

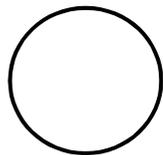
Permit Streamlining Task Force Subcommittee

December 16, 2021

Agenda



Pending Application Inventory



Rule 1109.1 Implementation



Pending Permit Application Status Dashboard



Online Tools Development



Other Issues and Public Comment

Pending Application Inventory Update

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Resource Update

Staffing

- Hired 13 new Air Quality Engineers in fourth quarter
 - Use of Permit Processing Handbook
- CY 2021 - 13 promotions; three retirements
- Anticipated continued turnover due to pending retirement
- Continuing assessment of staffing needs

Headwinds

- Continued COVID impacts
- AB617 support
 - Landing rule implementation
 - RECLAIM sunset
 - CERP support
- New Source Review amendment

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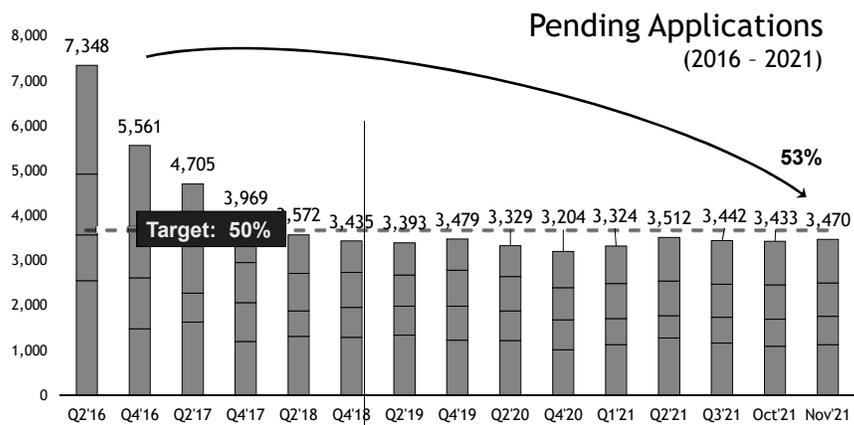
COVID-19 Impact Update

- Reviewing return to office
- Hybrid meetings
- CPP
- Focus on flexibility



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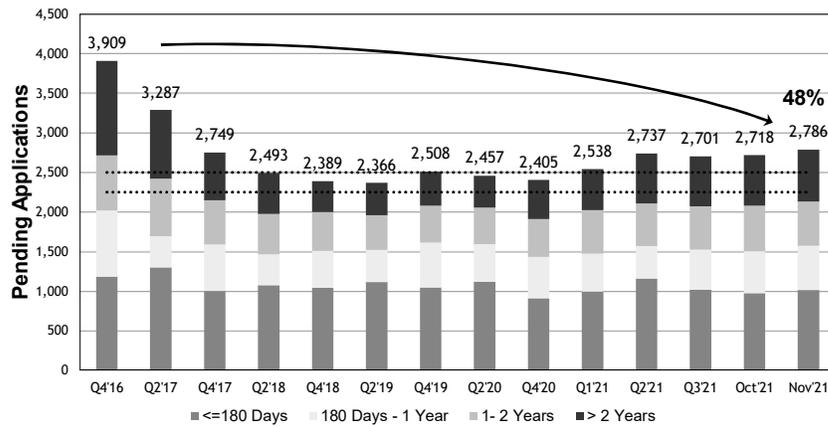
Permit Processing 2016 Inventory Reduction Initiative



Achieved and continue to maintain 50% reduction goal set in 2016

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Pending Applications less PCs Issued (2016 - 2021)



Ongoing Goal

Maintain pending applications without PC issued between 2,250 and 2,500

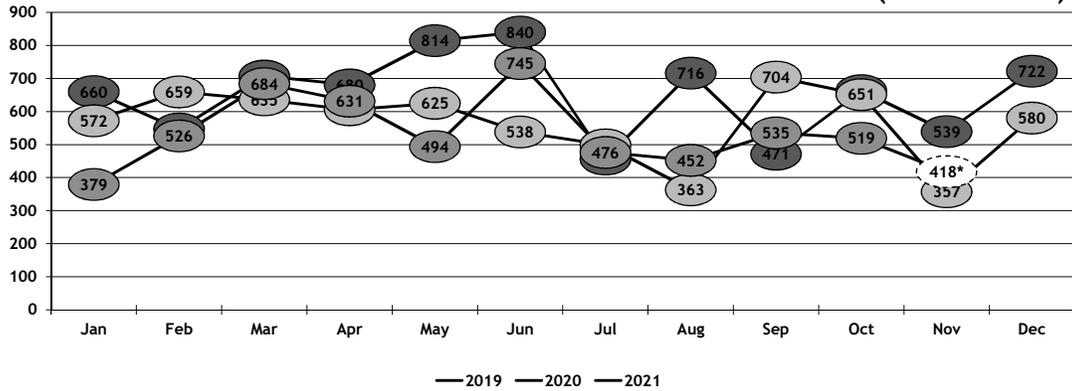
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COVID-19 Permit Application Trends

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Permit Activity

Number of Applications Received Per Month (2019 - 2021)



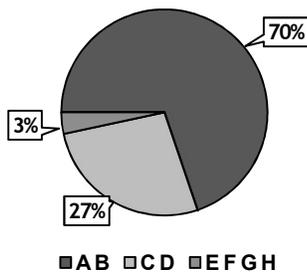
*November Data Preliminary

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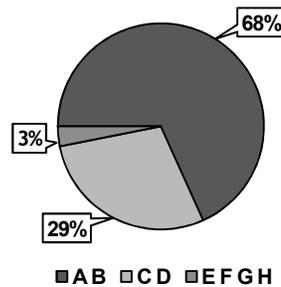
Permit Activity

Equipment Applications Received (Percent, By Assigned Fee Schedule)

2020 (Jan - Nov) (2,343 Total)



2021 YTD (Jan - Nov*) (2,279 Total)



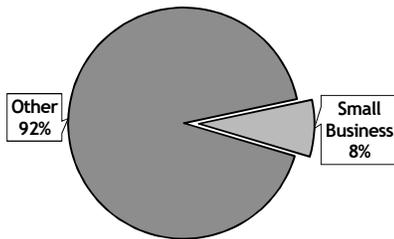
*November 2021 Data Preliminary

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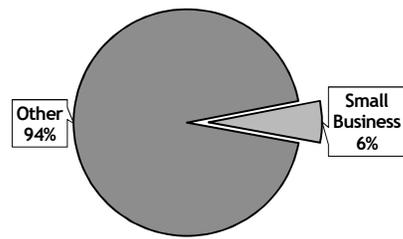
Permit Activity

Equipment Applications Received (Percent, Small Business vs. Others)

2020 (Jan - Nov)
(2,343 Total)



2021 YTD (Jan - Nov*)
(2,279 Total)



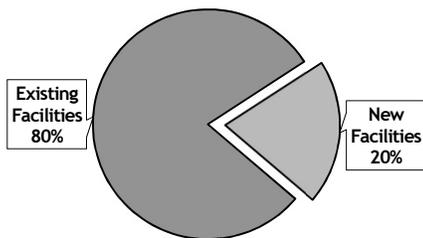
*November 2021 Data Preliminary

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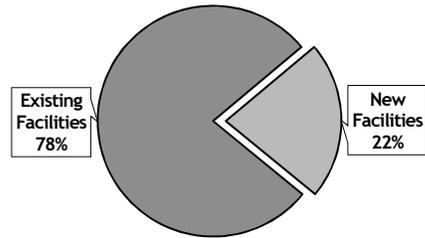
Permit Activity

Equipment Applications Received (Percent, New vs. Existing Facilities)

2020 (Jan - Nov)
(2,343 Total)



2021 YTD (Jan - Nov*)
(2,279 Total)



*November 2021 Data Preliminary

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Rule 1109.1 Implementation

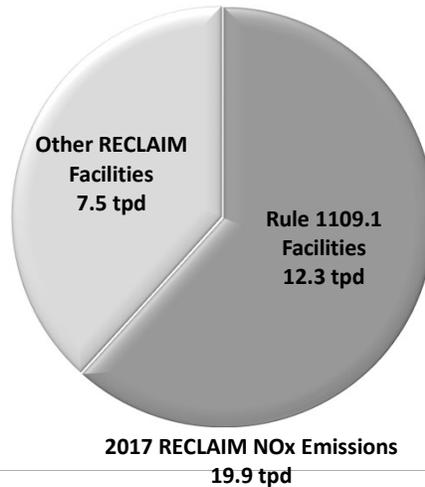
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Rule 1109.1 Background

- Board adopted Rule 1109.1 on November 5, 2021
- Rule 1109.1 sets BARCT NO_x standards for nearly 300 units at refineries and facilities with operations related to refineries
- Unlike RECLAIM, Rule 1109.1 does NOT allow facilities to purchase RECLAIM Trading Credits to meet emission reduction requirements
- Allows for two alternative compliance pathways for facilities with six or more pieces of equipment:
 - B-Plan or B-Cap
- At full implementation, Rule 1109.1 will significantly reduce NO_x emissions:
 - 7.7 to 7.9 tons per day (tpd) reduced
 - Approximately 75% of the emission reductions by 2027

Rule 1109.1 - 2017 Baseline Emissions (tpd)

- Rule 1109.1 facilities represent 62% of the NOx emissions in RECLAIM
- NOx Emissions from large boilers and heaters (≥ 40 MMBtu/hour) represent 57% of the emissions from Rule 1109.1 combustion equipment



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Rule 1109.1 Core Requirements

- Operators must meet NOx limits in Table 1
- If the conditional requirements can be met, operators can meet Table 2 “conditional NOx limits” in lieu of Table 1 limits
- Conditional NOx limits were developed to acknowledge achieving Table 1 NOx limits for some units have:
 - A high cost-effectiveness due to high capital cost and/or low emission reduction potential
- Incorporating the conditional NOx limits reduced the average cost-effectiveness to near or below \$50,000/ton NOx reduced for each class and category (BARCT)

TABLE 1: NOx AND CO CONCENTRATION LIMITS

Unit	NOx (ppmv)	CO (ppmv)	O ₂ Correction (%)	Rolling Averaging Time ²
Boilers <40 MMBtu/hour	Pursuant to subparagraphs (d)(2)(A) and (d)(2)(B)	400	3	24-hour
Boilers >40 MMBtu/hour	5	400	3	24-hour
FCCU	2	500	3	365-day
	5			7-day
Flares	20	400	3	2-hour
Gas Turbines fueled with Natural Gas	2	130	15	24-hour
Gas Turbines fueled with Gaseous Fuel other than Natural Gas	3	130	15	24-hour
Petroleum Coke Calciner	5	2,000	3	365-day
	10			7-day
Process Heaters <40 MMBtu/hour	Pursuant to (d)			

TABLE 2: CONDITIONAL NOx AND CO CONCENTRATION LIMITS

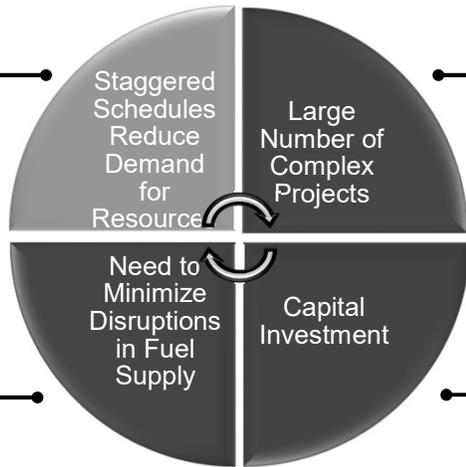
Unit	NOx (ppmv)	CO (ppmv)	O ₂ Correction (%)	Rolling Averaging Time ²
Boilers >110 MMBtu/hour	7.5	400	3	24-hour
FCCUs	16	500	3	365-day
				7-day
Gas Turbines fueled with Natural Gas	2.5	130	15	24-hour
Process Heaters >40 - <110 MMBtu/hour	18	400	3	24-hour
Process Heaters >110 MMBtu/hour	22	400	3	24-hour
SMR Heaters	7.5	400	3	24-hour
Vapor Incinerators	40	400	3	24-hour

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Rule 1109.1 Implementation Considerations

- Refineries competing for same pool of skilled labor, equipment manufacturers, source testing companies, etc.

- Integrating projects in refinery turnaround schedules minimizes fuel supply disruptions
- Most turnaround schedules are 3 to 5 years, a few are 9 to 10 years



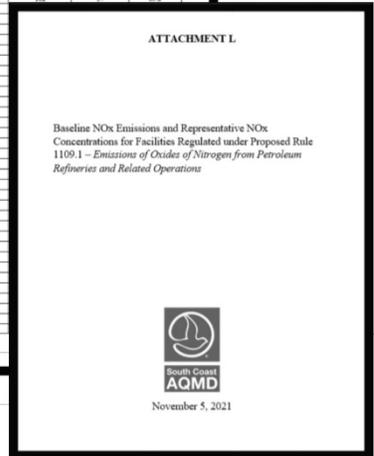
- ~90 new or upgraded selective catalytic reduction (SCR) projects
- SCR projects customized and require complex engineering
- Challenging to integrate within existing facility structure
- Capital costs for each project \$10 to \$70 million
- Cost per petroleum refinery ranges from \$179 million to \$1 billion

Streamlining Plan Review

- Facility Baseline Document
 - To minimize any discrepancies or delays in plan approvals, staff prepared a list of affected equipment and their associated emissions
 - Data was reviewed, verified, and agreed upon by facilities
 - List was approved by Board as part of Resolution on November 5, 2021
 - Facilities have 30 days from approval to request a change to any value
- To assist facilities in developing the compliance plans, staff is developing a guidance document
 - Will ensure uniformity and streamline the review and approval process

Table 1. Chevron Baseline Emissions and Representative NOx Concentration

Device ID	Category	Size (AD/Min/hr)	Baseline Annual Emissions (tons)	Representative NOx Concentration (ppmv)
D441	Heater	260	48.3	24
D443	Heater	220	26.2	20.3
D451	Heater	110	13.1	10.1
D1053	Gas Turbine	110	27	68.8
D353	FCCU			
D3973	FCCU Heater			
D2198	Gas Turbine			
D33	Heater			
D420	Heater			
D417	Heater			
D423	Heater			
D2397	Gas Turbine			
D362	Heater			
D419	Heater			
D354	Heater			
D431	Heater			
D426	Heater			
D2124	Boiler			
D45	Heater			
D63	Heater			
D84	Heater			
D189	Heater			
D149	Heater			
D141	Heater			
D464	SRU-TGIC			
D477	SRU-TGIC			
D468	Heater			
D467	Heater			
D411	SRU-TGIC			
D396	Heater			
D453	Heater			
C3493	Vapor Incinerator			
D3458	Heater			
D396	Heater			
C3188	Vapor Incinerator			



Implementation Plan (I-Plan) Overview

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I-Plan

- I-Plan is a phased implementation schedule
- Allows operators to tailor the implementation schedule to meet NOx limits to minimize operational disruptions

I-Plan Options	Provision	Phase I	Phase II	Phase III
Option 1 for B-Plan or Table 1 or 2	Targets	80%	100%	
	Submit Permit Application	Jan 1, 2023	Jan 1, 2031	
Option 2 B-Plan	Targets	65%	100%	
	Submit Permit Application	July 1, 2024	Jan 1, 2030	
Option 3 B-Plan or B-Cap	Targets	40%	100%	
	Submit Permit Application	July 1, 2025	July 1, 2029	
Option 4 B-Cap Only	Targets	50%	80%	100%
	Submit Permit Application	Jan 1, 2024 <i>(Effective Date)</i>	Jan 1, 2025	Jan 1, 2028
Option 5 for B-Plan or Table 1 or 2	Targets	50%	70%	100%
	Submit Permit Application	Jan 1, 2023	Jan 1, 2025	July 1, 2028

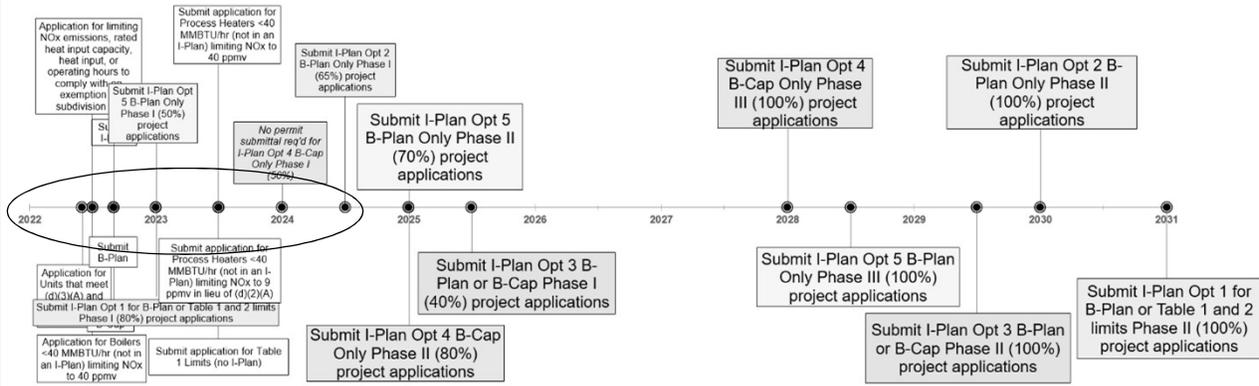
Streamlining Plan Review

- Planning staff will review I-Plan, B-Plan, and B-Cap
 - During Rule 1109.1 development, Planning staff met with each facility to discuss the affected equipment, potential implementation schedule and compliance plans
 - Spreadsheet with emission data for each unit subject to Rule 1109.1 was sent to each facility
 - Facilities used data to determine a feasible implementation schedule
 - Planning staff will work with each facility as they develop their plan submissions
 - Plan requirements inserted into permit by E&P and will be made available to the public on the South Coast AQMD website 30 days prior to approval
 - Inquiries handled by planning staff

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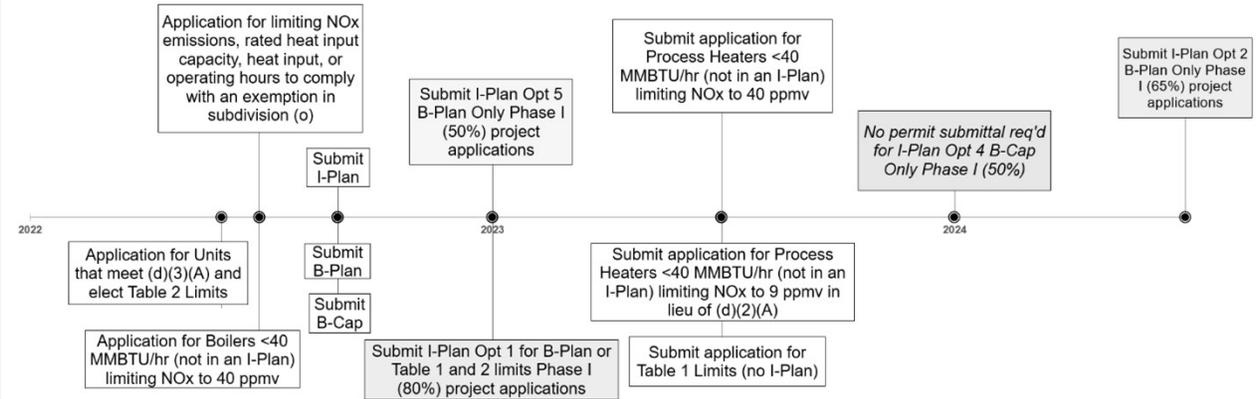
Rule 1109.1 Applications Overall Timeline

Rule 1109.1 CRITICAL ACTIVITY DEADLINES



Rule 1109.1 Applications Timeline - First 3-Years (2022-24)

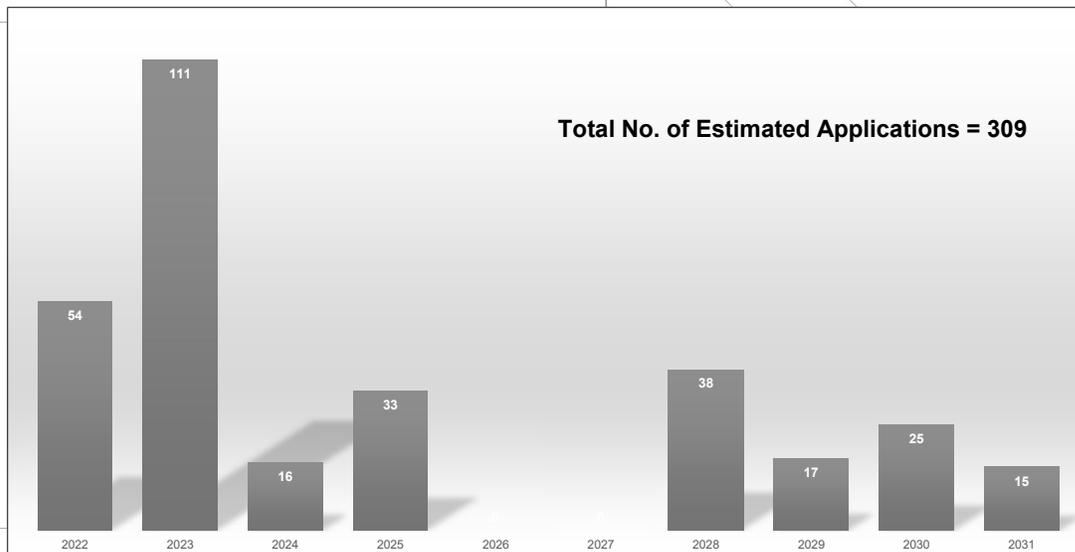
Rule 1109.1 CRITICAL ACTIVITY DEADLINES



Estimated Number of R1109.1 Applications to be Submitted

Category	Application Submittal Deadline	Plans	Applications other than Table 1 or 2	Applications for Table 1 I-Plan	Applications for Table 2 conditional limits in I-Plan
Potential Conditional Limits	June 1, 2022		30		
Boilers < 40 mmbtu to 40 ppmv Exempt Units	July 1, 2022		4		
B-Plan	September 1, 2022	3	9		
B-Cap	September 1, 2022	2			
I-Plan	September 1, 2022	6			
I-Plan option 5 phase I	January 1, 2023			15	
I-Plan option 1 phase I	January 1, 2023			21	
Heaters < 40 mmbtu to 40 ppmv	July 1, 2023		64		
Submit applications for Table 1 limits with no I-Plan	July 1, 2023			2	3
Submit applications for Table 1 limits with no I-Plan	July 1, 2023			6	
I-Plan option 4 phase I	January 1, 2024				
I-Plan option 2 phase I	July 1, 2024			16	
I-Plan option 5 phase II	January 1, 2025			6	
I-Plan option 4 phase II	January 1, 2025			10	10
I-Plan option 3 phase I	July 1, 2025			7	
I-Plan option 4 phase III	January 1, 2028		1	6	13
I-Plan option 5 phase III	July 1, 2028		5	8	5
I-Plan option 3 phase II	July 1, 2029		1	7	9
I-Plan option 2 phase II	January 1, 2030		9	8	8
I-Plan option 1 phase II	January 1, 2031		1	4	10

Estimated Number of R1109.1 Applications by Year



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Implementation Overview

Milestones / Approach

- Plan review by PRDAS
- Outreach to all refineries
- Quarterly Updates to Stationary Source Committee (starting Q3-2022)
 - Status of applications submittal and approvals relative to rule requirements
 - Steps taken to avoid deadline extensions
 - Turnaround needs
 - Other stakeholder points of interest

Streamline by Design

- Streamlining through rulemaking
- Address CEQA impacts through rule development
- Limited BACT exemption
- Estimated timelines for approvals driven by R1109.1 universe

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Additional Streamlining Considerations

- Application Checklists
 - B-Plan, B-Cap and I-Plans
 - SCR applications
 - Burner replacement applications
- Statement of basis streamlining and development of templates for routine applications
- Minimize scope creep for Rule 1109.1 applications
 - Adding other modification to Rule 1109.1 applications (e.g. increase in firing rate)
 - Modifications that may trigger LAER

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Pending Permit Application Status Dashboard Update

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Pending Permit Application Status Dashboard

Board initiative to increase transparency

- Online ability to view status of individual applications
- Integrate with existing F.I.N.D. application

Equipment ID	Equipment Name	Application Status	Application Date	Type
609423	FLARE, OTHER	APPLICATION CHANGED FROM CLASS I - III	12/26/2018	Control
602853	FACILITY PERMIT AMEND-RECLAIM ONLY	BANKING/PLAN GRANTED, NOW BILLABLE	04/06/2018	Basic
602159	MICRO-TURBINE, NOT NAT GAS, METHANOL OR LPG	APPLICATION CHANGED FROM CLASS I - III	03/27/2018	Basic

Facility Information Detail (F.I.N.D.)

Select Search Type: Find a Facility

Name: Street: City: Zip:

F.I.N.D. <https://xappprod.aqmd.gov/find>

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Dashboard Status Indicators

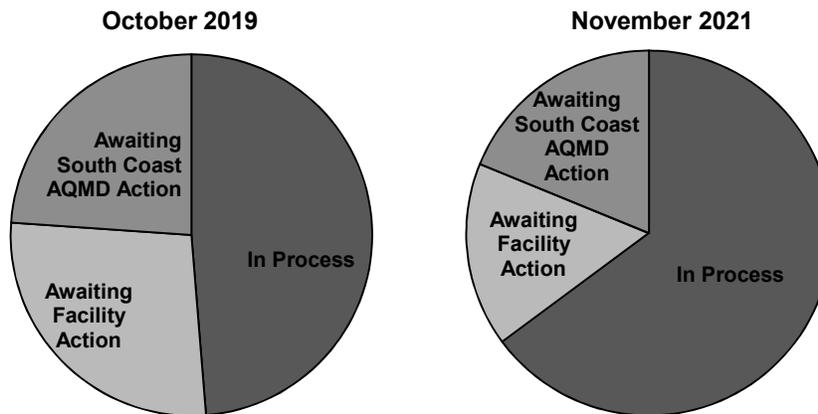
- Two status indicator types:
 1. Time elapsed indicator
 2. Application status indicators
- Status progress bar:

Application Status Progress



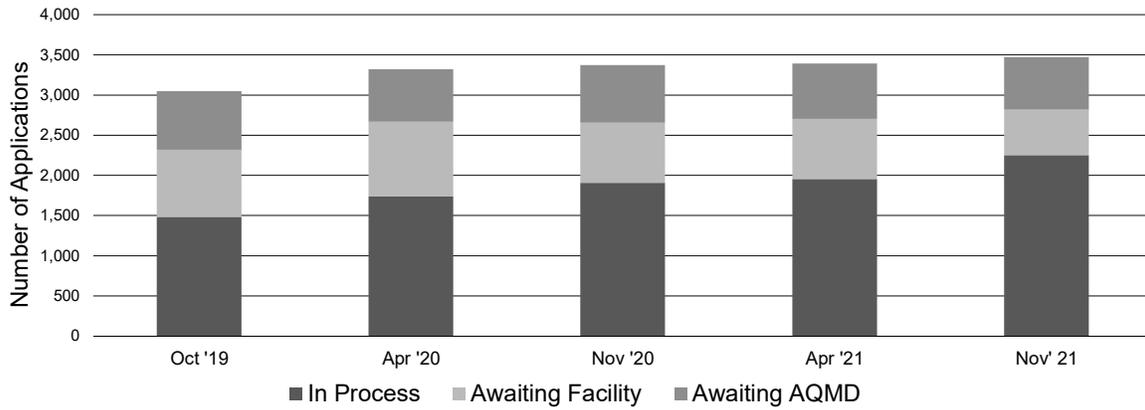
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Pending Permit Application Status Dashboard Debottlenecking Efforts



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Dashboard Pending Action Trends



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Pending Application Status Dashboard

Initial Observations - Snapshot (October 2019, cont.)

Completeness Determ. (Facility Action)		In Process		Awaiting Facility Action		Awaiting South Coast AQMD Action	
Add. Info. (A/I) Req	14%	Engineering Evaluation and Administrative Processing	41%	Compliance Review Draft	5%	Supv/Mgr Review	7%
Related App A/I	1%			Public Notice Distr.	< 1%	Related App Proc.	5%
Fee Resolution	< 1%			Conduct Source Test	6%	Source Test Review	4%
				Awaiting Constr.	3%	Policy Review	3%
						Field Eval	3%
						Other Agency Rev.	1%
						Public Notice	1%
						HRA / Modeling	< 1%

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Pending Permit Application Status Dashboard

November 2021 Snapshot

Completeness Determ. (Facility Action)		In Process		Awaiting Facility Action		Awaiting South Coast AQMD Action	
A/I Req. Related App A/I	7% 1%	Engineering Evaluation and Administrative Processing	65%	Compliance Review Draft	< 1% 1%	Supv/Mgr Review Related App Proc. Source Test Review Policy Review Field Eval Other Agency Rev. Public Notice	9% 3% 3% 1% < 1% 1% < 1%

Continued progress on lowering apps awaiting actions

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Pending Permit Application Status Dashboard

November 2021 Snapshot (cont.)

Awaiting action categories with longest average processing time:

- Awaiting SCAQMD
 - Policy Decision (31 apps)
 - Source Test Results Review (118)
 - Field Evaluation (18)
 - Related Applications Processing (106)
 - BACT/LAER Determination (2)
- Awaiting Facility
 - Awaiting Construction (153 apps)
 - Conduct Source Testing (89 apps)
- In Process
 - CEQA Analysis (26)

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Online Filing Update

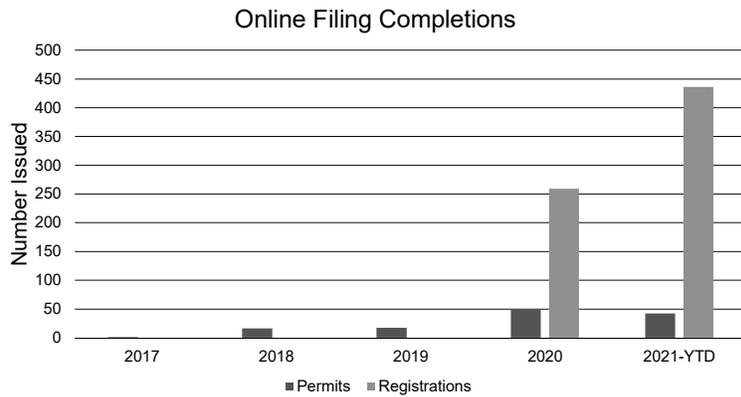
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Online Rule 222 Registration

- Three main registered equipment types
 - 222-A, Negative Air Machines (Asbestos)
 - 222-B, Boilers (1-2 mmbtu/hr)
 - 222-C, Commercial Charbroilers
- Represents ~ 80% of R222 Registrations
- Online Filing and Issuance
- Testing Complete – Release Pending
 - 222-CT, Cooling Towers
 - 222-TP, Tar Pots
 - 222-PW, Pressure Washers

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Online Filing Activity



- ~80% of R222 are for Negative Air Machine, balance is Charbroiler and Boiler
- Rule 1403 Online Filing and R222 Negative Air Machine Online Filing work in tandem
- Testing complete on three additional R222 modules

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Development

- Occasional software releases for data cleanup/program improvements
- Necessary to keep online programs consistent with rule changes
- Additional R222 Modules in testing stage
- Emergency IC Engine registration permit module in review
 - Online filing limited to certified engines with prescribed conditions
 - Seeking external volunteers to test module
- Workflow updates
 - IM to initiate building of individual modules

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Source Test Portal Update

- Released November 2021 internally for testing by multiple divisions
 - Incoming and routing of source tests and protocols
 - Electronic review and approval
 - Electronic communication and status / dashboard functionality
 - Online form processing (ST-1 / ST-2)
- Reiterative testing to continue

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Other Business

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Public Comment