## **Bay Area Air Quality Management District**

939 Ellis Street San Francisco, CA 94109 (415) 771-6000

# STATEMENT OF BASIS and PERMIT EVALUATION

for

## MAJOR FACILITY REVIEW PERMIT: REOPENING, ADMINISTRATIVE AMENDMENTS, AND MINOR REVISIONS

West Contra Costa Sanitary Landfill, Inc. Facility #A1840

**Facility Address:** 

Foot of Parr Boulevard Richmond, CA 94801

**Mailing Address:** 

3260 Blume Drive, Suite 300 Richmond, CA 94806

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## Title V Statement of Basis for MFR Permit: Reopening, Administrative Amendments, and Minor Revisions

## A. Background

As discussed in the Statement of Basis for the initial Major Facility Review (MFR) Permit for the West Contra Costa Sanitary Landfill (Site # A1840), this facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212.

This facility received its initial Title V permit on May 29, 2002 with an expiration date of April 30, 2007. The main purpose of this action is to reopen the permit to add the requirements related to the NESHAP for Municipal Solid Waste Landfills (40 CFR 63, Subpart AAAA) that was promulgated on January 16, 2003. Reopening this permit is required by Regulation 2, Rule 6 and by EPA's Title V regulations, because the expiration date for the permit is more than three years from the date of promulgation of the standard. This action will also make administrative amendments and minor revisions in order to: (a) update facility contact information, (b) update citations and dates based on SIP approvals and other regulatory changes, (c) update standard sections of the permit that have changed since the permit was initially issued, (d) correct errors, and (e) clarify permit language.

Reopening a permit requires the same process as initial issuance per BAAQMD Regulation 2-6-415. The proposed permit shows all changes to the existing permit in strikeout/underline format.

## **B.** Facility Description

The West Contra Costa Sanitary Landfill, Inc. (WCCSL) site includes a landfill, landfill gas combustion equipment (three internal combustion engines and an enclosed ground flare), and leachate treatment equipment. All currently permitted operations are included in the existing MFR Permit for this facility. This permit reopening and revision action will not make any changes to the equipment list for this facility.

A closed Hazardous Waste Management Facility (HWMF) is located on contiguous property with the landfill. The District is evaluating an application for a collection and control system for the HWMF. If approved by the District, the HWMF collection and control system will be added to this MFR permit in a future revision action.

#### C. Permit Content

Since a Statement of Basis was prepared for the initial MFR Permit that fully describes and explains the legal and factual basis for the MFR Permit, this report will only address the proposed changes to the MFR Permit. Changes to the permit sections are described in the order that they are presented in the permit.

## Changes on Title Page:

- The facility contact information was revised to reflect staff changes at the facility.
- The name of the APCO was corrected to reflect staff changes at the District.

#### I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. The proposed revisions to this section are listed below.

- The dates of adoption of the rules listed in Standard Condition I.A.1 have been updated.
- Standard text was added to Condition I.B to describe the application shield for renewal permits from Regulation 2-6-407.

## II. Equipment

This section of the permit lists all permitted or significant sources and all abatement or control devices for these sources. This permit reopening and revision action will not make any changes to the equipment list for this facility. However, minor clarifications are being made to Table II-A, as described below.

- The description of the A-8 Landfill Gas Flare is being expanded by listing the materials that are burned in this flare (landfill gas) and the maximum firing rate (45 MM BTU/hour).
- In the "Limit or Efficiency" column, an obsolete total hydrocarbon (THC) limit was deleted. A reference to Table VII-B was also added, because Table VII-B provides the full list of applicable limits for A-8.

## III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources, portable equipment, and temporary sources that may not require a District permit. The following changes are proposed for this section:

- Several typographical errors were corrected.
- The language has been amended to say that the Generally Applicable Requirements table may also contain requirements that apply to temporary sources.
- The location of the SIP requirements was corrected by referring to EPA's web site.
- The adoption and amendment dates of the rules have been corrected. SIP rules were listed separately if the rule amendment has not yet been adopted into the SIP.
- Obsolete SIP rules and regulations were deleted.

• New rules have been added to this section because these rules could be generally applicable or apply to unpermitted or temporary sources.

## IV. Source-Specific Applicable Requirements

This section of the permit lists all the applicable requirements that apply to permitted or significant sources. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

## **Complex Applicability Determinations:**

As discussed in the Statement of Basis for the initial MFR Permit for WCCSL, this facility is subject to the Emission Guidelines for MSW Landfills (40 CFR Part 60, Subpart Cc). The California State Plan (40 CFR Part 62.1115) implements these emission guidelines for existing landfills in California. In the Bay Area, Regulation 8, Rule 34 implements the state plan and federal emission guidelines requirements. All applicable Regulation 8, Rule 34 requirements, the emission guidelines and the state plan are currently listed in Table IV-B. Other applicable District requirements for the S-15 Landfill and A-8 Flare are also listed in Table IV-B.

Landfill gas fired combustion equipment such as S-5, S-6, and S-37 are also subject to specific sections of Regulation 8, Rule 34 and other District regulations. All applicable requirements for these sources are listed in Tables IV-A and IV-F.

The NESHAP for Municipal Solid Waste Landfills (40 CFR 63, Subpart AAAA) was adopted in November 2002 with an effective date of January 16, 2003. Any landfills that are subject to the MSW Landfill NSPS or Emission Guidelines landfill gas collection and control requirements are also subject to this NESHAP. For landfills subject to the NESHAP at the date of adoption, the requirements became effective on January 16, 2004. This NESHAP did not add any new control requirements, but it did require the preparation of a Startup, Shutdown, Malfunction Plan (to be retained on-site at all times) and added new reporting requirements. These requirements were added to Section IV of the permit in Tables IV-A, IV-B, and IV-F.

#### Changes to Permit

## Standard Text Before Tables:

- Typographical errors were corrected.
- The location of the SIP requirements was corrected.

#### Table IV-A:

- BAAQMD Regulation 1 was replaced with the current version of BAAQMD Regulation 1 and SIP Regulation 1.
- The date format was corrected for consistency with the format of other dates cited in this permit.

- Several BAAQMD Regulation 8, Rule 34 requirements, future effective dates, and the SIP Regulation 8, Rule 34 requirements were deleted, because these requirements are now obsolete.
- BAAQMD Regulations 8-34-501.3 and 507 were deleted because these record keeping and monitoring requirements apply to flares. Engines are subject to 8-34-501.11 and 509 instead, which were already listed for these engines. The basis for a related permit condition (Condition # 5771, Part 10) was also corrected in a similar manner.
- The most recent amendment date cited for the state plan (40 CFR, Part 62) was corrected and a missing section (40 CFR 62.1100) was added.
- The new NESHAP requirements (40 CFR 63, Subpart AAAA) and the general NESHAP requirements (40 CFR 63, Subpart A) were added.

#### Table IV-B:

- BAAQMD Regulation 1 was replaced with the current version of BAAQMD Regulation 1 and SIP Regulation 1.
- The date format was corrected for consistency with the format of other dates cited in this permit.
- The amendment date for BAAQMD Regulation 8, Rule 2 was updated.
- Several BAAQMD Regulation 8, Rule 34 requirements, future effective dates, and the SIP Regulation 8, Rule 34 requirements were deleted, because these requirements are now obsolete.
- Text was added to clarify that Regulation 9, Rule 1 applies to the A-8 Flare only.
- The most recent amendment date cited for the state plan (40 CFR, Part 62) was corrected and a missing section (40 CFR 62.1100) was added.
- The new NESHAP requirements (40 CFR 63, Subpart AAAA), the general NESHAP requirements (40 CFR 63, Subpart A), and a reporting requirement related to this NESHAP (Condition #17821, Part 15) were added.
- The bases for several permit conditions were clarified (Condition # 17821, Parts 2, 12, and 13).

#### Table IV-C:

• The amendment date for BAAQMD Regulation 8, Rule 8 was updated.

#### Table IV-D:

• The amendment date for BAAQMD Regulation 8, Rule 2 was updated.

## Table IV-E:

• The amendment date for BAAQMD Regulation 8, Rule 47 was updated.

#### Table IV-F:

• BAAQMD Regulation 1 was replaced with the current version of BAAQMD Regulation 1 and SIP Regulation 1.

- The date format was corrected for consistency with the format of other dates cited in this permit.
- Several BAAQMD Regulation 8, Rule 34 requirements, future effective dates, the SIP Regulation 8, Rule 34 requirements, and Condition # 17812, Parts 5 and 8 were deleted, because these requirements are now obsolete.
- BAAQMD Regulations 8-34-501.3 and 507 were deleted because these record keeping and monitoring requirements apply to flares. Engines are subject to 8-34-501.11 and 509 instead, which were already listed for these engines. The basis for a related permit condition (Condition # 17812, Part 10) was also corrected in a similar manner.
- The most recent amendment date cited for the state plan (40 CFR, Part 62) was corrected and a missing section (40 CFR 62.1100) was added.
- The new NESHAP requirements (40 CFR 63, Subpart AAAA) and the general NESHAP requirements (40 CFR 63, Subpart A) were added.
- Several parts of Condition # 17812 were renumbered after deleting Parts 5 and 8.

## V. Schedule of Compliance

No changes to this section are proposed.

#### VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier, up to five digits. Where necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting has been added to the permit.

For this reopening/revision, the District is proposing several changes to the permit conditions that are currently in effect. In general, these changes are necessary in order to add/revise the basis for the specific condition, to clarify the condition, to make the condition more enforceable, or to revise monitoring requirements/procedures. Exact text changes are identified in the draft MFR Permit. All changes to existing permit conditions are clearly shown in "strike-out/underline" format in the proposed permit. When the revised permit is issued, all "strike-out" language will be deleted; all "underline" language will be retained. The reasons for the changes to each condition number are discussed further below.

#### Condition # 5771 for S-5 and S-6:

- Part 6: The obsolete NMOC limit was deleted.
- Part 7: Source testing requirements for obsolete limits (Regulation 8-34-114 methane and total hydrocarbon destruction efficiency limits) were deleted, and the basis was corrected accordingly.
- Part 10: As a result of amendments to Regulation 2, Rule 6, any changes to the limits in Part 10 cannot be handled as administrative amendments. The text of this part was modified to reflect this procedural revision. In addition, the basis for Part 10 was corrected for consistency with the applicable requirements.

#### **Condition # 17812 for S-37:**

- Part 4: Editorial revisions were made to improve the clarity of this part.
- Part 5: This obsolete methane and THC destruction efficiency limit was deleted.
- Part 6: This part was renumbered and is now Part 5.
- Part 7: This part was renumbered and is now Part 6.
- Part 8: This obsolete POC exhaust concentration limit was deleted.
- Part 9: This part was renumbered and is now Part 7.
- Part 10: This part was renumbered and is now Part 8. Source testing requirements for obsolete limits (pre 7/1/02 methane and total hydrocarbon destruction efficiency limits) were deleted.
- Part 11: This part was renumbered and is now Part 9.
- Part 12: This part was renumbered and is now Part 10. The basis for this part was corrected for consistency with the applicable requirements.

#### **Condition # 17821 for S-15 and A-8:**

- Part 2: Regulation 2-1-403 was added to the basis for this part to clarify the justification for this permit condition.
- Part 3: The equation in Part 3c was revised to use scientific notation (1E6) instead of the equivalent exponential expression  $(10^6)$ , due to District databank limitations.
- Part 5: Editorial revisions were made to improve the clarity of this part.
- Part 9: As a result of amendments to Regulation 2, Rule 6, any changes to the limit in Part 9 cannot be handled as an administrative amendment. The text of this part was modified to reflect this procedural revision.
- Part 11: Source testing requirements for an obsolete limit (a pre 7/1/02 total hydrocarbon destruction efficiency limit) were deleted.
- Part 12: The District has established new standard language for a landfill gas analysis requirement in order to address comments received on other Title V permits and to correctly reflect the basis for this requirement. The District is proposing to replace the old landfill gas analysis text with the most recent version of the standard landfill gas analysis requirement. This part now lists the specific toxic air contaminants that the District requires testing for and eliminates the ambiguous language for removing compounds from the test list. The need for this testing is to correctly report the toxic emission inventory, which is an AB-2588 Air Toxics Hot Spots Act requirement.
- Part 13: The concentration limits in Part 13 are also related to the AB-2588 Air Toxics Hot Spots Act, because these limits ensure that facility emissions are below the levels at which public notification is required.
- Part 15: This part was added to incorporate the semi-annual reporting frequency that is required by the mew MSW Landfill NESHAP. This parts also allows the Regulation 8, Rule 34, NSPS, NESHAPs, and Title V reports to be combined into a single document submitted at the same time, provided all elements required by each report are included in this single document.

## VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements that apply to each source. The summary includes a citation for each monitoring requirement, frequency, and type. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

For this reopening/revision, the District is not proposing any changes to any existing federally enforceable monitoring requirements. The only new federally enforceable requirement is the general NESHAP requirement to minimize emissions during startup, shutdown, and malfunction (SSM) events. The MSW Landfill NESHAPS requires that facilities develop an SSM Plan to minimize emissions during SSM events and requires that records be kept of all SSM events including records of how emissions were minimized and the corrective actions that were taken. These records are adequate for demonstrating compliance with this standard.

The District is proposing revisions to the monitoring requirements for the non-federally enforceable landfill gas concentration limits (Condition # 17821, Parts 12-13). The new monitoring requirements will not require testing for non-carcinogenic compounds, because these compounds have no impact on the carcinogenic risk for the facility and the health impacts from non-carcinogenic compounds are negligible. The monitoring frequency is the same. Since these monitoring revisions only affect a non-federally enforceable requirement, these changes do not constitute a significant permit revision.

#### Changes to Permit:

The specific changes to each table are discussed in detail below.

#### Table VII-A:

- For requirements with no monitoring (N in the 7<sup>th</sup> column of the table), missing text and abbreviations (None and NA) were added to the 6<sup>th</sup> and 8<sup>th</sup> columns of the table.
- Obsolete limits were deleted.
- Effective dates that have passed were deleted.
- The general NESHAP requirement to minimize emissions during startup, shutdown, and malfunction (SSM) events was added.

#### Table VII-B:

- Effective dates that have passed were deleted.
- Obsolete limits were deleted.
- The general NESHAP requirement to minimize emissions during startup, shutdown, and malfunction (SSM) events was added.
- For requirements with no monitoring (N in the 7<sup>th</sup> column of the table), missing text and abbreviations (None and NA) were added to the 6<sup>th</sup> and 8<sup>th</sup> columns of the table.

#### Table VII-C:

• For requirements with no monitoring (N in the 7<sup>th</sup> column of the table), missing text and abbreviations (None and NA) were added to the 6<sup>th</sup> and 8<sup>th</sup> columns of the table.

#### Table VII-D:

• For requirements with no monitoring (N in the 7<sup>th</sup> column of the table), missing text and abbreviations (None and NA) were added to the 6<sup>th</sup> and 8<sup>th</sup> columns of the table.

#### Table VII-E:

• For requirements with no monitoring (N in the 7<sup>th</sup> column of the table), missing text and abbreviations (None and NA) were added to the 6<sup>th</sup> and 8<sup>th</sup> columns of the table.

#### Table VII-F:

- For requirements with no monitoring (N in the 7<sup>th</sup> column of the table), missing text and abbreviations (None and NA) were added to the 6<sup>th</sup> and 8<sup>th</sup> columns of the table.
- Obsolete limits were deleted.
- Effective dates that have passed were deleted.
- Part numbers were corrected based on the renumbering of parts in Condition # 17812.
- The general NESHAP requirement to minimize emissions during startup, shutdown, and malfunction (SSM) events was added.

## VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section VI of the permit.

## Changes to Permit:

The specific changes to this section are discussed in detail below.

• An editorial revision was made to the standard text.

#### Table VIII:

- An alternate method was added for BAAQMD Regulation 6-310, Particle Weight Limitation.
- Obsolete SIP requirements and other obsolete limits were deleted.
- An obsolete MOP test method was deleted.
- The appropriate test methods for the Condition #5771, Part 7 and Condition #17812, Part 8 annual engine source test requirements were added for clarity.
- Part numbers were corrected based on the renumbering of parts in Condition # 17812.
- The appropriate test methods for the Condition #17821, Parts 11-12 annual flare source test and landfill gas analysis requirements were added for clarity.

• The location of the compound list for Condition # 17812, Part 13 was corrected, based on revisions to Parts 12 and 13.

## IX. Permit Shield:

This facility has no permit shields.

## Changes to Permit:

There is no change in this section for this Title V reopening.

## X. Revision History:

This section summarizes the revisions that have been made to the permit since it was initially issued.

#### Changes to Permit:

This is a new section. The initial permit issuance date was listed. The changes proposed by this permit reopening/revision are summarized in this section under "Reopening".

## XI. Glossary:

This section explains words, phrases, acronyms, symbols, and usage unit abbreviations that are used in this permit.

## Changes to Permit:

This section was Section X and is now Section XI, due to the addition of Section X Revision History. Numerous terms were added to or corrected in the Glossary to improve the clarity of this permit.

#### **XII.** Applicable State Implementation Plan:

This section provides the web site address for the SIP versions of BAAQMD rules and regulations. This section was Section XI and is now Section XII, due to the addition of Section X Revision History. No other changes are being made to this section.

## **D.** Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility. No changes are proposed for this section for this reopening/revision of the MFR permit.

#### **E.** Compliance Status:

There is no change in compliance status for this facility.

#### F. Differences between the Application and the Proposed Permit:

Since the District initiated the reopening action and the other minor and administrative corrections to this permit, the facility did not submit an application for these actions.

The Responsible Official for this facility was notified in writing that the District was planning to reopen the MFR Permit for this site on April 2, 2004. A preliminary draft of the proposed revisions was sent to the Responsible Official by email on April 21, 2004. The proposed revisions are summarized below.

No changes are being made to the number of sources and abatement devices at this facility. The District is proposing to add the MSW Landfill NESHAP requirements (40 CFR Part 63, Subparts A and AAAA) that were adopted in November 2002. In addition, the District is proposing numerous administrative and minor revisions in order to correct facility contact information, update citations and dates based on SIP approvals and other regulatory changes, correct errors, and clarify permit language. The District is not proposing any changes to federally enforceable monitoring requirements. The District is proposing minor revisions to a non-federally enforceable monitoring requirement, which requires annual testing of the landfill gas for toxic compounds. This revision will specifically list the compounds that need to be analyzed for rather than referring to lists in other documents. This revision will also eliminate ambiguous language that allowed compounds to be removed from the test list based on health impact determinations. These changes will clarify the landfill gas testing requirements and eliminate unnecessary testing.

As of June 1, 2004, the Responsible Official has not provided any comments on the preliminary draft. Therefore, the District is proceeding with the public notification for this proposed reopening/revision of an MFR Permit.

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# APPENDIX A GLOSSARY

#### **ACT**

Federal Clean Air Act

#### **APCO**

Air Pollution Control Officer: Head of Bay Area Air Quality Management District

#### **ARB**

Air Resources Board

## **BAAQMD**

Bay Area Air Quality Management District

#### BACT

Best Available Control Technology

#### **BARCT**

Best Available Retrofit Control Technology

#### **Basis**

The underlying authority that allows the District to impose requirements.

#### CAA

The federal Clean Air Act

#### **CAAQS**

California Ambient Air Quality Standards

#### **CAPCOA**

California Air Pollution Control Officers Association

#### **CARB**

California Air Resources Board (same as ARB)

#### CEOA

California Environmental Quality Act

#### **CEM**

A "continuous emission monitor" is a monitoring device that provides a continuous direct measurement of some pollutant (e.g. NOx concentration) in an exhaust stream.

#### **CFR**

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

#### CH4 or CH<sub>4</sub>

Methane

#### CO

Carbon Monoxide

#### CO2 or CO<sub>2</sub>

Carbon Dioxide

#### CT

Combustion Zone Temperature

#### **Cumulative Increase**

The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Regulation 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Regulation 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Used to determine whether threshold-based requirements are triggered.

#### **District**

The Bay Area Air Quality Management District

#### **E** 6

Very large or very small number values are commonly expressed in a form called scientific notation, which consists of a decimal part multiplied by 10 raised to some power. For example,  $4.53 ext{ E 6}$  equals  $(4.53) ext{ x } (10^6) = (4.53) ext{ x } (10 ext{ x } 10 ext{ x } 10 ext{ x } 10 ext{ x } 10) = 4,530,000$ . Scientific notation is used to express large or small numbers without writing out long strings of zeros.

#### EG

**Emission Guidelines** 

#### EO

**Executive Order** 

#### **EPA**

The federal Environmental Protection Agency.

#### **Excluded**

Not subject to any District Regulations.

#### Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS) Part 61, (NESHAPs), Part 63 (HAP), and Part 72 (Permits Regulation, Acid Rain), and also including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

#### FID

Flame Ionization Detector

#### FP

Filterable particulate as measured by BAAQMD Method ST-15, Particulate.

#### FR

Federal Register

#### **GDF**

Gasoline Dispensing Facility

#### **GLM**

**Ground Level Monitor** 

#### H2S or H2S

Hydrogen Sulfide

#### HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

#### Hg

Mercury

#### **HHV**

Higher Heating Value. The quantity of heat evolved as determined by a calorimeter where the combustion products are cooled to 60 °F and all water vapor is condensed to liquid.

#### **LFG**

Landfill Gas

#### LHV

Lower Heating Value. Similar to the higher heating value (see HHV) except that the water produced by the combustion is not condensed but retained as vapor at 60 °F.

#### **Major Facility**

A facility with potential emissions of: (1) at least 100 tons per year of any regulated air pollutant, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

#### MAX or Max.

Maximum

#### MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Act and implemented by District Regulation 2, Rule 6.

#### MIN or Min.

Minimum

#### **MOP**

The District's Manual of Procedures.

#### **MSDS**

Material Safety Data Sheet

#### **MSW**

Municipal solid waste

#### MW

Molecular weight

#### N2 or N<sub>2</sub>

Nitrogen

#### NA

Not Applicable

#### **NAAQS**

National Ambient Air Quality Standards

#### **NESHAPs**

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

#### **NMHC**

Non-methane Hydrocarbons (same as NMOC).

## **NMOC**

Non-methane Organic Compounds (same as NMHC).

#### NOx or NO<sub>x</sub>

Oxides of nitrogen.

#### **NSPS**

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Act, and implemented by 40 CFR Part 60 and District Regulation 10.

#### **NSR**

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of air pollutants for which the District is classified "non-attainment". Mandated by Title I of the Clean Air Act and implemented by 40 CFR Parts 51 and 52 as well as District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

#### O2 or O2

Oxygen

## **Offset Requirement**

A New Source Review requirement to provide federally enforceable emission offsets at a specified ratio for the emissions from a new or modified source and any pre-existing cumulative increase minus any onsite contemporaneous emission reduction credits. Applies to emissions of POC, NOx, PM10, and SO2.

#### **Phase II Acid Rain Facility**

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

#### **POC**

Precursor Organic Compounds

#### **PM**

**Total Particulate Matter** 

#### PM10 or PM<sub>10</sub>

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

#### **PSD**

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

#### PV or P/V Valve

Pressure / Vacuum Valve

#### **RMP**

Risk Management Plan

#### S

Sulfur

#### **SIP**

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

## SO2 or SO<sub>2</sub>

Sulfur dioxide

#### **SSM**

Startup, Shutdown, or Malfunction

#### SSM Plan

A plan, which states the procedures that will be followed during a startup, shutdown, or malfunction, that is prepared in accordance with the general NESHAP provisions (40 CFR Part 63, Subpart A) and maintained on site at the facility.

#### THC

Total Hydrocarbons includes all NMHC plus methane (same as TOC).

#### Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

#### TOC

Total Organic Compounds includes all NMOC plus methane (same as THC).

#### **TPH**

**Total Petroleum Hydrocarbons** 

#### **TRMP**

Toxic Risk Management Policy

#### **TRS**

Total Reduced Sulfur

#### **TSP**

**Total Suspended Particulate** 

#### VOC

**Volatile Organic Compounds** 

## **Symbols:**

< = less than
> = greater than

 $\leq$  = less than or equal to  $\geq$  = greater than or equal to

## **Units of Measure:**

bbl barrel of liquid (1 bbl = 42 gallons) brake-horsepower bhp =btu **British Thermal Unit** BTU **British Thermal Unit** °C degrees Centigrade cfm cubic feet per minute = dscf dry standard cubic feet = ٥F degrees Fahrenheit =

 $ft^3$  = cubic feet g = grams gal = gallon

gpm = gallons per minute

gr = grains (7000 grains = 1 pound)

hp = horsepower

hr hour = in inches = kilograms kg =lb pound = lbmol pound-mole = M thousand =  $m^2$ square meter  $m^3$ cubic meters =

Mg = mega-grams, 1000 kilograms

 $\begin{array}{lll} \text{min} & = & \text{minute} \\ \text{mm} & = & \text{millimeter} \\ \text{MM} & = & \text{million} \end{array}$ 

MM BTU = million BTU

MMcf = million cubic feet

mm Hg = millimeters of mercury (pressure)

MW = megawatts

μg = microgram, one millionth of a gram

ppb = parts per billion

ppbv = parts per billion by volume

ppm = parts per million

ppmw = parts per million, by volume
ppmw = parts per million, by weight
psia = pounds per square inch, absolute
psig = pounds per square inch, gauge

scf = standard cubic feet

scfm = standard cubic feet per minute

sdcf = standard dry cubic feet

sdcfm = standard dry cubic feet per minute

therms = 1 therm = 100,000 BTU

yd = yard

 $yd^3$  = cubic yards

yr = year