

BOARD MEETING DATE: November 2, 2018

AGENDA NO. 23

REPORT: Stationary Source Committee

SYNOPSIS: The Stationary Source Committee held a meeting on Friday, October 19, 2018. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Ben Benoit, Chair
Stationary Source Committee

LT:rs

Committee Members

Present: Mayor Ben Benoit/Chair (videoconference)
Dr. Joseph Lyou/Vice Chair
Mayor Pro Tem Judith Mitchell
Supervisor V. Manuel Perez (videoconference)
Supervisor Janice Rutherford (videoconference)
Supervisor Hilda L. Solis (videoconference/arrived at 10:35 a.m.)

Absent: None

Call to Order

Chair Benoit called the meeting to order at 10:30 a.m.

INFORMATIONAL ITEMS:

- 1. Update on Proposed Amended Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations**
Ms. Susan Nakamura, Assistant Deputy Executive Officer/Planning, Rule Development, and Area Sources, presented an update on Proposed Amended Rule (PAR) 1469.

Wesley Turnbow, Metal Finishing Association of Southern California (MFASC), spoke on behalf of the Northern California, Southern California, and the national association. He stated that the MFASC no longer opposes the amendments to Rule 1469; however they still have concerns regarding economic impacts. This is one of many rules facilities have to comply with; one percent cost-to-revenue impact matters, especially if a facility cannot obtain loans for air pollution control equipment. He asked when the monitor around his facilities would be removed, and about the purpose of the downwind monitor.

Florence Gharibian, Del Amo Action Committee, expressed several concerns with PAR 1469, including: use of fume suppressants; ensuring enclosures are built; clear emission limits; time frames for source testing; and working towards eliminating hexavalent chromium use, which is the overarching concern. She appreciated schools being added to the definition of sensitive receptors, but was disappointed that parks were not also added. She hopes that this rule amendment will result in emission reductions of hexavalent chromium and its ultimate removal from use.

Supervisor Solis asked why parks were not added to the definition of sensitive receptors. Ms. Nakamura explained that staff considered parks and consulted with OEHHA on the definition of sensitive receptors and there is a two-pronged approach; involving predictability of use and long term use and exposure. Schools, although short-term, have predictable use. Hospitals do not have predictable use; however, someone could be there for a long time. Parks do not meet either definition of predictable or long term use. In terms of health impacts, a residential receptor is assumed to be outside during the entire time so their exposure while at a park is captured in the risk assessment.

Supervisor Solis suggested a pilot study involving putting a monitor in a park; wondered how many parks were located near PAR 1469 facilities and given the different times of day that people utilize parks, communities need to know they are safe when using parks. Wayne Nastri, Executive Officer, stated that we need to be consistent with state law and OEHHA guidance for risk assessments. Regarding the pilot study requested by Supervisor Solis, he stated that the MATES study covers parks, and staff will consider the request, possibly as part of the AB 617 process.

Supervisor Solis asked if the SCAQMD reports worker safety issues at facilities to CAL-OSHA. Mr. Nastri confirmed that concerns are shared with sister agencies, including CAL-OSHA; however, enforcement data is not shared.

Mayor Pro Tem Mitchell thanked staff for visiting all interested facilities, tailoring solutions for them, and working with them regarding cost-effectiveness. She thanked Mr. Turnbow and the MFASC for working with staff to find a solution. This is an important rule to get in place due to toxicity of hexavalent chromium. She also suggested that staff return to the Stationary Source Committee in a year to

report on implementation of the rule. Mr. Nastri stated that staff will return in 12 months for a progress report.

There was an additional late comment card received but since the public comment portion of this item had passed, Mayor Benoit declined to hear the comment but instead directed the commenter to speak with the Committee or staff after the meeting.

Supervisor Rutherford joined the meeting at 10:35 a.m. via videoconference.

2. Proposed Amended Rules 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters; 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters; 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters; and Proposed Rule 1100, Implementation Schedule for NO_x Facilities

Tracy Goss, Planning and Rules Manager, provided a briefing on recent rulemaking efforts for Proposed Amended Rule 1146 series and Proposed Rule 1100.

David Rothbart, representing the Los Angeles County Sanitation Districts (LACSD), commented that little notice was given to the stakeholders of proposed changes to biogas limits. He emphasized the differences between biogas and natural gas and the challenges that LACSD have experienced with landfill gas. Mr. Rothbart mentioned that the landfill gas boilers located in Puente Hills emit less NO_x emissions than biogas engines and turbines. He disagrees that it is cost-effective for the landfill gas boilers located in Puente Hills to be retrofitted because the equipment is unique and there are no burner retrofits readily available from any vendor. He also commented on the decreasing quality of the landfill gas for landfills that are closing and the uncertainty that 20 ppm NO_x can be achieved. Mr. Rothbart requested a one-year natural gas flame stabilization study to ensure 20 ppm is achievable.

Allison Torres, representing the Southern California Alliance of Publicly Owned Treatment Works (SCAP) and Eastern Municipal Water District (EMWD), stated that SCAP members have multiple beneficial projects involving dual fuel boilers that support the wastewater process. Ms. Torres commented that the new lower 7 ppm limit for natural gas fired boilers will affect the previously mentioned dual fuel units. SCAP has reached out to the San Joaquin Valley Air Pollution Control District (SJVAPCD) and was able to obtain information on one dual fuel unit permitted at 9 ppm, not 7 ppm that is proposed by staff. She also mentioned that rules in SJVAPCD do not prohibit tuning before testing, unlike rules in SCAQMD, and units from the two air districts are not directly comparable. She further expressed concern for the lower limit because it is not practicable to stop their

process in order to switch out the fuel. She requests dual fuel boilers retain the 9 ppm limit when firing on natural gas.

Terry Ahn, representing Orange County Sanitation District, commented that her facility operates three dual fuel units used to heat their digesters during colder months. The three units are primarily fired on natural gas but have the option to switch to natural gas when digester gas quantities are low. She mentioned that these dual fuel units can only use one fuel at a time and cannot burn two fuels at once, which subjects the units to two separate NOx limits: 15 ppm for digester gas and 9 ppm for natural gas. Switching between the two fuels has been a challenge and all three units have been recently retrofitted/replaced. Ms. Ahn also commented that the proposal to lower limits on biogas was introduced late in the rulemaking process. She expressed concern for dual fuel units to meet the new 7 ppm NOx limit when firing only on natural gas and requests that staff conduct a detailed review of actual installations that demonstrate viability of retrofitted dual fuel units to meet a 7 ppm NOx limit when firing only on natural gas. She proposed that the limit for dual fuel units remain at 15 ppm when firing digester gas, and 9 ppm when on natural gas until the 7 ppm technology is fully vetted.

Dr. Philip Fine, Deputy Executive Officer/Planning, Rule Development and Area Sources, acknowledged the challenges faced by publicly owned utilities and stated that staff is strongly considering establishing a sector-specific rule for publicly treatment works and landfills in order to better address the concerns of these stakeholders.

Mayor Pro Tem Mitchell disclosed that she does not have a conflict of interest or financial interest, but is an alternate board member on Los Angeles County Sanitation Districts. Mayor Pro Tem Mitchell agreed with Dr. Fine's approach and believes that publicly owned treatment works facilities that provide essential public service should be looked at separately to better address their challenges. Mayor Pro Tem Mitchell stated that the reductions from the publicly owned treatment works is not that great when considering the cost. She supported staff's concept of removing publicly owned treatment works facilities from the PAR 1146 series and into their own sector specific rule.

Mayor Benoit agreed with Mayor Pro Tem Mitchell, citing cost concerns to landfill facilities that are planned to shut down in a limited amount of time.

Dr. Lyou asked if emission reduction commitments in the 2016 AQMP Control Measure CMB-05 would be met if publicly owned treatment works are removed from the Rule 1146 series. Mr. Goss stated that staff is focused on accounting for and achieving the 12 tons per day reduction commitment from the 2015 RECLAIM amendments and implementing the control measure for the entire RECLAIM program to achieve the additional five tons per day as adopted in the 2016 AQMP.

3. Proposed Rule 1118.1 – Control of Emissions from Non-Refinery Flares

Planning and Rules Manager Michael Krause presented a summary of Proposed Rule 1118.1 – Control of Emissions from Non-Refinery Flares.

Professor Michael Salman, Professor of History at the University of California, Los Angeles (UCLA), commented that the proposed rule is not consistent with the goals of the AQMP to prioritize beneficial use. He requested a rule delay, separating the oil and gas industry from the other categories, and beneficial use prioritized to avoid an expansion in flaring. David Rothbart, representing SCAP, expressed concern about the proposal to require Best Available Control Technology/Lowest Achievable Emission Rate (BACT/LAER) standards for minor sources and mentioned recent research on the potential for NO_x emissions to increase from thermophilic digestion of food waste. He asked for reasonable limits on flares and temporary relief for facilities that accept food waste. Steve Jepsen, Executive Director of SCAP, described recent research presented to staff by Black and Veatch that indicated NO_x emissions would increase as the result of food waste diversion due to ammonia increase in the waste stream. Wastewater treatment plants can accept up to 75 percent of the food waste generated but the current rule proposal would be a barrier to food waste diversion. Edward Filadelfia of the City of Riverside, Terry Ahn of the Orange County Sanitation District, and Marissa Flores-Acosta of the City of San Bernardino also expressed concern that food waste will increase NO_x emissions. Ms. Torres of Eastern Municipal Wastewater District stated that they installed a low-NO_x flare and have experienced issues and frequent breakdowns. Amber Baylor of the South Orange County Wastewater Authority provided a minor source perspective and stated beneficial use projects are more complex and costly due to lower NO_x limits, such as Rule 1110.2 for engines. As a result, the flares must be a reliable backup in the event of equipment failure. Commenters from the Publicly Owned Treatment Works (POTWs) requested that the proposed rule establish a 0.06 pound/MMBtu NO_x limit and exempt any facilities that accept food waste for thermophilic digestion.

Dr. Fine indicated that the concerns raised are all in regard to the installation of a new flare, not on the proposed requirements for existing flares. He requested a few weeks to work with stakeholders on the proposal for new flares. Mr. Krause added that the increased NO_x from food waste is an added concern as it could lead to increased NO_x from wastewater treatment and the proposed capacity threshold for that industry may need revisiting. Mr. Krause stated that the facilities can continue to use their existing flare. Mayor Benoit expressed concerns for facilities that committed to accepting food waste and may need to install additional flares. Mr. Krause pointed out that major sources are already held to the lower NO_x standard. Mayor Pro Tem Mitchell indicated that there are competing policies, especially food diversion commitments under SB 1383 that need to be addressed and asked that staff try to find common ground and lower cost solutions. Dr. Fine committed to working with stakeholders to address concerns with the limits for new flares. Dr. Lyou also

mentioned a company named Newlight Technologies in Newport Beach that turns methane into renewable plastic that he would like staff to evaluate as a potential option for beneficial use.

4. RECLAIM Quarterly Report – 3rd Update

This item was postponed until the November 16, 2018 Stationary Source Committee meeting.

WRITTEN REPORTS

5. Notice of Violation Summary

The report was acknowledged by the Committee.

6. Twelve-month and Three-month Rolling Price of 2017 and 2018 Compliance Years RTCs

The report was acknowledged by the Committee.

OTHER MATTERS:

7. Other Business

There was no other business.

8. Public Comment Period

Erin Donnette, World Energy, provided a brief explanation of World Energy's operations, and expressed support for SCAQMD's air quality goals.

9. Next Meeting Date

The next regular Stationary Source Committee meeting is scheduled for Friday, November 16, 2018.

Adjournment

The meeting was adjourned at 12:02 p.m.

Attachments

1. Attendance Record
2. Notice of Violation Penalty Summary
3. Twelve-month and Three-month Rolling Price of 2017 and 2018 Compliance Years RTCs

ATTACHMENT 1

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
STATIONARY SOURCE COMMITTEE**

Attendance – October 19, 2018

Mayor Ben Benoit (videoconference)	SCAQMD Board Member
Dr. Joseph Lyou.....	SCAQMD Board Member
Mayor Pro Tem Judith Mitchell	SCAQMD Board Member
Supervisor V. Manuel Perez (videoconference).....	SCAQMD Board Member
Supervisor Janice Rutherford (videoconference)	SCAQMD Board Member
Supervisor Hilda Solis (videoconference).....	SCAQMD Board Member
Terry Ahn	Orange County Sanitation District
Amber Baylor	South Orange County Wastewater Authority
Erin Donnette.....	World Energy
Edward Filadelfia	City of Riverside
Marissa Flores-Acosta	San Bernardino Municipal Water District
Florence Gharibian	Del Amo Action Committee
Bobby Gustafson	City of Riverside
Kathy Gleeson	World Energy
Steve Jepsen.....	Southern California Alliance of Publicly Owned Treatment Works (SCAP)
Bill LaMarr	California Small Business Alliance
Daniel McGivney	SoCalGas
Alan Olich	Brite Plating
David Rothbart	SCAP
Michael Salman	University of California, Los Angeles
Alison Torres	Eastern Municipal Water District
Wesley Turnbow	Metal Finishing Association of Southern California
Peter Whittingham.....	Whittingham Public Affairs Advisors
Barbara Baird.....	SCAQMD staff
Marian Coleman	SCAQMD staff
Heather Farr	SCAQMD staff
Philip Fine	SCAQMD staff
Bayron Gilchrist	SCAQMD staff
Tracy Goss.....	SCAQMD staff
Michael Krause.....	SCAQMD staff
Susan Nakamura.....	SCAQMD staff
Wayne Nastro	SCAQMD staff
Laki Tisopulos	SCAQMD staff
Kim White	SCAQMD staff
Jill Whynot	SCAQMD staff

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
General Counsel's Office**

DRAFT

September 2018 Settlement Penalty Report

<u>Total Penalties</u>	
Civil Settlements:	\$293,750.00
Settlements including SEP:	\$40,000.00
MSPAP Settlements:	\$6,475.00
Total Cash Settlements:	\$340,225.00
Total SEP Value:	\$10,000.00
Fiscal Year through 9 / 2018 Cash Total:	\$1,069,392.00
Fiscal Year through 9 / 2018 SEP Value Only Total:	\$10,000.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbr	Total Settlement
Civil Settlements						
800030	CHEVRON PRODUCTS CO.	3002	9/14/2018	TRB	P58242	\$160,000.00
800032	CHEVRON USA INC	3002(c)(1) 462(d)(1)(F)	9/13/2018	TRB	P65314	\$10,000.00
19144	CORONET MFG CO INC	3002 3003	9/13/2018	VKT	P64013	\$1,250.00
181082	DAVITA DIALYSIS	203 (a)	9/7/2018	WBW	P56738	\$4,000.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbr	Total Settlement
92901	DYNAMIC POWDER COATING	203 (a) 1155	9/11/2018	NSF	P58084 P58089 P60452	\$5,000.00
175388	GRAND GAS, INC.	461 203	9/21/2018	SMP	P63215 P64983	\$6,000.00
100145	HARBOR FUMIGATION INC	3002	9/27/2018	SH	P63555	\$15,000.00
131732	NEWPORT FAB, LLC	2004	9/6/2018	DH	P56342 P56343 P60573	\$40,000.00
131732	NEWPORT FAB, LLC	2004	9/6/2018	DH	P64145	\$2,500.00
97081	THE TERMO COMPANY	1148.1 1173 221 462 2004	9/11/2018	NAS	P37248 P37249 P56994 P56995 P59379 P59381 P59383 P60867 P61526 P62956	\$50,000.00

Total Civil Settlements: \$293,750.00

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbr	Total Settlement
Settlements including SEP						
14364	CHEMICAL LIME CO	1155	9/19/2018	MJR	P61806	\$40,000.00
	<i>SEP \$10,000 - Facility to purchase equipment by November 1, 2018</i>	203				
		401				

Total Settlements including SEP: \$40,000

Fac ID	Company Name	Rule Number	Settled Date	Init	Notice Nbr	Total Settlement
MSPAP Settlements						
167320	ANABI OIL CORP. DBA C-MINI MART, INC.	461(c)(3)(Q)	9/26/2018	GC	P70560	\$600.00
184713	EQUITY RESIDENTIAL (HESBY)	203	9/11/2018	GC	P65152	\$200.00
183372	H & M INC DBA ARCO OF FULLERTON	461	9/11/2018	GC	P64982	\$650.00
800428	LAMPS PLUS INC/ PACIFIC COAST LIGHTING	3002(c)(1)	9/27/2018	TF	P66764	\$500.00
179343	MOTORS PETROLEUM INC	461	9/27/2018	TF	P66351	\$850.00
121344	NO. ORANGE CTY COMMUNITY COLLEGE DIST.	461(c)(3)(Q)	9/27/2018	TF	P71028	\$200.00
34300	PIERCE BROTHERS INC. - SCI CALIF FUNERALS	201 203 (a)	9/27/2018	TF	P68201	\$1,600.00
186766	RANCHO CALIFORNIA LANDSCAPING, INC.	203	9/27/2018	TF	P67653	\$800.00
160732	THRIFTY TREE SERVICE INC	PERP 2460	9/27/2018	TF	P66754	\$275.00
123861	VERIZON WIRELESS, JOHNSTONE PEAK	203 (a)	9/27/2018	TF	P65381	\$800.00

Total MSPAP Settlements: \$6,475.00

**DISTRICT'S RULES AND REGULATIONS INDEX
FOR SEPTEMBER 2018 PENALTY REPORT**

REGULATION II - PERMITS

Rule 201 Permit to Construct
Rule 203 Permit to Operate
Rule 221 Plans

REGULATION IV - PROHIBITIONS

Rule 401 Visible Emissions
Rule 461 Gasoline Transfer and Dispensing
Rule 462 Organic Liquid Loading

REGULATION XI - SOURCE SPECIFIC STANDARDS

Rule 1148.1 Oil and Gas Production Wells
Rule 1155 Particulate Matter Control Devices
Rule 1173 Fugitive Emissions of Volatile Organic Compounds

REGULATION XX - REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

Rule 2004 Requirements

REGULATION XXX - TITLE V PERMITS

Rule 3002 Requirements
Rule 3003 Applications

CALIFORNIA CODE OF REGULATIONS

13 CCR 2460 Portable Equipment Testing Requirements



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Twelve-Month and Three-Month Rolling Average Price of Compliance Years 2017 and 2018 NOx and SOx RTCs

October 2018 Quarterly Report to Stationary Source Committee

Table I

Twelve-Month Rolling Average Price Data for Compliance Year 2017 NOx RTCs
(Report to Governing Board if rolling average price greater than \$22,500/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2017 NOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price ¹ (\$/ton)
Jan-17	Jan-16 to Dec-16	69.7	\$460,621	9	\$6,606
Feb-17	Feb-16 to Jan-17	94.7	\$610,693	11	\$6,446
Mar-17	Mar-16 to Feb-17	82.2	\$573,193	10	\$6,970
Apr-17	Apr-16 to Mar-17	125.3	\$824,493	12	\$6,581
May-17	May-16 to Apr-17	113.8	\$741,828	15	\$6,519
Jun-17	Jun-16 to May-17	113.8	\$741,828	15	\$6,519
Jul-17	Jul-16 to Jun-17	134.4	\$867,079	22	\$6,450
Aug-17	Aug-16 to Jul-17	144.8	\$920,041	29	\$6,355
Sep-17	Sep-16 to Aug-17	150.4	\$955,120	35	\$6,351
Oct-17	Oct-16 to Sep-17	151.2	\$956,005	36	\$6,323
Nov-17	Nov-16 to Oct-17	252.8	\$1,345,772	55	\$5,324
Dec-17	Dec-16 to Nov-17	267.1	\$1,376,674	58	\$5,155
Jan-18	Jan-17 to Dec-17	305.1	\$1,276,006	57	\$4,182
Feb-18	Feb-17 to Jan-18	693.2	\$1,888,755	94	\$2,724
Mar-18	Mar-17 to Feb-18	743.6	\$1,991,269	111	\$2,678
Apr-18	Apr-17 to Mar-18	705.6	\$1,746,469	110	\$2,475
May-18	May-17 to Apr-18	766.5	\$1,993,214	127	\$2,600
Jun-18	Jun-17 to May-18	778.0	\$2,050,015	129	\$2,635
Jul-18	Jul-17 to Jun-18	826.8	\$2,091,914	128	\$2,530
Aug-18	Aug-17 to Jul 18	875.7	\$2,143,688	138	\$2,448

Twelve-Month Rolling Average Price Data for Compliance Year 2017 NOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price ¹ (\$/ton)
Sep-18	Sep-17 to Aug-18	1,195.3	\$2,508,784	159	\$2,099
Oct-18	Oct-17 to Sep-18	Compliance Year 2017 RTCs can no longer be traded after August 2018			

1. District Rule 2015(b)(6) - Backstop Provisions provides additional "evaluation and review of the compliance and enforcement aspects of the RECLAIM program" if the average RTC price exceeds \$15,000 per ton.

Table II

Twelve-Month Rolling Average Price Data for Compliance Year 2018 NOx RTCs
(Report to Governing Board if rolling average price greater than \$22,500/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2018 NOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price ¹ (\$/ton)
Jan-18	Jan-17 to Dec-17	91.6	\$974,592	3	\$10,639
Feb-18	Feb-17 to Jan-18	91.6	\$974,592	3	\$10,639
Mar-18	Mar-17 to Feb-18	100.7	\$1,041,091	4	\$10,337
Apr-18	Apr-17 to Mar-18	51.6	\$497,246	5	\$9,643
May-18	May-17 to Apr-18	56.6	\$527,075	8	\$9,320
Jun-18	Jun-17 to May-18	53.1	\$502,575	7	\$9,473
Jul-18	Jul-17 to Jun-18	72.6	\$625,883	14	\$8,618
Aug-18	Aug-17 to Jul 18	80.0	\$660,279	19	\$8,251
Sep-18	Sep-17 to Aug-18	86.8	\$698,621	28	\$8,050
Oct-18	Oct-17 to Sep-18	104.3	\$759,871	29	\$7,287

1. District Rule 2015(b)(6) - Backstop Provisions provides additional "evaluation and review of the compliance and enforcement aspects of the RECLAIM program" if the average RTC price exceeds \$15,000 per ton.

Table III

Three-Month Rolling Average Price Data for Compliance Year 2017 NOx RTCs
 (Report to Governing Board if rolling average price greater than \$35,000/ton)

Three-Month Rolling Average Price Data for Compliance Year 2017 NOx RTC					
Reporting Month	3-Month Period	Total Volume Traded with Price During Past 3-month (tons)	Total Price of Volume Traded During Past 3-month (\$)	Number of Trades with Price	Rolling Average Price (\$/ton)
Jan-17	Oct-16 to Dec-16	41.1	\$310,586	6	\$7,561
Feb-17	Nov-16 to Jan-17	66.1	\$460,658	8	\$6,971
Mar-17	Dec-16 to Feb-17	65.0	\$452,221	7	\$6,962
Apr-17	Jan-17 to Mar-17	68.1	\$401,372	4	\$5,897
May-17	Feb-17 to Apr-17	46.6	\$272,479	6	\$5,847
Jun-17	Mar-17 to May-17	46.6	\$272,479	6	\$5,847
Jul-17	Apr-17 to Jun-17	24.2	\$146,430	11	\$6,051
Aug-17	May-17 to Jul-17	31.0	\$178,213	14	\$5,753
Sep-17	Jun-17 to Aug-17	36.6	\$213,292	20	\$5,828
Oct-17	Jul-17 to Sep-17	17.9	\$97,616	15	\$5,468
Nov-17	Aug-17 to Oct-17	109.1	\$434,421	27	\$3,981
Dec-17	Sep-17 to Nov-17	118.9	\$438,682	25	\$3,689
Jan-18	Oct-17 to Dec-17	195.0	\$630,587	27	\$3,233
Feb-18	Nov-17 to Jan-18	506.5	\$1,003,641	47	\$1,981
Mar-18	Dec-17 to Feb-18	541.5	\$1,066,815	60	\$1,970
Apr-18	Jan-18 to Mar-18	468.5	\$871,835	57	\$1,861
May-18	Feb-18 to Apr-18	119.8	\$376,939	39	\$3,145
Jun-18	Mar-18 to May-18	81.0	\$331,226	24	\$4,092
Jul-18	Apr-18 to Jun-18	145.5	\$491,876	29	\$3,382
Aug-18	May-18 to Jul-18	140.1	\$328,687	25	\$2,345
Sep-18	Jun-18 to Aug-18	453.9	\$672,061	50	\$1,481
Oct-18	Jul-18 to Sep-18	Compliance Year 2017 RTCs can no longer be traded after August 2018			

Table IV

Three-Month Rolling Average Price Data for Compliance Year 2018 NOx RTCs
(Report to Governing Board if rolling average price greater than \$35,000/ton)

Three-Month Rolling Average Price Data for Compliance Year 2018 NOx RTC					
Reporting Month	3-Month Period	Total Volume Traded with Price During Past 3-month (tons)	Total Price of Volume Traded During Past 3-month (\$)	Number of Trades with Price	Rolling Average Price (\$/ton)
Jan-18	Oct-17 to Dec-17	38.1	\$400,092	1	\$10,500
Feb-18	Nov-17 to Jan-18	38.1	\$400,092	1	\$10,500
Mar-18	Dec-17 to Feb-18	9.1	\$66,499	1	\$7,300
Apr-18	Jan-18 to Mar-18	10.0	\$72,654	3	\$7,295
May-18	Feb-18 to Apr-18	15.0	\$102,483	6	\$6,855
Jun-18	Mar-18 to May-18	5.8	\$35,984	5	\$6,160
Jul-18	Apr-18 to Jun-18	24.6	\$153,137	10	\$6,235
Aug-18	May-18 to Jul-18	27.0	\$157,704	12	\$5,848
Sep-18	Jun-18 to Aug-18	33.7	\$196,046	21	\$5,813
Oct-18	Jul-18 to Sep-18	31.7	\$133,988	15	\$4,233

Table V

Twelve-Month Rolling Average Price Data for Infinite-Year Block NOx RTCs
 (Report to Governing Board if rolling average price after 2018 is less than \$200,000/ton)

Twelve-Month Rolling Average Price Data for Infinite-Year Block NOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price (\$/ton)
May-16	May-15 to Apr-16	805.1	\$215,694,953	44	\$267,913
Jun-16	Jun-15 to May-16	781.6	\$211,669,953	44	\$270,819
Jul-16	Jul-15 to Jun-16	351.5	\$128,539,029	31	\$365,654
Aug-16	Aug-15 to Jul-16	512.9	\$166,663,599	32	\$324,943
Sep-16	Sep-15 to Aug-16	517.7	\$167,951,099	32	\$324,449
Oct-16	Oct-15 to Sep-16	441.9	\$150,586,981	30	\$340,759
Nov-16	Nov-15 to Oct-16	321.9	\$121,239,854	25	\$376,628
Dec-16	Dec-15 to Nov-16	321.9	\$121,238,354	24	\$376,638
Jan-17	Jan-16 to Dec-16	301.9	\$114,731,605	20	\$380,057
Feb-17	Feb-16 to Jan-17	183.0	\$46,520,577	10	\$254,172
Mar-17	Mar-16 to Feb-17	174.3	\$41,738,077	7	\$239,491
Apr-17	Apr-16 to Mar-17	174.3	\$41,738,077	7	\$239,491
May-17	May-16 to Apr-17	176.8	\$42,113,977	8	\$238,223
Jun-17	Jun-16 to May-17	175.3	\$41,588,977	7	\$237,266
Jul-17	Jul-16 to Jun-17	172.2	\$40,437,201	6	\$234,802
Aug-17	Aug-16 to Jul-17	10.8	\$2,311,624	4	\$213,249
Sep-17	Sep-16 to Aug-17	4.1	\$624,124	3	\$152,598
Oct-17	Oct-16 to Sep-17	4.1	\$624,124	3	\$152,598
Nov-17	Nov-16 to Oct-17	4.1	\$624,124	3	\$152,598
Dec-17	Dec-16 to Nov-17	4.1	\$624,124	3	\$152,598
Jan-18	Jan-17 to Dec-17	31.8	\$1,262,801	6	\$39,673
Feb-18	Feb-17 to Jan-18	58.8	\$1,579,801	9	\$26,853
Mar-18	Mar-17 to Feb-18	58.8	\$1,579,801	9	\$26,853
Apr-18	Apr-17 to Mar-18	58.8	\$1,579,801	9	\$26,853
May-18	May-17 to Apr-18	56.3	\$1,203,901	8	\$21,374
Jun-18	Jun-17 to May-18	57.8	\$1,233,901	9	\$21,339
Jul-18	Jul-17 to Jun-18	56.7	\$1,140,677	8	\$20,103
Aug-18	Aug-17 to Jul 18	56.7	\$1,140,677	8	\$20,103
Sep-18	Sep-17 to Aug-18	56.7	\$1,140,677	8	\$20,103
Oct-18	Oct-17 to Sep-18	56.7	\$1,140,677	8	\$20,103

Table VI

Twelve-Month Rolling Average Price Data for Compliance Year 2017 SOx RTCs
 (Report to Governing Board if rolling average price greater than \$50,000/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2017 SOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price¹ (\$/ton)
Jan-17	Jan-16 to Dec-16	0	0	0	-
Feb-17	Feb-16 to Jan-17	0	0	0	-
Mar-17	Mar-16 to Feb-17	0	0	0	-
Apr-17	Jan-17 to Mar-17	0	0	0	-
May-17	May-16 to Apr-17	0	0	0	-
Jun-17	Jun-16 to May-17	0	0	0	-
Jul-17	Jul-16 to Jun-17	0	0	0	-
Aug-17	Aug-16 to Jul-17	4.0	\$4,400	1	\$1,100
Sep-17	Sep-16 to Aug-17	14.0	\$19,400	2	\$1,386
Oct-17	Oct-16 to Sep-17	14.0	\$19,400	2	\$1,386
Nov-17	Nov-16 to Oct-17	14.0	\$19,400	2	\$1,386
Dec-17	Dec-16 to Nov-17	14.0	\$19,400	2	\$1,386
Jan-18	Jan-17 to Dec-17	14.0	\$19,400	2	\$1,386
Feb-18	Feb-17 to Jan-18	57.0	\$58,742	7	\$1,030
Mar-18	Mar-17 to Feb-18	57.0	\$58,742	7	\$1,030
Apr-18	Apr-17 to Mar-18	57.0	\$58,742	7	\$1,030
May-18	May-17 to Apr-18	57.0	\$58,742	7	\$1,030
Jun-18	Jun-17 to May-18	120.2	\$102,965	10	\$857
Jul-18	Jul-17 to Jun-18	120.2	\$102,965	10	\$857
Aug-18	Aug-17 to Jul 18	117.5	\$99,463	10	\$847
Sep-18	Sep-17 to Aug-18	107.8	\$84,686	10	\$786
Oct-18	Oct-17 to Sep-18	Compliance Year 2017 RTCs can no longer be traded after August 2018			

1. District Rule 2015(b)(6) - Backstop Provisions provides additional "evaluation and review of the compliance and enforcement aspects of the RECLAIM program" if the average RTC price exceeds \$15,000 per ton.

Table VII

Twelve-Month Rolling Average Price Data for Compliance Year 2018 SOx RTCs
 (Report to Governing Board if rolling average price greater than \$50,000/ton)

Twelve-Month Rolling Average Price Data for Compliance Year 2018 SOx RTC					
Reporting Month	12-Month Period	Total Volume Traded with Price During Past 12-month (tons)	Total Price of Volume Traded During Past 12-month (\$)	Number of Trades with Price	Rolling Average Price¹ (\$/ton)
Jan-18	Jan-17 to Dec-17	None	-	-	-
Feb-18	Feb-17 to Jan-18	None	-	-	-
Mar-18	Mar-17 to Feb-18	None	-	-	-
Apr-18	Apr-17 to Mar-18	None	-	-	-
May-18	May-17 to Apr-18	None	-	-	-
Jun-18	Jun-17 to May-18	34.2	\$23,974	3	\$700
Jul-18	Jul-17 to Jun-18	34.2	\$23,974	3	\$700
Aug-18	Aug-17 to Jul 18	80.2	\$57,354	5	\$715
Sep-18	Sep-17 to Aug-18	95.2	\$67,854	6	\$713
Oct-18	Oct-17 to Sep-18	163.3	\$135,429	10	\$829

1. District Rule 2015(b)(6) - Backstop Provisions provides additional "evaluation and review of the compliance and enforcement aspects of the RECLAIM program" if the average RTC price exceeds \$15,000 per ton.