

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT
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(530)757-3650

**TITLE V PERMIT AMENDMENT
STATEMENT OF BASIS**

PERMIT NUMBER: F-00470-10

ENGINEER: René Toledo

DATE: July 13, 2011

Facility Name: Agrium U.S. Inc.
Mailing Address: 3961 Channel Drive
West Sacramento, CA 95691

Location: 3961 Channel Drive
West Sacramento, CA 95691

Responsible Official: Bobby E. Franklin
Title: Plant Manager

Application Contact: John Killey, Environmental Specialist

Phone: (916) 375-6160

I. FACILITY DESCRIPTION

This facility manufactures and distributes nitrogen based fertilizers. The facility is capable of receiving bulk shipments of granular or prilled urea and anhydrous ammonia by truck, rail, ship and/or barge (via the Sacramento River Deep Water Channel). The bulk urea received will be primarily stored in the 32,000 ton capacity warehouse, while the anhydrous ammonia is stored in two atmospheric storage tanks and one pressure vessel.

Stored bulk urea can be screened and shipped out by truck or railcar, or transferred to other parts of the facility for use in the production of UAN-32 (urea and ammonia nitrate) solution. The produced nitric acid is then used to manufacture an ammonium nitrate solution. Specifically, the combination of bulk urea with this ammonium nitrate solution produces urea ammonium nitrate (UAN-32). Any anhydrous ammonia not used in the UAN-32 production process can be shipped via truck, rail, ship or barge.

II. PROPOSED REVISIONS

Authority to Construct (ATC) C-11-61 proposes to modify Permit to Operate (PTO) P-37-82(a2) (Nitric Acid Production) in order to install a carbon monoxide (CO) abatement device, and amend two monitoring conditions to allow: (1) the use of an alternative visible emission evaluation (VEE) method to U.S. EPA Method 9; and (2)

the inclusion of pollutant specific continuous emission monitoring system (CEMS) drift error check methods. The source has not proposed any CO control efficiency for the abatement device as part of this modification application, nor are they proposing any carbon dioxide (CO₂) reductions for this project.

Lastly, the District has used this modification to incorporate the applicable conditions of Rule 2.42 (Nitric Acid Production) which was adopted into the California State Implementation Plan (SIP) on July 9, 2010. The application has been processed as part of Enhanced New Source Review and is considered a minor permit modification (see Rule 3.8 discussion).

This statement of basis addendum reflects only the proposed changes and their applicable regulations. Emissions units that are not affected by the proposed changes were last evaluated in the recent Statement of Basis renewal (issued on July 16, 2010) and will not be included here. Lastly, the expiration date of the Title V permit will be revised from May 29, 2013 to July 16, 2015 under the provisions of Section 302.15 of District Rule 3.8. This will ensure that the Title V permit is active for a full five (5) years since it's last renewal. It should be noted that proposed Title V Permit F-00470-10 supercedes proposed Title V Permit F-00470-9 which was cancelled on January 4, 2011.

III. INSIGNIFICANT EMISSIONS UNIT INFORMATION

Insignificant emissions units or exempted equipment may be supplemented, replaced or modified with non-identical equipment without notice provided that the exemption status of a unit has not changed as defined in current District or Federal rules. The equipment listed in Table 1 is a complete listing of the equipment currently identified as exempt or insignificant and not required to obtain an operating permit pursuant to District Rule 3.2 (Exemptions).

Table 1: Exempted and Insignificant Emissions Units

Equipment Description	Basis for Exemption
Heating, Ventilation, and Air Conditioning Systems	District Rule 3.2, Section 103
Portable Welding and Generator Engines Rated 50 BHP or Less	District Rule 3.2, Section 105.1
Equipment Repairs and Maintenance	District Rule 3.2, Section 108
Propane Storage Tank (1,000 gallon)	District Rule 3.2, Section 109.1
Diesel Aboveground Storage Tank (10,500 gallons)	District Rule 3.2, Section 109.2
Solvent Parts Washer (35 gallons)	District Rule 3.2, Section 110.3
Laboratory Equipment	District Rule 3.2, Section 111
Cooling Tower	District Rule 3.2, Section 112
Aqueous Urea Solution Mixing and Storage	District Rule 3.2, Section 113

IV. SIGNIFICANT EMISSIONS UNIT INFORMATION

The following emissions unit has been constructed pursuant to issuance of an ATC in accordance with District Rules 3.1 (General Permit Requirements) and 3.4 (New Source Review).

Identification Number: P-37-82(a3), Nitric Acid Production

Equipment Description: One (1) 3700 HP Air compressor; one (1) 5 HP stripper feed pump; one (1) 10 HP condensate feed pump; one (1) 10 HP ammonia feed; one (1) 15 HP acid feed pump; and one (1) 20 HP raw water pump

Control Equipment: Nitrogen Oxides (NO_x) Decomposer and carbon monoxide (CO) abatement device

V. TITLE V APPLICABILITY

The source has submitted an application for a Title V permit renewal. The stationary source is subject to the requirements of District Rule 3.8 (Federal Operating Permits) since the facility's potential to emit (PTE) exceeds the major source thresholds for CO

and oxides of nitrogen (NO_x) emissions (100 tons per year and 25 tons per year, respectively). The facility's emission totals are listed below in Table 2:

Table 2: Total Facility Emissions

Criteria Pollutant Emissions (tons per year)					
Emission Unit Name	VOC	CO	NO _x	SO _x	PM ₁₀
P-33-09(a)	-	-	-	-	2.42
P-36-82(a)	0.06	6.47	0.80	0.01	0.30
P-37-82(a3)	-	168.00	42.00	-	-
P-70-78(a1)	0.01	0.04	14.39	0.03	0.30
P-71-78(a)	0.02	0.25	0.30	Neg.	0.02
P-72-78(a7)	-	-	-	-	2.72
P-73-78(a3)	-	-	-	-	2.62
P-85-94(t)	0.12	0.27	1.25	0.02	0.09
Total	0.21	175.03	58.74	0.06	8.47

VI. APPLICABLE FEDERAL REQUIREMENTS

RULE 2.3 Ringelmann Chart

Rule Description

This rule specifies the allowable opacity limit for all sources operating in the District.

Compliance Status

The rule applies to any visible emissions at the stationary source. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California State Implementation Plan (SIP). The source is currently in compliance with the requirements of the rule.

Rule Requirement #1 - Opacity Requirement

The rule limits the opacity of any visible emissions from the nitric acid plant, and is a standard "Facility Wide Condition." The rule reads:

"A person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is:

- a. *As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines;*
or
- b. *Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection a. of this rule."*

Subsuming Demonstration: The requirements of Rule 2.3 have been subsumed by the requirements of Rule 2.42 (Nitric Acid Production) and 40 CFR Part 60 - Subpart G (Standards of Performance of Nitric Acid Plants) which require a more stringent opacity limit of 10%. The condition has also been streamlined to include the exemption requirements of Rule 2.42, Section 110. For reference, the subsuming condition revises the language of Condition 10 of PTO P-37-82(a2) which previously established a 10% opacity limit for the production facility, and does not relax or significantly change the monitoring requirements of the permit.

Related Requirements from other Regulations:

Section 110 of Rule 2.42, reads:

"The provisions of Section 301 and 302 [of Rule 2.42] shall not apply to any nitric acid production facilities during periods of equipment startup or shutdown, provided that the frequency and duration of these periods and the associated emissions are minimized to the maximum extent practicable."

Section 302 of Rule 2.42, reads:

"No activity associated with the nitric acid manufacturing process shall discharge into the atmosphere any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- 302.1 Half as dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines;*
or
- 302.2 Of such opacity as to obscure an observer's view to a degree equal to or greater than smoke as described in subsection 302.1 or 10% opacity."*

Part 60.72(a)(2) of Subpart G, requires that no affected facility "discharged into the atmosphere from any affected facility any gases which:"

"(2) Exhibit 10 percent opacity, or greater."

Subsuming Permit Condition

Except for qualifying periods of equipment startup or shutdown, no activity associated with the nitric acid manufacturing process shall discharge into the atmosphere any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- a. Half as dark or darker in shade as No. 1 on the Ringelmann Chart; or
- b. 10% opacity. [District Rule 2.3, District Rule 2.42, §110 and §302, and 40 CFR Part 60.72(a)(2)/C-11-61]

Subsuming Demonstration: The requirements of Rule 2.3 have been subsumed by the requirements of Rule 3.1 in order to limit the opacity of visible emissions from any

“qualifying periods of equipment startup or shutdown” to 20%. For reference, the 20% limit reflects the current opacity limit of Rule 2.3 (approved on January 13, 2010), but not yet approved into the SIP.

Subsuming Permit Condition

The Permit Holder shall not discharge into the atmosphere from any single source of emissions whatsoever, any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- a. As dark or darker in shade than No. 1 on the Ringelmann Chart; or
- b. Greater than 20% opacity. [District Rule 2.3 and District Rule 3.4]

RULE 2.5 Nuisance

Rule Description

This rule requires that sources are not a public nuisance.

Compliance Status

The rule applies to all emission units at the stationary source. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. The source is currently in compliance with the requirements of the rule.

It should be noted that this permit condition is Federally enforceable because it derives from District Rule 2.5 (Nuisance) that is currently part of the California SIP. The District is taking steps to remove Rule 2.5 from the SIP. Once the U.S. Environmental Protection Agency (EPA) has taken final action to remove District Rule 2.5 from the SIP, this permit condition will become state-enforceable only.

Rule Requirement #1 (Facility Wide Permit Condition)

The Permit Holder shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause to have a natural tendency to cause injury or damage to business or property.

RULE 2.11 Particulate Matter

Rule Description

This rule specifies the allowable particulate matter emission rates at standard conditions. For purpose of this evaluation, the particulate matter (PM) emissions are considered to be 100% PM₁₀ (PM with an aerodynamic diameter of 10 microns or less).

Compliance Status

The rule does not apply to this operation at the nitric acid production plant since the operation does not emit any regulated amount of particulate matter. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP.

Rule Requirement #1 - PM Emission Rate

No permit condition required.

RULE 2.12 Specific Contaminants

Rule Description

This rule specifies the allowable sulfur dioxide (SO₂) and PM emission rates at standard conditions. For the purposes of this evaluation, the sulfur oxide (SO_x) emissions are considered to be 100% SO₂.

Compliance Status

The rule does not apply to this operation at the nitric acid production plant since the operation does not emit any regulated amount of SO_x or PM. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP.

Rule Requirement #1 - SO_x Emission Rate

No permit condition required.

Rule Requirement #2 - PM Emission Rate

No permit condition required.

RULE 2.16 Fuel Burning Heat or Power Generators

Rule Description

This rule specifies the allowable SO₂, nitrogen dioxide (NO₂), and combustion PM limits for non-mobile, fuel burning, heat or power generating units. For the purposes of this evaluation, the nitrogen oxide (NO_x) emissions are considered to be 100% NO₂.

Compliance Status

The nitric acid production plant's permitted "NO_x Decomposer (a non-selective reduction control system) of P-37-82(a3) is exempt from the mass emission limits of Rule 2.16 since it consumes natural gas in order to abate the nitric acid plant's NO_x

emissions. Specifically, under Section (c)(1) of the rule, "fuel burning equipment serving primarily as air pollution control equipment by using combustion to destroy air contaminants shall be exempt from the provisions of [the] rule." The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. The source is currently in compliance with the requirements of the rule.

Rule Requirement #1 - SO_x Emission Rate

No permit condition required.

Rule Requirement #2 - NO_x Emission Rate

No permit condition required.

Rule Requirement #3 - PM Emission Rate

No permit condition required.

RULE 2.17 **Circumvention**

Rule Description

This rule prevents sources from concealing emissions to the atmosphere.

Compliance Status

The rule is applicable to all emission units at the facility. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP. The source is currently in compliance with the requirements of the rule.

Rule Requirement #1 (Facility Wide Permit Condition)

The Permit Holder shall not build, erect, install or use any article, machine, equipment, or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Division 26, Part 3 and Part 4 of the Health and Safety Code of the State of California or District Rules or Regulations. [District Rule 2.17]

RULE 2.19 **Particulate Matter Process Emission Rate**

Rule Description

This rule limits the pound per hour PM emission rate based on the amount of material processed.

Compliance Status

The rule does not apply to this operation at the nitric acid production plant since the operation does not emit any regulated amount of particulate matter. The version of the rule used in this evaluation is the rule adopted on October 1, 1971, and is part of the California SIP.

Rule Requirement #1 - PM Emission Rate

No permit condition required.

RULE 2.42 Nitric Acid Production

Rule Description

This rule established NO_x and visible emission limits for weak nitric acid production facilities.

Compliance Status

The rule applies to the nitric acid production plant of P-37-82(a3). The rule was adopted on May 15, 2009, and was approved into the California SIP on May 10, 2010 (see Federal Register 75 FR 25778).

Rule Requirement #1 - Emission Limit Exemption

Section 110 of the rule contains an exemption from the provisions of Section 301 (NO_x Emission Limitation) and 302 (Opacity Limitations) during qualifying startup and shutdown periods (as defined in Sections 207 and 206, respectively). The exemption requirement reads:

"The provisions of Section 301 and 302 shall not apply to any nitric acid production facilities during periods of equipment startup or shutdown, provided that the frequency and duration of these periods and the associated emissions are minimized to the maximum extent practicable."

Streamlining Demonstration: Since the startup and shutdown exemption requirements can provide relief from the NO_x and the opacity requirements of Rule 2.42, the District (under the provisions of Rule 3.4, Section 409) will streamline the exemption requirements with the requirements of Section 301 and 302 of this rule. Also, the "duration and frequency minimization" requirements of Section 110 have been streamlined with the definition of "startup period" and "shutdown period" into a single condition (listed below).

As discussed in the staff report for Rule 2.42 (April 28, 2009, Page 4), these startup and shutdown exemptions comply with EPA's "Policy on Excess Emissions During

Malfunctions, Startup, and Shutdown” and therefore can also be applied to the emission requirements of 40 CFR Part 60, Subpart G.

Related Requirements from other Rules:

Section 206 of Rule 2.42, defines “shutdown periods” as:

“The period of time after feedstock is no longer introduced in a nitric acid production unit. The shutdown period is not to include the time required to cool down the control equipment and shall not exceed three (3) hours.”

Section 207 of Rule 2.42, defines “startup periods” as the:

“The period of time between when feedstock is introduced into the nitric acid production process and the equipment achieves the proper operating temperature and stable operating conditions. The startup period is not to include the time required to preheat the control equipment and shall not exceed three (3) hours.”

Section 301 (NO_x Emission Limit) - see Rule 2.42, Requirement #2

Section 302 (Opacity Limit) - see Rule 2.42, Requirement #3

Part 60.72(a)(1) (NO_x Emission Limit) - see Rule 2.42, Requirement #2

Part 60.72(a)(2) (Opacity Limit) - see Subpart G, Requirement #2

Streamlined Permit Conditions

The Permit Holder shall minimize to the maximum extent practicable the frequency, duration, and emissions of all qualifying periods of startup and shutdown. Each qualifying period shall not exceed three (3) hours and shall be determined as follows:

- a. Startup Period - The period of time between when feedstock is introduced into the nitric acid production process and the equipment achieves the proper operating temperature and stable operating conditions. The period will exclude the time required to preheat the control equipment.
- b. Shutdown Period - The period of time after feedstock is no longer introduced in a nitric acid production unit. The period will exclude the time required to cool down the control equipment. [District Rule 2.42, §110, §206, and §207/C-11-61]

See Rule Requirement #2 below for the streamlined NO_x emission limit exemption language.

See Rule Requirement #3 below for the streamlined opacity limit exemption language.

Rule Requirement #2 - NO_x Emission Limit

Section 301 specifies the allowable NO_x emission limit and reads:

“The owner or operator of an affected facility shall not operate such equipment which results in measured NO_x (expressed as NO₂) emissions exceeding 3.0 lb/ton HNO₃ produced (being expressed as 100% nitric acid by mass) averaged over a three (3) hour rolling period.”

Streamlining Demonstration: The operation is also subject to the mass emission limit of 40 CFR Part 60.72(a)(1). Since the mass emission limits contained in Part 60.72(a)(1) are equivalent to the emission limits of Section 301, the District can streamline the two requirements into a single permit condition. The condition will also be streamlined to contain the exemptions allowed by Section 110 (see Rule Requirement #1 of Rule 2.42). The “duration and frequency minimization” requirements of Section 110 have been included in the permit as a separate condition (see Rule Requirement #1 of Rule 2.42 above). For reference, this streamlined condition revises the requirements of Condition 9 of PTO P-37-82(a2), and does not relax or significantly change the monitoring requirements of the permit.

Related Requirements from other Rules:

Section 110 (Startup and Shutdown Exemption) - see Rule 2.42, Requirement #1 Part 60.72(a)(1) of Subpart G, requires that no affected facility discharged into the atmosphere from any affected facility any gases which:

“Contain nitrogen oxides, expressed as NO₂, in excess of 1.5 kg per metric ton of acid produced (3.0 lb per ton), the production being expressed as 100 percent nitric acid.”

Streamlined Permit Condition

Except for qualifying periods of equipment startup or shutdown, the nitrogen oxides (NO_x) emissions (expressed as NO₂) shall not exceed 3.0 pound per ton (lb/ton) nitric acid (HNO₃) produced (expressed as 100% nitric acid by mass) averaged over a three (3) hour rolling period. [District Rule 2.42, §110 and §301 and 40 CFR Part 60.72(a)(1)/C-11-61]

Rule Requirement #3 - Opacity Limit

Section 302 of the rule reads:

“No activity associated with the nitric acid manufacturing process shall discharge into the atmosphere any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

302.1 Half as dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines;
or

302.2 Of such opacity as to obscure an observer's view to a degree equal to or greater than smoke as described in subsection 302.1 or 10% opacity.”

Subsuming Demonstration: The opacity requirements of Section 302 subsume the requirements of Rule 2.3, and have been streamlined with the requirements of 40 CFR Part 60.72(a)(2) (which require an equivalent opacity limit of 10%). The condition has also been streamlined to include the exemption requirements of Rule 2.42, Section 110. The “duration and frequency minimization” requirements of Section 110 have been included in the permit as a separate condition (see Rule Requirement #1 of Rule

2.42 above). As previously discussed, this condition revises the language of Condition 10 of PTO P-37-82(a2).

Related Requirements from other Rules:

Section 110 (Startup and Shutdown Exemption) - see Rule 2.42, Requirement #1 Part 60.72(a)(2) of Subpart G, requires that no affected facility discharged into the atmosphere from any affected facility any gases which:

“Exhibit 10 percent opacity, or greater.”

Subsuming Permit Condition

Except for qualifying periods of equipment startup or shutdown, no activity associated with the nitric acid manufacturing process shall discharge into the atmosphere any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- a. Half as dark or darker in shade as No. 1 on the Ringelmann Chart; or
- b. 10% opacity. [District Rule 2.3, District Rule 2.42, §110 and §302, and 40 CFR Part 60.72(a)(2)/C-11-61]

Rule Requirement #4 - NO_x Continuous Emission Monitoring System (CEMS)

Section 303 requires:

“The owner or operator of an affected facility shall install, calibrate, maintain, and operate a Continuous Emission Monitoring System (CEMS) for measuring NO_x emission concentrations.”

Streamlining Demonstration: The CEMS installation requirement of Section 303 is equivalent to the requirement of 40 CFR Part 60.73(a), and therefore can be streamlined into a single permit condition. For reference, this streamlined condition is equivalent to Condition 14 of PTO P-37-82(a2) which previously established the NO_x CEMS installation and operation requirement.

Related Requirements from other Rules:

Part 60.73(a) requires the following:

“The source owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides (NO_x).”

Streamlined Permit Condition

The Permit Holder shall install, calibrate, maintain, and operate a CEMS for measuring NO_x emission concentrations. [District Rule 2.42, §303 and 40 CFR Part 60.73(a)/C-11-61]

Rule Requirement #5 - CEMS Performance Specification

Section 303.1 requires:

"The CEMS shall comply with the requirements specified in 40 Code of Federal Regulations Part 60, Appendix B, Specification 2 or other alternative methods approved by the U.S. EPA and the District."

Streamlining Demonstration: The CEMS performance specifications requirement of Section 303.1 is equivalent to the requirement of 40 CFR Part 60.73(a), and therefore can be streamlined into a single permit condition. For reference, this streamlined condition is a new federally enforceable requirement of Rule 2.42 not contained in PTO P-37-82(a2).

Related Requirements from other Rules:

Part 60.73(a) requires the following:

"The pollutant gas mixtures under Performance Specification 2 and for calibration checks under §60.13(d) of this part shall be nitrogen dioxide (NO₂). ... Acceptable alternative methods to Method 7 are given in § 60.74(c)."

Streamlined Permit Condition

The NO_x CEMS shall comply with the requirements specified in 40 CFR Part 60 - Appendix B, Specification 2 or other alternative methods approved by the U.S. EPA and the District. [District Rule 2.42, §303.1 and 40 CFR Part 60.73(a)/C-11-61]

Rule Requirement #6 - NO_x CEMS Calibration

Section 303.2 requires:

"The CEMS shall be calibrated and checked using a NO₂ span gas with a value between 450 and 500 ppmv, or other alternative methods approved by the U.S. EPA and the District."

Subsuming Demonstration: The CEMS calibration requirement of Section 303.2 is equivalent to the requirement of 40 CFR Part 60.73(a). However as previously approved by the U.S. EPA and the District, the source may use nitrogen oxide (NO) as an alternative CEMS span gas. Specifically, Agrium received an approval form U.S. EPA to use a NO span gas as part of the CEMS last modification under ATC C-03-68. Since the NSPS specifically requires NO₂ as the system's span gas with a value of 500 ppm, the facility petitioned U.S. EPA for an alternate method (documented in an Agrium letter to EPA dated May 10, 2004). After several conversations with Steve Frye, EPA Region IX office, on April 11, 2005, Agrium received verbal approval for use of their proposed alternate method. As such, the NO₂ requirement of Section 303.2 and Part 60.73(a) have been subsumed by the requirements of Rule 3.4, §409, previously listed in Conditions 17 and 21 of PTO P-37-82(a2).

Related Requirements from other Rules:

Part 60.73(a) requires the following:

"The span value shall be 500 ppm of NO₂."

Subsuming Permit Condition

The NO_x CEMS shall be calibrated and checked using a nitrogen oxide (NO) span gas with a value between 450 and 500 ppmv, or other alternative methods approved by the U.S. EPA and the District. [District Rule 2.42, §303.2, District Rule 3.4, §409, and 40 CFR Part 60.73(a)/C-11-61]

Rule Requirement #7 - Source Testing Frequency (NO_x and Opacity)

Section 304 requires that all affected facilities:

“... shall perform a source test to verify compliance with the requirements of Section 301 and 302 at least once every twelve (12) continuous calendar months, in accordance with a District-approved protocol and the test methods listed in Section 600 of this Rule.”

Streamlining Demonstration (CO and NO_x CEMS): The requirements of Section 304 have been streamlined with a Rule 3.4 condition that also requires the testing of the nitric acid production plant’s CO emissions (in ppm and lb/day). For reference, this streamlined condition is a new federally enforceable requirement of Rule 2.42 not contained in PTO P-37-82(a2).

Streamlined Permit Condition

The Permit Holder shall perform a source test at least once every twelve (12) consecutive calendar months to demonstrate compliance with the following items:

- a. CO concentration (ppmvd @ 15% O₂);
- b. CO mass emissions (lb/day);
- c. NO_x concentration (ppmvd @ 15% O₂); and
- d. NO_x mass emissions (lb/day and lb/ton nitric acid produced). [District Rule 2.42, §304 and District Rule 3.4/C-11-61]

Subsuming Demonstration (Opacity): As previously required by Condition 13 of PTO P-37-82(a2), the District will subsume the annual VEE opacity requirement of Section 304 with a more stringent weekly requirement under Rule 3.4. Additionally, the streamlined condition will also continue to require that the source take corrective action when visible emissions are observed, and then report any visible emissions to the District after twenty-four (24) hours.

Related Requirements from other Rules:

Section 604 of Rule 2.42 requires that the following method be used to determine the opacity of any visual emissions from the operation:

“Visible emission evaluations shall be determined in accordance with U.S. EPA Method 9, or alternative methods approved by the U.S. EPA and the District.”

Subsuming Permit Condition

The Permit Holder shall perform a weekly visible emissions evaluation of the nitric acid production plant using U.S. EPA Method 9 (or an alternative test method approved by the U.S. EPA and the District). If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within twenty-four (24) hours the District shall be notified immediately. [District Rule 2.42, §304 and §604, and District Rule 3.4/C-11-61]

Rule Requirement #8 - Operating and Maintenance (O&M) Plan

Section 402 requires that the facility submit an Operations and Maintenance Plan for the emission control device (NO_x Decomposer) and the CEMS that includes:

402.1 "The procedures for collecting and recording required data and other information in a form approved by the APCO."

402.2 "The procedures and schedules for preventive and corrective maintenance performed for the purpose of maintaining both the emission control device and the CEMS in proper operating condition."

Streamlining Demonstration: The District has streamlined the O&M Plan requirements of Section 402 to explicitly require that the facility operate under the provisions of the most recently approved version of the plan (Version 1 submitted on June 16, 2009, and approved by the District on July 20, 2010). The streamlined condition also allows for the revision of the plan as needed to incorporate any changes in the O&M Plan procedures. For reference, this streamlined condition is a new federally enforceable requirement of Rule 2.42 not contained in PTO P-37-82(a2).

Streamlined Permit Condition

The Permit Holder shall comply with the procedures and schedules contained in the most recent Operation and Maintenance (O&M) Plan submitted to, and approved by, the District. [District Rule 2.42, §402 and District Rule 3.4, §409/C-11-61]

Rule Requirement #9 - Record Retention and Availability

Section 501 requires:

"All records required by this Rule shall be maintained on-site for a period of five (5) years and made available to the APCO upon request."

Subsuming Demonstration: The two (2) year record retention requirement of Part 60.7(f) will be subsumed by the more stringent five (5) year retention requirement of Section 501. For reference, this subsuming condition revises the language of Condition 33 of PTO P-37-82(a2) which previously established a two (2) year record retention limit. The condition does not relax or significantly change the monitoring requirements of the permit, since Rule 3.8, Section 302.6(b) already requires a five (5) year record retention schedule.

Related Requirements from other Rules:

Section 302.6(b) of Rule 3.8 - see Rule 3.8, Requirement #23
Part 60.7(f) - see Subpart A, Rule Requirement #4

Subsuming Permit Condition

The Permit Holder shall maintain all records required by this permit on-site for a period of five (5) years from the date of entry and made available to the APCO upon request. [District Rule 2.42, §501, District Rule 3.8, §302.6(b), and 40 CFR Part 60.7(f)/C-11-61]

Rule Requirement #10 - Recordkeeping

Section 502 requires that the operator maintain a daily operating log tracking the following information:

502.1 "The actual startup and shutdown time;"

502.2 "Total hours of operation, amount of nitric acid produced (expressed as 100% acid strength);"

502.3 "Operating system parameters;"

502.4 "The exhaust gas NO_x concentrations in parts per million volume (ppmv) on a dry basis; and"

502.5 "The exhaust gas NO_x emission rate in lb/ton HNO₃ per three (3) hour rolling average."

Streamlined Demonstration: The Part 60.73(c) and Section 502 requirements can be streamlined into a single condition by the provisions of Rule 3.4, since both rules require that the production rate and operating time of the facility be recorded on a daily basis. For reference, this streamlined condition revises the language of Condition 12 of PTO P-37-82(a2) which previously established the recordkeeping requirements for the nitric acid production plant. The streamlined condition does not relax or significantly change the monitoring requirements of the permit, and implements the new federally enforceable requirements of Rule 2.42.

Related Requirements from other Rules:

Part 60.73(c) reads:

"The owner or operator shall record the daily production rate and hours of operation."

Streamlined Permit Condition

The Permit Holder shall maintain an operating log for the facility that includes, on a daily basis:

- a. The actual startup and shutdown time;
- b. Total hours of operation, amount of nitric acid (HNO₃) produced (expressed as 100% acid strength);
- c. Operating system parameters;

- d. The exhaust gas NO_x concentrations in parts per million volume (ppmv) on a dry basis; and
- e. The exhaust gas NO_x emission rate in lb/ton HNO₃ per three (3) hour rolling average. [District Rule 2.42, §502 and 40 CFR Part 60.73(c)/C-11-61]

Rule Requirement #11 - NO_x Emission Concentration Determination

Section 601 requires that the NO_x emission concentrations be determined:

"... in accordance with U.S. EPA Method 7, or alternative methods approved by the U.S. EPA and the District."

Streamlining Demonstration: The emission concentration determination requirement of Section 601 is equivalent to the requirement of Part 60.73(a), and therefore can be streamlined into a single permit condition. Per District convention, the streamlined condition will also include (under Rule 3.4) the test methods needed to determine the CO emission concentrations (EPA Method 10), volumetric flow rate of exhaust (EPA Method 2), and visual emissions (EPA Method 9), or other approved alternatives. For reference, this streamlining condition revises the language of Condition 27 of PTO P-37-82(a2) which previously established the NO_x test method for the production facility, and does not relax or significantly change the monitoring requirements of the permit. The streamlined condition implements the new federally enforceable requirements of Rule 2.42.

Related Requirements from other Rules:

Section 604 of Rule 2.42 requires that the following method be used to determine the opacity of any visual emissions from the operation:

"Visible emission evaluations shall be determined in accordance with U.S. EPA Method 9, or alternative methods approved by the U.S. EPA and the District."

Part 60.74(b)(2) requires that the following method be used to determine NO_x emissions:

"Method 7 shall be used for the performance evaluations under § 60.13(c)."

Part 60.74(b)(3) requires that the following method be used to determine the production plant's effluent (exhaust) flow rate:

"Method 2 shall be used to determine the volumetric flow rate (Q_{sd}) of the effluent gas."

Streamlined Permit Condition

The Permit Holder shall conduct the following test methods (or alternative test methods approved by the U.S. EPA and the District) to measure the required pollutant emissions during any emission testing event. If the source wishes to use an alternative methodology a complete and detailed description of the method must be submitted to the District for written approval no less than thirty (30) days prior to the performance evaluation.

- a. CO - U.S. EPA Method 10;
- b. NO_x - U.S. EPA Method 7; and

- c. Volumetric Flow rate - U.S. EPA Method 2. [District Rule 2.42, §601, District Rule 3.4, §409, and 40 CFR Part 60.74(b)(2) and (b)(3)/C-11-61]

Rule Requirement #12 - NO_x Emission Rate Calculation

Section 602 requires that the NO_x emission rate for the facility be:

"... calculated using the equation contained in 40 CFR Part 60.74(b)(1)."

Streamlining Demonstration: The District has streamlined the related requirements of Sections 602 and 603 with their equivalent requirements contained in Part 60.73(b) and Part 60.74(b)(1) into a single permit condition. The streamlined permit condition establishes the procedures for determining the NO_x emissions from the production facility. For reference, this streamlined condition revises the language of Condition 16 of PTO P-37-82(a2) which previously required the development and use of CO and NO_x conversion factors. The revised NO_x specific requirement does not relax or significantly change the monitoring requirements of the permit. For clarity, the permit will still require the use of a CO specific conversion factor under the provisions of Rule 3.4.

Related Requirements from other Rules:

Section 602 of Rule 2.42 - see Requirement #13

Part 60.73(b) reads:

"The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be established by measuring emissions with the continuous monitoring system concurrent with measuring emissions with the applicable reference method tests. Using only that portion of the continuous monitoring emission data that represents emission measurements concurrent with the reference method test periods, the conversion factor shall be determined by dividing the reference method test data averages by the monitoring data averages to obtain a ratio expressed in units of the applicable standard to units of the monitoring data, i.e., kg/metric ton per ppm (lb/ton per ppm). The conversion factor shall be reestablished during any performance test under § 60.8 or any continuous monitoring system performance evaluation under § 60.13(c)."

Part 60.74(b)(1) requires that the NO_x emission rate ("E") be calculated using the following formula:

$$E = (C_s * Q_{sd}) / (P * K)$$

Where:

E = Emission rate of NO_x as NO₂, kg/metric ton (lb/ton) of 100% nitric acid

C_s = Concentration of NO_x as NO₂, g/dscm (lb/dscf)

Q_{sd} = Volumetric flow rate of effluent gas, dscm/hr (dscf/hr)

P = Acid production rate, metric ton/hr (ton/hr) or 100% nitric acid

K = Conversion factor, 1000 g/kg (1.0 lb/lb)"

Streamlined Permit Condition

The Permit Holder shall determine a NO_x conversion factor used to convert the NO_x CEMS data (in ppmv) into the applicable NO_x compliance limit units (in lb/ton) using the data from the most recent source test submitted to, and approved by, the District. The NO_x emission conversion factor shall:

- a. Be calculated using the equation contained in 40 CFR Part 60.74(b)(1);
- b. Be calculated using the CEMS and source test data pertaining to the same operating time frame;
- c. Be calculated by dividing the source test data averages (in lb/ton) by the corresponding CEMS data averages (in ppmv) to obtain a conversion factor expressed in the units of lb/ton per ppmv; and
- d. Be reestablished during any source test or RATA performed. [District Rule 2.42, §602 and §603, 40 CFR Part 60.73(b), and 60.74(b)(1)/C-11-61]

Rule Requirement #13 - NO_x Emission Conversion Factor

Section 603 requires that the factor used to convert the NO_x CEMS data (in ppmv) into the applicable NO_x compliance limit units (in lb/ton) be calculated *“using the data from the most recent source test submitted to, and approved by, the District. The emission conversion factor shall:*

603.1 Be calculated using the CEMS and source test data pertaining to the same operating time frame.

603.2 Be calculated by dividing the source test data averages (in lb/ton) by the corresponding CEMS data averages (in ppmv) to obtain a conversion factor expressed in the units of lb/ton per ppmv.

603.3 Be reestablished during any source test event performed pursuant to the requirements of Section 304 of this Rule.”

Streamlining Demonstration: As discussed above for Rule Requirement #12, the related requirements of Sections 602 and 603, Part 60.73(b), and Part 60.74(b)(1) have been streamlined into a single permit condition. For reference, this streamlined condition revises the language of Condition 16 of PTO P-37-82(a2) which previously required the development and use of CO and NO_x conversion factors.

Related Requirements from other Rules:

Section 602 of Rule 2.42 - see Requirement #12 (above)

Part 60.73(b) - see Requirement #12 (above)

Part 60.74(b)(1) -see Requirement #12 (above)

Streamlined Permit Condition

See Rule Requirement #12 (above)

Rule Requirement #14 - Opacity Determination

Section 604 requires that the opacity of any visual emissions be determined:

“Visible emission evaluations shall be determined in accordance with U.S. EPA Method 9, or alternative methods approved by the U.S. EPA and the District.”

Streamlining Demonstration: As previously discussed for Rule Requirement #11 (above), the provisions of Rule 3.4, Section 409, the streamlined condition includes all of the test methods (and approved alternatives) needed to determine the CO and NO_x emission concentrations (EPA Methods 10 and 7, respectively), volumetric flow rate of exhaust (EPA Method 2), and visual emissions (EPA Method 9). For reference, this streamlining condition revises the language of Condition 13 of PTO P-37-82(a2) which previously established the use of U.S. EPA Method 9 during the weekly visible emission evaluations. The revised condition does not relax or significantly change the monitoring requirements of the permit.

Streamlined Permit Condition

See Rule Requirement #11 (above)

RULE 3.1 General Permit Requirements

Rule Description

This rule provides an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of operating permits.

Compliance Status

The source is currently in compliance with the rule. The version of the rule used in this evaluation is the rule adopted on February 23, 1994, and is part of the California SIP. For reference, Page 67068 of the Federal Register, Vol. 69, No. 220 documents that the SIP approved version of Rule 3.1 was “deleted without replacement Rule 3.1, paragraphs 403 and 406.” No part of the proposed Title V permit has references to either Section 403 (dealing with Denial of Applications) or Section 406 (dealing with Appeals).

Requirement #1 (Facility Wide Permit Condition) - Authority to Construct

No person shall build, erect, alter, or replace any facility, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants, without first obtaining an authorization to construct from the APCO as specified in Section 401 of District Rule 3.1. [District Rule 3.1, §301.1]

Requirements #2 & 3 (Facility Wide Permit Conditions) - Permit to Operate

No person shall operate any facility, article, machine, equipment, or other contrivance, for which an authorization to construct is required by District Rules and Regulations without first obtaining a written permit from the APCO. [District Rule 3.1, §302.1]

No person shall operate any facility, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants, without obtaining a permit from the APCO or the Hearing Board. [District Rule 3.1, §302.2]

Rule Requirement #4 (Facility Wide Permit Condition) - Transfer of Permits to Operate

The Permits to Operate shall not be transferable, by operation of law or otherwise, from one location to another or from one piece of equipment to another. It shall be the transferee's responsibility to inform the District on assumption of ownership or operating control of any item under a Permit to Operate from the District and for which a Permit to Operate will be required. For any such transfer as hereinabove described, said transferee shall submit an application for authorization in accordance with applicable District Rules. [District Rule 3.1, §304]

Rule Requirement #5 (Facility Wide Permit Condition) - Renewal of Permits to Operate

All Permits to Operate shall be renewable annually on the individual permit's anniversary date, commencing one year after the date of issuance. The Permit Holder shall pay a fee for the annual permit renewal. If the annual renewal fee is not paid by the specified due date, the District shall assess a penalty of not more than 50% of the fee due. Non-payment of renewal fees is grounds for permit cancellation. [District Rule 3.1, §305 and District Rule 4.1, §303 and §401]

Rule Requirement #6 (Facility Wide Permit Condition) - Conditional Approval of Permits to Operate

Commencing work or operation under any Permits to Operate shall be deemed acceptance of all of the conditions so specified. [District Rule 3.1, §402]

Rule Requirement #7 (Facility Wide Permit Condition) - Permit to Operate Information

The Permit Holder shall submit an annual throughput/production report at the end of each calendar year for each Permit to Operate. These reports are due no later than March 31 for the previous year. This report must include actual operating hours and actual amounts of materials processed (for materials that have process limits listed on the Permit to Operate). Each type of material and each type of process must be listed separately. [District Rule 3.1, §405.1]

Requirement #8 (Facility Wide Permit Condition) - Breakdown, Malfunction, or Upset Notification

The owner or operator of any facility, article, machine, equipment, or other contrivance for which a permit to operate is in effect shall notify the District office whenever a breakdown, malfunction, or operational upset condition exists which would tend to increase emissions of air pollutants or whenever any operating condition contrary to any provision of the permit to operate exists. Such notice shall be given to the District no later than four hours after occurrence during regular workday hours or no later than two hours of the District workday following an occurrence not during regular District workday hours. The notice shall provide the District information as to causes and corrective action being taken, with a schedule for return to required operating conditions. [District Rule 3.1, §405.3]

Requirement #9 (Facility Wide Permit Condition) - Excess Emission Notification

The Permit Holder shall report all excess emissions to the District within ninety-six (96) hours of the occurrence of excess emissions. [District Rule 3.1, §405.4/C-11-61]

Rule Requirement #10 (Facility Wide Permit Condition) - Posting of Permits to Operate

The Permit Holder shall firmly affix all Permits to Operate, an approved facsimile, or other approved identification bearing the permit number upon the facility, article, machine, equipment, or other contrivance in such a manner as to be clearly visible and accessible. In the event that the facility, article, machine, equipment, or other contrivance is so constructed or operated that the Permit to Operate cannot be so placed, the Permit to Operate shall be mounted so as to be clearly visible in an accessible place within twenty (25) feet of the facility, article, machine, equipment, or other contrivance, or maintained readily available at all times on the operating premises. [District Rule 3.1, §408]

RULE 3.4 New Source Review

Rule Description

This rule applies to all new stationary sources and emissions units and all modifications to existing stationary sources and emissions units which are subject to Rule 3.1 (General Permit Requirements) and which, after construction or modification, emit or may emit any affected pollutants. This rule shall not apply to prescribed burning of forest, agriculture or range land, road construction or any other non-point source common to timber harvesting or agricultural practices. The purpose of this rule is to provide for the review of new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

Compliance Status

The source has satisfied the provisions of District Rule 3.4 (New Source Review). The New Source Review requirements were imposed on the most recent Authorities to Construct issued to the source.

Rule Requirement #1 (Facility Wide Permit Condition) - Modification of Permits to Operate

Modifications to this permit, as defined by District Rules and Regulations, requires prior District approval. A modification is defined as any physical change, change in method of operation, addition to or any change in hours of operation, or change in production rate, which: would necessitate a change in permit conditions; or is not specifically limited by a permit condition; or results in an increase in emissions not subject to an emissions limitation. [District Rule 3.4, §223]

Emission Unit Specific Permit Conditions

Emission Limits:

The CO emissions from the nitric acid production plant operating under P-37-82(a3) shall not exceed 1,000.0 lb/day, 90,000 lb/1st calendar quarter, 91,000 lb/2nd calendar quarter, 92,000 lb/3rd calendar quarter, 92,000 lb/4th calendar quarter, and 168.00 tons/year. [District Rule 3.4, §409/C-11-61]

The NO_x emissions from the nitric acid production plant operating under P-37-82(a3) shall not exceed 250.0 lb/day, 22,500 lb/1st calendar quarter, 22,750 lb/2nd calendar quarter, 23,000 lb/3rd calendar quarter, 23,000 lb/4th calendar quarter, and 42.00 tons/year. [District Rule 3.4, §409/C-11-61]

The Permit Holder shall not discharge into the atmosphere from any single source of emissions whatsoever, any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- c. As dark or darker in shade than No. 1 on the Ringelmann Chart; or
- d. Greater than 20% opacity. [District Rule 2.3 and District Rule 3.4]

Work Practice and Operational Requirements

Process Limits:

The mass emissions from the nitric acid production facility (including periods of start-up and shutdown) shall not exceed the daily, quarterly, or annual values listed in the

Permitted Emission Limits table of PTO P-37-82(a3). [District Rule 3.4, §409.2(b)/C-11-61] ¹

General Requirements:

The Permit Holder shall comply with the procedures and schedules contained in the most recent Operation and Maintenance (O&M) Plan submitted to, and approved by, the District. [District Rule 2.42, §402 and District Rule 3.4, §409/C-11-61] ²

Monitoring and Testing Requirements

The Permit Holder shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for measuring carbon monoxide (CO) emission concentrations. [District Rule 3.4, §409/C-11-61]

The CO CEMS shall comply with the requirements specified in 40 CFR Part 60 - Appendix B, Specification 4 or other alternative methods approved by the U.S. EPA and the District. [District Rule 3.4, §409/C-11-61] ³

The zero and span CO calibrations shall be adjusted whenever the daily zero drift or the daily span drift deviates from the reference value of the calibration gas by more than two-times 5% of the span value. [District Rule 3.4, §409 and 40 CFR Part 60 - Appendix B, Specification 4, Section 13.1/C-11-61] ⁴

The NO_x CEMS shall be calibrated and checked using a nitrogen oxide (NO) span gas with a value between 450 and 500 ppmv, or other alternative methods approved by

¹ For reference, the new Rule 3.4 condition does not relax or significantly change the permit conditions since the source was already quantifying all daily, quarterly, and yearly emissions for both CO and NO_x pollutants.

² The requirement of Rule 2.42, Section 402 has been streamlined with the Rule 3.4 condition (see Rule Requirement #8 of Rule 2.42).

³ For reference, the new Rule 3.4 condition does not relax or significantly change the permit conditions, since the production plant was already complying with Performance Specification 4A in order to satisfy the RATA requirements of Condition 34 of PTO P-37-82(a2).

⁴ The requirements of 40 CFR Part 60 - Appendix B and Rule 3.4, Section 409 have been streamlined into a single condition (see Rule Requirement #6 of Appendix B). For reference, the new streamlined condition does not relax or significantly change the permit conditions, since Condition 23 of P-37-82(a2) requires that the CO CEMS to comply with the NO_x specific drift tolerances listed in Performance Specification 2.

the U.S. EPA and the District. [District Rule 2.42, §303.2, District Rule 3.4, §409, and 40 CFR Part 60.73(a)/C-11-61] ⁵

The Permit Holder shall install and maintain such facilities as are necessary for sampling and testing purposes. The number, size, and location of sampling ports shall be in accordance with Air Resources Board Test Method 1 or EPA Test Methods. The location and access to the sampling platform shall be in accordance with the General Industry Safety Orders of the State of California. [District Rule 3.4, §409/C-11-61] ⁶

The Permit Holder shall perform a weekly visible emissions evaluation of the nitric acid production plant using U.S. EPA Method 9 (or an alternative test method approved by the U.S. EPA and the District). If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within twenty-four (24) hours the District shall be notified immediately. [District Rule 2.42, §304 and §604, and District Rule 3.4/C-11-61] ⁷

The Permit Holder shall perform a source test at least once every twelve (12) consecutive calendar months to demonstrate compliance with the following items:

- a. CO concentration (ppmvd @ 15% O₂);
- b. CO mass emissions (lb/day);
- c. NO_x concentration (ppmvd @ 15% O₂); and
- d. NO_x mass emissions (lb/day and lb/ton nitric acid produced). [District Rule 2.42, §304 and District Rule 3.4/C-11-61] ⁸

The Permit Holder shall perform a Relative Accuracy Test Audit (RATA) of the CO and NO_x CEMS at least once every twelve (12) consecutive calendar months. The RATA shall be performed in accordance with 40 CFR Part 60 - Appendix F (Quality Assurance Procedures), or approved equivalent. [District Rule 3.4 and 40 CFR Part 60 - Appendix F, Procedure 1, Section 5.1.1/C-11-61] ⁹

⁵ The applicable requirements of Rule 2.42 and 40 CFR Part 60 - Subpart G have been streamlined with a Rule 3.4, §409 condition (see Rule Requirement #6 for Rule 2.42).

⁶ The new Rule 3.4 condition does not relax or significantly change the requirements of the permit, since it now explicitly requires that the source maintain the proper sampling sports necessary for source testing.

⁷ The annual visible emission evaluation requirement of Rule 2.42 has been subsumed by the Rule 3.4 condition requiring weekly evaluations (see Rule Requirement #7 of Rule 2.42).

⁸ The source testing requirements of Rule 2.42 have been streamlined with Rule 3.4 requirements (see Rule Requirement #7 for Rule 2.42).

⁹ The NO_x CEMS RATA requirement of 40 CFR Part 60.13(a) has been streamlined by Rule 3.4 to include the CO CEMS requirements (see Rule Requirement #5 of 40 CFR Part 60 - Subpart A).

The Permit Holder shall conduct the following test methods (or alternative test methods approved by the U.S. EPA and the District) to measure the required pollutant emissions during any emission testing event. If the source wishes to use an alternative methodology a complete and detailed description of the method must be submitted to the District for written approval no less than thirty (30) days prior to the performance evaluation.

- a. CO - U.S. EPA Method 10;
- b. NO_x - U.S. EPA Method 7; and
- c. Volumetric Flow rate - U.S. EPA Method 2. [District Rule 2.42, §601, District Rule 3.4, §409, and 40 CFR Part 60.74(b)(2) and (b)(3)/C-11-61]¹⁰

The District must be notified prior to any emissions testing event (source test or RATA), and a protocol must be submitted for approval thirty (30) days prior to testing. The results of an emissions testing event shall be submitted to the District within sixty (60) days of the test date. The protocol and report shall be mailed to the attention of the Supervising Air Quality Engineer. [District Rule 3.4, §409/C-11-61]¹¹

The Permit Holder shall establish a conversion factor for the purpose of converting CO monitoring data (in ppmv) into the applicable CO compliance limit units (lb/day). [District Rule 3.4, §409/C-11-61]¹²

Recordkeeping Requirements

The Permit Holder shall submit a monthly CO and NO_x emission report to the District within fifteen (15) days of the end of the month. The report shall provide average daily CO and NO_x concentrations (ppm), daily CO and NO_x emissions in units of the District standard (lbs/day), and aggregate CO and NO_x emissions in tons. [District Rule 3.4, §409/C-11-61]¹³

RULE 3.8 Federal Operating Permits

Rule Description

This Rule implements the requirements of Title V of the Federal Clean Air Act as amended in 1990 (CAA) for permits to operate. Title V provides for the establishment

¹⁰ The source testing method requirements of Rule 2.42 and 40 CFR Part - Subpart G have been streamlined with a Rule 3.4 condition (see individual rule requirements).

¹¹ The new Rule 3.4 condition does not relax or significantly change the requirements of the permit, since it now explicitly establishes the proper emission testing notification requirements.

¹² The Rule 3.4 condition revises Condition 16 of PTO P-37-82(a2) and does not relax or significantly change the monitoring requirements of the permit.

¹³ The Rule 3.4 condition was previously listed as Condition 28 of PTO P-37-82(a2).

of operating permit programs for sources which emit regulated air pollutants, including attainment and non-attainment pollutants.

Compliance Status

The source is in compliance with the requirements of this rule and was issued a renewed Title V operating permit on July 16, 2010. As request by the source, ATC C-10-99 has been processed under the Enhanced New Source Review provisions of District Rule 3.4, Section 404 (see application). The proposed permit modification is considered a minor permit modification, since the modifications do not meet the definitions of "significant permit modification" or "administrative permit amendment." Section 228 of the rule defines a "significant permit modification" as any modification to a federally enforceable condition that: is defined in Title I of the Clean Air Act; significantly changes any monitoring requirement; relaxes any reporting or recordkeeping requirement; includes a permit term or condition which allows the source to avoid applicable federal requirement; involves a case-by-case determination of any emission standard; or involves an ambient impact analysis. Section 203 of the rule defines an "administrative permit amendment" as any amendment that: corrects a typographical error; identifies a minor administrative change; requires more frequent monitoring or reporting by the permit holder; transfers ownership of an affected source; or incorporates into the Title V permit conditions of an approved "preconstruction permit." Per Section 402.4 of the rule, minor permit modifications can include changes in the permitted emissions, and/or the addition of federally applicable requirements.

Rule Requirement #1 (Facility Wide Permit Condition) - Right of Entry

The permit shall require that the source allow the entry of the District, CARB, or U.S. EPA officials for the purpose of inspection and sampling, including:

- a. Inspection of the stationary source, including equipment, work practices, operations, and emissions-related activity;
- b. Inspection and duplication of records required by the permit to operate; and
- c. Source sampling or other monitoring activities. [District Rule 3.8, §302.10]

Rule Requirements #2-7 (Facility Wide Permit Conditions) - Compliance with Permit Conditions

The Permit Holder shall comply with all Title V permit conditions. [District Rule 3.8, §302.11(a)]

The permit does not convey property rights or exclusive privilege of any sort. [District Rule 3.8, §302.11(b)]

Non-compliance with any permit condition is grounds for permit termination, revocation and reissuance, modification, enforcement action, or denial of permit renewal. [District Rule 3.8, §302.11(c)]

The Permit Holder shall not use the “need to halt or reduce a permitted activity in order to maintain compliance” as a defense for non-compliance with any permit condition. [District Rule 3.8, §302.11(d)]

A pending permit action or notification of anticipated non-compliance does not stay any permit condition. [District Rule 3.8, §302.11(e)]

Within a reasonable time period, the Permit Holder shall furnish any information requested by the APCO, in writing, for the purpose of determining:

- a. Compliance with the permit; or
- b. Whether or not cause exists for a permit or enforcement action. [District Rule 3.8, §302.11(f)]

Rule Requirements #8-9 (Facility Wide Permit Conditions) - Emergency Provisions

Within two (2) weeks of an emergency event, the owner or operator shall submit to the District a properly signed contemporaneous log or other relevant evidence demonstrating that:

- a. An emergency occurred;
- b. The Permit Holder can identify the cause(s) of the emergency;
- c. The facility was being properly operated at the time of the emergency;
- d. All steps were taken to minimize the emissions resulting from the emergency; and
- e. Within two (2) working days of the emergency event, the Permit Holder provided the District with a description of the emergency and any mitigating or corrective actions taken; and

In any enforcement proceeding, the Permit Holder has the burden of proof for establishing that an emergency occurred. [District Rule 3.8, §302.12]

Rule Requirement #10 (Facility Wide Permit Condition) - Severability

If any provision, clause, sentence, paragraph, section or part of these conditions for any reason is judged to be unconstitutional or invalid, such judgement shall not affect or invalidate the remainder of these conditions. [District Rule 3.8, §302.13]

Rule Requirement #11 - Compliance Certification (Annual)

Section 302.14(a) of Rule 3.8 requires:

“The responsible official shall submit a compliance certification to the U.S. EPA and the APCO every twelve (12) months unless required more frequently by an applicable requirement. All compliance reports and other documents required

to be submitted to the District by the responsible official shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete;"

Streamlining Demonstration: In order to assure the timely submittal of the yearly compliance report required by this section, the District has amended the condition to include explicit reporting and submittal dates (under the provisions of Rule 3.4, Section 409). The revised condition requires that the yearly reporting period begin on the Title V permit's initial issuance date, and that the report be submitted within a month of the end of the reporting period.

Streamlined Permit Condition

The Responsible Official shall submit a compliance certification to the U.S. EPA and the APCO every twelve (12) months unless required more frequently by an applicable requirement. The twelve (12) month period will begin on the date that the Title V permit was originally issued (July 16), and will be due within thirty (30) days after the end of the reporting period, unless otherwise approved in writing by the District. All compliance reports and other documents required to be submitted to the District by the responsible official shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. [District Rule 3.4, §409 and District Rule 3.8, §302.14(a)]

Rule Requirements #12-14 (Facility Wide Permit Conditions) - Compliance Certification (General)

The compliance certification shall identify the basis for each permit term or condition (e.g., specify the emissions limitation, standard, or work practice) and a means of monitoring compliance with the term or condition consistent with Sections 302.5, 302.6, and 302.7 of Rule 3.8. [District Rule 3.8, §302.14(b)]

The compliance certification shall include a statement of the compliance status, whether compliance was continuous or intermittent, and method(s) used to determine compliance for the current time period and over the entire reporting period. [District Rule 3.8, §302.14(c)]

The compliance certification shall include any additional inspection, monitoring, or entry requirement that may be promulgated pursuant to Sections 114(a) and 504(b) of the Federal Clean Air Act. [District Rule 3.8, §302.14(d)]

Rule Requirement #15 (Facility Wide Permit Condition) - Permit Life

The Title V permit shall expire five (5) years from the date of issuance. Title V permit expiration terminates the stationary source's right to operate unless a timely and

complete Title V permit application for renewal has been submitted. [District Rule 3.8, §302.15]

Rule Requirement #16 (Facility Wide Permit Condition) - Payment of Fees

An owner or operator shall pay the appropriate Title V permit fees on schedule. If fees are not paid on schedule, the permit is forfeited. Operation without a permit subjects the source to potential enforcement action by the District and the U.S. EPA pursuant to Section 502(a) of the CAA. [District Rule 3.8, §302.16]

Rule Requirement #17 (Facility Wide Permit Condition) - Permit Revision Exemption

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit. [District Rule 3.8, §302.22]

Rule Requirements #18-20 (Facility Wide Permit Conditions) - Application Requirements

An owner or operator shall submit a standard District application for renewal of the Title V permit, no earlier than eighteen (18) months and no later than six (6) months before the expiration date of the current permit to operate. [District Rule 3.8, §402.2]

An owner or operator shall submit a standard District application for each emissions unit affected by a proposed permit revision that qualifies as a significant Title V permit modification. The application shall be submitted after obtaining any required preconstruction permits. Upon request by the APCO, the owner or operator shall submit copies of the latest preconstruction permit for each affected emissions unit. The emissions unit(s) shall not commence operation until the APCO approves the permit revision. [District Rule 3.8, §402.3]

An owner or operator shall submit a standard District application for each emissions unit affected by the proposed permit revision that qualifies as a minor permit modification. The application shall be submitted after obtaining any required preconstruction permits. The emissions unit(s) shall not commence operation until the APCO approves the permit revision. In the application, the owner or operator shall include the following:

- a. A description of the proposed permit revision, any change in emissions, and additional applicable federal requirements that will apply;
- b. Proposed permit terms and conditions; and
- c. A certification by a responsible official that the permit revision meets criteria for use of minor permit modification procedures and a request that such procedures be used. [District Rule 3.8, §402.4]

Rule Requirement #21 (Facility Wide Permit Condition) - Permit Reopening for Cause

Circumstances that are cause for reopening and revision of a permit include, but are not limited to, the following:

- a. The need to correct a material mistake or inaccurate statement;
- b. The need to revise or revoke a permit to operate to assure compliance with applicable federal requirements;
- c. The need to incorporate any new, revised, or additional applicable federal requirements, if the remaining authorized life of the permit is three (3) years or greater, no later than eighteen (18) months after the promulgation of such requirement (where less than three (3) years remain in the authorized life of the permit, the APCO shall incorporate the requirements into the permit to operate upon renewal); or
- d. Additional requirements promulgated pursuant to Title IV as they become applicable to any acid rain unit governed by the permit. [District Rule 3.8, §413.1]

Rule Requirement #22 (Facility Wide Permit Condition) - Recordkeeping

The Permit Holder shall record maintenance of all monitoring and support information required by any applicable federal requirement, including:

- a. Date, place, and time of sampling;
- b. Operating conditions at the time of sampling;
- c. Date, place, and method of analysis; and
- d. Results of the analysis. [District Rule 3.8, §302.6(a)]

Rule Requirement #23 (Facility Wide Permit Condition) - Recordkeeping (Retention)

The Permit Holder shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of sample collection, measurement, report, or application. [District Rule 3.8, §302.6(b)]

Rule Requirement #24-26 (Facility Wide Permit Conditions) - Reporting Requirements (General)

Any deviation from permit requirements, including that attributable to upset conditions (as defined in the permit), shall be promptly reported to the APCO. For the purpose of this condition prompt means as soon as reasonably possible, but no later than 10 days after detection.[District Rule 3.8, §302.7(a)]

All reports of deviation from permit requirements shall include the probable cause of the deviation and any preventive or corrective action taken. [District Rule 3.8, §302.7(c)]

Each monitoring report shall be accompanied by a written statement from the responsible official that certifies the truth, accuracy, and completeness of the report. [District Rule 3.8, §302.7(e)]

Rule Requirement #27 - Reporting Requirements (Semi-Annual)

Section 302.7(b) of Rule 3.8 requires:

“A monitoring report shall be submitted at least every six (6) months and shall identify any deviation from permit requirements, including that previously reported to the APCO pursuant to Section 302.7(a) of Rule 3.8.”

Streamlining Demonstration: In order to assure the timely submittal of the semi-annual compliance report required by this section, the District has amended the condition to include explicit reporting and submittal dates (under the provisions of Rule 3.4, Section 409). The revised condition requires that the semi-annual reporting period begin on the Title V permit’s initial issuance date, and that the report be submitted within a month of the end of the reporting period.

Streamlining Permit Condition

A semi-annual monitoring report shall be submitted at least every six (6) consecutive months and shall identify any deviation from permit requirements, including that previously reported to the APCO pursuant to Section 302.7(a) of Rule 3.8. The six (6) month period will begin on the date that the Title V permit was originally issued (July 16), and will be due within thirty (30) days after the end of the reporting period, unless otherwise approved in writing by the District. [District Rule 3.1, §402 and District 3.8, §302.7(b)]

40 CFR PART 60 - SUBPART A **General Provisions**

Rule Description

This subpart provides general monitoring, recordkeeping, performance, and compliance requirements for sources that are subject to New Source Performance Standards (NSPS).

Compliance Status

The rule applies to the nitric acid production plant operating under P-37-82(a3). The source is currently in compliance with this subpart.

Rule Requirement #1 (Permit Condition) - Quarterly Report

The Permit Holder shall submit a quarterly excess emissions and monitoring system performance report and/or a summary report form to the District and U.S. EPA, Region

IX within thirty (30) days of the end of each quarter. [40 CFR Part 60.7(c)/C-11-61] *(previously Condition 29 of PTO P-37-82(a2))*

Rule Requirement #2 (Permit Condition) - CEMS Records

The Permit Holder shall maintain records of the occurrence and duration of any:

- a. Startup, shutdown, or malfunction in the operation of an affected facility;
- b. Any malfunction of the air pollution control equipment; or
- c. Any periods during which a continuous emission monitoring system (CEMS) or monitoring device is inoperative. [40 CFR Part 60.7(b)/C-11-61] *(previously Condition 32 of PTO P-37-82(a2))*

Rule Requirement #3 (Permit Condition) - Excess Emission Report Criteria

The Permit Holder shall submit a summary report and excess emissions and monitoring report if the total duration of excess emissions for the reporting period is 1% or greater of the total operating time for the reporting period, or if the total CEMS downtime for the reporting period is 5% or greater of the total operating time for the reporting period. [40 CFR Part 60.7(d)(2)/C-11-61] *(previously Condition 30 of PTO P-37-82(a2))*

Rule Requirement #4 - Record Retention and Availability

Part 60.7(f) establishes that the type (measurements, CEMS data and evaluations, maintenance, etc.) and retention length (two (2) years from last entry) of records that are to be kept by the facility (see Rule Requirement #9 of Rule 2.42 for section language).

Subsuming Demonstration: As previously discussed for Requirement #9 of Rule 2.42, the requirements of Part 60.7(f) have been subsumed by the requirements of Rule 2.42, Section 501. As previously discussed, this subsuming condition revises the language of Condition 33 of PTO P-37-82(a2) which previously established a two (2) year record retention limit. The condition does not relax or significantly change the monitoring requirements of the permit, since Rule 3.8, Section 302.6(b) already requires a five (5) year record retention schedule.

Related Requirements from other Rules:

Section 501 of Rule 2.42 - see Rule 2.42, Requirement #9

Section 302.6(b) of Rule 3.8 - see Rule 3.8, Requirement #23

Subsuming Permit Condition

The Permit Holder shall maintain all records required by this permit on-site for a period of five (5) years from the date of entry and made available to the APCO upon request. [District Rule 2.42, §501, Rule 3.8, §302.6(b), and 40 CFR Part 60.7(f)/C-11-61]

Rule Requirement #5 - CEMS RATA Requirement

Section 60.13(a) requires that all continuous monitoring systems (CMS) required under an applicable subpart:

"... be subject to the provisions of this section upon promulgation of performance specifications for [CMS] under appendix B to this part and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to this part, ..."

Streamlining Demonstration (NO_x and CO CEMS): Both the NO_x and CO CEMS are currently "used to demonstrate compliance with emission limits on a continuous basis," however, only the NO_x CEMS is required by Subpart G. Appendix F requires that a Relative Accuracy Test Audit (RATA) be performed at least once every four(4) calendar quarters. The District has streamlined the RATA requirement with a Rule 3.4 condition requiring the RATA of the CO CEMS. Also, the RATA frequency of Appendix F has been subsumed by the more stringent Rule 3.4 condition that requires a RATA be performed at least once every twelve (12) continuous calendar months. For reference, this streamlined condition revises the RATA language of Condition 34 of PTO P-37-82(a2), and does not relax or significantly change the monitoring requirements of the permit.

Related Requirements from other Rules:

Procedure 1, Section 5.1.1 of 40 CFR Part 60 - Appendix F - see Appendix F, Requirement #1

Streamlined Permit Condition

The Permit Holder shall perform a Relative Accuracy Test Audit (RATA) of the CO and NO_x continuous emission monitoring systems (CEMS) at least once every twelve (12) consecutive calendar months. The RATA shall be performed in accordance with 40 CFR Part 60 - Appendix F (Quality Assurance Procedures), or approved equivalent. [District Rule 3.4, §409 and 40 CFR Part 60 - Appendix, Procedure 1, Section 5.1.1/C-11-61]

Rule Requirement #6 (Permit Condition) - Daily Calibration Checks

The Permit Holder shall check the zero and span calibration drifts at least once daily (24-hour) in accordance with a written procedure. [40 CFR Part 60.13(d)(1)/C-11-61] (*previously Condition 20 of PTO P-37-82(a2)*)

Rule Requirement #7 - Calibration Drift Adjustment Criteria

Part 60.13(d)(1) requires that an affected CEMS system be adjusted if it's daily zero or span drift values are found to be outside of the allowed tolerance of 40 CFR Part 60 - Appendix B, Specification 2.

Streamlining Demonstration: For clarity, the related requirements of Part 60.13(d)(1) and Appendix B, Specification 2 have been streamlined into a single condition. For reference, this streamlined condition revises the language of Condition 23 of PTO P-37-82(a2) to explicitly apply to only the NO_x CEMS calibrations. As part of this permit modification, the District has added a CO CEMS specific requirement (see Rule Requirement #6 of 40 CFR Part 60 - Appendix B).

Related Requirements from other Rules:

Section 13.1 of Appendix B, Specification 2 requires:

"The CEMS calibration must not drift or deviate from the reference value of the gas cylinder, gas cell, or optical filter by more than 2.5 percent of the span value."

Streamlined Permit Condition

The zero and span NO_x calibrations shall be adjusted whenever the daily zero drift or the daily span drift deviates from the reference value of the calibration gas by more than two-times 2.5% of the span value. [40 CFR Part 60.13(d)(1) and 40 CFR Part 60 - Appendix B, Specifications 2, Section 13.1/C-11-61]

Rule Requirements #8-11 (Permit Conditions) - CEMS Operating Parameters

The CEMS shall be in continuous operation except for system breakdowns, repairs, calibration checks, and zero and span adjustments. [40 CFR Part 60.13(e)/C-11-61] *(previously Condition 18 of PTO P-37-82(a2))*

The CEMS shall complete a minimum of one (1) cycle of operation (sampling, analyzing, and data recording) for each successive fifteen (15) minute period. [40 CFR Part 60.13(e)(2)/C-11-61] *(previously Condition 24 of PTO P-37-82(a2))*

One (1) hour averages shall be computed from four (4) or more data points equally spaced over each one (1) hour period. [40 CFR Part 60.13(h)/C-11-61] *(previously Condition 25 of PTO P-37-82(a2))*

The data accumulated during periods of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, shall not be included in the data average. [40 CFR Part 60.13(h)/C-11-61] *(previously Condition 26 of PTO P-37-82(a2))*

40 CFR PART 60 - SUBPART G Standards of Performance for Nitric Acid Plants

This subpart contains emission guidelines and monitoring requirements for control of NO_x from nitric acid production plants.

Compliance Status

This subpart is applicable to any facility that commences construction or modification after August 17, 1971, and therefore applies to the nitric acid production plant operating under P-37-82(a3). The source is currently in compliance with this subpart.

Rule Requirement #1 (Permit Condition) - Compliance with the Subpart

The nitric acid production facility shall be operated in accordance with the requirements of 40 CFR Part 60 - Subpart G (Standards of Performance for Nitric Acid Plants). [40 CFR Part 60.70 through 60.74/C-11-61] (*previously Condition 11 of PTO P-37-82(a2)*)

Rule Requirement #2 - NO_x Emission Limit

Part 60.72(a)(1) establishes the allowable NO_x emission limit for affected facilities (see Rule Requirement #2 of Rule 2.42 for section language).

Streamlining Demonstration: As previously discussed in Rule Requirement #2 of Rule 2.42, the requirements of Sections 110 and 301 of Rule 2.42, have been streamlined with the requirements of Part 60.72(a)(1). As previously discussed, this streamlined condition revises the language of Condition 9 of PTO P-37-82(a2).

Streamlined Permit Condition

Except for qualifying periods of equipment startup or shutdown, the nitrogen oxides (NO_x) emissions (expressed as NO₂) shall not exceed 3.0 pound per ton (lb/ton) nitric acid (HNO₃) produced (expressed as 100% nitric acid by mass) averaged over a three (3) hour rolling period. [District Rule 2.42, §110 and §301 and 40 CFR Part 60.72(a)(1)/C-11-61]

Rule Requirement #3 - Opacity Limit

Part 60.72(a)(2) establishes a 10% opacity limit for an affected facility (see Rule Requirement #3 of Rule 2.42 for section language).

Streamlining Demonstration: As previously discussed in Rule Requirement #3 of Rule 2.42, the requirements of Sections 110 and 302 of Rule 2.42, have been streamlined with the requirements of Part 60.72(a)(2). As previously discussed, this condition revises the language of Condition 10 of PTO P-37-82(a2).

Streamlined Permit Condition

Except for qualifying periods of equipment startup or shutdown, no activity associated with the nitric acid manufacturing process shall discharge into the atmosphere any air

contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- a. Half as dark or darker in shade than No. 1 on the Ringelmann Chart; or
- b. 10% opacity. [District Rule 2.3, District Rule 2.42, §110 and §302, and 40 CFR Part 60.72(a)(2)/C-11-61]

Rule Requirement #4 - NO_x CEMS

Part 60.70(a) establishes that an affected facility install and operate an approved CEMS for NO_x (see Rule Requirement #4 of Rule 2.42 for section language).

Streamlining Demonstration: As previously discussed in Rule Requirement #4 of Rule 2.42, the requirements of Section 303 of Rule 2.42, have been streamlined with the requirements of Rule 3.4, §409 and Part 60.73(a). As previously discussed, this streamlined condition is equivalent to Condition 14 of PTO P-37-82(a2).

Streamlined Permit Condition

The Permit Holder shall install, calibrate, maintain, and operate a CEMS for measuring NO_x emission concentrations. [District Rule 2.42, §303 and 40 CFR Part 60.73(a)/C-11-61]

Rule Requirement #5 - CEMS Performance Specifications

Part 60.73(a) outlines the performance specifications that the NO_x CEMS must comply with (see Rule Requirement #5 of Rule 2.42 for section language).

Streamlining Demonstration: As previously discussed in Rule Requirement #5 of Rule 2.42, the requirements of Section 303.1 of Rule 2.42, have been streamlined with the requirements of Part 60.70(a). As previously discussed, this streamlined condition is a new federally enforceable requirement not contained in PTO P-37-82(a2).

Streamlined Permit Condition

The NO_x CEMS shall comply with the requirements specified in 40 Code of Federal Regulations (CFR) Part 60 - Appendix B, Specification 2 or other alternative methods approved by the U.S. EPA and the District. [District Rule 2.42, §303.1 and 40 CFR Part 60.73(a)/C-11-61]

Rule Requirement #6 - NO_x CEMS Calibration

Part 60.73(a) establishes the type and value of calibration span gas to be used by the NO_x CEMS (see Rule Requirement #6 of Rule 2.42 for section language).

Streamlining Demonstration: As previously discussed in Rule Requirement #6 of Rule 2.42, the requirements of Section 303.2 of Rule 2.42, have been streamlined with the requirements of Rule 3.4, §409 and Part 60.70(a). This streamlined condition was previously listed as Conditions 17 and 21 of PTO P-37-82(a2).

Streamlined Permit Condition

The NO_x CEMS shall be calibrated and checked using a nitrogen oxide (NO) span gas with a value between 450 and 500 ppmv, or other alternative methods approved by the U.S. EPA and the District. [District Rule 2.42, §303.2, District Rule 3.4, §409, and 40 CFR Part 60.73(a)/C-11-61]

Rule Requirement #7 - NO_x Emission Conversion Factor

Part 60.73(b) outlines the procedure required in developing a conversion factor that converts CEMS data to the applicable emission limit (see Rule Requirement #12 of Rule 2.42 for section language).

Streamlining Demonstration: As discussed in Rule Requirement #12 of Rule 2.42, the related requirements of Sections 602 and 603, Part 60.73(b), and Part 60.74(b)(1) have been streamlined into a single permit condition. For reference, this streamlined condition revises the language of Condition 16 of PTO P-37-82(a2) which previously required the development and use of CO and NO_x conversion factors.

Related Requirements from other Rules:

Section 602 of Rule 2.42 - see Rule 2.42, Requirement #12

Section 603 of Rule 2.42 - see Rule 2.42, Requirement #12

Part 60.74(b)(1) - see Rule 2.42, Requirement #12

Streamlined Permit Condition

The Permit Holder shall determine a NO_x conversion factor used to convert the NO_x CEMS data (in ppmv) into the applicable NO_x compliance limit units (in lb/ton) using the data from the most recent source test submitted to, and approved by, the District. The NO_x emission conversion factor shall:

- a. Be calculated using the equation contained in 40 CFR Part 60.74(b)(1);
- b. Be calculated using the CEMS and source test data pertaining to the same operating time frame;
- c. Be calculated by dividing the source test data averages (in lb/ton) by the corresponding CEMS data averages (in ppmv) to obtain a conversion factor expressed in the units of lb/ton per ppmv; and
- d. Be reestablished during any source test or RATA performed. [District Rule 2.42, §602 and §603, 40 CFR Part 60.73(b), and 60.74(b)(1)/C-11-61]

Rule Requirement #8 - Recordkeeping

Part 60.73(c) requires that daily production rates and operational hours be recorded (see Rule Requirement #10 of Rule 2.42 for section language).

Streamlining Demonstration: As previously discussed in Rule Requirement #10 of Rule 2.42, the requirements of Section 502 of Rule 2.42, have been streamlined with the requirements of Part 60.76(c). As previously discussed, this streamlined condition revises the language of Condition 33 of PTO P-37-82(a2).

Streamlined Permit Condition

The Permit Holder shall maintain an operating log for the facility that includes, on a daily basis:

- a. The actual startup and shutdown time;
- b. Total hours of operation, amount of nitric acid (HNO_3) produced (expressed as 100% acid strength);
- c. Operating system parameters;
- d. The exhaust gas NO_x concentrations in parts per million volume (ppmv) on a dry basis; and
- f. The exhaust gas NO_x emission rate in lb/ton HNO_3 per three (3) hour rolling average. [District Rule 2.42, §502 and 40 CFR Part 60.73(c)/C-11-61]

Rule Requirement #9 - NO_x Emission Rate

Part 60.74(b)(1) establishes the formula to be used in determining the applicable NO_x emission rate of an affected facility (see Rule Requirement #12 of Rule 2.42 for section language).

Streamlining Demonstration: As discussed in Rule Requirement #12 of Rule 2.42, the related requirements of Sections 602 and 603, Part 60.73(b), and Part 60.74(b)(1) have been streamlined into a single permit condition. For reference, this streamlined condition revises the language of Condition 16 of PTO P-37-82(a2) which previously required the development and use of CO and NO_x conversion factors.

Related Requirements from other Rules:

Section 602 of Rule 2.42 - see Rule 2.42, Requirement #12

Section 603 of Rule 2.42 - see Rule 2.42, Requirement #12

Part 60.73(b) - see Rule 2.42, Requirement #12

Streamlined Permit Condition

See Rule Requirement #7 (above)

Rule Requirement #10 - NO_x Emission Concentration

Part 60.74(b)(2) requires that U.S. EPA Method 7 be used to determine the NO_x emission concentrations (see Rule Requirement #11 of Rule 2.42 for section language).

Streamlining Demonstration: As previously discussed in Rule Requirement #11 of Rule 2.42, the requirements of Section 601 of Rule 2.42, have been streamlined with the requirements of Rule 3.4, §409 and Part 60.74(b)(2). The streamlined condition also incorporates test method requirements for CO, opacity, and volumetric flow. As previously discussed, this streamlined condition revises the language of Condition 27 of PTO P-37-82(a2).

Streamlined Permit Condition

The Permit Holder shall conduct the following test methods (or alternative test methods approved by the U.S. EPA and the District) to measure the required pollutant emissions during any emission testing event. If the source wishes to use an alternative methodology a complete and detailed description of the method must be submitted to the District for written approval no less than thirty (30) days prior to the performance evaluation.

- a. CO - U.S. EPA Method 10;
- b. NO_x - U.S. EPA Method 7; and
- c. Volumetric Flow rate - U.S. EPA Method 2. [District Rule 2.42, §601, District Rule 3.4, §409, and 40 CFR Part 60.74(b)(2) and (b)(3)/C-11-61]

Rule Requirement #11 - Opacity Determination

Part 60.74(b)(3) requires that U.S. EPA Method 2 be used to determine the visible emission opacity of an affected facility (see Rule Requirement #11 of Rule 2.42 for section language).

Streamlining Demonstration: As previously discussed above for Rule Requirement #11 of Rule 2.42, the requirements of Section 601 of Rule 2.42, have been streamlined with the requirements of Rule 3.4, §409 and Part 60.74(b)(3). The streamlined condition also incorporates test method requirements for CO, NO_x, and volumetric flow and revises the language of Condition 13 of PTO P-37-82(a2). The revised conditions do not relax or significantly change the monitoring requirements of the permit.

Streamlined Permit Condition

See Rule Requirement #10 (above)

40 CFR PART 60 - APPENDIX B Performance Specifications

Rule Description

This appendix details performance specifications for CEMS units that are required by Subparts of 40 CFR Part 60.

Compliance Status

This appendix is applicable to the NO_x CEMS unit on the nitric acid production facility operating under P-37-82(a3). The source is currently in compliance with this appendix.

Rule Requirement #1 - Specification 2 (NO_x) CEMS High-Level

Section 6.1.1.2 of Specification 2 requires that the CEMS have:

"... high-level value between 1.5 times the pollutant concentration corresponding to the emission standard level and the span value[,] given in the applicable regulations is adequate."

Streamlining Demonstration: The requirements of Section 6.1.1.2 of Specification 2, have been streamlined with the corresponding requirements of Specification 4 into a single condition since their requirements are identical. This streamlined requirement now applies to both the CO and NO_x CEMS's. For reference, this streamlined condition revises the language of Condition 19 of PTO P-37-82(a2), and does not relax or significantly change the monitoring requirements of the permit.

Related Requirements from other Rules:

Section 6.0 of Specification 4 indicates that the requirements of Specification 2, Section 6.0 be followed.

Streamlined Permit Condition

Each CEMS (recorder output) shall have a high-level value between 1.5 times the pollutant concentration corresponding to the emission standard level and the span value. [40 CFR Part 60 - Appendix B, Performance Specifications 2 & 4A, Section 6.1.1.2)/C-11-61]

Rule Requirement #2 - Specification 2 (NO_x) CEMS Design & Drift Calculations

Section 6.1.2 of Specification 2 requires that the CEMS design allow:

"... for the determination of calibration drift at the zero and high-level values. If this is not possible or practical, the design must allow these determinations to be conducted at a low-level value (zero to 20 percent of the high-level value) and at a value between 50 and 100 percent of the high-level value."

Streamlining Demonstration: The requirements of Section 6.1.2 of Specification 2 for NO_x, have been streamlined with the corresponding requirements of Specification 4 for CO into a single condition since their requirements are identical. The revised streamlined condition revised the language of Condition 19 of PTO P-37-82(a2). The streamlined condition does not relax or significantly change the monitoring requirements for the NO_x CEMS.

Related Requirements from other Rules:

Section 6.0 of Specification 4 indicates that the requirements of Specification 2, Section 6.0 be followed.

Streamlined Permit Condition

The calibration gas shall have a reference value between 50% and 100% of the high-level value. [District Rule 3.4, §409 and 40 CFR Part 60 - Appendix B, Performance Specifications 2 & 4A, Section 6.1.2/C-11-61] (*previously Condition 22 of PTO P-37-82(a2)*)

Rule Requirement #3 - Calibration Drift Adjustment Criteria

Section 13.1 of Specification 2 reads:

"The CEMS calibration must not drift or deviate from the reference value of the gas cylinder, gas cell, or optical filter by more than 2.5 percent of the span value."

Streamlining Demonstration: As previously discussed in Rule Requirement #7 for Subpart A, the related requirements of Part 60.13(d)(1) and Specification 2 have been streamlined into a single condition. As previously discussed, this streamlined condition revises the language of Condition 23 of PTO P-37-82(a2) to explicitly apply to only the NO_x CEMS calibrations, and does relax or significantly change the requirements of the permit.

Streamlined Permit Condition

The zero and span NO_x calibrations shall be adjusted whenever the daily zero drift or the daily span drift deviates from the reference value of the calibration gas by more than two-times 2.5% of the span value. [40 CFR Part 60.13(d)(1) and 40 CFR Part 60 - Appendix B, Specifications 2, Section 13.1/C-11-61]

Rule Requirement #4 - Specification 4 (CO) CEMS High-Level

Section 6.0 of Specification 4 indicates that the requirements of Specification 2, Section 6.0 be followed.

Streamlining Demonstration: As discussed previously for Rule Requirement #1 of Appendix B, the requirements of Section 6.1.1.2 of Specification 2, have been

streamlined with the corresponding requirements of Specification 4 into a single condition. For reference, this streamlined condition revises the language of Condition 19 of PTO P-37-82(a2), and does not relax or significantly change the monitoring requirements of the permit.

Streamlined Permit Condition

See Rule Requirement #1 (above)

Rule Requirement #5 - Specification 4 (CO) CEMS Design & Drift Calculations

Section 6.0 of Specification 4 indicates that the requirements of Specification 2, Section 6.0 be followed.

Streamlining Demonstration: Streamlining Demonstration: As discussed previously for Rule Requirement #2 of Appendix B, the requirements of Section 6.1.2 of Specification 2, have been streamlined with the corresponding requirements of Specification 4 into a single condition. The streamlined condition now requires that the CO CEMS comply with the drift requirements of Specification 4.

Streamlined Permit Condition

See Rule Requirement #2 (above)

Rule Requirement #6 - Calibration Drift Adjustment Criteria

Section 13.1 of Specification 4 reads:

"The CEMS calibration must not drift or deviate from the reference value of the gas cylinder, gas cell, or optical filter by more than 5 percent of the span value for 6 out of 7 days."

Streamlining Demonstration: Under the provisions of Rule 3.4, Section 409, the requirements of Section 13.1 have been streamlined in order to specifically require that the CO CEMS comply with the applicable Performance Standard contained in Appendix B. For reference, the new Rule 3.4 condition does not relax or significantly change the permit conditions, since Condition 23 of P-37-82(a2) requires that the CO CEMS to comply with the NO_x specific drift tolerances listed in Performance Specification 2.

Streamlined Permit Condition

The zero and span CO calibrations shall be adjusted whenever the daily zero drift or the daily span drift deviates from the reference value of the calibration gas by more than two-times 5% of the span value. [District Rule 3.4, §409 and 40 CFR Part 60 - Appendix B, Specification 4, Section 13.1/C-11-61]

40 CFR PART 60 - APPENDIX F Quality Assurance Procedures

Rule Description

This appendix establishes quality control (QC) and quality assurance (QA) procedures required to evaluate the effectiveness of the data produced by a CEMS being used for determining compliance with the emission standards on a continuous basis under the provisions of 40 CFR Part 60.

Compliance Status

The source is currently in compliance with the requirements of the subpart.

Rule Requirement #1 - Testing Frequency

Section 5.1.1 of Procedure 1 of Appendix F, establishes a RATA frequency of once every four calendar quarters (see Rule Requirement #5 of 40 CFR Part 60 - Subpart A for section language).

Streamlining Demonstration (NO_x and CO CEMS): As previously discussed in Rule Requirement #5 of 40 CFR Part 60 - Subpart A, the CEMS RATA requirements of Appendix F, have been streamlined with the requirements of Rule 3.4. The streamlined condition applies to the CO CEMS and implements a more stringent testing frequency than the subpart requirement. Lastly, this streamlined condition revises the RATA language of Condition 34 of PTO P-37-82(a2), and does not relax or significantly change the monitoring requirements of the permit.

Related Requirement from an other Rule:

Part 60.13(a) - see Subpart A, Requirement #5

Streamlined Permit Condition

The Permit Holder shall perform a Relative Accuracy Test Audit (RATA) of the CO and NO_x continuous emission monitoring systems (CEMS) at least once every twelve (12) consecutive calendar months. The RATA shall be performed in accordance with 40 CFR Part 60 - Appendix F (Quality Assurance Procedures), or approved equivalent. [District Rule 3.4, §409 and 40 CFR Part 60 - Appendix, Procedure 1, Section 5.1.1/C-11-61]

40 CFR PART 64 Compliance Assurance Monitoring

Rule Description

This subpart provides guidelines for developing a Compliance Assurance Monitoring (CAM) Plan. The CAM Plan requires that a facility monitor the appropriate parameters

of a process or its control equipment, and/or measure the process' actual emissions, so as to ensure emission compliance on an ongoing basis.

CAM requirements are pollutant specific and apply to any pollutant emissions unit at a major source that is required to obtain a Part 70 permit which satisfies all of the following:

- a. The unit is subject to an emission limit or standard for an applicable regulated air pollutant;
- b. The unit uses a control device to achieve compliance with any such emission limitation or standard; and
- c. The unit's pre-control device potential to emit of an applicable regulated pollutant is greater than or equal to that pollutant's major source threshold.

Compliance Status

The CEMS equipped nitric acid production facility is not subject to the requirements of this subpart based on its applicability requirements.

Rule Requirement #1 - CAM Applicability

The CAM plan requirements are pollutant specific, and apply to emission units equipped with pollutant specific control devices (defined in Part 64.1). The CAM applicability determinations will be completed separately for the CO and NO_x pollutants.

Applicability Determination for CO: The following findings can be made for the facility's CO emissions:

- a. The facility is subject to CO specific emission limits of PTO P-37-82(a3);
- b. Although not given any specific control efficiency, the modified facility will operate with a CO specific control device used to comply with the emission limits of P-37-82(a3); and
- c. The modified facility's potential to emit (PTE) is less than the major source threshold of 100 tons per year.

The facility meets two of the three applicability requirements of the rule. Therefore, the facility is not subject to the CAM requirements.

Applicability Determination for NO_x: The following findings can be made for the facility's NO_x emissions:

- a. The facility is subject to the NO_x emission standards of Subpart G and PTO P-37-82(a3);
- b. The facility is equipped with a NO_x specific control device ("NO_x Decomposer") consisting of a non-selective catalytic reduction system (NSCR) used to comply with the emission standards of Subpart G and PTO P-37-82(a3); and

- c. The facility's pre-control device PTE is between 792 tons and 4,666 tons per year (calculated using a NSCR control efficiency range of 94.7% to 99.1%, as listed in U.S. EPA's "Alternative Control Techniques Document - Nitric and Adipic Acid Manufacturing Plants" - Pg. 5-17, December 1991).

Although the facility meets all three CAM requirements, it is exempted from the requirements of the rule per the provisions of Section 64.2(b)(vi). The section requires that any emissions unit complying with a continuous compliance determination method be exempted from the requirements of the subpart. Therefore, by complying with the CEMS requirements of Subpart G, the nitric acid production plant is exempted from the CAM requirements.

Permit Conditions

No permit conditions are required.