

**MARICOPA COUNTY
AIR QUALITY
DEPARTMENT**



**AIR QUALITY DEPARTMENT
1001 North Central Avenue, Suite 200
Phoenix, Arizona 85004**

AIR QUALITY PERMIT

Permit Number: 030132

Issue Date: August 18, 2005

Renewal Date: July 31, 2010

Permittee Name: ARIZONA PUBLIC SERVICE CO

Mailing Address: PO BOX 52034 MS 7626 PHOENIX, AZ 85072-2034

Business Name: PALO VERDE NUCLEAR GENERATING STATION

Facility Address: 5801 S WINTERSBURG RD TONOPAH, AZ 85354-7529

Equipment Covered: See attached list

This Permit is issued in accordance with Maricopa County Air Pollution (MCAP) Control Regulations, Rule 200, §303, and Arizona Revised Statutes, §49-404c and §49-480.

The attached Permit Conditions are incorporated into and form an integral part of this Permit.

If the MCAP Control Officer determines that additional monitoring, sampling, modeling and/or control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and/or welfare, the MCAP Control Officer will amend the provisions of this Permit.

This Permit may be subject to suspension or revocation for cause including nonpayment of fees, noncompliance with Arizona State Statutes, Maricopa County Air Pollution Control Regulations, or the attached Permit Conditions, or if the MCAP Control Officer determines that significant misrepresentation exists in the application and supporting documentation filed to obtain or modify this Permit.

A handwritten signature in black ink, appearing to read "Robert J. Kard".

Robert Kard, Director
Maricopa County Air Pollution Control Officer

PERMIT CONDITIONS

PALO VERDE NUCLEAR GENERATING STATION

Date Issued: 08/18/2005

Permit Number 030132

Revision:

Revision Date:

The numerical section references in this Permit are based on Maricopa County Air Pollution Control Rules and Regulations (Rules) in effect on the date of issuance of these Permit Conditions. In the event that these Rules are revised to change the content and numerical references during the term of this Permit, the revised Rules and numbering system will apply to this permit.

GENERAL CONDITIONS:

1. Certification:

Any document which is required to be submitted by this Permit or the Rules shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete. [Rule 100, §200.95; Rule 220, §301.5 and §302.14] [Locally enforceable only]

2. Confidentiality Claims:

Except as provided for in Rule 100, any records, reports, or information obtained from the Permittee pursuant to the County Rules or this Permit shall be available to the public unless the Control Officer has notified the Permittee in writing and provided the Permittee:

- a. Precisely identifies the information in the permit(s), records, or reports which is considered confidential.
- b. Provides sufficient supporting information to allow the Control Officer to evaluate whether such information satisfies the requirements related to trade secrets.

A claim of confidentiality shall not excuse the Permittee from providing any and all information required or requested by the Control Officer and shall not be a defense for failure to provide such information.

[Rule 100, §200.107, §402 and Rule 200, §411] [Locally enforceable only]

3. Controls:

Except as provided by the applicable Rules or these Permit Conditions, the Permittee shall not operate any equipment or process unless air pollution controls, required by either this Permit or the Rules, are in place, are operating without bypass, and are operating within their design parameters and in accordance with any other conditions specified in this Permit. This requirement to operate any required air pollution control equipment shall be subject to the provisions in Rules 130 and 140 in the event of an emergency, malfunction, or during periods of startup or shutdown.

[Rule 100, §501, Rules 130 and Rule 140] [Locally enforceable only]

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The Permittee shall notify the Control Officer, in accordance with Rule 220, before making any additions, modifications or replacements to any required air pollution control equipment. This notification requirement does not apply to normal maintenance and repair activities.

[Rule 220, §404 and §405] [Locally enforceable only]

4. Duty to Supplement or Correct Application:

The Permittee who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.

[Rule 220, §301.5] [Locally enforceable only]

5. Duty to Comply:

The Permittee shall comply with all conditions of this Permit including all applicable requirements of Federal laws, Arizona laws, and Maricopa County Air Pollution Control Rules and Regulations.

[Rule 200, §308] [Locally enforceable only]

6. Fees:

The Permittee shall pay, in a timely manner, an annual fee for this Permit as determined by the Control Officer in accordance with Rule 280.

[Rule 280, §302] [Locally enforceable only]

7. Fugitive Dust:

The Permittee shall take all reasonable precautions to minimize the emissions of fugitive dust in accordance with §300 of Rule 310.

[Rule 310, §300]

8. Leased/Rented/Borrowed Equipment:

The permit, for a portable source requiring a permit per Rule 200, shall be provided by the owner to the renter or lessee, and the renter or lessee shall be bound by the permit provisions. In the event a copy of the permit is not provided to the renter or lessee, both the owner and the renter or lessee shall be responsible for the operation of the portable source in compliance with the permit conditions and any violations thereof.

[Rule 200, §410] [Locally enforceable only]

9. Malfunctions (Emergency Upsets) and Excess Emissions:

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Emergencies, malfunctions, and other excess emissions shall be reported as required by Rule 100, Section 500, Rule 130, and Rule 140.

[Rule 100, §400 and §500; Rule 130, §400; Rule 140, §400 and §500] [Locally enforceable only]

10. Material Containment:

Materials including, but not limited to, solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution.

[Rule 320, §302]

11. Modifications:

The Permittee shall notify the Control Officer, in accordance with Rule 220, of changes, replacements or additions to the source which are not covered by this Permit. The Permittee may make any changes that do not require a non-Title V permit revision pursuant to Rule 220 §404.

[Rule 200, §312.3 and Rule 220, §400] [Locally enforceable only]

12. Odors:

The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.

[Rule 320, §300]

13. Permit Term, Permit Transfer, and Permit Renewal:

a. This Permit shall remain in effect for no more than 5 years.

[Rule 220, §402] [Locally enforceable only]

b. Except as provided in Rule 200, this Permit may be transferred to another person if the person who holds the permit gives notice to the Control Officer in writing at least 30 days before the proposed transfer and complies with the permit transfer requirements of Rule 200 and the administrative permit amendment procedures pursuant to Rule 220.

[Rule 200, §400 and Rule 220, §405.1] [Locally enforceable only]

c. The Permittee shall file an application for a permit renewal at least six months, but not more than 18 months, before the expiration date of this Permit.

[Rule 220, §301.3a] [Locally enforceable only]

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14. Record Keeping:

The Permittee shall maintain accurate records as required by these Permit Conditions and by Section 500 of all applicable Rules. These records shall be kept in a form, which allows easy verification of compliance with these Permit Conditions and any applicable Rules.

All records shall be kept for the time as specified. All records required to demonstrate that each required air pollution control device is being operated properly shall be retained for five years.

All records required by this Permit should be made available for inspection upon request by a representative of the Control Officer.

Upon request, the Permittee shall furnish to the Control Officer copies of records required to be kept by this Permit.

[Rule 100, §504; Rule 220, §302.7] [Locally enforceable only]
[§500 of All Applicable Rules]

15. Reopening For Cause:

This Permit shall be reopened or revised prior to expiration under any of the following conditions:

- a. Either the Control Officer or the Administrator of the United States Environmental Protection Agency (Administrator) determines that this Permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of this Permit Revision, or
- b. Either the Control Officer or Administrator determines that this Permit must be revised or revoked to assure compliance with the applicable requirements.

[Rule 200, §402] [Locally enforceable only]

16. Reporting:

If notified, the Permittee shall submit an annual emissions inventory report to the Control Officer. The report shall summarize the activities and air pollution emissions from the facility during the previous calendar year in accordance with §505 of Rule 100. The report shall be filed on a form supplied by the Control Officer and shall be due by April 30 or 90 days after the Control Officer makes the forms available, whichever is later.

The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause

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exists for revising or revoking and reissuing this Permit or to determine compliance with this Permit.

Upon request, the Permittee shall furnish to the Control Officer copies of records required to be kept by this Permit.

The Permittee shall file any additional reports required by the Control Officer in a complete and timely manner.

[Rule 100, §501 and §505; Rule 220, §302.8 and §302.13] [Locally enforceable only]

17. Right to Entry:

The authorized representative of the Control Officer, upon presentation of credentials, shall be permitted:

- a. To enter upon the premises where the source is located or emission-related activity is conducted, or where records are required to be kept under the conditions of this Permit and in accordance with the PVNGS access authorization process, and
- b. To have access to and copy, at reasonable times, any records that are required to be kept under the conditions of this Permit, and
- c. To inspect, at reasonable times and in accordance with the PVNGS access authorization process, any source(s), equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under the Permit, and
- d. To sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the Permit or other applicable requirements, and
- e. To record any inspection by use of written, electronic, magnetic, and photographic media in accordance with PVNGS security requirements.

No claim of confidentiality for trade secrets or commercial information available to the Permittee under Arizona Revised Statutes (ARS) 49-487 or Rule 200 §411 can limit the scope of or otherwise interfere with an on-site inspection by a representative of the Control Officer. However, a claim of confidentiality may be made on any information gathered during the inspection to the extent identified in ARS 49-487 or Rule 200 §411.

[Rule 100, §§106, 200.107 and 402; Rule 200, §411; Rule 220, §302.17-21] [Locally enforceable only]

18. Rights and Privileges:

This Permit does not convey any property rights nor exclusive privileges of any sort.

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[Rule 220, §302.12] [Locally enforceable only]

19. Severability:

The provisions of this Permit are severable, and, if any provision of this Permit is held invalid, the remainder of this Permit shall not be affected thereby.

[Rule 220, §302.9] [Locally enforceable only]

20. Start-up Notification:

If a performance test is required, the Permittee shall give written notification to the Department, Attention Source Test Compliance Section Manager, at least 7 days but no more than 30 days before the initial start-up of any new pollution abatement equipment or process that requires a test. Start-up of the subject equipment or process, shall be defined as the earliest occurrence of one of the following dates:

- a. The date that achieved maximum (or permitted) capacity occurs; or
- b. The date that a marketable product has been produced; or
- c. The date that achieved sustained product manufacturing occurs; or
- d. The date that the production line(s) or processes, exhausted to the air pollution abatement equipment that require the test, have been qualified to produce product that meets customer requirements.

This startup notification does not apply to processes or equipment recognized by the Control Officer as being trivial or insignificant activities.

[Rule 270, §400]

SPECIFIC CONDITIONS:

21. Allowable Emissions:

The Permittee shall not allow emissions to the atmosphere to exceed any of the following limits:

	Monthly Emissions Limits	12-Month Rolling Emissions Limits	Total
Carbon Monoxide (CO)		45.0 Tons	
Nitrogen Oxide (NOx)		95.0 Tons	
Sulfur Oxide (SOx)		4.0 Tons	
Particulate Matter < 10 micron diam. (PM-10)		54.0 Tons	
Volatile Organic Compounds (VOC)		35.0Tons	
Total Hazardous Air		8.0 Tons	

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Pollutants (HAPs)		
Any Single Hazardous Air Pollutant (HAP)		3.0 Tons

PM10 emissions are limited to 5.6 tons per month.
[Rule 220 §302.2] [Locally enforceable only]
[Rule 220 §304]

The Permittee shall demonstrate compliance with the Hazardous Air Pollutants (HAPs) allowable emissions at least once per calendar year by submitting a HAPs report to the Department with the emission inventory. For the report, the Permittee shall calculate emissions of individual HAPs emitted in quantities above 500 pounds per calendar year. As of the issuance date of this permit, the Permittee shall calculate and report emissions from chloroform, xylenes, and ethyl benzene.
[Rule 220, §302.2] [Locally enforceable only]

Emissions Reporting: The Permittee shall submit a NOx emissions report and a PM10 emissions report to the Department (attention: Compliance Manager) every six months from the date of permit issuance. The reports shall be submitted within 40 days following the end of each six-month reporting period. The Permittee shall maintain a monthly log of NOx and PM10 monthly emission calculations to be kept on-site for inspection upon request. Based on the monthly log, the twelve month rolling total NOx emissions shall be calculated within 20 days following the end of each calendar month by summing the NOx emissions for the most recent twelve calendar months. The twelve month rolling total PM10 emissions shall be calculated within 20 days following the end of each calendar month by summing the PM10 emissions for the most recent twelve calendar months.
[Rule 220, §304]

FUEL BURNING, INTERNAL COMBUSTION, AND TURBINES

22. Opacity:

a. Standards:

The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity.
[Rule 300 §301; Rule 324 §303] [Locally enforceable only]

When emergency diesel generators (EDGs) and equipment must run for safety reasons and/or for safety and operational tests to meet the requirements legally imposed by the Nuclear Regulatory Commission, the Permittee may discharge air contaminants, other than uncombined water, in excess of the applicable opacity limit in Section 301 of Rule 300. Any discharge of air contaminants, other than uncombined water, in excess of the

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opacity limit in Section 301 of Rule 300 should not contribute to a violation of the national ambient air quality standard.

[Rule 300, §302.2] [Locally enforceable only]

Equipment important to nuclear safety and security include Units 1, 2, and 3 Emergency Diesel Generators, Gas Turbine Diesel Emergency Generators, Fire Protection Pump Emergency Diesels, Security Emergency Diesel Generator, Technical Support Center (TSC) Emergency Diesel Generator, Security Substation L Emergency Diesel Generator, and the Security Hubs 2, 3, and 4 Emergency Diesel Generators described in Permit Conditions 23.a.1 through 23.a.7.

b. Monitoring:

1. The Permittee shall conduct a facility walk-through each month and conduct visible emission checks during the walk-through each month from the auxiliary boiler, administrative buildings A and B backup diesel generators, the chemical storage building diesel generator, and any portable diesel or gasoline engine permitted as a stationary source and fuel burning equipment using diesel or natural gas fuel capable of emitting any air contaminant other than condensed water containing no more than analytical trace amounts of other chemical elements or compounds. The Permittee shall log the visual emission checks, including the date and time when the reading was taken, the equipment for which a reading was taken, results of the reading, name of the person who took the reading and any other related information. Monthly visible emission checks are limited to only the equipment that is operating on the day that the facility walk-through is performed. The Permittee shall submit copies of the monthly facility walk-through log every six months as part of the Emission Report described in Permit Condition 21.
[220 §302.5] [Locally enforceable only]
2. If visible emissions, other than uncombined water, are observed being discharged into the ambient air, while the equipment is in its standard mode of operation (not during periods of start-up, shut-down, or malfunction), the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air using the techniques specified in EPA Reference Method 9. The initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next earliest day that the emitting equipment is in operation. If the problem causing the initial visible emissions is corrected before the first Method 9 opacity reading is

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required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in its standard mode of operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

[220 §302.5] [Locally enforceable only]

3. Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the emitting equipment is in its standard mode of operation for at least three periods of operation. Follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, or following three periods of operation where the measured opacity meets the requirements in Permit Condition 22a. A "period of operation" is defined for this permit as the operation portion of a startup-operation-shutdown cycle during maintenance or testing and does not include emergency operation.
[220 §302.5] [Locally enforceable only]

4. Opacity Readings

- (a) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.
[Rule 300 §501] [Locally enforceable only]
- (b) Opacity of visible emissions from intermittent sources as defined by Rule 300 §201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 24 consecutive readings shall be required at 15-second intervals for the averaging time.
[Rule 300 §502] [Locally enforceable only]

c. Record Keeping:

The Permittee shall maintain a log of all visible emissions checks pursuant to Permit Condition 22.b.1, as well as any subsequent Method 9 observations pursuant to Permit Condition 22.b.2, and a description of any necessary corrective actions.

[Rule 220 §302.8] [Locally enforceable only]

23. Allowable Operating Parameters:

- a. For the purpose of ensuring that the NOX emissions limit identified in Permit Condition 21 is not exceeded, the Permittee shall limit the operation of the following equipment to the limits specified below or as specified under the alternate-operating scenario in Permit Condition 23.b.

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1. Units 1, 2, and 3 Emergency Diesel Generators – limit the run time to less than or equal to 800 hours in aggregate over any twelve consecutive months.
2. Gas Turbine Emergency Generators – limit either run time to less than or equal to 400 hours in aggregate or fuel consumption to less than or equal to 158,000 gallons diesel in aggregate over any twelve consecutive months.
3. Fire Protection Pump Emergency Diesels - limit the run time to less than or equal to 280 hours in aggregate over any twelve consecutive months.
4. Security Emergency Diesel Generator – limit the run time to less than or equal to 204 hours over any twelve consecutive months.
5. Technical Support Center (TSC) Emergency Diesel Generator – limit the run time to less than or equal to 204 hours over any twelve consecutive months.
6. Security Substation L Emergency Diesel Generator – limit the run time to less than or equal to 200 hours over any twelve consecutive months.
7. Security Hubs 2, 3, and 4 Emergency Diesel Generators – limit the aggregate run time to less than or equal to 600 hours over any twelve consecutive months.
8. Auxiliary Boiler – limit fuel consumption to less than or equal to 535,000 gallons of #2 diesel oil over any twelve consecutive months.
9. Administration Building A Backup Diesel Generator – limit the run time to less than or equal to 200 hours over any twelve consecutive months.
10. Administration Building B Backup Diesel Generator – limit the run time to less than or equal to 200 hours over any twelve consecutive months.
11. Chemical Storage Building Backup Diesel Generator – limit the run time to less than or equal to 200 hours over any twelve consecutive months.
12. Small portable diesel engines (<600 h.p.) permitted as stationary sources – limit aggregate fuel consumption to less than or equal to 15,000 gallons diesel fuel over any twelve consecutive months.

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13. Small portable gasoline engines permitted as stationary sources – limit aggregate fuel consumption to less than or equal to 5,000 gallons gasoline over any twelve consecutive months.
14. Small fuel burning equipment using diesel fuel (not identified as an insignificant source in Maricopa County Rules and Regulations Appendix D or trivial source in Maricopa County Rules and Regulations Appendix E) - limit aggregate fuel consumption to less than or equal to 5,000 gallons diesel fuel over any twelve consecutive months.
15. Small fuel burning equipment using natural gas or liquefied petroleum gas (not identified as an insignificant source in Maricopa County Rules and Regulations Appendix D or trivial source in Maricopa County Rules and Regulations Appendix E) - limit aggregate fuel consumption to less than or equal to 20,000 gallons over any twelve consecutive months.

[Rule 220 §302.2] [Locally enforceable only]
[Rule 220 §304]

b. Alternate Operating Scenario:

The Permittee may enter an alternate-operating scenario by adjusting operational limits identified in Permit Condition 23.a. such that the total emissions limit identified in Permit Condition 21 is not exceeded. The alternate operating scenario limits shall be documented, and records maintained in accordance with Permit Condition 26. The alternate operating scenario limits will remain in effect for the next consecutive twelve months or until the operational limits are again adjusted to meet new operational circumstances. The alternate operating scenario limits must satisfy the following equations:

$$\text{Twelve Month Cumulative NOx emissions (tons)} \leq 95$$

$$\text{Twelve Month Cumulative NOx (tons)} = \sum [(OL)_i \times (EF)_i] / 2000$$

Where:

$(OL)_i$ = 12 month operating limit in hours or gallons of fuel used, as appropriate, for the i th source identified in Table 1.

$(EF)_i$ = NOx emissions factor for the i th source identified in Table 1.

2000 = factor converting lbs to tons

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Table 1- NOx Emission Factors by Combustion Source

Source	Description	Emission Factor (EF)
1	Units 1, 2, and 3 Emergency Diesel Generators	165.75 lbs NOx/hr
2	Gas Turbine Emergency Generators	46.3 lbs NOx/hr, or 122.4 lbs NOx/Mgal
3	Fire Protection Pump Emergency Diesels	5.92 lbs NOx/hr
4	Security Emergency Diesel Generators	5.44 lbs NOx/hr
5	Technical Support Center (TSC) Emergency Diesel Generator	32.89 lbs NOx/hr
6	Security Substation L Emergency Diesel Generator	3.34 lbs NOx/hr
7	Security Hubs 2, 3, and 4 Emergency Diesel Generators	0.81 lbs NOx/hr
8	Auxiliary Boiler	24 lbs NOx/Mgal
9	Administration Building A Backup Diesel Generator	13.15 lbs NOx/hr
10	Administration Building B Backup Diesel Generator	7.25 lbs NOx/hr
11	Chemical Storage Building Backup Diesel Generator	4.11 lbs NOx/hr
12	Portable diesel engines (<600 hp) permitted as stationary sources	604 lbs NOx/Mgal
13	Portable gasoline engines permitted as stationary sources	212 lbs NOx/Mgal
14	Fuel burning equipment using diesel fuel (not identified as an insignificant source or trivial source)	20 lbs NOx/Mgal
15	Fuel burning equipment using natural gas or liquefied petroleum (not identified as an insignificant source or trivial source)	14 lbs NOx/Mgal

[Rule 220 §302.2] [Locally enforceable only]
[Rule 220 §304]

- c. The Permittee may only use natural gas, butane, and propane as fuel for boilers and heaters designed to use natural gas.
[Rule 220 §302.2] [Locally enforceable only]
[Rule 220 §304]

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d. The Permittee shall not purchase fuel oil (diesel) that contains greater than 0.05 weight percent sulfur, except as specified in Permit Condition 65.
[Rule 220 §302.2] [Locally enforceable only]

1. The Permittee shall not combust fuel oil (diesel) that contains greater than 0.05 weight percent sulfur.

2. The Permittee shall not combust fuel oil (diesel) that contains sulfur in excess of the limits in Permit Condition 24b. for the stationary gas turbines.

[Rule 320 §305] [Locally enforceable only]

f. The Permittee shall track fuel use and calculate emissions for equipment identified in the attached equipment list as de minimus when the rolling total NOX emissions exceeds 90 tons per any twelve consecutive months. In such cases, the Permittee shall begin to track fuel use and calculate emissions in the month following the month in which the emission calculation was completed for the preceding month. The Permittee shall continue to track fuel use and calculate emissions from deminimus equipment in the attached equipment list until the rolling total NOx emissions fall below 90 tons per twelve consecutive months.

[Rule 220 §304]

24. Turbine Operations:

Standard for Sulfur Dioxide:

a. The Permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.
[40CFR 60.333]

b. The Permittee shall not burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.05 percent by weight.
[Rule 320 §305]

c. The Permittee shall determine compliance with the sulfur content standard in Permit Condition 24.b above as follows: ASTM D 2880-71, 78, or 96 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80 or 90 (Reapproved 1994), D 3031-81, D 4084-82 or 94, or D 3246-81, 92, or 96 shall be used for the sulfur content of gaseous fuels (incorporated by reference - see § 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis

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(with verification of the dilution ratio) may be used, subject to the approval of the Control Officer.

[40CFR 60.335(d)]

25. Stationary Internal Combustion Engine Operation:

- a. Permit Condition 25 does not apply to the following IC engines:
1. Any rotary engines, including gas turbines, jet engines;
 2. An IC engine operated as a non-road engine,
 3. An IC engine operated as an emergency generator or other equipment at a nuclear power plant that must run for safety reasons and/or operational test to meet requirements imposed by the Nuclear Regulatory Commission,
 4. An IC engine used for training purposes as long as the total number of hours of the operation does not exceed 100 hours per calendar year per engine.
 5. An IC engine with a rated brake horsepower less than or equal to 50 bhp.

[Rule 324 §§102, 103] [Locally enforceable only]

- b. Permit Conditions 25.e through 25.h do not apply to any stationary IC engine operated as an emergency engine, as defined in Rule 324, for any of the following reasons:
1. Used only for power when normal power service fails from the serving utility or if onsite electrical transmission or onsite power generation equipment fails;
 2. Used only for the emergency pumping of water resulting from a flood, fire, lightning strikes, police action or for any other essential public services which affect the public health and safety;
 3. Used for sewage overflow mitigation and/or prevention
 4. Used for reliability-related activities such as engine readiness, calibration, o maintenance or to prevent the occurrence of an unsafe condition during electrical system maintenance, as long as the total number of hours of the operation does not exceed 100 hours per calendar year per engine;
 5. Used as the prime engine when the prime engine has failed, but only for such time as is needed to repair the prime engine; or
 6. Used to operate standby emergency water pumps for fire control that activate when sensors detect low water pressure.

[Rule 324 §104] [Locally enforceable only]

- c. Permit Conditions 25.e through 25.h do not apply to the following non-emergency, low usage, prime engines:
1. Each engine rated at or below 1000 bhp that operates less than 200 hours in any 12-consecutive-month period, and

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2. Each engine rated above 1000 bhp that operates less than 100 hours in any 12-consecutive month period.

[Rule 324 §105] [Locally enforceable only]

- d. For any IC engine owned or operated by the Permittee, excluding those engines identified in Permit Condition 25.a, the Permittee shall keep a record that includes an initial one time entry that lists the particular engine combustion type (compression or spark ignition or rich or lean burn); manufacturer; model designation, rated brake horsepower, serial number and where the engine is located on the site.

[Rule 324 §502.1] [Locally enforceable only]

- e. Operating hours of any emergency or low use engine identified in Permit Conditions 25.b and 25.c may be increased in accordance with Permit Condition 23.b provided that a compliance determination is made in accordance with Rule 324 §501 prior to increasing the operating hours and the engine complies with Permit Conditions 25.e through 25.h, as applicable.

[Rule 324 §501] [Locally enforceable only]

- f. The Permittee shall conduct preventative maintenance or tuning procedures recommended by the engine manufacturer to ensure good combustion practices to minimize NO_x emissions. A handheld monitor may be used if so desired for measurement of NO_x, CO, and concentrations in the effluent stream after each adjustment is made. This may assist in determining that the proper adjustment has been made to ensure NO_x and CO minimization. In lieu of a manufacturer's procedure, a different procedure specified by any other maintenance guideline may be used as a default procedure. The tuning procedure shall include all of the following, if so equipped, and appropriate to the type of engine.
 1. Lubricating Oil and Filter: change once every three months or after no more than 300 hours of operation, whichever occurs last;
 2. Inlet Air Filter: clean once every three months or after no more than 300 hours of operation and replace every 1,000 hours of operation or every year, whichever occurs last;
 3. Fuel Filter: clean once every year or replace (if cartridge type) once every 1,000 hours of operation, whichever occurs last;
 4. Check and adjust the following once every year or after no more than 1,000 hours of operation, whichever occurs last:
 - A. intake and exhaust valves

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- B. spark plugs (if so equipped)
- C. spark timing and dwell or fuel injection timing (if adjustable), and
- D. carburetor mixture (if adjustable).
- 5. Spark plugs and ignition points: replace after 3,000 hours of operation or every year whichever occurs last;
- 6. Coolant: change after 3,000 hours of operation or every year whichever occurs last; and
- 7. Exhaust System: check for leaks and/or restrictions after 3,000 hours of operation or every year whichever occurs last.

The Permittee shall maintain an annual record of good combustion procedures.

[Rule 324 §§302; 502.3] [Locally enforceable only]

- g. Each prime engine greater than 250 rated bhp shall comply with the emission limits or control technology requirements listed in Rule 324 §304, Table 1, 2, or 3, dependent upon the type of engine. Each emission limit expressed in Rule 324 §304 Table 1, 2, and 3 may be multiplied by an efficiency allowance as described in Rule 324 §305.
[Rule 324 §§304, 305] [Locally enforceable only]
- h. An equivalent or identical replacement engine that replaces an existing engine shall be treated as an existing engine for the purposes of compliance with Permit Condition 25, unless the engine commenced operation or was constructed or modified after October 22, 2003, including the contractual obligation to undertake and complete an order for an engine and then it will be considered a new engine for purposes of meeting the standards for a new engine.
[Rule 324 §306] [Locally enforceable only]

26. Monitoring, Record Keeping, and Reporting:

- a. The Permittee shall maintain a record of operating hours, fuel usage, and sulfur fuel content documentation, as appropriate, for the equipment listed in Table 1 of Permit Condition 23. In the event runtime clocks or fuel meters are inoperable or not present on regulated equipment, actual fuel use may be used to demonstrate compliance with the appropriate limits of Permit Condition 23.a. Fuel use may be estimated from fuel tank fill data.

For the equipment listed in Permit Condition 25 b. and c., the Permittee shall keep an annual record of the engine that includes operating hours and an explanation for the use of the engine if it is used as an emergency engine.

[Rule 220 §§302.7, 304]

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[Rule 324 §§502.2, 502.4] [Locally enforceable only]

- b. For monthly NOX emission calculations required by Permit Condition 21, the following conversion factors may be used for calculating fuel consumption:

1. Diesel Fueled Engines: 1 hp = 2546.6 Btu/hr (1 lb fuel/19,300 Btu) (1 gal/7.1 lb)
1 hp = 0.01858 gal/hr

2. Gasoline Fueled Engines: 1 hp = 2546.6 Btu/hr (1 gal fuel/130,000 Btu)
1 hp = 0.01959 gal/hr

For compliance purposes, NOX emissions from sources identified in the attached equipment list as de minimus sources shall be quantified for any twelve month rolling total calculation, only if the total NOX emissions exceed 90 tons.

[Rule 220 §§302.7, 304]

- c. The date any alternate operating scenario is entered into shall be documented with the monthly emissions report and include any revised operating limits. The calculations associated with the revised operating limits shall also be documented and maintained.

[Rule 220 §302.16]

- d. All records and monthly emissions reports and logs shall be readily available for inspection by Department representatives or submittal to the Control Officer for a minimum of five (5) years from the date of the record. Records may be maintained in either written form or documented electronically.

[Rule 220 §§302.7, 304]

- e. The Permittee shall retain the purchase records of fuel for use in equipment listed in Table 1. This document must include:

1. The date of the purchase,
2. the amount of fuel purchased, and
3. the percent sulfur content by weight of the fuel purchased.

[Rule 220 §§302.7, 304]

- f. Turbine Monitoring and Reporting:

1. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

2. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop

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custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Control Officer.

[40CFR 60.334(b), (c2)]

3. Periods of excess emissions that shall be reported are defined as any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.05 percent.
[Rule 220 §302.7] [Locally enforceable only]

GASOLINE STORAGE OPERATIONS

27. Allowable Emissions:

- a. Gasoline delivery operations shall be vapor tight, as defined in Section 218 of Rule 353, except for tanks exempted by Section 305 of Rule 353 from Stage 1 vapor recovery requirements.
- b. Tanks and their fittings shall be vapor tight except for the outlet of a pressure/vacuum relief valve on a dispensing tank's vent pipe. Specifically, this means that at a probe tip distance of 1 inch (2.5 cm) from a surface, no vapor escape shall exceed 1/5 of the lower explosive limit. This applies to tanks containing gasoline regardless of whether they are currently being filled, and to caps and other tank fittings.

[Rule 353, §301.1]

- c. The requirements of permit conditions 28 through 31 do not apply to gasoline storage tanks that are less than 250 gallons.
[Rule 353, §102]

28. Allowable Throughput:

The Permittee shall limit the delivery of gasoline to the facility to less than 60,000 gallons per month and less than 500,000 gallons per twelve consecutive months.
[Rule 220, §302.2] [Locally enforceable only]

29. Control Device Parameters:

The Permittee shall not allow gasoline to be dispensed into any storage tank unless all of the following are met:

- a. Leakage Limits:

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1. Gasoline storage and receiving operations shall be leak free. Specifically, no liquid gasoline escape of more than 3 drops per minute is allowed. This includes leaks through the walls of piping, fittings, fill hose(s), and vapor hose(s).
 2. There shall be no excess gasoline drainage from the end of a fill hose or a vapor hose. Specifically, not more than 2 teaspoonsful of gasoline shall be lost in the course of a connect or disconnect process.
- [Rule 353, §301.2]

b. Fill Pipe and Caps:

1. The tank shall be equipped with a permanent submerged fill pipe, the end of which is totally submerged when the liquid level is 6 inches from the bottom of the tank (not applicable to any side fill tanks as long as the end of the fill pipe is at the bottom of the tank);
2. Threads and gaskets shall be kept vapor tight;
3. Fill pipe caps shall have a secure, intact gasket which latches completely and has no structural defects;
4. The fill pipe caps may only be removed to measure the gasoline depth in the tank, deliver gasoline, or for testing, maintenance, and inspection of the vapor recovery system;
5. Overfill prevention equipment shall be kept vapor tight so that no emissions from the tank can penetrate into the fill-pipe or atmosphere;
6. The Permittee shall not allow any type of screen or obstruction in fill-pipe assemblies unless it is approved in writing by the Control Officer (not applicable to any side fill tanks as long as the end of the fill pipe is at the bottom of the tank).

[Rule 353, §§302.1, 302.2, 302.4, and 302.5]

c. Spill Containment Equipment:

The spill containment system including gaskets shall be kept vapor-tight;

1. Spill containment receptacles shall be kept clean and free of foreign material at all times.
2. Prior to the delivery vessel leaving the premises, the Permittee shall assure that
 - A. any gasoline in the dispensing tank's spill containment receptacle has been removed; and
 - B. any gasoline absorbed into/onto other materials shall be removed from the receptacle and contained in order to minimize VOC emissions.

[Rule 353, §301.3]

d. Equipment Maintenance and Use:

1. The Permittee shall operate and maintain all required vapor loss control equipment in accordance with the manufacturer's recommendations.

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2. Both the Permittee and the owner/operator of any vessel delivering gasoline to the storage tanks are responsible for assuring that the proper vapor recovery equipment is connected for each gasoline delivery.
3. The Permittee shall refuse delivery of gasoline from a delivery vessel which does not bear a current pressure test certification decal issued by the Control Officer.
[Rule 353, §§304.1 and 304.2]

30. Operating & Inspection Requirements:

The Permittee is required to:

- a. Ensure that gasoline vapors displaced from the storage tank while gasoline is being delivered be vented through a Stage 1 Vapor Recovery system which has CARB certified, spring-loaded, vapor tight poppetted dry break valves.
- b. Concurrent delivery of gasoline to a tank with more than 1 fill pipe is prohibited.
- c. After June 16, 1999 no part of the vapor recovery system shall be replaced with any part that is not CARB certified.
- d. Spill containment receptacles shall be inspected weekly for cracks, defects, foreign material, and spilled gasoline. Records shall be maintained as specified in Permit Condition 31.

If deliveries are less than weekly, inspection and recording of the inspection at the time of each delivery will be considered an acceptable alternative to the weekly inspection and record keeping requirement of Rule 353.

- e. External fittings of the fill pipe assembly shall be inspected weekly to assure that the cap, gasket, and piping are intact and are not loose. Records shall be maintained as specified in Permit Condition 31.

If deliveries are less than weekly, inspection and recording of the inspection at the time of each delivery will be considered an acceptable alternative to the weekly inspection and record keeping requirement of Rule 353 per the Department's Technical Guidance #TG00-002.

- f. Vapor valves shall be inspected weekly to ensure that they properly close and that their gaskets are intact.

If deliveries are less than weekly, inspection and recording of the inspection at the time of each delivery will be considered an acceptable alternative to the weekly

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inspection and record keeping requirement of Rule 353 per the Department's Technical Guidance #TG00-002.

[Rule 353, §§301.3, 302.1, 302.3, and 303.2]

31. Record Keeping:

The Permittee shall keep the following records for a period of five years:

- a. The total amount of gasoline received each month shall be recorded by the end of the following month.
- b. Weekly inspection records of the fill pipe, vapor valve, and spill containment receptacles shall be recorded by the end of Saturday of the following week.
If deliveries are less than weekly, inspection and recording of the inspection at the time of each delivery will be considered an acceptable alternative to the weekly inspection and record keeping requirement of Rule 353 per the Department's Technical Guidance #TG00-002.
- c. Records of the last 12 months shall be onsite and readily available to the Control Officer without delay.

[Rule 353, §§502.1, 502.2, and 502.4]

COATING OPERATIONS

32. Controls:

- a. Unless exempted under paragraph b of this permit condition, the Permittee shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:
 1. Should the Permittee operate spray coating equipment outside of a building, the Permittee shall operate all spray coating equipment inside an enclosure which has at least three sides a minimum of eight feet in height and able to contain any object(s) being coated.
 - (a) For three-sided enclosures, the Permittee shall direct the spray in a horizontal or downward pointing manner so that overspray is directed at the walls or floor of the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of the top of the enclosure.
 - (b) For enclosures with three sides and a roof, or for complete enclosures, the Permittee shall direct the spray into the enclosure so that the overspray is directed away from any opening in the enclosure. No spraying shall be

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conducted within three feet of any open end and/or within two feet of any open top of the enclosure.

[Rule 315 § 301.1] [Locally enforceable only]

2. The Permittee shall install and operate a filtering system on any spray booth or enclosure with forced air exhaust. The filtering system shall have an average overspray removal efficiency of at least 92% by weight, as specified in writing by the manufacturer, for the type of material being sprayed. No gaps, sags or holes shall be present in the filters and all exhaust must be discharged into the atmosphere.

[Rule 315, §301.2] [Locally enforceable only]

b. Exemptions:

The controls required in paragraph a of this permit condition shall not apply to:

1. the spray coating of buildings or dwellings, including appurtenances and any other ornamental objects that are not normally removed prior to coating
2. the spray coating of facility equipment or structures which are fixed in a permanent location and cannot easily be moved into an enclosure or spray booth and which are not normally dismantled or moved prior to coating.
3. the spray coating of objects which cannot fit inside of an enclosure with internal dimensions of 10'W X 25'L X 8'H.
4. enclosures and spray booths and exhausts located entirely in a completely enclosed building, providing that any vents or openings do not allow overspray to be emitted into the outside air.
5. any coating operations utilizing only hand-held aerosol cans.

[Rule 315, §302] [Locally enforceable only]

c. Vehicle Coating:

1. Permit Conditions 36 through 39 apply to the dip cleaning of vehicle or mobile equipment surfaces.

[Rule 345, §305.3] [Locally enforceable only]

2. The requirements of c.3 through c.7 do not apply to
 - (a) Materials that contain 2.0% or less VOC by either weight or volume, or have less than 0.17 lbs VOC per gallon (20 g/liter) material VOC content, as determined by the formula in subsection 503.3 of Rule 345;
 - (b) Coating with a non-refillable aerosol can.

[Rule 345, §§102.2 and 312.3] [Locally enforceable only]

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3. The Permittee shall not apply any coating with a VOC content exceeding 3.0 lbs VOC/ gal (360 g/l) using a spray gun, unless such spraying employs one of the following devices or systems:
- (a) A Low pressure spray gun or system (such as HVLP), or
 - (b) A system that atomizes principally by hydraulic pressure, including airless and air-assisted airless systems, or
 - (c) An electrostatic system.

[Rule 345 §307.1] [Locally enforceable only]

4. The Permittee may use spray guns other than those indicated in paragraph c.3 of this permit condition under the following conditions:
- (a) For applying materials that have a VOC content not exceeding 3.0 lbs VOC/gal as applied, less water and non-precursor compounds.
 - (b) If such guns are designed and used solely for detailing and touch up with a maximum reservoir capacity of 8.8 fluid ounces (250 cc).
 - (c) If such guns are used to apply adhesives.

[Rule 345 §307.2] [Locally enforceable only]

5. The Permittee shall use a gun cleaning machine to clean all paint guns. Manual cleaning outside of the cleaning machine is allowed if the cleaning machine is used immediately after manual cleaning, and if done without spraying cleaning solvent with the gun. A cleaning machine is not required to clean a paint gun if the gun is cleaned with water or a cleaning mixture that is more than 50% water by weight or volume.

[Rule 345 §310.1] [Locally enforceable only]

- (a) The gun cleaning machine shall:
 - (1) Be designed to clean paint guns and be kept in proper repair and free from liquid leaks.
 - (2) Have at least one pump which drives cleaning solvent through and over the gun, and a basin which permits containment of the cleaning solvent.
 - (3) Have all covers and other surfaces that are exposed to gaseous or liquid VOC solvent be impervious to both gaseous and liquid VOC solvent.

[Rule 345 §310.2] [Locally enforceable only]

- (b) All Automatic gun cleaning machines:
 - (1) Shall be self-covering or enclosed when not loading or unloading.
 - (2) Shall have a self closing cover or other self enclosing feature which in the cover's closed position allows no gaps exceeding 1/8 inch width between the cover and the cabinet.

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(3) Shall be designed to prevent operation of its mechanical cleaning feature unless it is completely covered or enclosed to the gap limit of 1/8 inch.
[Rule 345 §310.3.a] [Locally enforceable only]

(c) All non-automatic remote reservoir gun cleaning machines:

(1) Shall be designed such that cleaning solvent drains from the work space quickly and completely into a remote reservoir when the work space is not in use.

(2) Shall have total reservoir openings, including the drain opening(s), of two square inches or less.

(3) Are allowed to be designed in a way such that the base of the work space functions as the reservoir's top surface, as long as the fit or seal between the sink base and the reservoir container allows the reservoir to meet the opening limits specified in the preceding paragraph.

[Rule 345 §310.3.b] [Locally enforceable only]

6. Cleanup of Vehicle Coating Application Equipment: When using VOC- containing material to clean application equipment, the Permittee shall comply with the following:

A. All solvent used to manually clean spray guns shall be collected into a container which shall be immediately closed after all the solvent has been collected.

B. All solvent used for line cleaning shall be pumped or drained into a container that is kept closed when not in use.

C. Tanks used for stripping off coating or for cleaning objects shall be covered when not in use. Solvent-dragout shall be minimized by tilting or rotating the object to drain off any pools of solvent before removing the object from the above tank.

[Rule 345, §309] [Locally enforceable only]

7. Neither surface-cleaning nor surface-preparation material that contains VOC shall be applied by means of motor-compressed air if applied in a mist or (finely atomized) spray.

[Rule 345 §305.2] [Locally enforceable only]

d. Other Surface Coating (Non-vehicle, Non-wood furniture, Non-architectural)

1. The requirements of d.2 and d.3 do not apply to the following:

(a) Coatings having a VOC content, minus exempt compounds, of less than 0.15 lb VOC/gal (18g/L) or to solvents having a VOC content of material less than 0.15 lb VOC/gal.

(b) Coating with an aerosol can

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- (c) Touch up or repair-coating operations
 - (d) Low usage coatings
 - (e) Quality Class Q protective coatings
- [Rule 336, §§102.3 and 305.4] [Locally enforceable only]
2. The Permittee shall employ one of the following for all applications of surface coating containing more than 2 pounds of VOC per gallon (240 g/L) minus exempt compounds:
- (a) A low pressure spray gun; or
 - (b) An electrostatic system; or
 - (c) A system that atomizes principally by hydraulic pressure, including "airless" and "air assisted airless"; or
 - (d) Non-atomizing or non-spraying application methods, such as but not limited to dipping, rolling, or brushing; or
 - (e) Any method which is approved by the Administrator of the Federal EPA and the Control Officer as having a transfer efficiency of 65% or greater.
- [Rule 336, §302] [Locally enforceable only]
3. The Permittee may employ spray guns otherwise prohibited by subsection d.2 of this Permit Condition for use with coatings over 2 lb VOC /gal under the following limited conditions:
- (a) To coat the inside of pipes and tubes with a wand-style applicator.
 - (b) Using an airbrush or other small gun that has a reservoir capacity not exceeding 250 cc (8.8 fluid ounces) and is used solely for detailing, lettering, touchup, and/or repair.
- [Rule 336, §305.7] [Locally enforceable only]
4. Cleanup of Surface Coating (Non-vehicle, Non-Wood furniture, Non-architectural) Application Equipment: When using VOC-containing material to clean application equipment, the Permittee shall disassemble any spray gun and other application equipment and clean it in a container which remains covered at all times, except when the application equipment is being handled in the container, or transferred into or out of the container; or a commercially-sold gun cleaning machine which shall be operated and maintained according to manufacturer's or distributor's instructions.
- [Rule 336, §303] [Locally enforceable only]
5. In lieu of meeting an equipment or work practice standard within section d of this permit condition, the Permittee is allowed to instead use an Emission Control System (ECS) that has a capture efficiency not less than 90% and meets all ECS

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requirements in Section 306 of Rule 336. The Permittee shall submit a permit revision for the installation of the ECS per Rule 220 Section 403.
[Rule 336, §305.3] [Locally enforceable only]

6. The Permittee shall clean or strip a surface for coating or other purposes per the requirements of Permit Conditions 36 through 45.
[Rule 331, §102]

33. Material Limitations:

a. Vehicle Coatings:

1. Refinish coatings for light duty vehicles, their chassis replacement parts, and appurtenances (even if the appurtenances have never been coated or used) shall meet the VOC content specified in Rule 345 §301, Table 1.
[Rule 345, §§301.1 and 301.3] [Locally enforceable only]
2. Refinish coatings for heavy duty truck, truck trailers, their chassis replacement parts, and appurtenances (even if the appurtenances have never been coated or used) shall meet the VOC content specified in Rule 345 §302, Table 2.
[Rule 345, §§302.1 and 302.2] [Locally enforceable only]
3. New or never coated surfaces of mobile equipment and of a vehicle, including a heavy truck, shall meet the VOC content specified in Rule 345 § 303, Table 3.
[Rule 345, §303.1] [Locally enforceable only]
4. The recoating of a section of light-duty vehicle, mobile equipment or a heavy-duty vehicle, including a heavy truck, that is not part of its body/chassis, its wheels, nor appurtenances, shall comply with the VOC limits of Rule 345, Table 3. This includes drive-train, steering gear, suspension, etc.
[Rule 345, §§301.2 and 303.2] [Locally enforceable only]
5. Spot refinishing of heavy trucks shall meet the following VOC limits: 546 g/l (4.55 lbs./gal) for all coatings except wash primers and 780 g/l (6.5 lbs./gal) for wash primers.
[Rule 345, §302.3a] [Locally enforceable only]
6. Spot refinishing of heavy trucks shall:
 - (a) be applied from a reservoir not exceeding 1.2 liter and containing no more than 1 liter of coating; and
 - (b) the complete topcoat of a single stage finish shall not exceed 1 liters; and
 - (c) the complete topcoat of a multi-stage finish shall not exceed 2 liters; and

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(d) the total of all other coatings, including wash and primers shall not exceed 1 liter.

[Rule 345 §302.3] [Locally enforceable only]

7. Refinish coatings for mobile equipment and heavy duty vehicles which are not heavy duty trucks shall meet the VOC content specified in Rule 345, Table 3, except pretreatment acid etchant wash shall conform with Rule 345, Table 2, Row 1.

[Rule 345 §303.3] [Locally enforceable only]

8. Coatings applied with non-refillable aerosol cans are not subject to a coating limit.

[Rule 345 §312.3] [Locally enforceable only]

9. Vehicle surface preparation liquids and surface cleaning liquids used for cleaning or preparing the surface of a vehicle or mobile equipment using a wipe method or other non-dip method shall contain no more than 1.4 pounds of VOC per gallon.

[Rule 345 §305.1] [Locally enforceable only]

b. Other Surface Coating (Non-Vehicle, Non-Wood furniture, Non-architectural)

1. The requirements of Permit Condition 32 paragraphs b.2 through b.4 are not applicable to coatings having a VOC content, minus exempt compounds, of less than 0.15 lb VOC/gal (18g/L) nor to solvents having a VOC content of material less than 0.15 lb VOC/gal.

[Rule 336, §102.3] [Locally enforceable only]

2. The Permittee shall not apply any surface coating, including any VOC-containing materials added to the original coating supplied by the manufacturer, which contains VOCs in excess of the limits in Rule 336, §301.1, Table 1, except as provided in Condition 33.b.1.

[Rule 336, §301.1] [Locally enforceable only]

3. For surface coatings that contain VOCs in excess of the limits established in the Rule 336, §301, Table I, the Permittee shall control the emissions using an emission control system operated in accordance with Rule 336, §306.1 or the Permittee shall demonstrate the coating type is classified as one of the following:

[Rule 336, §301.2, §301.3] [Locally enforceable only]

(a) Leak-Preventing Materials: Sealants, adhesives, caulking, and similar materials used on non-metallic substrates; and used substrates, post

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manufacture, such as, but not limited to, old joints and seals on pipe and valve assemblies.

[Rule 336, §305.2a.] [Locally enforceable only]

- (b) Adhesive Use: Adhesive and adhesive primer applications except those listed in Rule 336, §301, Table 1. Any adhesive exempted in Rule 336 and to which no other rule specifically applies shall comply with the provisions of Rule 330.
[Rule 336, §305.2b.] [Locally enforceable only]

- (c) Certain Joint Fillers: Caulking and beaded sealants used to fill gaps or to fill joints between surfaces except those used in manufacturing other metal parts and products as defined in Rule 336, §231 or in the manufacturing of cans.
[Rule 336, §305.2c.] [Locally enforceable only]

- (d) Extreme Performance Coatings: Extreme performance coatings when used under the following conditions:
- i. Used on internal combustion engine components that are normally above 250°F (121°C) during use; or
 - ii. Used at temperatures above 250°F (121°C) on items that are both included under SIC (Standard Industrial Classification, 1987) codes 3661, 3663, 3669, 3677, 3678, 3679, or 3769 and are electronic products in space vehicles and/or are communications equipment.

[Rule 336, §305.2d.] [Locally enforceable only]

- (e) Coating with an aerosol can.
[Rule 336, §305.4a.] [Locally enforceable only]

- (f) Touch up or repair-coating operations as defined in Rule 336 §250 and §240.
[Rule 336, §305.4b.] [Locally enforceable only]

- (g) Low usage coatings which in aggregate of all formulations do not exceed 55 gallons (208 liters) per year facility-wide if the operator updates usage-records of these coatings on each day of their use.
[Rule 336, §305.4c.] [Locally enforceable only]

- (h) A Quality Class Q protective coating.
[Rule 336, §305.4e.] [Locally enforceable only]

- (i) A tactical military-equipment coating.
[Rule 336, §305.4f.] [Locally enforceable only]

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4. The Permittee shall use solvent that has at 20 °C (68 °F) a total VOC vapor pressure below 35 mm Hg for cleaning coating-application equipment, unless such application equipment does not use spray devices and the same principal solvent is used for cleaning as is used in the coating.
[Rule 336, §§ 303.2 and 305.6] [Locally enforceable only]

c. **Architectural Coatings:**

The Permittee shall limit the volatile organic compound (VOC) content of architectural coatings as follows:

1. **Pavement Sealer:**

The Permittee shall not apply, sell, or offer for sale any architectural coating manufactured after July 13, 1988, which is recommended for use as a bituminous pavement sealer unless it is an emulsion type coating.

[Rule 335, §301]

2. **Non-Flat Architectural Coating:**

The Permittee shall not apply, sell, or offer for sale any non-flat architectural coating manufactured after July 13, 1990, which contains more than 2.1 lbs (250 g/l) of volatile organic compounds per gallon of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings listed in Condition 32.c.4.

[Rule 335, §303]

3. **Flat Architectural Coating:**

The Permittee shall not apply, sell, or offer for sale any flat architectural coating manufactured after July 13, 1989, which contains more than 2.1 lbs (250 g/l) of volatile organic compounds per gallon of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings listed in Condition 32.c.4.

[Rule 335, §304]

4. **Specialty Coatings:**

The Permittee shall not apply, sell, or offer for sale any architectural coating manufactured after July 13, 1991 that exceeds the limits listed in Rule 335 §305. The limits are expressed in pounds of VOC per gallon of coating as applied, excluding water and any colorant added to tint bases.

[Rule 335, §305]

5. **Exemptions:**

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The VOC content requirement of this Permit Condition shall not apply to the following:

- (a) Architectural coatings supplied in containers having capacities of one quart or less.
- (b) Architectural coatings recommended by the manufacturer for use solely as one or more of the following:
 - (1) Below ground wood preservative coatings.
 - (2) Bond breakers.
 - (3) Fire retardant coatings.
 - (4) Graphic arts coatings (sign paints)
 - (5) Mastic texture coatings.
 - (6) Metallic pigmented coatings.
 - (7) Multi-colored paints.
 - (8) Quick-dry primers, sealers and undercoaters.
 - (9) Shellacs.
 - (10) Swimming pool paints.
 - (11) Tile-like glaze coatings.

[Rule 335, §§306 and 307]

34. Record Keeping:

- a. Surface Coating (Non-vehicle, Non-Wood furniture, Non-architectural):
 - 1. The Permittee shall retain the following records for a period of no less than five years and make them available to the Control Officer upon request:
[Rule 336, §501] [Locally enforceable only]
 - 2. A current list of coatings, adhesives, reducers, thinners, gun-cleaning materials, additives, and any other VOC-containing materials used for surface coating stating the VOC content of material for each as received (before thinning). The Permittee shall express VOC content in 1 of 3 forms: pounds VOC per gallon, grams VOC per liter, or the percent VOC by weight along with the specific gravity or density, (2 numbers are required).
[Rule 336, §501.1; Rule 345 §501.1] [Locally enforceable only]
 - 3. For all coatings (except those recorded each day of use per Rule 336, §305.4c., low usage allowance), the Permittee shall make the following listings for coatings and adhesives that have VOC limits in Rule 336, §301, Table 1.
 - (a) VOC Before Reducing: The VOC content of each coating as received, minus exempt compounds. (This figure is sometimes called the "EPA Method 24" VOC content on manufacturer's data sheets). If the coating is a multi-part coating, list the VOC content which the manufacturer states the coating will

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have once you have mixed all the necessary parts together in the proportions specified by the manufacturer.

[Rule 336, §501.1c.(1)(a)] [Locally enforceable only]

(b) List Maximum VOC Content Of Coating As Applied: For each coating that the Permittee thins/reduces or adds any additive to, the Permittee shall record in a permanent log either of the following:

- i. The maximum number of fluid ounces thinner/reducer that is ever added to a gallon of unreduced coating (or maximum g/liter), and the maximum fluid ounces of every other additive mixed into a gallon of the coating; or
- ii. The VOC content of the coating, after adding the maximum amount of thinner/reducer and other additives that would ever be added, as determined by the formula in Rule 336, §255.1.

[Rule 336, §501.1c.(1)(b)] [Locally enforceable only]

4. Applicator Cleanup Solvent: The Permittee shall have a hardcopy of the VOC vapor pressure (VP) at 20°C (68°F) of solvent(s) used to clean spray guns, hoses, reservoirs, and any other coating application equipment. Any one of the following ways of providing the VP data is sufficient:

- (a) A current manufacturer's technical data sheet;
- (b) A current manufacturer's safety data sheet (MSDS);
- (c) Actual test results; or
- (d) A letter signed by an official or lab manager of the supplying facility.

[Rule 336, §501.1c.(2)] [Locally enforceable only]

5. Usage Records:

(a) The Permittee shall update monthly the records of each coating used that complies with the VOC limits in Rule 336, §301, Table 1. This monthly update shall be completed by the end of the following month.

[Rule 336, §501.2b(1).] [Locally enforceable only]

In lieu of monthly use records, usage may be tracked by warehouse or storeroom issue records (either maintained manually or by computer). It will be assumed that the amount of material issued is immediately used upon issuance. This does not apply to any materials that require more frequent or detailed record keeping.

[Rule 220 §302.2] [Locally enforceable only]

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(b) The Permittee shall update daily the usage records of each coating that exceeds the limits in Rule 336, §301, Table 1, including coatings exempted by Rule 336, §305.4c.

[Rule 336, §501.2b(2).] [Locally enforceable only]

(c) Records shall include the type and amount used of each VOC-containing coating or adhesive. This includes, but is not limited to, thinners, surfacers, and diluents.

[Rule 336, §501.2.] [Locally enforceable only]

(d) For purposes of recording usage, coatings and adhesives that are in the same category in Table 1, and have similar VOC content, may be recorded under a name that includes the category name. The highest VOC content among the members of that grouping shall be assigned to that grouping, rounded to the nearest 10th of a pound. To identify what products belong within each group, after each group name and the group's VOC content of material must appear the name of each product in the group and its VOC content of material.

[Rule 336, §501.3.] [Locally enforceable only]

b. Vehicle Coatings:

1. The Permittee shall maintain written records in the facility which give the name or code number of each VOC-containing product and its VOC content as received. VOC content shall be expressed in pounds of VOC per gallon (or grams/liter), less water and non-precursors, excepting waterborne cleaners which shall include the water.

[Rule 345 §501.1] [Locally enforceable only]

2. The Permittee shall keep purchase records for the current and previous year showing the volume of each VOC-containing refinishing-related product purchased. Actual invoices and receipts showing the volume of the material purchased, or computerized warehouse records regarding material receipt and shipment, will suffice in place of ledger-style records.

[Rule 345 §501.2] [Locally enforceable only]

As an alternative to Permit Condition 34.b.2, the Permittee may track warehouse or storeroom issue records (either maintained manually or by computer) for monthly material usage. The Permittee may assume that the amount of material issued is immediately used upon issuance. This does not apply to any materials that require more frequent or detailed record keeping.

[Rule 220 §302.7] [Locally enforceable only]

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c. **Wood Furniture Coating:** This condition applies to wood furniture manufacturing per the Technical Guidance #98-007. Reconditioning and repair of furniture is subject to the record keeping requirements in Permit Condition 34.a. for reconditioning and repair of wood furniture and fixtures or Permit Condition 34.d. for architectural fixtures made of wood. The Permittee shall keep on the premises current records of all coating related materials currently used, and their VOC content. For this purpose, a complete, updated set of receipts/invoices and MSDSs will suffice if each receipt/invoice is retained on the premises at least two years.

1. Facility records shall demonstrate that no more than a total of 55 gallons (209 liters) of VOC-borne wood-product coatings plus VOC-solvent are used in any month and that such monthly total divided by that month's number of days of coating application does not exceed 3.0 gallons (11.4 liters); and
2. Records shall show that the facility emits less than 1814 kg (4000 lb) VOC, facility-wide per year from all wood-product coating operations including VOC in both solvent-borne and water-borne coatings, all VOC diluent added to coatings, all solvent cleaning and stripping, and VOC solvent used for coating equipment cleanup.
[Rule 342 §307.2d] [Locally enforceable only]

As an alternative to Permit Condition 34.c.2, the Permittee may track warehouse or storeroom issue records (either maintained manually or by computer) for monthly material usage. The Permittee may assume that the amount of material issued is immediately used upon issuance. This does not apply to any materials that require more frequent or detailed record keeping.
[Rule 220 §302.7] [Locally enforceable only]

d. **Architectural Coatings:**

1. The Permittee shall keep a material list of all coatings used. The material list shall contain name of each coating, short description of the material, pounds of VOCs per gallon of coating, excluding water and colorant added to tint bases and amount used. If the coating is exempt from the volatile organic compounds content requirements, the justification for the determination shall be documented and kept on file.
[Rule 330, §503.1] [Locally enforceable only]
2. Maintain monthly records of the amount of each coating; makeup solvent; solvent used for surface preparation, for cleanup, and for the removal of materials; and any other VOC-containing material used.
[Rule 330, §503.2] [Locally enforceable only]

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As an alternative to Permit Condition 34.d.2, the Permittee may track warehouse or storeroom issue records (either maintained manually or by computer) for monthly material usage. The Permittee may assume that the amount of material issued is immediately used upon issuance. This does not apply to any materials that require more frequent or detailed record keeping.
[Rule 220 §302.7] [Locally enforceable only]

- e. A coating material may be used for more than one type of activity. The Permittee shall maintain material purchase records for coating activities that emit regulated air pollutants. The Permittee does not have to maintain separate purchase records for each type of coating activity unless otherwise specified in this permit or the rule specific to the activity. However, upon request, the Permittee shall report coating usage by tracking the material purchase or warehouse or storeroom issue records by activity.
[Rule 220, §302.7] [Locally enforceable only]

35. Other:

- a. VOC Containment and Disposal: The Permittee shall:
 - 1. Cover and keep covered each VOC-containing material which is not currently in use. The Permittee shall store finishing and cleaning materials in closed or covered leak-free containers.
 - 2. Store all VOC-containing materials intended for disposal including, but not limited to, rags, waste coatings, waste brushes, waste rollers, waste applicators, waste solvents, and their residues, in closed, leakfree containers which are legibly labeled with their contents and which remain covered when not in use.

[Rule 336, §304; Rule 342 §305] [Locally enforceable only]

- 3. The Permittee shall store all VOC-containing materials subject to Rule 345, including but not limited to waste coatings, waste solvents and their residues, and rags in closed containers. A container must have a legible label identifying the container's contents and shall be kept closed except when contents are added or removed. Disposal of waste or surplus VOC-containing materials shall be done in a manner that inhibits VOC evaporation, such as having these materials hauled off site in sealed containers.
[Rule 345, §311] [Locally enforceable only]

- b. Vehicle Coating Mixing Requirements:

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To any vehicle refinish coating regulated by either Rule 345 §301, Table 1 or Rule 345 §302, Table 2, the Permittee shall not add VOC-containing thinner, reducer, or other diluent in proportions higher than those specified or recommended by the instructions provided by the supplier of the coating.

[Rule 345, §304.3] [Locally enforceable only]

c. Vehicle Coating Reporting:

1. If during a calendar year VOC emissions exceed 10,000 pounds from vehicle coating operations, the Permittee shall submit a report of such emissions on a form supplied by the Department after the end of that calendar year.

[Rule 345, §402.1] [Locally enforceable only]

2. If during a calendar year the Permittee meets or exceeds any of the following quantities associated with vehicle coating operations, the Control Officer must be notified of this fact in writing by February 28 (within two months) after the end of that calendar year:

(a) Used a total of 1,000 gallons (3,793 liters) of coating (with reducer and hardener); or

(b) Received a total of 1,300 gallons (3,793 liters) of cleaning solvents, lacquer thinner and wash thinner; or

(c) Disposed of more than 1,000 gallons (3,793 liters) or 6,000 pounds (2722 KG) of materials to a hazardous waste collection facility; or

(d) Submitted a total exceeding 9,000 pounds (4082 kilograms) of VOC emissions in the facility's most recently completed Maricopa County annual air emission inventory form.

[Rule 345, §402.2] [Locally enforceable only]

SOLVENT CLEANING OPERATIONS

36. Exemptions

a. Total Exemptions: The requirements of Permit Conditions 37 through 39 do not apply to:

1. Janitorial cleaning.

[Rule 331, §102.1.b]

2. Testing for surface cleanliness or the cleaning of laboratory equipment at the laboratory.

[Rule 331, §102.1.c]

3. A cleaning-solvent that meets any of the following:

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- A. is composed of at least 98% water by either weight or volume; or
 - B. contains only water and material which is a dry solid before mixing with water;
or
 - C. Has a VOC content no exceeding 20 grams per liter (0.17 lb/gal).
[Rule 331, §102.2d.]
4. The following cleaning operations that are not regulated by Rule 331:
- (a) Dry cleaning with petroleum solvents (Rule 333);
 - (b) Printing and graphic arts coating (Rule 337);
 - (c) Semiconductor manufacturing (Rule 338);
 - (d) Automotive windshield washer fluid (Rule 344); and
 - (e) Architectural Coating (Rule 335).
[Rule 331, §308.1.a]
5. Cleanup Of Coating-Application Equipment: Operations involving the cleanup of coating-application equipment that are regulated in Permit Conditions 32 through 35.
[Rule 331, §308.1.c(1)]
- b. Partial Exemptions:
- 1. The requirements of Permit Conditions 36.b. and 37b. through 37.e. do not apply to wipe cleaning.
[Rule 331, §308.2.a]
 - 2. The requirements of Permit Conditions 37.c. through 37.e. do not apply to any non-vapor cleaning machine (degreaser) or dip-tank fitting either of the following descriptions, except that these shall be covered when work is not being processed:
 - (a) A small cleaner having a liquid surface area of 1 square foot (0.09 square meters) or less, or
 - (b) A small cleaner having a maximum capacity of one gallon (3.79 liters) or less.
[Rule 331, §308.2.b]
 - 3. The prohibition against fans and fan drafts being close to ckening machines does not apply to a totally enclosed cleaning machine that cannot be penetrated by drafts.
[Rule 331, §308.4]
 - 4. Aerosol cans, squirt bottles, and other solvent containers intended for handheld use shall meet the requirements I Permit Conditions 37a. and 39.
[Rule 331, §308.6]

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5. A Low-VOC Cleaner (as defined in Rule 331) is subject only to Permit Conditions 37.a, 37.b, 37.e.1, 39.a.1, and 39.b.
[Rule 331, §308.7]

37. Operating Conditions

- a. Solvent Handling Requirements: The Permittee shall comply with all of the following:
1. All cleaning-solvent, including solvent soaked materials, shall be kept in closed leakfree containers that are opened only when adding or removing material.
 - (a) Porous or absorbent materials shall be stored in closed containers when not in use.
 - (b) Each container shall be clearly labeled with its contents.[Rule 331, §301.1]
 2. If any cleaning-solvent escapes from a container:
 - (a) Wipe up or otherwise remove immediately if in accessible areas.
 - (b) For areas where access is not feasible during normal production, remove as soon as reasonably possible.[Rule 331, §301.2]
 3. Unless records show that VOC-containing cleaning material was sent offsite for legal disposal, it will be assumed that it evaporated on site.
[Rule 331, §301.3]
- b. Equipment Requirements for All Cleaning Machines: When operating a cleaning machine, the Permittee shall comply with all of the following:
1. Provide a leakfree, impervious container (degreaser) for the solvents and the articles being cleaned.
 - (a) The VOC-containment portion shall be impervious to VOC-containing liquid and vapors.
 - (b) No surface of any freeboard required by this rule shall have an opening or duct through which VOC can escape to the atmosphere, except as controlled by an ECS, or as required by OSHA.[Rule 331, §302.1]
 2. Properly maintain and operate all cleaning machine equipment and any of its emission controls required by this permit or Rule 331.
[Rule 331, §302.2]

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- c. Specific Operating and Signage Requirements for Cleaning Machines: When cleaning with cleaning-solvent other than a Low-VOC Cleaner, the Permittee shall conform to all of the following operating requirements:
1. Operating Requirements:
 - (a) Fans: Do not locate nor position comfort fans in such a way as to direct airflow across the opening of any cleaning machine.
 - (b) Cover: Do not remove any device designed to cover the solvent unless processing work in the cleaning machine or maintaining the machine.
 - (c) Draining: Drain cleaned parts for at least 15 seconds after cleaning or until dripping ceases, whichever is later.
 - (d) Spraying: If using a cleaning-solvent spray system,
 - (1) Use only a continuous, undivided stream (not a fine, atomized, or shower type spray).
 - (2) Pressure at the orifice from which the solvent emerges shall not exceed 10 psig and shall not cause liquid solvent to splash outside of the solvent container.
 - (3) In an in-line cleaning machine, a shower-type spray is allowed, provided that the spraying is conducted in a totally confined space that is separated from the environment.
 - (4) Exceptions to foregoing Permit Conditions 37.c.1.D.(1), 37.c.1.D.(2), and 37.c.1.D.(3) are provided for in Permit Condition 37.e.
 - (e) Agitation: No person shall cause agitation of a cleaning-solvent in a cleaning machine by sparging with air or other gas. Covers shall be placed over ultrasonic cleaners when the cleaning cycle exceeds 15 seconds.
 - (f) No Porous Material:
 - (1) Do not clean nor use porous or absorbent materials to clean parts or products in a cleaning machine. Porous or absorbent materials include, but are not limited to, cloth, leather, wood and rope
 - (2) Do not place an object with a sealed wood handle, including a brush, in or on a cleaning machine.
 - (3) Do not place porous or absorbent materials, including, but not limited to, cloth, leather, wood, and rope on a cleaning machine.
 - (g) Vent Rates: The ventilation rate at the cleaning machine shall not exceed 65 cfm per square foot of evaporative surface ($20 \text{ m}^3/\text{min}./\text{m}^2$), unless that rate must be changed to meet a standard specified and certified by a Certified Safety Professional, a Certified Industrial Hygienist, or a licensed professional engineer experienced in ventilation, to meet health and safety requirements.
 - (h) Hoist Speed: Limit the vertical speed of mechanical hoists moving parts in and out of the cleaning machine to a maximum of 2.2 inches per second and 11 ft/min. (3.3 m/min.).

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- (i) Contamination Prevention: Prevent cross contamination of solvents regulated, per Permit Condition 36. Use signs, separated work-areas, or other effective means for this purpose. This includes those spray gun cleaning solvents that are regulated by other Permit Conditions.
- (j) Filtration Devices: If a filtration device (e.g. to remove oils, greases, sludge, and fine carbon from cleaning solvent) is inherent in the design of the cleaning machine, then such filtration device shall be operated in accordance with manufacturer's specifications and in accordance with the following requirements:
 - (1) The filtration device shall be fully submerged in cleaning solvent at all times during filtration.
 - (2) When the filtration device is completely saturated and must be removed from the cleaning machine, the filtration device shall be drained until no liquid can flow from the filtration device. Draining and drying such filtration device shall be conducted in a sealed container with no exhaust to the atmosphere or work area.
 - (3) After the filtration device is dry, the filtration device shall be stored in a closed, leakfree, impervious container that is legibly labeled with its contents and that remains covered when not in use. Disposal of the filtration device shall be done in a manner that inhibits VOC evaporation and that is in compliance with appropriate/legal methods of disposal.

[Rule 331, §303.1]

- 2. Signage Requirements: Any person who uses cleaning-solvent, other than Low-VOC Cleaner, in any solvent cleaning machine (degreaser) or dip tank shall provide on the machine, or within 3¼ feet (1 meter) of the machine, a permanent, conspicuous label or placard which includes, at a minimum, each of the following applicable instructions, or its equivalent:
 - (a) "Keep cover closed when parts are not being handled." (This is not required for remote reservoir cleaners.)
 - (b) "Drain parts until they can be removed without dripping."
 - (c) "Do not blow off parts before they have stopped dripping."
 - (d) "Wipe up spills and drips as soon as possible; store used spill rags [or 'wiping material'] in covered container."
 - (e) "Don't leave cloth or any absorbent materials in or on this tank."
 - (f) For cleaning machines with moving parts such as hoists, pumps, or conveyors, post: "Operating instructions can be obtained from _____," listing a person or place where the instructions are available.

[Rule 331, §303.2]

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- d. Non-Vapor Batch Cleaning Machines: Low-VOC Cleaners are exempt from this section.
1. With Remote Reservoir: A batch cleaning machine with remote reservoir, including cabinet type(s), shall be equipped with the following:
 - (a) A sink-like work area or basin which is sloped sufficiently towards the drain so as to prevent pooling of cleaning-solvent.
 - (b) A single, unimpeded drain opening or cluster of openings served by a single drain for the cleaning-solvent to flow from the sink into the enclosed reservoir. Such opening(s) shall be contained within a contiguous area not larger than 15.5 square inches (100 cm²).
 - (c) Solvent Return: Provide a means for drainage of cleaned parts such that the drained solvent is returned to the cleaning machine.

[Rule 331, §305.1]

2. Cleaning Machine With Internal Reservoir (Non-Remote): A batch cleaning machine without a remote reservoir shall be equipped with all of the following:
 - (a) Have and use an internal drainage rack or other assembly that confines within the freeboard all cleaning-solvent dripping from parts and returns it to the hold of the cleaning machine (degreaser); and
 - (b) Have an impervious cover which when closed prevents cleaning-solvent vapors in the cleaning machine from escaping into the air/atmosphere when not processing work in the cleaning machine.
 - (i) A cover shall be fitted so that in its closed position the cover is between the cleaning-solvent and any lip exhaust or other safety vent, except that such position of cover and venting may be altered by an operator for valid concerns of flammability established in writing and certified to by a Certified Safety Professional or a Certified Industrial Hygienist to meet health and safety requirements.
 - (ii) A cover is not required when an ECS is used in accordance with Permit Condition 37.e.4.
 - (c) In the absence of additional applicable freeboard standards, freeboard height shall be not less than 6 inches (15.2 cm); and
 - (d) The freeboard zone shall have a permanent, conspicuous mark that locates the maximum allowable solvent level which conforms to the applicable freeboard requirements.

[Rule 331, §305.2]

3. Using Cleaning-Solvent That Is Heated, Agitated, Or Is Non-Conforming: If a cleaning machine uses a cleaning-solvent at a temperature above 120°F (49°C), uses non-conforming solvent, or agitates the solvent, then comply with one of the following:

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- (a) Remote Reservoir Cleaning Machines: For a remote reservoir cleaning machine, comply with Permit Condition 37.d.1 and, in addition, use a stopper in the drain or a cover covering the sink whenever the sink or cabinet is empty of solvent and nothing is being handled in the sink.
- (b) Cleaning Machines With Internal Reservoir: A person using a cleaning machine that has an internal reservoir shall comply with Permit Condition 37.d.2 and either subsection (1) or (2) that follow:
 - (1) A Water Cover: A floating layer of water (insoluble in the solvent) at least 1 inch thick, and a freeboard at least 6 inches above the top of the solvent shall be present; or
 - (2) Freeboard an Cover:
 - (i) The basin shall have a freeboard ratio of 0.75 or greater and an impervious cover shall cover the basin whenever work is not being processed; and
 - (ii) If a non-conforming solvent is used, the cover shall be of a sliding or rolling type which is designed to easily open and close in a horizontal plane without disturbing the vapor zone.
- (c) Cabinet Style: Keep a cabinet-style cleaning machine closed at all times that it contains cleaning-solvent, except when introducing or removing work from the machine. If blasting or misting with cleaning-solvent, also conform to the applicable requirements of Permit Condition 37.e.

[Rule 331, §305.3]

- 4. ECS Alternative: An operator is allowed to meet the requirements of any one or combination of the requirements of Permit Condition 37.d.1, d.2, and/or d.3 by operating an ECS in accordance with subsection IV of the Appendix of Rule 331 whenever any requirement of subsections Permit Condition 37.d.1, d.2, and/or d.3 is not met.

[Rule 331, §305.4]

- e. Special Non-Vapor Cleaning Situations:
 - 1. Blasting/Misting With Conforming Solvent: Any person blasting or misting with conforming solvent shall operate and equip the device(s) as follows:

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- (a) Equipment: The device shall have internal drainage, a reservoir or sump, and a completely enclosed cleaning chamber, designed so as to prevent any perceptible liquid from emerging from the device; and
- (b) Operation: The device shall be operated such that there is no perceptible leakage from the device except for incidental drops from drained, removed parts.

[Rule 331, §307.1]

- 2. Blasting/Misting With Non-conforming Solvent: Any person shall use a Sealed System pursuant to Rule 331 §304.3 for all blasting or misting with a non-conforming solvent.

[Rule 331, §307.2]

- 3. High Pressure Flushing: Cleaning systems using cleaning-solvent that emerges from an object undergoing flushing with a visible mist or at a pressure exceeding 10 psig, shall comply as follows:

- (a) Conforming Solvent: For conforming solvent, use a containment system that is designed to prevent any perceptible cleaning-solvent liquid from becoming airborne outside the containment system, such as a completely enclosed chamber.

- (b) Non-Conforming Solvent: Use a Sealed System for non-conforming solvent.

[Rule 331, §307.3]

- 4. ECS Alternative: A person is allowed to meet the requirement(s) Permit Condition 37.e.1 and/or 37.e.2 by operating an ECS that controls VOC vapor from processes addressed by the requirement(s); the ECS shall be operated pursuant to subsection IV of the Appendix to Rule 331. The Permittee shall submit a permit revision for the installation of an ECS per Rule 220 Section 403.

[Rule 331, §307.4]

38. Solvent Specifications for Non-Vapor Cleaning/Degreasing:

All cleaning solvents, except Low-VOC Cleaners, used in non-boiling cleaning machines shall comply with one of the following:

- a. Use a cleaning-solvent having a total VOC vapor pressure at 68°F (20°C) not exceeding 1 millimeter of mercury column.

[Rule 331, §304.1]

- b. Use an Emission Control System (ECS) to capture and process VOC emissions per subsection IV of the Appendix to Rule 331. The Permittee shall submit a permit revision for the installation of an ECS per Rule 220 Section 403.

[Rule 331, §304.2]

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- c. **Sealed System:** Use a Sealed System that is an Air-tight or Airless Cleaning System which is operated according to the manufacturer's specifications and, unless otherwise indicated by the manufacturer, meets all of the following requirements:
1. Has a door or other pressure-sealing apparatus that is shut during each cleaning and drying cycle; and
 2. Has a differential pressure gauge that always indicates the pressure in the sealed chamber when occupied or in active use; and
 3. Any associated pressure relief device(s) shall be so designed and operated as to prevent liquid cleaning-solvents from draining out.

[Rule 331, §304.3]

39. Record Keeping:

The Permittee shall maintain the following records for a period of at least five years from the date of the records and make them available to the Control Officer upon request.

a. **Current list:**

1. Maintain a current list of cleaning-solvents; state the VOC-content of each in pounds VOC per gallon of material or grams per liter of material.
2. Any cleaning solvent used that is subject to the vapor-pressure limits of Permit Condition 38.a. shall have on site the written value of the total VOC vapor-pressure of each such solvent in one of the following forms:
 - (i) A manufacturer's technical data sheet,
 - (ii) A manufacturer's safety data sheet (MSDS), or
 - (iii) Actual test results.

[Rule 331, §501.1]

b. **Usage Records:**

1. **Monthly:** Records of the amount of cleaning-solvent used shall be updated by the end of month for the previous month. Show the type and amount of each make-up and all other cleaning-solvent to which this rule is applicable.
In lieu of monthly use records, usage may be tracked by warehouse or storeroom issue records (either maintained manually or by computer). It will be assumed that the amount of material issued is immediately used upon issuance. This does not apply to any materials that require more frequent record keeping.

[Rule 331, §501.2]

2. **Annually:**

- (a) **Certain Concentrates:** Use of concentrate that is used only in the formulation of Low VOC Cleaner shall be updated at least annually.

[Rule 331, §501.2]

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- (b) Low-VOC Cleaner: An owner or operator need not keep a record of a cleaning substance that is made by diluting a concentrate with water or non-precursor compound(s) to a level that qualifies as a Low VOC Cleaner if records of the concentrate usage are kept in accordance with this rule.
[Rule 331, §501.2]
 - (c) The Permittee shall calculate emissions of organic HAPs from cleaning activities at least annually.
[Rule 220, §302.2] [Locally enforceable only]
3. Grouping By VOC Content: For purposes of recording usage, an operator may give cleaning-solvents of similar VOC content a single group-name, distinct from any product names in the group. The total usage of all the products in that group are then recorded under just one name. (In such a case, the operator must also keep a separate list that identifies the product names of the particular solvents included under the group name). To the group name shall be assigned the highest VOC content among the members of that group, rounded to the nearest 10th of a pound of VOC per gallon of material, or to the nearest gram VOC per liter of material.
[Rule 331, §501.2]

ABRASIVE BLASTING OPERATIONS

40. Allowable Emissions:

- a. Opacity: The Permittee shall not discharge into the atmosphere from any abrasive blasting operation any air contaminant for an observation period or periods aggregating more than three minutes in any sixty minute period an opacity equal to or greater than 20 percent. Opacity shall be determined by observations of visible emissions conducted in accordance with EPA Reference Method 9 and Rule 312, Section 505.
 - 1. The Permittee shall conduct visible emission observations for all ECS equipment associated with abrasive blasting operations when the equipment is in operation.
 - 2. If visible emissions, other than uncombined water, are observed being discharged into the ambient air from the ECS equipment, the Permittee shall monitor for compliance with the opacity standard in accordance with EPA Reference Method 9 and Rule 312 Section 505 by a certified emissions evaluator. The initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the first Method 9 opacity reading shall be taken the next earliest day the emitting equipment is in operation. If the problem causing the initial visible emissions is corrected before the initial Method 9

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- opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity reading.
3. Follow-up Method 9 Opacity readings on the ECS equipment shall be performed by a certified visible emissions evaluator while the emitting equipment is in its standard mode of operation in accordance with the following schedule:
 - (a) Daily:
 - (1) Except as provided in Permit Condition 40.a.3(c), a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred.
 - (2) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with Permit Condition 40.a.3.(b)
 - (b) Weekly:
 - (1) If the Permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.
 - (2) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with Permit Condition 40.a.3.(a).
 - (3) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of Permit Condition 40.a.3.(c) are met.
 - (c) Cease Follow-up Method 9 Opacity Monitoring: Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emission, other than uncombined water, during every observation taken during a Method 9 procedure.
 4. The Permittee shall maintain records of all visible emissions observation results required by this permit condition for ECS equipment as well as any subsequent Method 9 observations and a description of any necessary corrective actions if any visible emission limits were exceeded.
 5. If any visible emissions (excluding water vapor) are detected or reported in excess of the limits specified in Permit Condition 40.a., the Permittee shall determine the cause and/or the source of the emissions. The Permittee shall then take immediate corrective action(s) and if necessary, shut down the applicable equipment. If visible emissions (excluding water vapor) exceed the limit set forth in Permit Condition 40.a. subsequent to implementing corrective action(s), the

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Permittee shall shut down the applicable equipment and institute repairs or changes necessary to ensure compliance prior to resuming operations.

[Rule 312, §§ 305 and 505] [Locally enforceable only]

- b. Exemptions: Permit Conditions 40 through 45 do not apply to self-contained, enclosed abrasive blasting equipment that is not vented to the atmosphere or is vented inside a building with the exhaust directed away from any opening to the building exterior, or hydroblasting.

[Rule 312, § 103] [Locally enforceable only]

41. Limitations for Blasting:

- a. All abrasive blasting operations shall be performed in a confined enclosure, unless one of the following conditions are met, in which case unconfined blasting according to Permit Condition 42 of this rule may be performed:

- 1. The item to be blasted exceeds 8 ft. in any one dimension, or
- 2. The surface being blasted is fixed in a permanent location, cannot easily be moved into a confined enclosure, and the surface is not normally dismantled or moved prior to abrasive blasting.

[Rule 312, §301] [Locally enforceable only]

- b. No dry unconfined abrasive blasting operation shall be conducted during a wind event.

[Rule 312, §306]

- c. Traffic Markers – Surface preparation for raised traffic delineating markers and pavement marking removal using abrasive blasting operations shall be performed by wet blasting, hydroblasting or vacuum blasting. Dry blasting may be performed using only certified abrasives when:

- 1. Removing pavement markings of less than 1,000 square feet
- 2. Performing surface preparation for raised traffic delineating markers of less than 1,000 square feet.

[Rule 312, §307] [Locally enforceable only]

42. Requirements for Unconfined Blasting:

- a. At least one of the following control measures shall be used:

- 1. Wet abrasive blasting,
- 2. Vacuum blasting, or
- 3. Dry abrasive blasting, provided that all of the following conditions are met:
 - (a) Perform only on a metal substrate.
 - (b) Use only certified abrasive for dry unconfined blasting.

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- (c) Blast only paint that is lead free (i.e. the lead content is less than 0.1 percent).
- (d) Perform the abrasive blasting operation directed away from unpaved surfaces.
- (e) Use the certified abrasive not more than once unless contaminants are separated from the abrasive through filtration and the abrasive conforms to its original size.

[Rule 312, §302] [Locally enforceable only]

- b. The Permittee shall clean up spent abrasive material with a potential to be transported during a wind event and, until removal occurs, shall, at a minimum, meet the provisions of Rule 310 regarding work practices.

[Rule 312, §308.1] [Locally enforceable only]

43. Requirements for Confined Blasting:

- a. Dry abrasive blasting in a confined enclosure with a forced air exhaust shall be conducted by implementing either of the following:
 - 1. Using a certified abrasive, or
 - 2. Venting to an ECS.

[Rule 312, §303] [Locally enforceable only]

- b. At the end of the work shift, the Permittee shall clean up spillage, carry-out, and/or trackout of any spent abrasive material with a potential to be transported during a wind event.

[Rule 312, §308.2] [Locally enforceable only]

44. Requirements for ECS and Monitoring Devices:

- a. Blasting equipment that vents to an ECS (buildings and/or enclosures are not considered control equipment), meeting the following two criteria, and is operated and maintained in accordance with manufacturer's specifications, is exempt from the requirements of this Permit Condition 44.b.:
 - 1. Is self-contained and the total internal volume of the blast section is 50 cubic feet or less, and
 - 2. Is vented to an ECS.

[Rule 312, §304] [Locally enforceable only]

- b. Operation and Maintenance (O&M) Plan Required for ECS

- 1. The Permittee shall provide and maintain, readily available at all times, an O&M Plan for any ECS, other emission processing equipment, and ECS monitoring devices that are used pursuant to Rule 312 or to an air pollution control permit.
- 2. Within 45 days after the date of permit issuance, the Permittee shall submit to the Control Officer for approval the O&M Plans of each ECS and each ECS

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monitoring device that is used pursuant to Rule 312, unless there is no change to the existing approved O&M Plan for the device(s).

3. The Permittee shall comply with all the identified actions and schedules provided in each O&M Plan.

[Rule 312, §304.1] [Locally enforceable only]

- c. **Installing and Maintaining ECS Monitoring Devices:** The Permittee, if operating an ECS pursuant to Rule 312, shall properly install and maintain in calibration, in good working order and in operation, devices described in the facility's O&M Plan that indicate temperatures, pressures, rates of flow, or other operating parameters necessary to determine if air pollution control equipment is functioning properly.

[Rule 312, §304.2] [Locally enforceable only]

45. Record Keeping:

At a minimum, the Permittee shall keep the following records on site, that are applicable to all abrasive blasting operations:

- a. If blasting operations occur daily or are a part of a facility's primary work activity, then the following shall be kept as a record:
 1. A list of the blasting equipment,
 2. The description of the type of blasting as confined, unconfined, sand, wet, or other,
 3. The locations of the blasting equipment or specify if the equipment is portable,
 4. A description of the ECS associated with the blasting operations,
 5. The days of the week blasting occurs, and
 6. The normal hours of operation.
- b. If blasting operations occur periodically, then the following shall be kept as a record:
 1. The date the blasting occurs,
 2. The blasting equipment that is operating,
 3. A description of the type of blasting, and
 4. A description of the ECS associated with the blasting operations.
- c. The type and amount of solid abrasive material consumed on a monthly basis. Include name of certified abrasive used, as applicable.
- d. Material Safety Data Sheets (MSDS) or results of any lead testing that was performed on paint that is to be removed via unconfined blasting, as applicable.

[Rule 312, § 501] [Locally enforceable only]

- e. The Permittee shall retain copies of reports, logs, and supporting documentation required by this permit for at least 2 years.

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[Rule 312, § 502] [Locally enforceable only]

WATER RECLAMATION OPERATIONS

46. Opacity:

- a. The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity.

[Rule 300 §301] [Locally enforceable only]

1. The Permittee shall conduct visible emission observations for all storage and supply silo dust collectors at least once per calendar quarter when the equipment is in operation.
2. If visible emissions, other than uncombined water, are observed being discharged into the ambient air from the dust collectors, the Permittee shall monitor for compliance with the opacity standard in accordance with EPA Reference Method 9 by a certified visible emissions evaluator. The initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next earliest day the emitting equipment is in operation. If the problem causing the initial visible emissions is corrected before the first Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.
3. Follow-up Method 9 Opacity readings on the dust collectors shall be performed by a certified visible emissions evaluator while the emitting equipment is in its standard mode of operation in accordance with the following schedule:
 - (a) Daily:
 - (1) Except as provided in Permit Condition 46.a.3(c) of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 reading have occurred.
 - (2) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with Permit Condition 46.a.3.(b).
 - (b) Weekly:
 - (1) If the Permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be

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decreased to once per week for any week in which the equipment is operated.

- (2) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with Permit Condition 46.a.3.(a).
- (3) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of Permit Condition 46.a.3.(c) are met.

(c) Cease Follow-up Method 9 Opacity Monitoring: Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

4. The Permittee shall maintain records of all visible emissions observation results required by this Permit Condition for the dust collectors as well as any subsequent Method 9 observations and a description of any necessary corrective actions if any visible emission limits were exceeded.
5. If any visible emissions (excluding water vapor) are detected or reported in excess of the limits specified in Permit Condition 46.a., the Permittee shall determine the cause and/or the source of the emissions. The Permittee shall then take immediate corrective action(s) and if necessary, shut down the applicable equipment. If visible emissions (excluding water vapor) exceed the limit specified in Permit Condition 46.a., subsequent to implementing corrective action(s), the Permittee shall shut down the applicable equipment and institute repairs or changes necessary to ensure compliance prior to resuming operations.

[Rule 220 302.5] [Locally enforceable only]

47. Operation and Maintenance (O&M) Plan:

The Permittee shall submit an O&M Plan to the Department for each dust collector. This O&M Plan shall be prepared in accordance with Department guidelines, and shall be submitted to the Department's Air Quality Compliance Manager within 45 days of the issuance of this permit, unless there is no change to the existing approved O&M Plan for the device(s).

The O&M Plans for each dust collector shall be maintained and readily available on-site at all times.

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The Permittee shall operate the lime, soda ash, and brinemaker storage and supply silos, along with the associated dust collectors in accordance with the O&M Plans submitted to the Department for approval.

[Rule 220, §302.5]

48. Record Keeping:

O&M Plan Records: Key system parameters such as flow rate, pressure drops, and other conditions necessary to determine if the dust collector is functioning properly, shall be recorded in accordance with the approved O&M Plan. These records shall account for periods when the control device was not operating.

[Rule 220, §302.7]

WASTEWATER TREATMENT OPERATIONS

49. Applicability:

The Permittee shall meet the requirements of Permit Conditions 50 and 51. If the Department should receive three (3) or more complaints regarding H₂S odors associated with wastewater treatment operations within any twelve (12) consecutive month period, the Permittee shall also comply with the requirements of Permit Conditions 52 and through 53.

[Rule 220, §302.2]

50. Hydrogen Sulfide Limitation:

The Permittee shall not emit hydrogen sulfide from any location in such a manner or amount that the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located exceeds 0.03 parts per million by volume for any averaging period of 30 minutes or more.

[Rule 320, §304]

51. Record Keeping:

The Permittee shall maintain maintenance history and operator logs for the wastewater treatment operation. These records shall be maintained for the determination of the following:

- a. The occurrence of any process upsets that would cause the release of hydrogen sulfide or other waste gases into the atmosphere. Examples of such upsets would include failure of the blowers in the recirculation of gases in the aeration process or a catastrophic failure of the biological reactor responsible for hydrogen sulfide removal.
- b. Repairs and schedules required to restore the treatment process after upset. The Permittee shall retain records of the operational parameter tests used to ensure proper operation of the process.

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[Rule 140, §501; Rule 220, §302.7] [Locally enforceable only]

52. Compliance Demonstration:

Within 90 days after the issuance of this permit or the receipt of a written request from the Department, the Permittee shall perform a compliance demonstration by one of the following methods:

- a. Conduct a test to monitor hydrogen sulfide levels, or
- b. Conduct an engineering evaluation (air dispersion modeling and analysis) to determine the hydrogen sulfide concentration levels.

The compliance demonstration shall be performed at a location representing the nearest occupied place beyond the premises on which the source of hydrogen sulfide is located.

The Permittee shall perform an additional compliance demonstration within 6 months of completing the initial demonstration. If the average hydrogen sulfide concentration is less than 0.03 ppm in any of the first two compliance demonstrations, the monitoring shall be subsequently conducted on an annual basis. If the hydrogen sulfide concentration is less than 0.03 ppm for two consecutive annual compliance demonstrations, compliance demonstrations will no longer be required. If results from any annual compliance demonstration indicate that the hydrogen sulfide concentration is greater than 0.03 ppm, the Permittee shall return to the semi-annual compliance demonstration schedule.

The Permittee shall submit a report to the Compliance Manager of the Maricopa County Environmental Services Department detailing the results of each compliance demonstration within 30 days of completion of each demonstration.

[Rule 220, §302.5; Rule 320, §304]

53. Compliance Plan:

In the event of an exceedance of hydrogen sulfide, the Permittee shall submit a Compliance Plan to the Compliance Manager of the Maricopa County Environmental Services Department for approval. The Compliance Plan shall include:

- a. Technological evaluation of additional odor control alternatives at the plant.
- b. Additional monitoring and/or air dispersion modeling to determine property line concentration of hydrogen sulfide based on the implementation of selected odor control alternatives.
- c. Conceptual design and preliminary cost estimate for the proposed odor control alternatives.
- d. Schedule for design and construction of the proposed control alternatives.

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e. Description of recommended actions.

The Permittee shall complete and submit the Compliance Plan within 120 days of exceeding the hydrogen sulfide emission limitation.
[Rule 220, §303]

COOLING TOWERS OPERATIONS

54. Operating Limitations:

The Permittee shall limit the total dissolved solids (TDS) concentration of the circulating water of each cooling tower unit to 30,000 ppm. The Permittee may calculate this value as a rolling average for the month based on the weekly TDS sampling described below.

[Rule 220, §302.2]

55. Monitoring & Record Keeping:

The Permittee shall conduct the following monitoring and shall retain records on-site for a period of no less than 5 years from the date of such record.

a. Total Dissolved Solids Concentration (TDS):

1. On a weekly basis, when the towers are in operation, the Permittee shall measure and record the TDS concentration in the circulating water of each unit cooling tower system (only one sample is required for each unit cooling tower system. A cooling tower system consists of three towers and a common circulating water system.). If the towers are not in operation on the scheduled day for sampling, the Permittee shall obtain a sample on the next day the cooling tower is operating.
2. On a monthly basis, the Permittee shall calculate and record an arithmetic average of the weekly samples collected in the calendar month.
3. On a monthly basis, when the portable cooling tower is in operation, the Permittee shall measure and record the TDS concentration in the circulating water of each portable cooling tower system. If the towers are not in operation for the entire month, no sample is required.

[Rule 220 §302.5] [Locally enforceable only]

b. Emissions Calculations:

1. On a monthly basis within 20 days following the end of each calendar month, the Permittee shall calculate and record PM10 emissions from each cooling tower unit using the applicable equation specified below. Emissions from the portable cooling tower are not required to be calculated during months it has not been operated:

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(a) For each unit cooling tower system (one for each of Units 1, 2, and 3), monthly emissions shall be calculated using the following equation:

$$PM_{10} = (8.4 \times 10^{-6})(24)(60) (F_1) (F_D) (CFR) (TDS) (D)$$

$$PM_{10} = 0.0121 (F_1) (F_D) (CFR) (TDS) (D)$$

where,

PM₁₀ = PM₁₀ emissions (tons/number of operating days);

CFR = circulating water flowrate in gallons per minute;

TDS = the monthly average total dissolved solids concentration (ppm);

D = the cumulative days of cooling tower operation during the month (days).

F₁ = 0.00001 (0.00075% from salt drift study);

F_D = the cumulative mass fraction of drift droplets emitted that will result in PM₁₀ emissions determined by linear interpolation from Table 1 using the droplet diameter calculated from the following equation:

$$D_c = \frac{1301}{TDS^{1/3}}$$

where:

D_c = the drift droplet diameter that will evaporate and produce a solid particle with a diameter of 10 microns.

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Table 1
PVNGS Unit Cooling Tower Particle Size Distribution

D_c Droplet Diameter (micron, μm)	F_D Cumulative Mass Fraction ($<$ Diameter)	D_c Droplet Diameter (micron, μm)	F_D Cumulative Mass Fraction ($<$ Diameter)
0	0.00000	475	0.36724
15	0.00009	550	0.39493
25	0.00036	650	0.40655
35	0.00500	750	0.41994
45	0.02828	850	0.43192
55	0.06739	950	0.44923
65	0.09640	1100	0.47234
85	0.12894	1300	0.51496
100	0.14447	1500	0.56629
120	0.15897	1700	0.59469
140	0.17381	1900	0.65639
165	0.19692	2100	0.71808
195	0.21905	2300	0.84833
225	0.23927	2500	0.84833
255	0.25994	2700	0.84833
285	0.27691	2900	0.90231
325	0.30455	3100	0.90231
375	0.32817	3300	0.90231
425	0.34979	3500	1.00000

After the completion of the source test in Permit Condition 56, and after the Permittee has received a written approval of the source test report by the Department, the Permittee

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shall use the results of the source test to update F_D in Table 1 and F_1 , to calculate and report cooling tower emissions in Permit Condition 55b.

(b) For the Portable Cooling Tower (Tower Tech, Model 875460 M.S.):

$$PM10 = (7.26 \times 10^{-7}) (TDS) (D)$$

where,

PM10 = PM10 emissions (tons)

TDS = the actual TDS concentration of the circulating water of the cooling tower for the month it is in operation;

D = the number of operating days the cooling tower operated during the month (days)

[Rule 220 §302.5] [Locally enforceable only]

c. Cooling Tower Inspections:

1. During a Unit refueling outage, the Permittee shall conduct an inspection of the drift eliminators and water spray distribution systems of the cooling towers associated with the outage to ensure proper operation. The Permittee shall maintain a log of the inspections indicating, at a minimum, the following information:

(a) Date(s) of inspection;

(b) Name of person responsible for overseeing the inspection;

(c) Identification of the cooling tower;

(d) Condition of the drift eliminators;

(e) Condition of the water spray distribution system; and

(f) Description of any repairs or maintenance activities conducted.

[Rule 220, §302.5] [Locally enforceable only]

2. The Permittee shall notify the Department in writing at least 30 days in advance of the actual time and date of the inspection so that the Department may have a representative attend.

[Rule 220, §302.2] [Locally enforceable only]

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56. Emissions Testing:

- a. The Permittee shall conduct an emissions test on Cooling Tower Unit 1, 2, or 3 (to be chosen by the Department) to demonstrate the values for use in the cooling tower monitoring described in Permit Condition 55. The Permittee shall conduct appropriate testing for demonstrating F_1 , the site specific drift factor, and F_D , the fraction of drift droplets that become PM10. Testing shall be conducted within 60 days after the issuance date of this permit. The testing deadline may be extended by the Control Officer for good cause, but in no case shall the testing deadline extend beyond 180 days after the issuance of this permit. If the Permittee requests an extension, the Permittee shall submit a written request to the Control Officer no later than 30 days after the issuance date of this permit.

[Rule 200, §309.2; Rule 270 §401] [Locally enforceable only]

- b. Compliance with Emission Limits: The results of the testing shall be used to verify that the maximum projected PM10 emissions do not exceed 35.0 tons per year. In the event that the maximum emissions exceed 35.0 tons per year, the Permittee shall submit an application for permit modification per Rule 220 §405.3.

[Rule 200, §§ 309.2; Rule 270 §407] [Locally enforceable only]

- c. Test Methods and Procedures: The method used to determine the cooling tower drift rate and fraction of drift droplets that become PM10 emissions shall be consistent with the method reviewed and approved by the U.S. EPA pursuant to a letter from EPA to Maricopa County Environmental Services Department, dated March 27, 2003. The Permittee shall use the Heated Glass Bead Isokinetic (HGBIK) method and the Sensitive Paper method to determine the cooling tower PM10 emissions. The Permittee shall use the results of the HGBIK method to evaluate the sampling effectiveness of the Sensitive Paper method. An equivalent method may be used, if such method is approved in writing by the Control Officer.

[Rule 270, §402] [Locally enforceable only]

- d. Test Protocol: The Permittee shall submit a test protocol to the Air Quality Technical Services Unit Manager for review and approval at least 30 days prior to the emissions test. The Permittee shall also submit test protocols for measuring total dissolved solids (TDS) of the circulating water and the circulating water flowrate (CFR) of the cooling towers at least 30 days prior to the emissions test.

[Rule 270, §301.1] [Locally enforceable only]

- e. Test Conditions: Performance tests shall be conducted under conditions (i.e. TDS, CFR, water temperatures, etc.) that are representative of normal operations of the applicable equipment. The Permittee shall make available to the Control Officer such records as may be necessary to determine the conditions of the emissions tests. Operations during periods of start-up, shutdown, and malfunction shall not constitute

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representative conditions of emissions tests unless otherwise specified in the applicable standard.

[Rule 270, §403] [Locally enforceable only]

- f. Notice of testing: The Permittee shall notify the Department in writing at least two weeks prior to each emissions test to allow Department representatives to be present during testing. The notice shall include the date and time that the testing is to be conducted.

[Rule 270, §404] [Locally enforceable only]

- g. Testing Facilities Required: The Permittee shall provide, or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to such source.
2. Safe sampling platform(s).
3. Safe access to sampling platforms(s).
4. Utilities for sampling and testing equipment.

[Rule 270, §405] [Locally enforceable only]

- h. Test Report: Within four weeks after completion of testing, the Permittee shall submit the final test report to the manager of the Air Quality Technical Services Unit for review and approval. Upon written request by the Permittee, the final test report deadline may be extended by the Control Officer for good cause, but for not more than 60 days. The report shall summarize the results of the testing in sufficient detail to allow a compliance determination to be made.

[Rule 270, §301.1] [Locally enforceable only]

STEAM GENERATOR CLEANING OPERATIONS

57. Allowable Emissions:

The Permittee shall not discharge more than 15 pounds (6.8 kg) of volatile organic compounds into the atmosphere in any one day from any machine, equipment, device or other article in which any volatile organic compound or any material containing a volatile organic compound comes into contact with a flame or is evaporated at temperatures exceeding 200°F (93.3°C), in the presence of oxygen, unless the entire amount of such discharge has been reduced by using low VOC material containing no more than 20 percent VOC by volume (as determined by the applicable test method(s) and excluding nonprecursor organic compounds and water).

[Rule 330, §§301 and 304.3] [Locally enforceable only]

58. Opacity:

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The Permittee shall not discharge into the ambient air emissions of any air contaminant, other than uncombined water, in excess of 20% opacity from the condensing unit during operation of the reduction process.

[Rule 200, §309; Rule 220, §302.4; Rule 300, §301] [Locally enforceable only]

The Permittee shall observe the gas exhaust of the condensing unit while it is operating during the volume reduction process daily for visible emissions. If any visible emissions are observed, the Permittee shall investigate and take corrective action if necessary to bring the unit into proper operation. The Permittee shall log the results of the daily visible emission results and any corrective action taken to bring the unit into proper operation.

59. VOC Containment and Disposal:

The Permittee shall not store, discard, or dispose of VOC or VOC-containing material in a way intended to cause or to allow the evaporation of VOC to the atmosphere. Reasonable measures shall be taken to prevent such evaporation.

[Rule 330, §306] [Locally enforceable only]

60. Operating Requirements:

After the completion of the chemical cleaning process, the Permittee shall collect the used cleaning solution and rinse water in a storage tanks. To dispose of the used cleaning solution and rinse water collected in the storage tank, the Permittee shall process the solution to an electric evaporator to reduce the volume. The distillate of the evaporator shall be collected and condensed by use of a cooling tower, then collected in storage tanks to be discharged to the evaporation pond for treatment by biodegradation.

As an alternative, the Permittee may discharge the used cleaning solution and rinse water to a sanitary sewer system or use other means of disposal which do not allow the VOCs to escape into the atmosphere.

[Rule 200, §309] [Locally enforceable only]

OTHER

61. Dust Control Plan:

a. Within 60 days of the issuance of this permit, the Permittee shall submit a Dust Control Plan (Plan) to the compliance manager to prevent and/or minimize fugitive dust. The Plan shall contain, at a minimum, the following information, as required by Maricopa County Air Pollution Control Regulations Rule 310, Section 304.

b. The Dust Control Plan shall be kept onsite and readily available upon inspections.

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c. Opacity: The Permittee of a source engaging in dust generating operations and or activities shall not allow visible fugitive dust emissions to exceed 20%. Compliance with Rule 310 requirements shall be determined by conducting and following the test methods in Rule 310, Section 501, Appendix C.

d. If the Control Officer determines that an approved Dust Control Plan has been followed, yet fugitive dust emissions from any given fugitive dust source still exceed opacity limitations (Section 301) or stabilization requirements (Section 302) of Rule 310 for fugitive dust sources, then the Control Officer shall issue a written notice to the Permittee of such source explaining such determination. The Permittee shall make written revisions to the Dust Control Plan and shall submit such revised Dust Control Plan to the Control Officer within three working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon request, for good cause. During the time that the Permittee is preparing revisions to the approved Dust Control Plan, the Permittee must still comply with all requirements of Rule 310.

e. Wind Event: Exceedances of the opacity limit that occur due to a wind event shall constitute a violation of the opacity limit. However, it shall be affirmative defense in an enforcement action if the Permittee demonstrate all of the conditions as described in Rule 310, Section 301.1.

f. Recordkeeping: As per Rule 310, Sections 502 and 503, the Permittee shall keep a written daily log recording the actual application or implementation of the control measures delineated in the approved Dust Control Plan. Upon verbal or written request by the Control Officer, the log or the records and supporting documentation shall be provided within 48 hours, excluding weekends.

[Rule 310, §§301, 303, 304, 402.2, 500]

62. Open Outdoor Fires

- a. If the Permittee conducts open outdoor fire activities, the requirements of Rule 314 shall be met, as well as the following:
1. Each day of burning, the Permittee must call area fire department and this Department, (602) 506-6700, for permission to burn.
 2. Burning garbage, trash, debris, and salvage material is prohibited.
 3. Fire must not be left unattended, and adequate fire fighting systems must be on site.
 4. Creation of a smoke nuisance is prohibited.
 5. No burning during an air pollution advisory, unless allowed by exemptions.
 6. Open outdoor fires, unless allowed by exemptions, are only permitted:

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- (a) March 1 to September 30 during daylight hours and
- (b) October 1 to February 28 from noon to 4:00 P.M.

[Rule 314 §403]

b. Exemptions:

1. Domestic cooking for immediate human consumption.
2. Warmth for human beings.
3. Recreational purposes, where the combustible material is clean, dry wood, or charcoal.
4. Disposal of dangerous material.
 - (a) Disposal of dangerous material must be conducted in compliance with the Department of Environmental Quality's (ADEQ's) regulations.
 - (b) Before the Permittee conducts an open outdoor fire to dispose of dangerous material, the Permittee shall call the Control Officer to determine if a restricted-burn period has been declared and obtain permission to burn.
5. Fire extinguisher training. This exemption applies only when the training is limited to using a small amount of flammable liquid and a small container (i.e., a wastepaper basket or a flat pan).
6. Fire fighting training areas and training structures.
 - (a) This exemption applies only if the sole source of flame is a burner fueled by either liquefied petroleum gas or natural gas, with a British Thermal Unit (BTU) input per hour rating of less than 2,000,000 BTUs.
 - (b) Before the Permittee conducts an open outdoor fire for fire fighting training areas and training structures, the Permittee shall call the Control Officer to determine if a restricted-burn period has been declared and obtain permission to burn.

[Rule 314, §303]

63. Nonroad Engines:

- a. Nonroad engines are defined in paragraph b of this permit condition. The Permittee shall operate non-road engines which meet the definition in paragraph b of this permit condition by keeping a log of those on site at all times. The log does not have to contain engines associated with trivial or insignificant activities as described in Appendices D and E of the Maricopa County Air Pollution Control Rules and Regulations. This log shall be made available for inspection upon request. The log shall contain the following information:
 1. Date engine is received by the facility or identify that the engine is part of the Permittee's permanent fleet;
 2. The engine identification, rated capacity, and purpose;
 3. Location where the engine is being used and duration, in total days, at that location;

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4. Location where the engine is being stored and not in-use at the laydown yard, and duration at that location.

[Rule 220 §302.5] [Locally enforceable only]

b. Definition of Nonroad Engines:

- (1) Except as discussed in paragraph (2) of this definition, a nonroad engine is any internal combustion engine:

- (i) In or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or
- (ii) In or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or
- (iii) That, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

- (2) An internal combustion engine is not a nonroad engine if:

- (i) The engine is used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under section 202 [Motor Vehicle Emission and Fuel Standards] of the Act; or
- (ii) The engine is regulated by a federal New Source Performance Standard promulgated under section 111 of the Act; or
- (iii) The engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year. This paragraph does not apply to an engine after the engine is removed from the location.

[40 CFR §89.2]

- c. For nonroad engines using diesel fuel, the Permittee is limited to diesel fuel with a sulfur content of 0.05% sulfur by weight or less.

[Rule 200 §309; Rule 220 §302.2; Rule 320 §305] [Locally enforceable only]

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If proof of the sulfur content is requested by the Control Officer, the Permittee shall submit fuel receipts, contract specifications, pipeline meter tickets or Material Safety Data Sheets (MSDS), if applicable, from the fuel supplier indicating the sulfur content of the fuel oil. In lieu of these, testing of the fuel oil for sulfur content to meet the 0.05% limit shall be permitted if so desired by the Permittee for evidence of compliance.

[Rule 220 §302.7] [Locally enforceable only]

- d. The Permittee shall follow the requirements under Permit Condition 22 for this equipment.

[Rule 200 §309; Rule 220 §302.7] [Locally enforceable only]

64. Portable Sources:

For the use of portable sources that are owned by the Permittee, or leased and permitted by outside contractors or contract service organizations, the Permittee shall quantify emissions of portable sources, as defined in Rule 100, which are operating on site, for the purposes of emissions reporting and compliance with the allowable emissions in Permit Condition 21 per the definition of Building, Structure, Facility, or Installation in Rule 100. If a portable source meets the definition of Nonroad Engine as stated in Permit Condition 64, then it is not subject to this condition.

[Rule 200 §§309, 410a] [Locally enforceable only]

[Rule 220 §§302.2, 304]

Rule 200, Section 410: Permit Requirements for Portable Sources:

- a. A portable source which will operate for the duration of its permit solely in Maricopa County and is subject to Sections 410.2, 410.3, and 410.4 of Rule 200. A portable source with a current State of Arizona permit need not obtain a Maricopa County permit but is subject to Sections 410.3, 410.4, and 410.5 of Rule 200. Any permit for a portable source shall contain conditions that will assure compliance with all applicable requirements at all authorized locations.
- b. An owner or operator of a portable source which has a Maricopa County permit but proposes to operate outside of Maricopa County shall obtain a permit from the Arizona Department of Environmental Quality Director (Director). Upon issuance of a permit by the Director, the Control Officer shall terminate the Maricopa County permit for that source. If the owner or operator relocates the portable source in Maricopa County, the owner or operator shall notify the Control Officer, as required by Section 410.4 of Rule 200, of the relocation of the portable source. Whenever the owner or operator of a portable source operates a portable source in Maricopa County, such owner or operator shall comply with all regulatory requirements.

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- c. An owner of a portable source which requires a permit under Rule 200 shall obtain the permit prior to renting or leasing said portable source. This permit shall be provided by the owner to the renter or lessee, and the renter or lessee shall be bound by the permit provisions. In the event a copy of the permit is not provided to the renter or lessee, both the owner and the renter or lessee shall be responsible for the operation of the portable source in compliance with these permit conditions and any violations thereof.
- d. A portable source may be transported from one location to another within or across Maricopa County boundaries provided the owner or operator of such portable source notifies the Director and any Control Officer who has jurisdiction over the geographic area that includes the new location of the portable source by certified mail at least ten working days before the portable source is transported to the new location. The notification required under this rule shall include:
 - 1. A description of the portable source to be transported including the Maricopa County permit number or the State of Arizona permit number for such portable source;
 - 2. A description of the present location;
 - 3. A description of the location to which the portable source is to be transported, including the availability of all utilities, such as water and electricity, necessary for the proper operation of all control equipment;
 - 4. The date on which the portable source is to be moved;
 - 5. The date on which operation of the portable source will begin at the new location; and
 - 6. The duration of operation at the new location.
- e. An owner or operator of a portable source with a current State of Arizona permit that moves such portable source into Maricopa County shall notify the Control Officer that such portable source is being transported to a new location and shall include in such notification a copy of the State of Arizona permit and a copy of any conditions imposed by the State of Arizona permit. The source shall be subject to all regulatory requirements of these rules.

[Rule 200 §410]

65. Compliance Plan:

On or before May 20, 2005, the Permittee shall comply with Rule 320 §305. Compliance with Rule 320 §305 shall be achieved by removing the high sulfur diesel fuel in the Technical Support Center (TSC) emergency generator fuel tank and the Security emergency diesel generator fuel tank. On or before May 20, 2005, the Permittee shall submit a letter signed by a responsible official confirming that the high sulfur diesel fuel in the Technical Support Center (TSC) emergency generator fuel tank and the Security emergency diesel generator fuel tank has been removed.

[Rule 220 §303]

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Equipment List

PALO VERDE NUCLEAR GENERATING STATION

Date Issued: 07/06/05

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Equipment Description	Rated Capacity	Quantity Exist/Future
FUEL BURNING EQUIPMENT		
1. BOILER - AUXILIARY BOILER, DIESEL, ZURN, MODEL SAO-DAR-42	249.00 MM BTU/HR	1 /
2. HEATER - PORTABLE AIR HEATER, LPG, INDUSTRIAL COMBUSTION ENGINEERS, MODEL 3000V	2.50 MM BTU/HR	1 /
IC ENGINES AND TURBINES		
1. EMERGENCY GENERATOR - DIESEL, COOPER BESSEMER, MODEL KSV-20-T	7,670.00 HP	6 /
2. EMERGENCY GENERATOR - DIESEL GAS TURBINE, SOLAR TURBINES, MODEL T-6501	4,270.00 KW	2 /
3. EMERGENCY GENERATOR - DIESEL, FIRE PROTECTION PUMP GENERATOR, CUMMINS, MODEL N-855-F	190.00 HP	2 /
4. EMERGENCY GENERATOR - DIESEL, SECURITY GENERATOR, CATERPILLAR, MODEL 3306	227.00 HP	1 /
5. EMERGENCY GENERATOR - DIESEL, TECHNICAL SUPPORT CENTER GENERATOR, DETROIT DIESEL,	1,000.00 HP	1 /
6. EMERGENCY GENERATOR - DIESEL, BUILDING A GENERATOR, CUMMINS, MODEL KTA19-G2	600.00 HP	1 /
7. EMERGENCY GENERATOR - DIESEL, BUILDING B GENERATOR, JOHN DEERE, MODEL 6076A	289.00 HP	1 /
8. EMERGENCY GENERATOR - DIESEL, CHEMICAL STORAGE BUILDING GENERATOR, JOHN DEERE, MODEL 6059T/1875F	149.00 HP	1 /
9. EMERGENCY GENERATOR - DIESEL, GAS TURBINE STARTER, CATERPILLAR, MODEL 3208T	250.00 HP	2 /
PETROLEUM STORAGE		
1. TANK, ABOVEGROUND STORAGE - GASOLINE	12,000.00 GALLON(S)	1 /
2. TANK, ABOVEGROUND STORAGE - GASOLINE	20,000.00 GALLON(S)	1 /
SPRAY COATING		
1. SPRAY BOOTH - 26' X 14' X 9' (INSIDE DIMENSIONS)	12,500.00 CFM	1 /
2. GUN CLEANER - MODEL #40-3550		1 /
SOLVENT CLEANING EQUIPMENT		
1. COLD CLEANER W/O REMOTE RESERVOIR - ID NOS: PW-1 THRU -3, -5, -6, -8, -14 THRU -17, -20	40.00 GALLON(S)	11 /
2. COLD CLEANER W/ REMOTE RESERVOIR - PW-21	5.00 GALLON(S)	1 /
3. COLD CLEANER W/ REMOTE RESERVOIR - PW-25, -33	40.00 GALLON(S)	2 /
4. COLD CLEANER W/ REMOTE RESERVOIR - PW-26	8.00 GALLON(S)	1 /
5. COLD CLEANER W/ REMOTE RESERVOIR - PW-35, GRAYMILLS, INSTALL 3/2004	6.00 GALLON(S)	1 /
ABRASIVE BLASTING EQUIPMENT		
1. ABRASIVE BLAST ENCLOSURE - MAIN ABRASIVE BLAST BOOTH W/ DUST COLLECTOR	11,000.00 CFM	1 /
2. ABRASIVE BLAST ENCLOSURE - RADWASTE BUILDING DECONTAMINATION BOOTH W/ MIST ELIMINATOR	1,300.00 CFM	3 /
3. ABRASIVE BLAST ENCLOSURE - LAUNDRY FACILITY DECONTAMINATION BOOTH W/ MIST ELIMINATOR	1,300.00 CFM	1 /

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Equipment Description	Rated Capacity	Quantity Exist/Future
4. ABRASIVE BLAST ENCLOSURE - COATINGS FACILITY ENCLOSED BLAST AREA		1 /
5. HOPPER - ABRASIVE STORAGE HOPPER W/ HEPA FILTER	1,100.00 CFM	1 /
6. DUST COLLECTOR - PORTABLE DUST COLLECTOR, FARR MODEL TENKAY 8D	6,800.00 CFM	1 /
7. EQUIPMENT - PORTABLE ABRASIVE VACUUM RECOVERY SYSTEM, IPEC MODEL TR-32	700.00 CFM	1 /
8. EQUIPMENT - PORTABLE ABRASIVE VACUUM RECOVERY SYSTEM, CLEMCO MODEL ELS-4-290	290.00 CFM	1 /
9. DUST COLLECTOR - PORTABLE DUST COLLECTOR, CINCINNATI FAN MODEL 200S	1,100.00 CFM	1 /
WATER RECLAMATION EQUIPMENT		
1. FILTER - LIME FILTER/SEPARATOR, MIKROPUL MODEL 55-8-FV	40,000.00 LB(S)/HR	1 /
2. SILO - LIME STORAGE SILO, PEABODY TECTANK, BOLTED STEEL TANK	663,500.00 POUND(S)	9 /
3. SILO - LIME SUPPLY SILO, PEABODY TECTANK, BOLTED STEEL TANK	50,500.00 POUND(S)	6 /
4. FILTER - LIME FILTER/SEPARATOR, ID NO: AWLSNS01	518.00 SQ FT	1 /
5. DUST COLLECTOR - LIME DUST COLLECTOR, ID NOS: AWLSNS02A THRU AWLSNS02I & AWLSNS03A THRU AWLSNS03F	189.00 SQ FT	15 /
6. FILTER - SODA ASH FILTER/SEPARATOR, MIKROPUL MODEL 55-8-FV	40,000.00 LB(S)/HR	1 /
7. SILO - SODA ASH STORAGE SILO, PEABODY TECTANK, BOLTED STEEL TANK	663,500.00 POUND(S)	6 /
8. SILO - SODA ASH SUPPLY SILO, PEABODY TECTANK, BOLTED STEEL TANK	59,200.00 POUND(S)	2 /
9. FILTER - SODA ASH FILTER/SEPARATOR, ID NO: AWNSXNS01	518.00 SQ FT	1 /
10. DUST COLLECTOR - SODA ASH DUST COLLECTOR, ID NOS: AWNSO2A THRU AWNSO2F & AWNSO3A, AWNSO3B	189.00 SQ FT	8 /
11. EQUIPMENT - BRINEMAKER, INTERNATIONAL SALT, MODEL 1230MACTEWGVVSNQ	132.00 TON(S)	2 /
COOLING TOWERS EQUIPMENT		
1. COOLING TOWERS - MARLEY MECHANICAL DRAFT CROSS FLOW, MODEL 77823-21-16	196,400.00 GPM	9 /
2. COOLING TOWERS - MODULAR COOLING TOWER, PORTABLE, TOWER TECH MODEL 875460 M.S.	6,000.00 GPM	1 /
STEAM GENERATOR CLEANING EQUIPMENT		
1. EQUIPMENT - UNIT STEAM GENERATOR	36,970.00 GALLON(S)	2 /
2. TANK - WATER STORAGE	40,000.00 GALLON(S)	5 /
3. EVAPORATOR - ELECTRIC	1,600.00 KW	1 /
4. SYSTEM - EVAPORATOR/CONDENSOR SYSTEM	6.00 GPM	1 /
5. COOLING TOWERS - BALTIMORE AIR COOLING MODEL VXT-105	23,000.00 CFM	1 /

Equipment List

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Equipment Description	Rated Capacity	Quantity Exist/Future
OTHER EQUIPMENT		
1. TANK - HYDRAZINE DAY TANK	260.00 GALLON(S)	6 /
De Minimis Equipment:		
1. EMERGENCY GENERATOR - DIESEL, NORTH ANNEX GENERATOR, GENERAC, MODEL 30DN	40.00 HP	1 /
2. PRESSURE WASHER - DIESEL, LANDA, MODEL SEHW 4-2000	385,000.00 BTU/HR	1 /
3. EQUIPMENT - FIRE EXTINGUISHER TRAINING UNIT, LPG, FTS, MODEL TUTOR	800,000.00 BTU/HR	1 /
4. GENERATOR - DIESEL, HURRICANE PUMP GENERATOR, CATERPILLAR, MODEL 3054	80.00 HP	2 /
5. BOILER - ABANDONED AUXILIARY BOILER; ZURN ID AN-B01; NOT IN USE	50,000.00 LB(S)/HR	1 /
6. FURNACE - RECALCINATION FURNACE AND CONTROL EQUIPMENT, NOT IN USE		1 /

