internal volume of 27 cubic feet or less, provided that aerosol cans, air brushes, or hand applications are used exclusively. Under this exemption control enclosures with an internal volume greater than 27 cubic feet are also exempted provided that aerosol cans, air brushes, or hand applications are used exclusively and a filing pursuant to Rule 222 is submitted to the Executive Officer.</i> "	Commenter paints large articles (character heads, carousel horses) that cannot fit into a 27 cubic feet desk-top booth but the artists only paint them via air brushes or hand application (currently allowed under the exemption).	Did not incorporate suggestion. The original intent of this exemption (added in July 2003) was simply to provide a way to hobbyists to spray paint, not commercial operations.
Cooling Towers	Revisit PM calculation methodology for HVAC cooling towers	Establish a flow rate equivalent to 1 lb/day of PM emissions and require facilities with emissions above that threshold to file for registration. Intent of registration will be to establish an inventory of cooling towers with associated flow rates that potentially have PM emissions above that threshold for a subsequent rule development. Rule development will examine whether to require high efficiency drift eliminators on older cooling towers, in order to incorporate proposed 2016 AQMP control measure BCM-02.	Did not incorporate recommendation to establish a flow rate equivalent for 1 lb/day for PM emissions. Instead, only requiring industrial cooling towers to register under Rule 222, but not comfort cooling towers. Emission calculations, including any speciation of droplet size will be left to future rulemaking.

Table 2-4 - Stakeholder Requests to Consider in PAR 219 and PAR 222

Equipment or Process	Proposal	Discussion	Disposition of Request
PERP Engines	Modify (b)(8) - PERP engines so it points to (r)(1) - all PERP equipment. Add language to (r)(1) to ensure that RECLAIM facilities include PERP equipment when determining the appropriate requirements for monitoring, reporting and recordkeeping (MRR) protocols under Rules 2011 and 2012.	Administrative modification.	Incorporated proposal.
Oil and Gas Wells	Allow all oil and gas wells to be registered in PAR 222 under one filing.	Commenter proposed this at the first working group meeting.	Propose to incorporate suggestion. Require API number of each active and inactive well in the oil field to be submitted in registration. Require annual re-registration. Base registration fee only on active wells.
Food Ovens	Remove daily VOC limit of 1 lb/day - replace with annual limit, or rolling limit (rolling 12 months or 30-day average).	Small ovens are often operated intermittently and strictly enforcing an absolute 1 lb/day limit could force small ovens into expensive retrofits or controls.	Did not incorporate proposal. Regulation XIII currently does not provide the leeway for an averaging scenario.

Table 2-4 - Stakeholder Requests to Consider in PAR 219 and PAR 222

Equipment or Process	Proposal	Discussion	Disposition of Request
Gaseous and Liquid Fuel Fired Combustion Equipment	Expand the list of equipment proposed for inclusion in the Rule 222 filing program to include gaseous and liquid fuel fired combustion equipment, as defined in Rule 1147, with individual fuel usage profiles of one pound or less of NOx emissions per day. Examples of these are spray booth heaters, dryers, and ovens, and heaters and dryers on printing presses.	Heaters, dryers and ovens are integral to many spray booths – they are not separate from the spray booth. Permitting of the entire spray booth, including combustion equipment is necessary in order for permitting staff to make a determination regarding the complete emissions profile from spray booths, for VOC, PM and potentially toxic emissions from the coatings sprayed, as well as NOx from any combustion equipment. In addition, staff evaluates spray booths for potential nuisance impacts under Rule 402. The Technology Assessment conducted by staff under Rule 1147, and verified by an independent third party, did not establish a definitive level at which all heaters, dryers and ovens used on either printing presses or spray booths will be less than 1 lb/day of NOx; rather, it depends on the heat input, operating schedule and age of the heater, dryer or oven. Also, the current proposal for Rule 1147 does not require small, low emitting units to retrofit with a compliant unit; it only requires these units to meet the appropriate Rule 1147 emission limit when they are subject to a combustion modification that changes the heat rating or are replaced or rebuilt.	Did not incorporate proposal.
Asphalt Distributor Truck	Include the diesel burner used to heat the asphalt emulsion applied by an asphalt tanker truck in the Rule 222 registration program.	Truck does not meet exemption criteria for an asphalt day tanker under (m)(23) because it has a diesel burner and the truck is used to apply asphalt. Permit condition requires compliance with Rule 1147 limit by July 2018. However, since this unit emits less than 1 lb/day of NOx, Rule 1147(c)(6)(B) allows deferment of compliance for an additional 5 years, to July 2023. Under a separate staff proposal for PAR1147, this burner would have until 2038 to comply with the NOx concentration limit.	Did not incorporate proposal.

**RULE 222 – FILING REQUIREMENTS FOR SPECIFIC EMISSION SOURCES NOT
REQUIRING A WRITTEN PERMIT PURSUANT TO REGULATION II**

CHAPTER 3: SUMMARY OF PROPOSED AMENDED RULE 222

- o Overview: Proposed Amendment To Rule 222
- o Industrial Cooling Towers
- o Natural Gas and Crude Oil Production Equipment
 - o Well Heads and Well Pumps
 - o Natural Gas Pipeline Transfer Pumps
 - o Repressurizing Equipment
- o Storage Tanks for Aqueous Urea Solutions
- o ICEs used at remote Two-Way Radio Transmission Towers
- o Food Ovens
- o Fuel Cells

OVERVIEW: PROPOSED AMENDMENT TO RULE 222

The purpose of this amendment is to require specific emission sources that currently have written District permits to instead file their information for such equipment under the Rule 222 filing program. The Rule 222 filing program is designed for small emitting exempt emission sources under Rule 219 that can operate in compliance through standard conditions as determined by the Executive Officer. Based on evaluation of their emission characteristics, staff proposes to add the following equipment categories to the SCAQMD Rule 222 filing program:

- Water cooling towers not used for evaporative cooling of process water or not used for evaporative cooling of water from barometric jets or from barometric condensers and in which no chromium compounds are contained, including industrial cooling towers located in a chemical plant, refinery or other industrial facility;
- Natural gas and crude oil production equipment, including: natural gas pipeline transfer pumps; and gas, hydraulic, or pneumatic repressurizing equipment;
- Storage tanks for aqueous urea solutions

In addition to these three equipment categories, staff is also proposing to make changes to an additional three equipment categories. These categories include:

- Food Ovens, with a rated maximum heat input capacity of 2,000,000 Btu per hour or less, are fired exclusively on natural gas and where the process VOC emissions are less than one pound per day;
- Fuel cells, which produce electricity in an electro-chemical reaction and use phosphoric acid, molten carbonate, proton exchange membrane, or solid oxide technologies; and associated heating equipment, where the heating equipment is fueled exclusively with natural gas, methanol, liquefied petroleum gas, or any combination thereof, including heaters that have a rated maximum heat input capacity of greater than 2,000,000 Btu per hour, provided that the supplemental heat used is 90,000 therms per year or less; and
- Internal combustion engines used exclusively for electrical generation at remote two-way radio transmission towers where no utility, electricity or natural gas is available within a ½ mile radius, has a manufacturer's rating of 100 brake horsepower or less, and are fired exclusively on diesel #2 fuel, compressed natural gas (CNG) or liquefied petroleum gas (LPG).

Additionally, staff intends to enhance enforceability of the operating conditions included in the Rule 222 filings and include minor clarifications and editorial corrections to the rule.

Compliance with the filing requirements of PAR 222 is necessary within 12 months after the effective date in Table 1 of Rule 222 for a new or amended source category incorporated into Rule 222.

The following includes the proposed definitions and descriptions for the additional sources and changes proposed to be added to Rule 222:

NEW EQUIPMENT TO BE ADDED TO RULE 222 FILING PROGRAM

Water Cooling Towers

As described in Chapter 2, Proposed 2016 AQMP Control Measure BCM-02 will seek reductions in PM_{2.5} emissions from industrial cooling towers in future years. The proposed control measure will seek to reduce PM emissions from cooling towers by requiring the use of more efficient drift eliminators that keep drift losses to less than 0.001% of the circulating water flow rate.

Staff proposes to add industrial cooling towers to the Rule 222 filing program by adding new rule language to Table 1 of Rule 222. The purpose of adding this source category to the Rule 222 filing program is to develop an inventory of industrial cooling towers and facilities at which these towers are located, for the benefit of future rule development to be conducted to implement AQMP Control Measure BCM-02.

Since this source category (industrial cooling towers) is currently exempt from permit under Rule 219(d)(3), there are no new or forgone emissions associated with inclusion in the Rule 222 filing program.

Emissions from cooling towers are reported under the District's Annual Emission Reporting (AER) program. However, only facilities with emissions from a criteria pollutant in excess of 4 tons per year are required to report those emissions. The most recent year for which cooling tower emissions data are obtainable under the AER program is 2013. For this year, emissions from 251 cooling towers are reported. Sixty-two (62) of these are from cooling towers used for comfort cooling, and 189 are from industrial cooling towers. The average reported emissions of total suspended particulate (TSP) from industrial cooling towers reported under AER is 6,420 lbs/yr or 3.21 tons/yr (TPY). Since the average emissions from these sources is less than the 4 TPY reporting threshold in the AER program, there may be additional industrial cooling towers located at facilities that do not have TSP emissions in addition to those from an industrial cooling tower.

Staff proposes to add the following definition to Rule 222, paragraph (c)(17):

INDUSTRIAL COOLING TOWER means a cooling tower located at a chemical plant, refinery or other industrial facility that is not used for comfort cooling.

Staff further proposes to add the following registration source category to Rule 222, Table 1:

Industrial water cooling towers not used for evaporative cooling of process water or not used for evaporative cooling of water from barometric jets or from barometric condensers and in which no chromium compounds are contained, located in a chemical plant, refinery or other industrial facility.	5/5/2017
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Natural Gas and Crude Oil Production Equipment

The oil and natural gas industry includes a wide range of operations and equipment, from wells to natural gas gathering lines and processing facilities, to storage tanks and transmission and distribution lines.

As described in Chapter 2, CARB is proposing a Regulation Order for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities (draft regulation)¹. This draft regulation is currently scheduled to be heard before the CARB Board in the spring of 2017. The draft regulation will regulate greenhouse gases, including methane from specific equipment at crude oil and natural gas facilities. Historically SCAQMD has not regulated methane, which is an exempt compound and is not considered a VOC. CARB requires that all equipment addressed under the draft regulation be either permitted or registered by a local air district. Staff believes that nearly all of this equipment is currently permitted or registered under Rule 222. However, there may be limited numbers of equipment that are not either under permit or registration. These include equipment exclusively handling natural gas. Most oil field equipment listed in subdivision (n) is permitted to allow it to transfer of both oil and natural gas, and as such is required to be permitted.

The draft regulation for oil and gas production facilities allows both a permitting option and a registration option for equipment and processes. Under the registration option, the following information must be reported:

§95216(b) [Proposed]

(2) Reporting and Registration Requirements for Facilities Not Subject to an Air District Permitting Program

(A) Owners or operators of facilities with equipment covered by this article which are not included in a local air district permitting program shall register the facility by reporting the following information by [Month, Day, Year]. The information shall be reported to ARB unless the relevant local air district has established a registration program that collects at least the following information.

- 1. The owner or operator's name and contact information for the equipment covered by this article.*
- 2. A description of the crude oil or natural gas facility where the equipment is located.*
- 3. A description of all equipment covered by this article located at the facility which shall include the following:*

¹ California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 10 Climate Change, Article 4, Subarticle 13: Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities

- a. *The number of crude oil or natural gas wells at the facility.*
 - b. *A list of all tanks and separators at the facility, including the size of each tank and separator in units of barrels.*
 - c. *The annual crude oil, natural gas, and produced water throughput of the facility.*
 - d. *A list of all reciprocating and centrifugal natural gas compressors at the facility, including the manufacturer's horsepower rating for each compressor.*
 - e. *A count of all pneumatic devices and pumps at the facility.*
- (B) *Updates to these reports, recording any changes in this information, must be filed with ARB, or, as relevant, with the air district no later than [Month, Day, Year] each year if the owner or operator has installed or removed any equipment covered by this article at its facility.*

Rule 219, subdivision (n) currently exempts six categories of equipment. Of these six categories, one is currently required to submit registrations under the Rule 222 filing program: well heads and well pumps. Well heads and well pumps subject to the requirements of Rule 1148.1 are allowed to be registered in groups of 4. During rule development, staff received a request from a stakeholder to allow all well heads or well pumps located at a facility to be registered on one form. The reasoning for this request is that no identifying information is required to be submitted for the wells under registration. For example, no well location is given in the registration, in the form of a location (latitude and longitude), Universal Transverse Mercator (UTM) coordinates or the American Petroleum Institute (API) number assigned to each well head. It is not currently possible for an SCAQMD inspector to identify the four wells under a single registration in the field. Well heads and well pumps can be put into production and/or taken out of production within a single year. Since it is not possible to identify wells under any one registration, a common practice is for a facility to submit and pay fees for one more registration than the number of producing wells they estimate will be operating during the year.

Therefore, staff plans to modify form 222-OW to include a list of all wells at a facility, require the API number to identify each well head, and to review the fee structure under Rule 301(u) during the next rule amendment to Rule 301 to charge an equivalent fee for each well head to the amount currently charged. For example, an initial filing fee of \$198.13 is currently charged for a Rule 222 registration of up to four well heads [Rule 301(u)(1)]. In addition, an annual renewal fee of \$198.13 is currently charged for a Rule 222 registration of up to four well heads [Rule 301(u)(3)]. The equivalent per-well head fee is \$49.53 for both the initial filing fee and annual renewal fee. Under the staff proposal, the same per-well head fee could be charged for an initial filing fee and annual renewal fee as under the current fee structure. The difference is that all well heads and well pumps could be recorded on one Rule 222-OW registration form. Staff would provide specific language regarding the amendments to Rule 301(u)1 and (u)(3) as well as the definition for "Emission Source" [Rule 301(b)(13)] during rule development.

According to data from the Division of Oil, Gas and Geothermal Resources (DOGGR), there are 7,270 land-based wells and 2,267 offshore wells of all types in the South Coast Air Basin and

offshore in State Territorial Waters. The wells subject to the draft regulation include oil and gas wells, dry gas wells and gas storage wells. These wells may have other functions as well - for example, some oil and gas wells are also cyclic steam wells, or water flood wells. Staff believes most of these wells are currently under registration. The possible exception includes dry gas wells and gas storage wells. From the DOGGR data, there are 138 potential natural gas-only wells and another 2 that are offshore.

Staff proposes to bring two other groups of equipment into the Rule 222 filing program, as opposed to requiring a written permit. These groups of equipment are currently exempted under Rule 219 paragraph (n)(2) – natural gas pipeline transfer pumps, and paragraph (n)(3) - gas, hydraulic, or pneumatic repressurizing equipment. Since this equipment is currently exempt from obtaining a written permit pursuant to Rule 219 and is not required to register under Rule 222, data is not currently available to estimate the number of registrations that may result from these additions to the Rule 222 filing program.

Since this source category (natural gas and crude oil equipment) is currently exempt from permit under Rule 219(d)(3), there are no new or forgone emissions associated with inclusion in the Rule 222 filing program.

Staff proposes to add the following registration source category to Rule 222, Table 1:

Natural gas and crude oil production equipment, including: well heads and well pumps; natural gas pipeline transfer pumps; and gas, hydraulic, or pneumatic repressurizing equipment	5/5/2017
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Storage of Aqueous Urea Solutions

As discussed in Chapter 2, ammonia emission estimates from storage tanks containing urea solutions are very low. Staff is working to develop an estimate of the current number of permits with BCAT 315900 – *Storage Tank - Aqueous Urea No Controls*. Staff proposes to add the following definition to Rule 222, paragraph (c)(28):

STORAGE OF AQUEOUS UREA SOLUTIONS is equipment used exclusively to store aqueous solutions of urea [$CO(NH_2)_2$] with a holding capacity of 6500 gallons or less.

Staff further proposes to add the following registration source category to Rule 222, Table 1:

Storage of aqueous urea solutions	5/5/2017
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Due to very low emissions of ammonia from tanks that store urea (~0.01 lbs/day) staff anticipates potential total emissions affected will be <1 lb/day of PM emissions.

CLARIFICATION TO AN EXISTING SOURCE CATEGORY

Food Ovens

Staff proposes to clarify the definition of a food oven and the description in Table 1 to specify that the VOC emission limit of 1 lb per day can be from any source, not only from yeast fermentation. Prior to this source category being added to the Rule 222 filing program in May 2013, if a food oven with a rated maximum heat input capacity of 2,000,000 Btu/hour or less was used to process food products that involved yeast, that food oven would have required a written permit to operate based on the formation of ethanol emissions. When this source category was added in May 2013, data indicated 55 permitted food ovens with a rated maximum heat input capacity of 2,000,000 Btu/hour or less that were permitted. Staff now proposes to clarify that VOC emissions can be from any source, not only from yeast fermentation.

Staff proposes to modify the existing definition of food oven in paragraph (c)(12) as follows:

FOOD OVEN – is any equipment used exclusively for food preparation, has a rated maximum heat input capacity of no more than 2,000,000 Btu per hour or less, and is exclusively fired on natural gas and where the process VOC emissions ~~from yeast fermentation~~ are less than one pound per day.

In the new definition, process VOC emissions refers to VOC emissions from all sources, including VOC emissions from the baking process in addition to VOC emissions from yeast fermentation and other VOC emitted during the operation of the oven.

Staff further proposes to modify the current description of food ovens from Rule 222, Table 1:

Food Ovens with a rated maximum heat input capacity of 2,000,000 Btu per hour or less, are fired exclusively on natural gas and where the <u>process</u> VOC emissions from yeast fermentation are less than one pound per day.	5/5/2017
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Since this modification is merely to clarify that the 1 lb/day limit for VOC emissions can be from any source and the existing exemption in Rule 219(b)(2) currently exempts “*Boilers, process heaters, or any combustion equipment that has a rated maximum heat input capacity of 2,000,000 Btu per hour (gross) or less and are equipped to be heated exclusively with natural gas, methanol, liquefied petroleum gas, or any combination thereof*”, staff does not anticipate any additional registrations as a result of this clarification.

Fuel Cells

Staff proposes to clarify that only fuel cells that are heated by supplemental heaters during startup using combustion equipment are required to register under the Rule 222 filing program. In addition, staff proposes to clarify the allowable fuels for supplemental heat in combustion devices includes natural gas, methanol, liquid petroleum gas (LPG), or any combination thereof.

Fuel cells are used by some water districts to produce power from digester gas. Fuel cells require an external heating source during startup. First generation fuel cells in the early 2000s used electrical heaters for this purpose. However, later generation fuel cells were larger and required more heat input and were therefore heated with a natural gas burner. Prior to the May 2013 amendment to Rules 219 and 222, during staff discussion with industry representatives, it was proposed that fuel cells with electrical heaters would continue to be exempt, and only fuel cells heated with a combustion source would be registered under the Rule 222 filing program, provided the supplemental heater used 90,000 therms per year or less. However, this was not explicitly stated in the exemption language and confusion during implementation resulted in registration of fuel cells with electric heaters.

Staff proposes to modify the current description of fuel cells from Rule 222, Table 1:

<p>Fuel cells, which produce electricity in an electro-chemical reaction and use phosphoric acid, molten carbonate, proton exchange membrane, or solid oxide technologies; and associated heating equipment, <u>provided the heating equipment is fueled exclusively with natural gas, methanol, liquefied petroleum gas, or any combination thereof</u>, including heaters that have a rated maximum heat input capacity of greater than 2,000,000 Btu per hour, provided that the supplemental heat used is 90,000 therms per year or less.</p>	<p>5/3/2013 5/5/2017</p>
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Since these changes are intended to: 1. restore the original intent that only fuel cells with supplemental heat based on combustion are required to register under the exemption in Rule 219(b)(5); and 2. specify allowable fuels in supplemental combustion heaters, there are no changes in emissions from this source category.

ICEs Used at Remote Two-Way Radio Transmission Towers

Staff proposes to clarify that the allowable fuels for internal combustion engines used at remote two-way radio towers includes diesel #2 fuel, compressed natural gas (CNG) and liquefied petroleum gas (LPG).

Staff proposes to modify the current description of ICEs at remote two-way transmission towers from Rule 222, Table 1:

Internal combustion engines used exclusively for electrical generation at remote two-way radio transmission towers where no utility, electricity or natural gas is available within a ½ mile radius, has a manufacturer’s rating of 100 brake horsepower or less, and are fired exclusively on diesel #2 fuel, <u>compressed natural gas (CNG) or liquefied petroleum gas (LPG).</u>	5/5/2017
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There are 16 engines at remote two-way radio transmission towers currently in the Rule 222 filing program. In addition, there is one engine with an open application for a remote site emergency ICE that uses LPG. The engine is used as back-up power to the primary power for a county emergency communications system. The primary power is solar panels combined with three banks of batteries. During periods of bad weather, the solar panel array and battery bank cannot keep up with the power demand. In these conditions, the ICE is started. This engine is operated approximately 1000 hours per year. Since this unit will no longer be subject to Rule 1110.2 requirements, staff has calculated a best estimate for daily NOx emissions forgone to be 3.5 pounds per day. The engine is a small emission source and have low cancer risk of less than one in a million based on its remote location.

REVISIONS TO EXISTING RULE LANGUAGE

Staff is proposing a revision to the current rule language in Rule 222 for purposes of clarifying the intent of the existing rule language.

Revisions to subparagraph {222 (d)(1)(D)}

Staff proposes to update the date in the Requirements subdivision to reflect the anticipated date of amendment for PAR 222. The proposed amended language follows:

- (D) *On ~~May 3, 2013~~ May 5, 2017, and each subsequent January 1 thereafter, records shall be kept and made available to the District upon request to provide operation data and any updated information on the emission sources or equipment, applicable to this rule, including, but not limited to:*
- (i) *hours of operation;*
 - (ii) *materials used or processed;*
 - (iii) *fuel usage;*
 - (iv) *throughput; and*
 - (v) *operating parameters.*

RULE 219 – EQUIPMENT NOT REQUIRING A WRITTEN PERMIT PURSUANT TO REGULATION II

RULE 222 – FILING REQUIREMENTS FOR SPECIFIC EMISSION SOURCES NOT REQUIRING A WRITTEN PERMIT PURSUANT TO REGULATION II

CHAPTER 4: IMPACT ASSESSMENT OF PROPOSED AMENDED RULES 219 AND 222

- Introduction
- Impact Assessment
 - Emissions Impacts
 - CEQA Impacts
 - Socioeconomic Impacts

INTRODUCTION

District Rule 219 is an administrative rule that identifies equipment, processes, or operations that emit small amounts of air contaminants to be exempted from written permits, unless such equipment, process or operation is subject to subdivision (s) – Exceptions or is determined to require a written permit by the Executive Officer. The equipment categories proposed for exemption from written permits all have very small criteria and toxic emissions profile. The proposal to amend Rule 222 will allow certain specific types of equipment to transition from their current written permits to the more streamlined Rule 222 filing program. These specific types of equipment have been determined to be small emitting sources and can be streamlined from written permit to the Rule 222 filing program.

IMPACTS ASSESSMENT

Emissions Impacts

Staff is currently conducting an emissions impact assessment to determine the criteria pollutant and toxics emissions affected by this amendment. Staff is seeking input from stakeholders on emissions impacts from new and modified source categories of equipment under PARs 219 and 222.

CEQA Impacts

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, the SCAQMD, as lead agency for the proposed project, will be reviewing the proposed amendments to Rule 219 and Rule 222 and will determine if the proposed amendments will result in any potential adverse environmental impacts. Appropriate CEQA documentation for the proposed project will be prepared based on the analysis. In the event that the proposed project may have statewide, regional, or area-wide significance, a CEQA scoping meeting is required pursuant to Public Resources Code section 21083.9(a)(2).

Comments and suggestions regarding the CEQA analysis may be directed to:

Sam Wang
Planning, Rule Development and Area Sources, CEQA Section
South Coast Air Quality Management District
21865 Copley Drive Diamond Bar, CA 91765
Phone: (909) 396-2649
Email: swang1@aqmd.gov
Fax: (909) 396-3324

Socioeconomic Impacts

Staff will prepare a socioeconomic assessment of the proposed amendments to Rule 219 and 222 and will incorporate that assessment as part of Draft Staff Report for the Set Hearing Package.

REFERENCES

Designing Efficient Sub Slab Venting and Vapor Barrier Systems for Schools and Large Buildings, T. Hatton, 2010, Proceedings of 2010 Radon Symposium

United States Environmental Protection Agency, March 2008 *Brownfields Technology Primer: Vapor Intrusion Considerations for Redevelopment*, EPA 542-R-08-001

United States Environmental Protection Agency, February 2004, *User's Guide for Evaluating Subsurface Vapor Intrusion into Building*

Steam: Its Generation and Uses. [Babcock & Wilcox](#)

INTERNET REFERENCES:

<https://www.arb.ca.gov/portable/perp/perpreg.pdf>

<https://www.env.nm.gov/aqb/permit/documents/PermittingGuidanceforCoolingTowerParticulateEmissions.pdf>

<https://www.arb.ca.gov/regact/2016/oilandgas2016/oilgasappa.pdf>

<http://textilelearner.blogspot.com/2013/01/sueding-machine-specification-of.html>

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10100