



Working Group Meeting #5

PROPOSED RULE 1159.1 – CONTROL OF NO_x EMISSIONS FROM NITRIC ACID TANKS (PR 1159.1)

South Coast AQMD
August 31, 2022
1:00 PM

Zoom webinar link:

<https://scaqmd.zoom.us/j/94172407245>

Join via teleconference:

Dial-in Number: +1 669 900 6833

Zoom Webinar ID: 941 7240 7245

Agenda



Summary of Working Group #4



Overview of Key Requirements and Exemptions



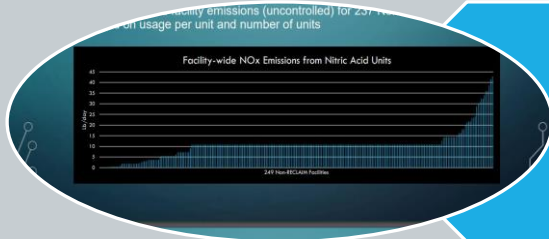
Initial Rule Language



Next Steps

Summary of Working Group #4

During the fourth Working Group meeting, staff presented:

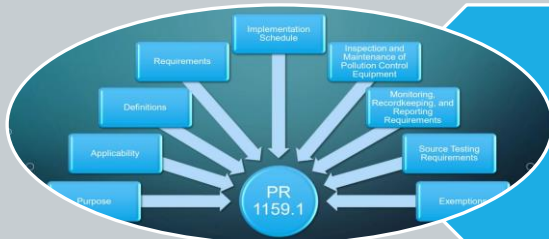


Estimated NOx Emissions from Universe of Facilities

A table titled "Low-Use Exemptions for Nitric Acid Units" with two columns. The first column lists examples of facilities and their usage. The second column lists the usage allowed and the facility-wide usage limitation.

Examples	Usage Allowed
Facility A has 10 units using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility B has 2 units using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility C has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility D has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility E has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility F has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility G has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility H has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility I has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility J has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility K has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility L has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility M has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility N has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility O has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility P has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility Q has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility R has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility S has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility T has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility U has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility V has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility W has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility X has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility Y has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit
Facility Z has 1 unit using 68% by weight nitric acid solution	Usage allowed is 2.1 gal/day (11 lbs NOx/day) per unit

Low-Use Exemptions for Nitric Acid Units



Rule Concepts of PR 1159.1

The background is a dark gray gradient. In the corners, there are white line-art illustrations of circuit traces. The top-left and bottom-left corners feature more complex, branching circuit patterns. The top-right and bottom-right corners have simpler, more linear circuit traces. The central text is in a bold, white, sans-serif font.

OVERVIEW OF KEY REQUIREMENTS AND EXEMPTIONS

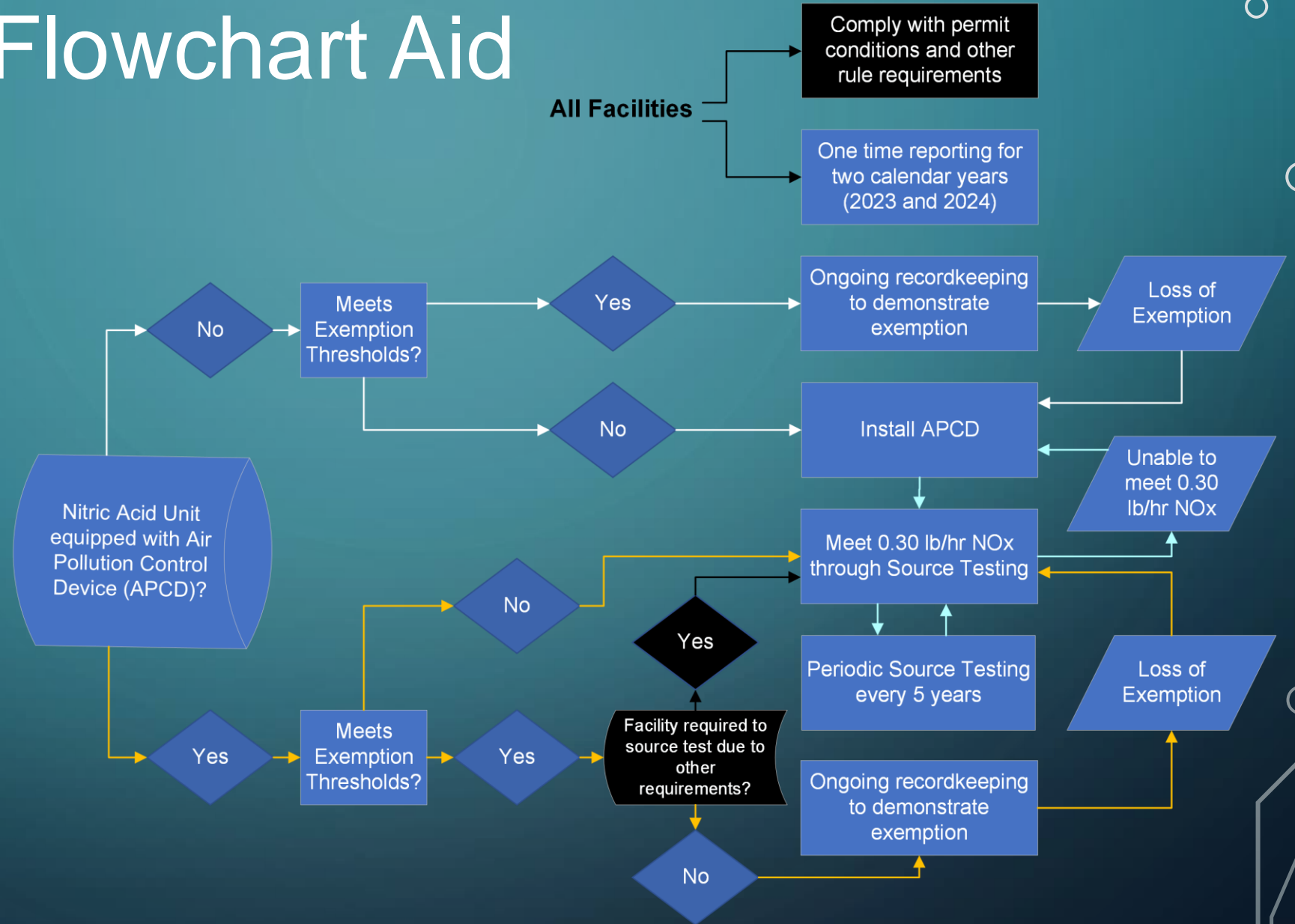
PR 1159.1 Universe and Approach

- PR 1159.1 applies to 260 facilities
- Establishes requirements for nitric acid units
 - Control requirements for NO_x
 - NO_x emission limit of 0.30 lb/hr for APCD
 - Other supporting requirements
- Exemption for low-usage nitric acid units
 - Most facilities expected to make use of exemption
 - Must maintain recordkeeping to verify usage
 - Certain units no longer exempt if usage threshold is exceeded

	Number of Facilities with Nitric Acid Units
RECLAIM	11
NON-RECLAIM	249
Total	260

General Flowchart Aid

- Flowchart designed as an aid
- Specific scenarios might not be captured
- Provision for exceedance of facility-wide threshold not shown

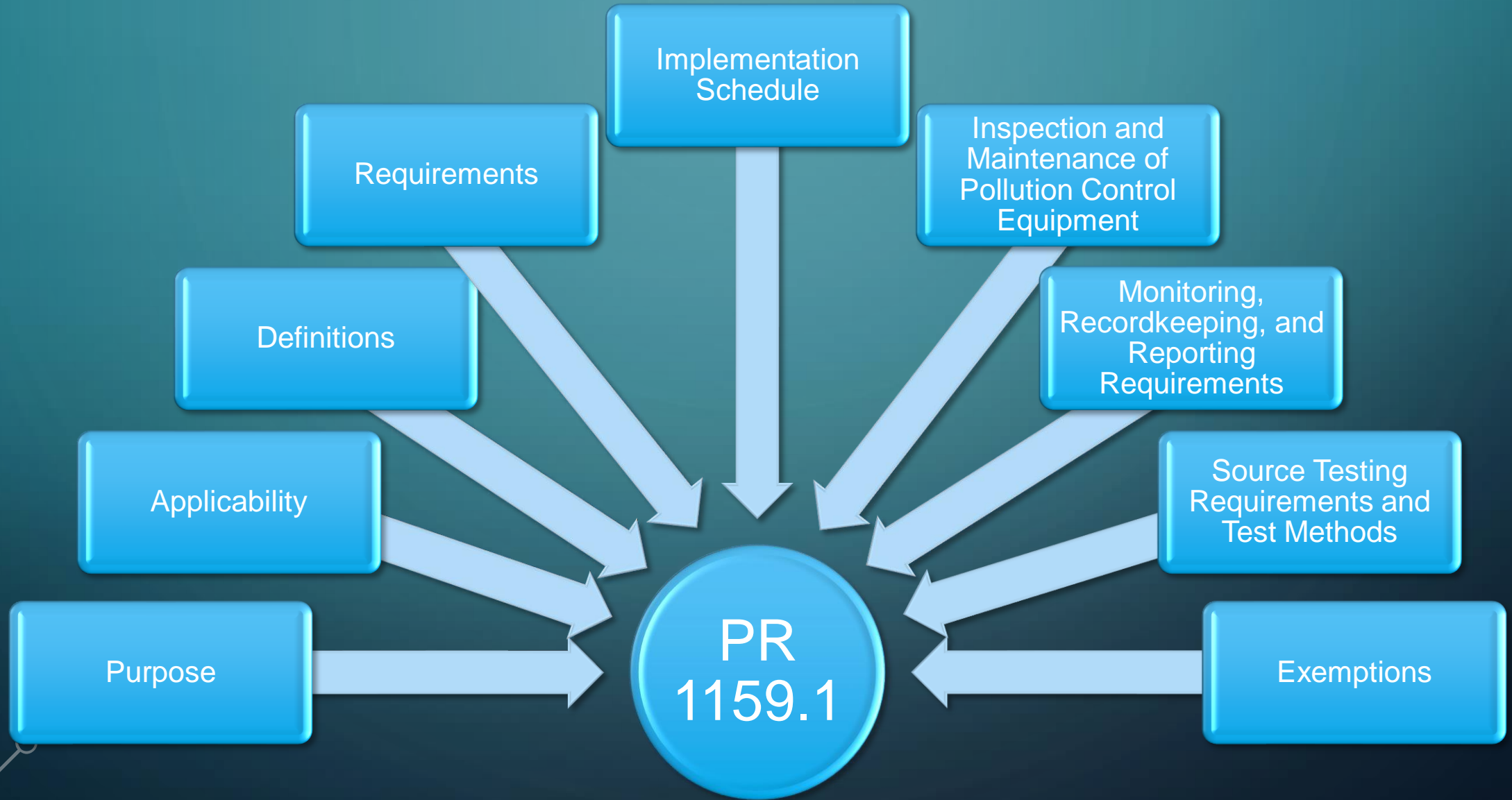


RESPONSE TO COMMENTS

Comments	Applicable Rule Provisions
<ul style="list-style-type: none">• The definition of nitric acid unit	Paragraph (c)(5)
<ul style="list-style-type: none">• Unreacted nitric acid solutions	Paragraph (i)(2)
<ul style="list-style-type: none">• Nitric acid of different concentrations for low-use threshold	Subdivision (i) – Table A
<ul style="list-style-type: none">• Time average used for low-use threshold	Subdivision (i) – Table A
<ul style="list-style-type: none">• Exempt equipment in Rule 219	Paragraph (i)(3)

INITIAL RULE LANGUAGE

PR 1159.1 Structure





Purpose (a)

(a) Purpose

The purpose of this rule is to reduce emissions of Nitrogen Oxide (NO_x) from the use of nitric acid at Metal Finishing, Precious Metal Reclamation, and Expanded Graphite Foil Production operations.

Applicability (b)

(b) Applicability

This rule applies to an owner or operator of a facility performing Metal Finishing, Precious Metal Reclamation, or Expanded Graphite Foil Production operations using nitric acid.

- PR 1159.1 includes a subdivision to state the purpose of the rule
- Metal Finishing includes surface treatment tanks and chemical milling tanks
- Specifies the facilities that are subject to PR 1159.1



Definitions (c)

- (2) EXPANDED GRAPHITE FOIL PRODUCTION means the production of graphite products from raw graphite flakes.
 - (3) METAL FINISHING means the treatment of metal surfaces to obtain desired characteristics using open process tanks.
 - (8) PRECIOUS METAL RECLAMATION means the recovery of valuable metals from scraps.
-
- (10) RECYCLE means the reuse of solution containing nitric acid taken from a Nitric Acid Unit to use in another Nitric Acid Unit at the facility.
 - (11) REPLACEMENT ADJUSTMENT means the volume of new nitric acid added to a Nitric Acid Unit that replaces nitric acid from removed solution, in part or whole, that is not reused at the facility.
 - (12) REPLENISHMENT means the volume of nitric acid added to a Nitric Acid Unit.

- Includes definitions for the different operations that are subject to PR 1159.1
- Includes definitions related to nitric acid recordkeeping for low use exemption



Definitions (c) *(continued)*

- (1) AIR POLLUTION CONTROL DEVICE (APCD) means equipment installed for the purpose of collecting and reducing emissions from a Nitric Acid Unit(s).
- (4) NEW NITRIC ACID UNIT means a Nitric Acid Unit that is installed, relocated, or replaced after [Date of Rule Adoption].
- (5) NITRIC ACID UNIT means tank, reactor, vessel, or other container used for Metal Finishing, Precious Metal Reclamation, or Expanded Graphite Foil Production, that contains nitric acid (HNO_3). A Nitric Acid Unit does not include a container used exclusively to store nitric acid or a Rinse Tank.
- (6) EMISSIONS of NO_x means the sum of nitric oxides and nitrogen dioxides emitted, calculated as nitrogen dioxide.
- (7) OPERATING PARAMETER VALUE means a minimum or maximum value established to monitor the proper operation of an Air Pollution Control Device.
- (9) PROCESS LINE means a series of tanks, including Nitric Acid Units, necessary to conduct a specific process at the facility.
- (13) RINSE TANK means any tank where a part is partially or fully submerged into a liquid to remove any residual solution from a Nitric Acid Unit.

- Includes definitions for the different equipment subject to provisions
 - APCD
 - Nitric Acid Units
- Process Lines are operations with multiple tanks
- Rinse Tanks may have residual nitric acid but are excluded



Requirements (d)

- (1) An owner or operator of a facility shall not operate a Nitric Acid Unit unless it is equipped with an Air Pollution Control Device (APCD) that meets a NO_x emission limit of 0.30 pounds per hour (lb/hr), as demonstrated pursuant to subdivision (h).
- (2) An owner or operator of a facility shall comply with the requirements of paragraph (d)(1) pursuant to the applicable implementation schedule in subdivision (e).
- (3) Beginning June 1, 2023, an owner or operator of a facility shall maintain clear labeling on each Nitric Acid Unit with the South Coast AQMD tank number or other identifier, South Coast AQMD permit number, and maximum nitric acid concentration by weight.

- Specifies NO_x emission limit of 0.30 lb/hr
- Labeling requirements
 - Label tanks with tank operational information
 - June 1st 2023 to allow facilities time to implement provisions



Requirements (d) *(continued)*

(4) Air Pollution Control Device

- (A) An owner or operator of a facility shall not remove or render inoperable an APCD for a Nitric Acid Unit unless it is replaced by an APCD meeting the requirements of paragraph (d)(1).
- (B) Beginning June 1, 2023, an owner or operator of a facility shall maintain clear labeling on the gauges of the APCD of all Operating Parameter Values listed on the permit to operate and include the following information:
 - (i) Flowrate of scrubber solution;
 - (ii) pH of the scrubber solution;
 - (iii) Oxidation Reduction Potential meter reading of the scrubber solution, if equipped; and
 - (iv) Pressure drop across each stage of the scrubber system.
- (C) Beginning June 1, 2023, an owner or operator of an APCD facility shall not operate a Nitric Acid Unit subject to the requirements of paragraph (d)(1), unless all visible emissions are collected by an APCD.

- Provisions to ensure that APCDs are operating properly to capture and control NOx emissions

Implementation Schedule (e)



- (1) Nitric Acid Units in operation on or before [Date of Adoption]
No later than March 1, 2023, an owner or operator of a Nitric Acid Unit in operation on or before [Date of Adoption] shall submit a source test protocol that meets the requirements of paragraph (h)(1) to the Executive Officer. No later than 90 days after written approval of the source test protocol by the Executive Officer is electronically distributed, the owner or operator shall conduct the source test according to the approved source test protocol and no later than September 1, 2023 demonstrate compliance with the emission limit specified in paragraph (d)(1).
- (2) New Nitric Acid Units
No later than 60 days after completion of construction of an APCD, an owner or operator of a New Nitric Acid Unit shall submit a source test protocol that meets the requirements of paragraph (h)(1) to the Executive Officer. No later than 90 days after written approval of the source test protocol by the Executive Officer is electronically distributed, the owner or operator shall conduct the source test according to the approved source test protocol and no later than 270 days after completion of construction demonstrate compliance with the emission limit specified in paragraph (d)(1).

For non-exempt units

- Specifies schedule for submittal of source test protocol and meeting NOx emission limit for
 - Existing units
 - New units
- Source test protocols require approval before a source test is conducted
- Source tests required to demonstrate meeting 0.30 lb/hr NOx



Implementation Schedule

(e) *(continued)*

- (3) Nitric Acid Unit(s) Exceeding the Per Nitric Acid Unit Low-Use Threshold
- Beginning June 1, 2023, a Nitric Acid Unit that was initially exempt from the requirements of paragraph (d)(1) that exceeds the applicable Per Nitric Acid Unit Low-Use Threshold in Table A shall constitute a violation of this rule. In addition, the owner or operator of the facility shall:
- (A) No later than 90 days from the last day of the month the Nitric Acid Unit(s) exceeded the applicable low-use threshold, submit a permit application(s) to the South Coast AQMD for an APCD(s) that meets requirements of paragraph (d)(1) for:
 - (i) The Nitric Acid Unit(s) that exceeded the low-use threshold; and
 - (ii) The Nitric Acid Unit(s) in the same Process Line as the Nitric Acid Unit(s) that exceeded the low-use threshold, if applicable; and
 - (B) Complete the installation of the APCD no later than the permit to construct expiration date, including any written extension(s) issued pursuant to Rule 205; and
 - (C) No later than 60 days from completion of construction of the APCD(s), submit a source test protocol pursuant to paragraph (h)(1) to the Executive Officer. No later than 90 days after written approval of the source test protocol by the Executive Officer is electronically distributed, the owner or operator shall conduct the source test according to the approved source test protocol and no later than 270 days after completion of construction and demonstrate compliance with the emission limit specified in paragraph (d)(1).

- Specifies schedule for units that exceed low-use threshold to demonstrate compliance with emission limit
- Would not take affect until June 1, 2023 to allow facilities to better understand their monthly nitric acid usage

Implementation Schedule

(e) *(continued)*



(4) Nitric Acid Unit(s) Exceeding the Facility-Wide or Reduced Facility-Wide Threshold

Beginning June 1, 2023, Nitric Acid Units that were initially exempt from the requirements of paragraph (d)(1) that exceed the applicable Facility-Wide or Reduced Facility-Wide Low-Use Threshold in Table A shall constitute a violation of this rule. In addition:

- (A) *The owner or operator of Nitric Acid Units that exceeded the Facility-Wide Low-Use Threshold shall:
...
- (B) No later than 90 days from the last day of the month the Nitric Acid Units exceeded the Facility-Wide Low-Use Threshold or the Reduced Facility-Wide Low-Use Threshold in Table A, the owner or operator of a facility shall submit a permit application(s) to the South Coast AQMD for an APCD(s) that meets the emission limit specified in paragraph (d)(1) for all Nitric Acid Units at the facility.
 - (i) An owner or operator of Nitric Acid Unit(s) that exceeded the Facility-Wide Low-Use Threshold may* exclude the groups identified pursuant to subparagraph (e)(4)(A) provided that Nitric Acid Unit(s) not meeting the requirements of paragraph (d)(1) complies with the applicable Reduced Facility-Wide Low-Use Threshold in Table A;
- (C) The owner or operator of a facility shall complete the installation of the APCD no later than the permit to construct expiration date, including any written extension(s) issued pursuant to Rule 205; and
- (D) No later than 60 days from the completion of the construction of the installation of the APCD(s), the owner or operator of a facility shall submit a source test protocol that meets the requirements of paragraph (h)(1) to the Executive Officer. No later than 90 days after written approval of the source test protocol by the Executive Officer is electronically distributed, the owner or operator shall conduct the source test according to the approved source test protocol and no later than 270 days after completion of construction demonstrate compliance with the emission limit specified in paragraph (d)(1).

- Specifies schedule for units that exceed facility-wide low-use threshold to demonstrate compliance with emission limit
- Would not take affect until June 1, 2023 to allow facilities to better understand their monthly nitric acid usage
- Example for units that could be excluded from controls*

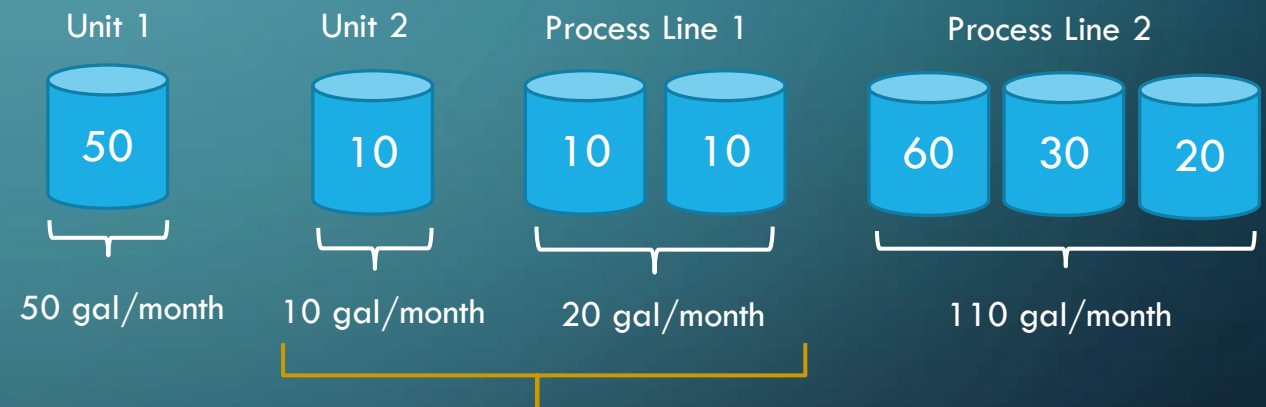
Exceedance of Facility-Wide Low-Use Threshold (e)(4)(A)

(A) The owner or operator of Nitric Acid Units that exceeded the Facility-Wide Low-Use Threshold shall:

- (i) Identify and record Nitric Acid Units in each Process Line(s) and Nitric Acid Unit(s) not in a Process Line.
- (ii) Calculate and record the Replenishments for each Nitric Acid Unit identified in clause (e)(4)(A)(i), for the month the exceedance occurred;
- (iii) Identify, group, and record a Nitric Acid Unit(s) not in a Process Line and Process Lines identified in clauses (e)(4)(A)(i) and (e)(4)(A)(ii) with monthly Replenishments that, when totaled together, are less than twenty percent of the applicable Facility-Wide Low-Use Threshold in Table A that was exceeded;

EXAMPLE

Facility-Wide Threshold = 198 gal/month (using 68%WT)
20% of Facility-Wide Threshold = 40 gal/month



Total usage in Unit 2 and Process Line 1 is less than 20% of Facility-Wide Threshold



Option to not route to APCD and Reduced Facility-Wide Threshold applies (Unit 1 and Process Line 2 will be required to have controls)

Implementation Schedule

(e) *(continued)*



(5) Source Testing Alternative to Installation of New APCD

In lieu of complying with subparagraphs (e)(3)(A)-(e)(3)(C) or (e)(4)(A)-(e)(4)(D), an owner or operator of a facility with a Nitric Acid Unit(s) with emissions controlled by an APCD that has not previously elected to use the source testing alternative, pursuant to this paragraph, shall:

- (A) No later than 90 days from last day of the month the Nitric Acid Unit(s) exceeded the applicable low-use threshold, submit a source test protocol that meet the requirements of paragraph (h)(1) to the South Coast AQMD;
- (B) No later than 90 days after written approval of the source test protocol by the Executive Officer is electronically distributed, the owner or operator shall conduct the source test according to the approved source test protocol and no later than 270 days from last day of the month the Nitric Acid Unit(s) exceeded the applicable low-use threshold demonstrate compliance with the emission limit specified in paragraph (d)(1); and
- (C) Upon demonstration of compliance with paragraph (d)(1), exclude Replenishments for the Nitric Acid Unit(s) with emissions controlled by the APCD that demonstrated compliance with paragraph (d)(1), from the determination of usage in subdivision (i).

For exceedances of a threshold

- Provision allows test units already equipped with controls to source test
- Upon demonstration of meeting 0.30 lb/hr NOx
 - Units compliant with (d)(1)
 - Replenishments from those units excluded for determining usage for low use exemption

Implementation Schedule

(e) *(continued)*



(6) Non-Compliant Results for Source Testing Alternative

An owner or operator of a facility that first elected to comply with paragraph (e)(5) and did not demonstrate compliance with the requirements of paragraph (d)(1) shall submit a permit application(s) to the South Coast AQMD for an APCD(s) that did not meet requirements of paragraph (d)(1) and meet the emission limit in paragraph (d)(1) no later than 270 days from:

- (A) Receiving a source test report where the APCD did not comply with the requirements of paragraph (d)(1); or
- (B) Receiving written notification electronically distributed by the Executive Officer that the source test report submitted is not acceptable or does not demonstrate compliance with paragraph (d)(1).

Units that fail source test

- Specifies requirement to submit permit applications for APCD that would be necessary to meet 0.30 lb/hr NO_x



Inspection and Maintenance of APCD (f)

(f) Inspection and Maintenance of Air Pollution Control Device

- (1) An owner or operator of a facility with a Nitric Acid Unit equipped with an APCD shall conduct visual inspections for leaks and malfunctions on the APCD per the manufacturer's recommended schedule or at least once every quarter, whichever is more frequent.
- (2) An owner or operator of a facility with a Nitric Acid Unit equipped with an APCD shall maintain and operate the APCD in accordance with manufacturer's specifications and recommendations.

- Specifies inspection and maintenance requirements to ensure APCD is operating properly to reduce NOx emissions



Monitoring, Recordkeeping, and Reporting (g)

(1) Air Pollution Control Devices

Beginning January 1, 2023, an owner or operator of a facility shall, on each day the APCD is required to operate, monitor and record the following Operational Parameter Values:

- (A) Flowrate of scrubber solution;
- (B) pH of the scrubber solution;
- (C) Oxidation Reduction Potential meter reading of the scrubber solution, if equipped; and
- (D) Pressure drop across each stage of the scrubber system.

(2) Nitric Acid Units

Beginning January 1, 2023 and ending December 31, 2024, an owner or operator of a Nitric Acid Unit that is not exempt pursuant to subdivision (i), and beginning January 1, 2023 an owner or operator of a unit that is exempt pursuant to subdivision (i), shall:

- (A) Record all Replenishments and nitric acid concentrations (in percent by weight (WT%)) for each Nitric Acid Unit;
- (B) Record all Replacement Adjustments, nitric acid concentrations (in WT%), and calculations for each Nitric Acid Unit; and
- (C) Determine a monthly nitric acid usage (in gallon) and nitric acid concentrations (in WT%) for each Nitric Acid Unit.

- Parametric monitoring of APCD to ensure operational parameters are checked daily
- Two-year nitric acid usage recordkeeping requirements
- Exempt units must continue to demonstrate usage below thresholds



Monitoring, Recordkeeping, and Reporting (g)

- (3) No later than February 1, 2025, an owner or operator of a facility shall prepare annual reports for calendar year 2023 and 2024, that include the following information:
 - (A) Records of all nitric acid usage pursuant to paragraph (g)(2) for each nitric acid unit;
 - (B) Identify each heated Nitric Acid Unit;
 - (C) Identify all Nitric Acid Unit(s) controlled by each APCD; and
 - (D) Source test report (or source test report number if already evaluated by the South Coast AQMD) for any Nitric Acid Unit(s) where a source test was conducted in the previous five calendar years.
- (4) No later than February 15, 2025, an owner or operator of a facility shall submit the two annual reports for calendar years 2023 and 2024 prepared pursuant to paragraph (g)(3) to the Executive Officer at [Rule1159_1_Reports@aqmd.gov].
- (5) All records shall be maintained for at least five years with the two most current years kept on site and made available to the Executive Officer upon request.

- One-time report submittal requirement for all facilities
 - Year 2023
 - Year 2024
- Five-year record retention with most recent 2 years kept onsite



Source Testing Requirements and Test Methods (h)

- (1) The source test protocol shall include the following information:
 - (A) Facility information;
 - (B) Description of the operations to be tested;
 - (C) Target NOx emission rate;
 - (D) Source test methods used and shall include South Coast AQMD Method 100.1 – Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989) and South Coast AQMD Method 7.1 – Determination of Nitrogen Oxide Emissions from Stationary Sources (March 1989) to measure NOx emissions, and South Coast AQMD Methods 1.1-4.1 to determine stack gas flowrate;
 - (E) Design criteria and ventilation velocities specified in *A Manual of Recommended Practice for Design* authored by the American Conference of Governmental Industrial Hygienists for the APCD;
 - (F) Demonstration of 100% capture efficiency;
 - (G) South Coast AQMD permits;
 - (H) The number of test runs; and
 - (I) Test conditions that represent normal operations of the Nitric Acid Unit(s).
- (2) Disapproval of Source Test Protocol
No later than 30 days after written notification of the disapproval of the source test protocol by the Executive Officer is electronically distributed, the owner or operator shall submit a revised source test protocol addressing deficiencies identified by South Coast AQMD.

- Specifies required elements to be included in source test protocol
- Requirements when a source test protocol is not approved by South Coast AQMD



Source Testing Requirements and Test Methods (h)

(3) Periodic Source Testing

No later than five years from the last source test that demonstrated compliance with the emission limit specified in paragraph (d)(1), the owner or operator of a facility shall conduct a subsequent source test, except:

(A) For a Nitric Acid Unit that is not in operation on the date the source test is required, conduct the source test no later than the end of seven consecutive days or 15 cumulative days of resuming operations.

(4) Qualifications of Contractor Conducting Source Test

Source tests conducted to demonstrate compliance shall use a South Coast AQMD-approved contractor under the Laboratory Approval Program.

(5) Source test reports shall be submitted to the Executive Officer within 60 days of completion of the source test.

- Source testing every five years
- Use of qualified source testing contractor
- Source test report must be sent to South Coast AQMD for review



Source Testing Requirements and Test Methods (h)

(6) Source Test Reports Unable to Demonstrate Compliance

No later than 90 days of written notification electronically distributed by the Executive Officer that the source test submitted pursuant to paragraph (h)(5) is not acceptable to demonstrate compliance, the owner or operator shall conduct the source test addressing the deficiencies identified by the Executive Officer with the following notification requirements:

- (A) No less than seven days before the date of a scheduled retest, notify the Executive Officer at 1-800-CUT SMOG and provide the following information:
 - (i) Facility name and identification;
 - (ii) Facility address;
 - (iii) Name and contact information of facility representative; and
 - (iv) Date and time of scheduled retest;
- (B) If a scheduled source test is delayed, notify the Executive Officer at 1-800-CUT SMOG within 24 hours from the time that an owner or operator knew of the delay; and

- Requirements for re-testing if a source test fails to demonstrate compliance with the emission limit

How to Determine Usage for Exemptions

Replenishment

- Refers to volume of nitric acid added to a tank
- Counts towards usage

Replacement Adjustment

- Refers to volume of nitric acid added to a tank after complete or partial tank solution removal for disposal purposes
- Optional adjustments
- Excluded from usage

Replenishments

- Replenishment refers to volume of nitric acid added to a tank, typically purchased products:
 - Stock nitric acid (e.g., 68%WT)
 - Premixed chemicals with nitric acid
- Count toward usage for low-use exemption
- Nitric acid concentrations listed on product's Safety Data Sheets (SDS)
- Does not refer to the “in use” nitric acid concentration of the tank's solution

Nitric Acid 42° Baumé Industrial Grade

Section 2. Hazard identification

Signal word : Danger

Hazard statements : May intensify fire; oxidizer.
May be corrosive to metals.
Toxic if inhaled.
Causes severe skin burns and eye damage.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Keep only in original packaging. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.

Response : Absorb spillage to prevent material damage.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up. Store in a corrosion resistant container with a resistant inner liner.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : None known.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Ingredient name	% (w/w)	CAS number
Nitric acid	67.2 - 67.9	7697-37-2
Water	32.1 - 32.8	7732-18-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the reporting in this section, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact : CORROSIVE. Begin eye irrigation immediately. All eye exposures to nitric acid require medical evaluation following decontamination. Immediately rinse eyes with large quantities of water or saline for a minimum of 20-30 minutes depending on severity of exposure. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. Call an ambulance for transport to hospital. Continue eye irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or medical provider.

Date of issue/Date of revision : 3/13/2019 Date of previous issue : 1/22/2019 Version : 3.1 2/10

Replacement Adjustments

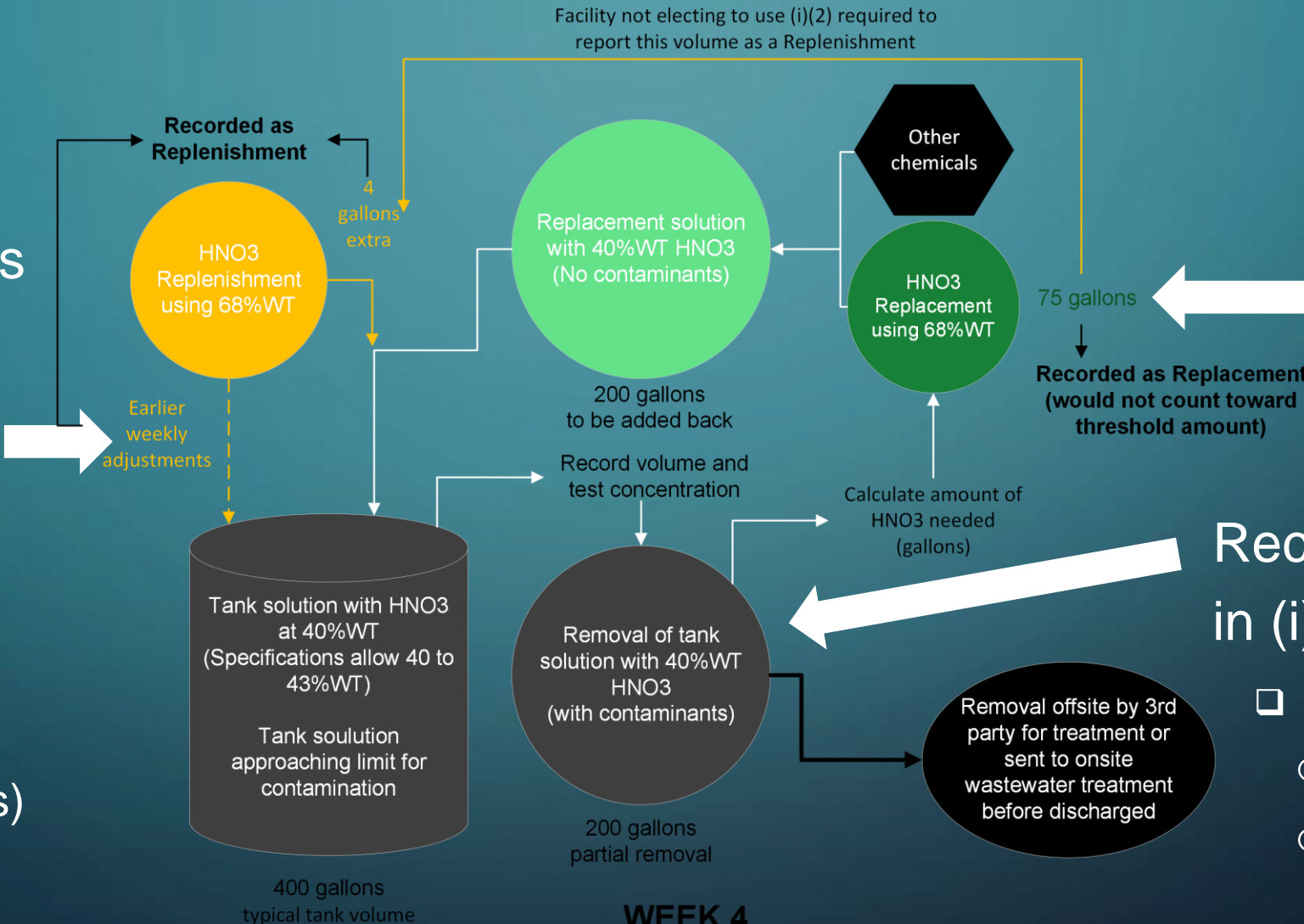
- Replacement Adjustments refers to volume of nitric added to a tank after complete or partial tank solution removal for disposal purposes
 - Removed portions will no longer react to form NO_x
 - Stored then hauled offsite by third party
 - Treated onsite using wastewater treatment system before discharged (subject to permits from other agencies)
- Optional provision to exclude these volumes of nitric acid from being classified as Replenishments for purposes of determining exemption status



Example of Facility with Weekly Testing

Records of Replenishments

- Week 1 – 3.0 gallons
- Week 2 – 2.5 gallons
- Week 3 – 3.0 gallons
- Week 4 – 4.0 (or 79 gallons)



Records of Replacement Adjustments (i)(2)(D)

- Week 4 – 75 gallons

Records required in (i)(2)(C)

- Week 4
 - 200 gallons
 - 40%WT

**WEEK 4
PARTIAL TANK BAIL OUT**



Exemptions (i)

- (1) A Nitric Acid Unit is exempt paragraphs (d)(1), (d)(2), (d)(4), (e)(1) and (e)(2), subdivision (f), paragraph (g)(1) and subdivision (h), provided that Replenishments do not exceed neither the Per Nitric Acid Unit nor the applicable Facility-Wide low use thresholds specified in Table A based on the concentration of the nitric acid used for Replenishments.

Table A – Low-Use Thresholds for Nitric Acid Units			
Concentration of Nitric Acid (WT%)* Stock Solution or Premixed Chemical based on Safety Data Sheet	Low-Use Thresholds (gallons per month)		
	Per Nitric Acid Unit	Facility-Wide	Reduced Facility-Wide for Units Identified in Clause (e)(4)(B)(i) without an APCD
0-50%	95	285	57
>50-68%	66	198	40
>68-100%	45	135	27

** If different nitric acid concentrations are used, the threshold for the highest concentration applies.*

- Exempt from specific requirements only
- Threshold values for three ranges of nitric acid concentrations
 - 68%WT used by majority of facilities
- Use of “gallons” for ease of tracking
- Monthly averaged threshold to normalize usage



Exemptions (i)

(2) Replacement Adjustments

An owner or operator of a facility may elect to exclude the amount of new nitric acid added to a Nitric Acid Unit for subparagraph (g)(2)(A) due to disposal, in part or whole, of the nitric acid unit's solution, provided:

- (A) The owner or operator tests and records the concentration of nitric acid in the solution immediately before removal;
- (B) The owner or operator measures and records the volume of the solution removed;
- (C) The owner or operator replaces and records the same volume of the solution in subparagraph (i)(2)(B) at the same concentration or less in subparagraph (i)(2)(A);
- (D) The owner or operator records the Replacement Adjustment for subparagraph (i)(2)(C) pursuant to subparagraph (g)(2)(B); and
- (E) The removed solution in subparagraph (i)(2)(B) is not Recycled.

(3) Nitric Acid Units exempt pursuant to Rule 219 - Equipment Not Requiring a Written Permit Pursuant to Regulation II under subparagraph (p)(4)(H) are exempt from the provisions of this rule.

- Addresses nitric acid usage not forming NO_x emissions
 - Optional provision
 - Requires additional recordkeeping
- Rule 219 exempt nitric acid units exempt from entire rule

NEXT STEPS

Next Steps

Release Preliminary Draft Rule Language and Staff Report (Mid-September)



Public Workshop (Early October)



Public Hearing (expected December 2, 2022)



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☐ Rule 1153.1 Emissions of Oxides of Nitrogen from Commercial Food Ovens

☒ Rule 1159.1 Control of NOx Emissions from Nitric Acid Tanks

☐ Rule 1162 Polyester Resin Operations

PR 1159.1 Staff Contacts

Min Sue
Air Quality Specialist
(909) 396-3241
msue@aqmd.gov

Melissa Gamoning
Program Supervisor (WOC)
(909) 396-3115
mgamoning@aqmd.gov

Neil Fujiwara
Program Supervisor
(909) 396-3512
nfujiwara@aqmd.gov

Kalam Cheung, Ph.D.
Planning and Rules Manager
(909) 396-3281
kcheung@aqmd.gov

Michael Krause
Assistant Deputy Executive Officer
(909) 396-2706
mkrause@aqmd.gov