

# Bay Area Air Quality Management District

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

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**Final**

## MAJOR FACILITY REVIEW PERMIT

**Issued To:**

**Kirby Canyon Recycling and Disposal Facility  
Facility #A1812**

**Facility Address:**

910 Coyote Creek Golf Drive  
Morgan Hill, CA 95037

**Mailing Address:**

P.O. Box 1870  
Morgan Hill, CA 95038

**Responsible Official**

Bill Spence, District Manager  
(408) 779-2206

**Facility Contact**

Rebecca Azevedo, Environmental Manager  
(408) 779-2206

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**Type of Facility:** Landfill  
**Primary SIC:** 4953  
**Product:** Non-hazardous Solid Waste

**BAAQMD Permit Division Contact:**  
Tamiko Endow, Air Quality Engineer

**ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

Signed by Jeff McKay for Jack P. Broadbent  
Jack P. Broadbent, Executive Officer/Air Pollution Control Officer

March 2, 2012  
Date

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## I. STANDARD CONDITIONS

### A. Administrative Requirements

The permit holder shall comply with all applicable requirements in the following regulations:

BAAQMD Regulation 1 - General Provisions and Definitions  
(as amended by the District Board on 5/4/11);

SIP Regulation 1 - General Provisions and Definitions  
(as approved by EPA through 6/28/99);

BAAQMD Regulation 2, Rule 1 - Permits, General Requirements  
(as amended by the District Board on 3/4/09);

SIP Regulation 2, Rule 1 - Permits, General Requirements  
(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 2 - Permits, New Source Review  
(as amended by the District Board on 6/15/05);

SIP Regulation 2, Rule 2 - Permits, New Source Review and Prevention of Significant Deterioration  
(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking  
(as amended by the District Board 12/21/04);

SIP Regulation 2, Rule 4 - Permits, Emissions Banking  
(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants  
(as amended by the District Board on 1/6/10)

BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review  
(as amended by the District Board on 4/16/03); and

SIP Regulation 2, Rule 6 – Permits, Major Facility Review  
(as approved by EPA through 6/23/95)

### B. Conditions to Implement Regulation 2, Rule 6, Major Facility Review

1. This Major Facility Review Permit was issued on March 2, 2012 and expires on March 1, 2017. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than September 1, 2017, and no earlier than March 1, 2016. **If a complete application for renewal has not been submitted in accordance with this deadline, the facility may not operate after March 1, 2017.** If the permit renewal has not been issued by March 1, 2017, but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application. (Regulation 2-6-307, 404.2, 407, & 409.6; MOP Volume II, Part 3, §4.2)
2. The permit holder shall comply with all conditions of this permit. The permit consists of this document and all appendices. Any non-compliance with the terms and conditions of this permit will constitute a violation of the law and will be grounds for enforcement action; permit termination, revocation and re-issuance, or modification; or denial of a permit renewal application. (Regulation 2-6-307; MOP Volume II, Part 3, §4.11)
3. In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permittee to

## I. Standard Conditions

- halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. (MOP Volume II, Part 3, §4.11)
4. This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)
  5. The filing of a request by the facility for a permit modification, revocation and re-issuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
  6. This permit does not convey any property rights of any sort, or any exclusive privilege. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
  7. The permit holder shall supply within 30 days any information that the District requests in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. (Regulation 1-441, Regulation 2-6-409.4 & 501; MOP Volume II, Part 3, §4.11)
  8. Any records required to be maintained pursuant to this permit that the permittee considers to contain proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District's Administrative Code. (Regulation 2-6-419; MOP Volume II, Part 3, §4.11)
  9. Proprietary or trade secret information provided to EPA will be subject to the requirements of 40 CFR Part 2, Subpart B - Public Information, Confidentiality of Business Information. (40 CFR Part 2)
  10. The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions or the potential to emit for the time period stated and is included only as one means of determining applicable requirements for emission sources. It does not establish, or constitute a basis for establishing, any new emission limitations. (MOP Volume II, Part 3, §4.11)
  11. The responsible official shall certify all documents submitted by the facility pursuant to the major facility review permit. The 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. The certifications shall be signed by a responsible official for the facility. (Regulation 2-6-409.20, MOP Volume II, Part 3, §4.11)
  12. The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors. (Regulation 2-6-307)

## **I. Standard Conditions**

### **C. Requirement to Pay Fees**

The permit holder shall pay annual fees in accordance with District Regulation 3, including Schedule P. (Regulation 2-6-402 & 409.13, Regulation 3; MOP Volume II, Part 3, §4.12)

### **D. Inspection and Entry**

**Access to Facility:** The permit holder shall provide reasonable access to the facility and equipment that is subject to this permit to the APCO and/or to his or her designee. (Regulation 1-440, Regulation 2-6-409.3; MOP Volume II, Part 3, §4.14)

### **E. Records**

1. The permit holder must provide any information, records, and reports requested or specified by the APCO. (Regulation 1-441, Regulation 2-6-409.4)
2. Notwithstanding the specific wording in any requirement, all records for federally enforceable requirements shall be maintained for at least five years from the date of creation of the record. (Regulation 2-6-501, MOP Volume II, Part 3, §4.7)

### **F. Monitoring Reports**

Reports of all required monitoring must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting. Reports shall be for the following periods: January 1st through June 30th and July 1st through December 31st, and are due on the last day of the month after the end of the reporting period. All instances of non-compliance shall be clearly identified in these reports. The reports shall be certified by the responsible official as true, accurate, and complete. In addition, all instances of non-compliance with the permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions. The reports shall be sent to the following address:

Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109  
Attn: Title V Reports

(Regulation 2-6-502, MOP Volume II, Part 3, §4.7)

### **G. Compliance Certification**

Compliance certifications shall be submitted annually by the responsible official of this facility to the Bay Area Air Quality Management District and to the Environmental Protection Agency. The certification period will be July 1st through June 30th. The certification shall be submitted by July 31st of each year. The certification must list each applicable requirement, the compliance status, whether compliance was continuous or intermittent, the method used to determine compliance, and any other specific information required by the permit. The permit holder may satisfy this requirement through submittal of

## **I. Standard Conditions**

District-generated Compliance Certification forms. The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the certification shall be sent to the Environmental Protection Agency at the following address:

Director of the Air Division  
USEPA, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105  
Attention: Air-3

(MOP Volume II, Part 3, §4.5 and 4.15)

## **H. Emergency Provisions**

1. The permit holder may seek relief from enforcement action in the event of a breakdown, as defined by Regulation 1-208 of the District's Rules and Regulations, by following the procedures contained in Regulations 1-431 and 1-432. The District will thereafter determine whether breakdown relief will be granted in accordance with Regulation 1-433. (MOP Volume II, Part 3, §4.8)
2. The permit holder may seek relief from enforcement action for a violation of any of the terms and conditions of this permit by applying to the District's Hearing Board for a variance pursuant to Health and Safety Code Section 42350. The Hearing Board will determine after notice and hearing whether variance relief should be granted in accordance with the procedures and standards set forth in Health and Safety Code Section 42350 et seq. (MOP Volume II, Part 3, §4.8)
3. The granting by the District of breakdown relief or the issuance by the Hearing Board of a variance will not provide relief from federal enforcement. (MOP Volume II, Part 3, §4.8)

## **I. Severability**

In the event that any provision of this permit is invalidated by a court or tribunal of competent jurisdiction, or by the Administrator of the EPA, all remaining portions of the permit shall remain in full force and effect. (Regulation 2-6-409.5; MOP Volume II, Part 3, §4.10)

## **J. Miscellaneous Conditions**

1. The maximum capacity for each source as shown in Table II-A is the maximum allowable capacity. Exceedance of the maximum allowable capacity for any source is a violation of Regulation 2, Rule 1, Section 301. (Regulation 2-1-301)

## II. EQUIPMENT

### A. Permitted Source List

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

**Table II A – Permitted Sources**

S-#	Description	Make or Type	Model	Capacity
S-1	Kirby Canyon MSW Landfill – Waste Decomposition Process,  Equipped with Active Landfill Gas Collection System	Active Landfill Accepting Municipal Solid Wasted (MSW), Commercial, Industrial, and Construction		Max. Acceptance Rate = 2600 tons/day (except for temporary situations approved by the LEA) Estimated Maximum Cumulative Waste In Place = 19.84 million tons decomposable materials Gas Collection Wells = 58 Leachate Collection Wells = 1
S-22	Kirby Canyon MSW Landfill – Waste and Cover Material Dumping	Active Landfill Accepting MSW, Commercial, Industrial, and Construction		Max. Design Capacity = 36.4 million yd <sup>3</sup> (27.8 million m <sup>3</sup> ) Max. Acceptance Rate = 2600 tons/day (except for temporary situations approved by the LEA)
S-23	Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities	Active Landfill Accepting MSW, Commercial, Industrial, and Construction		Max. Design Capacity = 36.4 million yd <sup>3</sup> (27.8 million m <sup>3</sup> ) Max. Acceptance Rate = 2600 tons/day (except for temporary situations approved by the LEA)

## II. Equipment

### B. Abatement Device List

**Table II B – Abatement Devices**

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
A-12	Enclosed Landfill Gas Flare with Condensate Injection System, 5 gal/min maximum condensate injection rate, 149 MMBtu/hr	S-1	BAAQMD 8-34-301.3, see also Table IV-A	Minimum combustion zone temperature of 1428 °F, see also Table VII-A	98% destruction of NMOC or < 30 ppmv of NMOC, as CH <sub>4</sub> , at 3% O <sub>2</sub> , dry

### C. Exempt Equipment List

Each of the following devices is exempt from major facility review permitting pursuant to the requirements of BAAQMD Regulation 2, Rule 6: Permits, Major Facility Review. The applicable exemption for each device is identified in the table below. Registered portable engines and non-road engines are exempt from BAAQMD Regulation 2, Rule 6 pursuant to BAAQMD Regulation 2-6-113 and 2-6-114, respectively, even though these engines may be required to have a BAAQMD permit to operate pursuant to BAAQMD Regulation 2, Rule 1, Permit, General Requirements. This table may include other types of equipment that are exempt from the requirement to have a BAAQMD permit to operate pursuant to BAAQMD Regulation 2, Rule 1. Equipment that is exempt from BAAQMD permitting requirements does not need to be included in this permit unless the equipment is a significant source, as defined in BAAQMD, Regulation 2-6-239. Any source that must be included in this permit because it is a significant source will be listed in a separate table.

**Table II C – Exempt Equipment**

S-#	Description	Make or Type	Model	Capacity	Exemption
S-8	Portable Diesel IC Engine for a Portable Air Compressor	John Deere	4045D	80 BHP, 3.3 gal/hr maximum fuel consumption	Reg. 2-6-114 Non-road Engines



### III. GENERALLY APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. These requirements apply in a general manner to the facility and/or to sources exempt from the requirement to obtain a District Permit to Operate. The District has determined that these requirements will not be violated under normal, routine operations, and that no additional periodic monitoring or reporting to demonstrate compliance is warranted. In cases where a requirement, in addition to being generally applicable, is also specifically applicable to one or more sources, the requirement and the source are also included in Section IV, Source-Specific Applicable Requirements, of this permit. This section also contains provisions that may apply to temporary sources.

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

1. BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP: The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full language of the SIP requirements are posted on the EPA Region 9 website. The address is:

<http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>.

**NOTE:**

There are differences between the current BAAQMD rules and the versions of the rules in the SIP. All sources must comply with both versions of the rule until US EPA has reviewed and approved the District’s revision of the regulation.

**Table III  
 Generally Applicable Requirements**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>
BAAQMD Regulation 1	General Provisions and Definitions (5/4/11)	N
SIP Regulation 1	General Provisions and Definitions (6/28/99)	Y
BAAQMD Regulation 2, Rule 1	Permits – General Requirements (3/4/09)	N
BAAQMD 2-1-429	Permits – General Requirements – Federal Emissions Statement (12/21/04)	N
SIP Regulation 2, Rule 1	Permits – General Requirements (1/26/99)	Y

### III. Generally Applicable Requirements

**Table III  
 Generally Applicable Requirements**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>
SIP Regulation 2-1-429	Permits – General Requirements – Federal Emissions Statement (4/3/95)	Y
BAAQMD Regulation 2, Rule 5	Permits – New Source Review of Toxic Air Contaminants (1/6/10)	N
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	N
SIP Regulation 4	Air Pollution Episode Plan (8/06/90)	Y
BAAQMD Regulation 5	Open Burning (7/9/08)	N
SIP Regulation 5	Open Burning (9/4/98)	Y
BAAQMD Regulation 6, Rule 1	Particulate Matter – General Requirements (12/5/07)	N
SIP Regulation 6	Particulate Matter and Visible Emissions (9/4/98)	Y
BAAQMD Regulation 7	Odorous Substances (3/17/82)	N
BAAQMD Regulation 8, Rule 1	Organic Compounds – General Provisions (6/15/94)	Y
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/05)	N
SIP Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (3/22/95)	Y
BAAQMD Regulation 8, Rule 3	Organic Compounds – Architectural Coatings (7/1/09)	N
SIP Regulation 8, Rule 3	Organic Compounds – Architectural Coatings (1/2/04)	Y
BAAQMD Regulation 8, Rule 4	Organic Compounds – General Solvent and Surface Coating Operations (10/16/02)	Y
BAAQMD Regulation 8, Rule 5	Organic Compounds – Storage of Organic Liquids (10/18/06)	N
SIP Regulation 8, Rule 5	Organic Compounds – Storage of Organic Liquids (6/5/03)	Y
BAAQMD Regulation 8, Rule 15	Organic Compounds – Emulsified and Liquid Asphalts (6/1/94)	Y
BAAQMD Regulation 8, Rule 16	Organic Compounds – Solvent Cleaning Operations (10/16/02)	Y
BAAQMD Regulation 8, Rule 40	Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05)	N
SIP Regulation 8, Rule 40	Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (4/19/01)	Y
BAAQMD Regulation 8, Rule 47	Organic Compounds – Air Stripping and Soil Vapor Extraction Operations (6/15/05)	N

### III. Generally Applicable Requirements

**Table III  
 Generally Applicable Requirements**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>
SIP Regulation 8, Rule 47	Organic Compounds – Air Stripping and Soil Vapor Extraction Operations (4/26/95)	Y
BAAQMD Regulation 8, Rule 49	Organic Compounds – Aerosol Paint Products (12/20/95)	N
SIP Regulation 8, Rule 49	Organic Compounds – Aerosol Paint Products (3/22/95)	Y
BAAQMD Regulation 8, Rule 51	Organic Compounds – Adhesive and Sealant Products (7/17/02)	N
SIP Regulation 8, Rule 51	Organic Compounds – Adhesive and Sealant Products (2/26/02)	Y
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)	N
SIP Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/99)	Y
BAAQMD Regulation 9, Rule 2	Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)	N
BAAQMD Regulation 11, Rule 1	Hazardous Pollutants – Lead (3/17/82)	N
SIP Regulation 11, Rule 1	Hazardous Pollutants – Lead (9/2/81)	Y
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants – Asbestos Demolition, Renovation and Manufacturing (10/7/98)	N
BAAQMD Regulation 11, Rule 14	Hazardous Pollutants – Asbestos Containing Serpentine (7/17/91)	N
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance – Sandblasting (7/11/90)	N
SIP Regulation 12, Rule 4	Miscellaneous Standards of Performance – Sandblasting (9/2/81)	Y
California Health and Safety Code Section 41750 et seq.	Portable Equipment	N
California Health and Safety Code Section 44300 et seq.	Air Toxics “Hot Spots” Information and Assessment Act of 1987	N
California Health and Safety Code, Title 17, Section 93105	Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying and Surface Mining Operations (7/26/01)	N
California Health and Safety Code, Title 17, Section 93106	Asbestos Airborne Toxic Control Measure for Asbestos Containing Serpentine (7/20/00)	N
California Health and Safety Code, Title 17, Section 93116	Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater (2/19/11)	N

### III. Generally Applicable Requirements

**Table III**  
**Generally Applicable Requirements**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>
40 CFR Part 61, Subpart A	National Emission Standards for Hazardous Air Pollutants – General Provisions (9/13/10)	Y
40 CFR Part 61, Subpart M	National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos (7/20/04)	Y

#### IV. SOURCE-SPECIFIC APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. The requirements cited in the following tables apply in a specific manner to the indicated source(s).

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

1. BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP: The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full text of each permit condition cited is included in Section VI, Permit Conditions, of this permit. The full language of the SIP requirements are posted on the EPA Region 9 website. The address is:

<http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>

All other text may be found in the regulations themselves.

**Table IV – A**  
**Source-Specific Applicable Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIALS DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>BAAQMD Regulation 1</b>	<b>General Provisions and Definitions (5/4/11)</b>		
1-523	Parametric Monitoring and Recordkeeping Procedures	N	
1-523.1	Parametric monitor periods of inoperation	Y	
1-523.2	Limit on duration of inoperation	Y	
1-523.3	Reporting requirement for violations of any applicable limits	N	
1-523.4	Records of inoperation, tests, calibrations, adjustments, & maintenance	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV – A**  
**Source-Specific Applicable Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIALS DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
1-523.5	Maintenance and calibration	N	
<b>SIP Regulation 1</b>	<b>General Provisions and Definitions (6/28/99)</b>		
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	
1-523.3	Reporting requirement for violations of any applicable limits	Y	
<b>BAAQMD Regulation 6, Rule 1</b>	<b>Particulate Matter - General Requirements (12/5/07)</b>		
6-1-301	Ringelmann No. 1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particle Weight Limitation (applies to A-12 Flare only)	N	
6-1-401	Appearance of Emissions	N	
<b>SIP Regulation 6</b>	<b>Particulate Matter and Visible Emissions (12/19/90)</b>		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particle Weight Limitation (applies to A-12 Flare only)	Y	
6-401	Appearance of Emissions	Y	
<b>BAAQMD Regulation 8, Rule 2</b>	<b>Organic Compounds – Miscellaneous Operations (7/20/05)</b>		
8-2-301	Miscellaneous Operations (applies to low VOC soil handling and disposal activities only)	Y	
<b>BAAQMD Regulation 8, Rule 34</b>	<b>Organic Compounds – Solid Waste Disposal Sites (6/15/05)</b>		
8-34-113	Limited Exemption, Inspection and Maintenance	Y	
8-34-113.1	Emission Minimization Requirement	Y	
8-34-113.2	Shutdown Time Limitation	Y	
8-34-113.3	Recordkeeping Requirement	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV – A**  
**Source-Specific Applicable Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIALS DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
8-34-116	Limited Exemption, Well Raising	Y	
8-34-116.1	New Fill	Y	
8-34-116.2	Limits on Number of Wells Shutdown	Y	
8-34-116.3	Shutdown Duration Limit	Y	
8-34-116.4	Capping Well Extensions	Y	
8-34-116.5	Well Disconnection Records	Y	
8-34-117	Limited Exemption, Gas Collection System Components	Y	
8-34-117.1	Necessity of Existing Component Repairs/Adjustments	Y	
8-34-117.2	New Components are Described in Collection and Control System Design Plan	Y	
8-34-117.3	Meet Section 8-34-118 Requirements	Y	
8-34-117.4	Limits on Number of Wells Shutdown	Y	
8-34-117.5	Shutdown Duration Limit	Y	
8-34-117.6	Well Disconnection Records	Y	
8-34-118	Limited Exemption, Construction Activities	Y	
8-34-118.1	Construction Plan	Y	
8-34-118.2	Activity is Required to Maintain Compliance with this Rule	Y	
8-34-118.3	Required or Approved by Other Enforcement Agencies	Y	
8-34-118.4	Emission Minimization Requirement	Y	
8-34-118.5	Excavated Refuse Requirements	Y	
8-34-118.6	Covering Requirements for Exposed Refuse	Y	
8-34-118.7	Installation Time Limit	Y	
8-34-118.8	Capping Required for New Components	Y	
8-34-118.9	Construction Activity Records	Y	
8-34-301	Landfill Gas Collection and Emission Control System Requirements	Y	
8-34-301.1	Continuous Operation	Y	
8-34-301.2	Collection and Control Systems Leak Limitations	Y	
8-34-301.3	Limits for Enclosed Flares	Y	
8-34-303	Landfill Surface Requirements	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV – A**  
**Source-Specific Applicable Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIALS DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
8-34-304	Gas Collection System Installation Requirements	Y	
8-34-304.1	Based on Waste Age For Inactive or Closed Areas	Y	
8-34-304.2	Based on Waste Age For Active Areas	Y	
8-34-304.3	Based on Amount of Decomposable Waste Accepted	Y	
8-34-304.4	Based on NMOC Emission Rate	Y	
8-34-305	Wellhead Requirements	Y	
8-34-305.1	Wellhead Vacuum Requirements	Y	
8-34-305.2	Wellhead Temperature Limit	Y	
8-34-305.3	Nitrogen Concentration Limit for Wellhead Gas or	Y	
8-34-305.4	Oxygen Concentration Limit for Wellhead Gas	Y	
8-34-404	Less than Continuous Operation Petition Contents	Y	
8-34-404.1	Landfill gas flow rates, methane concentrations	Y	
8-34-404.2	Collection system map with component locations	Y	
8-34-404.3	Operating, maintenance, and inspection schedule	Y	
8-34-404.4	APCO approval contents	Y	
8-34-404.5	Petition renewal every 3 years	Y	
8-34-405	Design Capacity Reports	Y	
8-34-408	Collection and Control System Design Plans	Y	
8-34-408.2	Sites With Existing Collection and Control Systems	Y	
8-34-411	Annual Report	Y	
8-34-412	Compliance Demonstration Tests	Y	
8-34-413	Performance Test Report	Y	
8-34-414	Repair Schedule for Wellhead Excesses	Y	
8-34-414.1	Records of Excesses	Y	
8-34-414.2	Corrective Action	Y	
8-34-414.3	Collection System Expansion	Y	
8-34-414.4	Operational Due Date for Expansion	Y	
8-34-415	Repair Schedule for Surface Leak Excesses	Y	
8-34-415.1	Records of Excesses	Y	



#### IV. Source-Specific Applicable Requirements

**Table IV – A**  
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**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;**  
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<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
8-34-415.2	Corrective Action	Y	
8-34-415.3	Re-monitor Excess Location Within 10 Days	Y	
8-34-415.4	Re-monitor Excess Location Within 1 Month	Y	
8-34-415.5	If No More Excesses, No Further Re-Monitoring	Y	
8-34-415.6	Additional Corrective Action	Y	
8-34-415.7	Re-monitor Second Excess Within 10 days	Y	
8-34-415.8	Re-monitor Second Excess Within 1 Month	Y	
8-34-415.9	If No More Excesses, No Further Re-monitoring	Y	
8-34-415.10	Collection System Expansion for Third Excess in a Quarter	Y	
8-34-415.11	Operational Due Date for Expansion	Y	
8-34-416	Cover Repairs	Y	
8-34-501	Operating Records	Y	
8-34-501.1	Collection System Downtime	Y	
8-34-501.2	Emission Control System Downtime	Y	
8-34-501.3	Continuous Temperature Records for Enclosed Combustors	Y	
8-34-501.4	Testing	Y	
8-34-501.5	Monthly landfill gas flow rates and well concentrations for facilities subject to 8-34-404 (less than continuous operation)	Y	
8-34-501.6	Leak Discovery and Repair Records	Y	
8-34-501.7	Waste Acceptance Records	Y	
8-34-501.8	Non-decomposable Waste Records	Y	
8-34-501.9	Wellhead Excesses and Repair Records	Y	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	
8-34-501.12	Records Retention for 5 Years	Y	
8-34-503	Landfill Gas Collection and Emission Control System Leak Testing	Y	
8-34-504	Portable Hydrocarbon Detector	Y	
8-34-505	Well Head Monitoring	Y	
8-34-506	Landfill Surface Monitoring	Y	
8-34-507	Continuous Temperature Monitor and Recorder	Y	

#### IV. Source-Specific Applicable Requirements

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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
8-34-508	Gas Flow Meter	Y	
8-34-510	Cover Integrity Monitoring	Y	
<b>BAAQMD Regulation 8, Rule 40</b>	<b>Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05)</b>		
8-40-110	Exemption, Storage Pile	Y	
8-40-112	Exemption, Sampling	Y	
8-40-113	Exemption, Non-Volatile Hydrocarbons	Y	
8-40-116	Exemption, Small Volume	Y	
8-40-116.1	Volume does not exceed 1 cubic yard	Y	
8-40-116.2	Volume does not exceed 8 cubic yards, organic content does not exceed 500 ppmw, may be used only once per quarter	Y	
8-40-117	Exemption, Accidental Spills	Y	
8-40-118	Exemption, Aeration Projects of Limited Impact	Y	
8-40-301	Uncontrolled Contaminated Soil Aeration	Y	
8-40-304	Active Storage Piles	Y	
8-40-305	Inactive Storage Piles	Y	
<b>BAAQMD Regulation 9, Rule 1</b>	<b>Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)</b>		
9-1-301	Limitations on Ground Level Concentrations (applies to A-12 Flare only)	Y	
9-1-302	General Emission Limitations (applies to A-12 Flare only)	Y	
<b>BAAQMD Regulation 9, Rule 2</b>	<b>Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)</b>		
9-2-301	Limitations on Hydrogen Sulfide	N	

#### IV. Source-Specific Applicable Requirements

**Table IV – A**  
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**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;**  
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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>40 CFR Part 60, Subpart A</b>	<b>Standards of Performance for New Stationary Sources – General Provisions (9/13/10)</b>		
60.4	Address	Y	
60.4(b)	Requires Submission of Requests, Reports, Applications, and Other Correspondence to the Administrator	Y	
60.7	Notification and Recordkeeping	Y	
60.8	Performance Tests	Y	
60.11	Compliance with Standards and Maintenance Requirements	Y	
60.11(a)	Compliance determined by performance tests	Y	
60.11(d)	Control devices operated using good air pollution control practice	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.13(a)	Applies to all continuous monitoring systems	Y	
60.13(b)	Monitors shall be installed and operational before performing performance tests	Y	
60.13(e)	Continuous monitors shall operate continuously	Y	
60.13(f)	Monitors shall be installed in proper locations	Y	
60.13(g)	Requires multiple monitors for multiple stacks	Y	
60.14	Modification	Y	
60.15	Reconstruction	Y	
60.19	General Notification and Reporting Requirements	Y	
<b>40 CFR Part 60, Subpart Cc</b>	<b>Standards of Performance for New Stationary Sources – Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills (2/24/99)</b>		
60.36c	Compliance Times	Y	
60.36c(a)	Collection and Control Systems in Compliance by 30 months after Initial NMOC Emission Rate Report Shows NMOC Emissions $\geq$ 50 MG/year	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV – A**  
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**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;**  
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Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>40 CFR Part 62, Subpart F</b>	<b>Approval and Promulgation of State Plans for Designated Facilities and Pollutants - California (4/20/06)</b>		
62.1100	Identification of Plan	Y	
62.1115	Identification of Sources – Existing Municipal Solid Waste Landfills	Y	
<b>40 CFR Part 63, Subpart A</b>	<b>National Emission Standards for Hazardous Air Pollutants: General Provisions (9/13/10)</b>		
63.4	Prohibited activities and circumvention	Y	
63.5	Preconstruction review and notification requirements	Y	
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	Y	
63.6	Compliance with standards and maintenance requirements	Y	
63.6(e)	Operation and maintenance requirements and SSM Plan	Y	
63.6(f)	Compliance with non-opacity emission standards	Y	
63.10	Record keeping and reporting requirements	Y	
63.10(b)	General record keeping requirements	Y	
63.10(b)(2)	For affected sources, maintain relevant records of:	Y	
63.10(b)(2)(i-v)	Records for startup, shutdown, malfunction, and maintenance	Y	
63.10(d)	General reporting requirements	Y	
63.10(d)(5)	Startup, Shutdown, and Malfunction (SSM) Reports	Y	
<b>40 CFR Part 63, Subpart AAAA</b>	<b>National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (4/20/06)</b>		
63.1945	When do I have to comply with this subpart?	Y	
63.1945(b)	Compliance date for existing affected landfills	Y	
63.1955	What requirements must I meet?	Y	

#### IV. Source-Specific Applicable Requirements

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<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
63.1955(a)	Comply with either 63.1955(a)(1) or (a)(2)	Y	
63.1955(a)(2)	Comply with State Plan that implements 40 CFR Part 60, Subpart Cc	Y	
63.1955(b)	Comply with 63.1960-63.1985, if a collection and control system is required by 40 CFR Part 60, Subpart WWW or a State Plan implementing 40 CFR Part 60, Subpart Cc	Y	
63.1955(c)	Comply with all approved alternatives to standards for collection and control systems plus all SSM requirements and 6 month compliance reporting requirements	Y	
63.1960	How is compliance determined?	Y	
63.1965	What is a deviation?	Y	
63.1975	How do I calculate the 3-hour block average used to demonstrate compliance?	Y	
63.1980	What records and reports must I keep and submit?	Y	
63.1980(a)	Comply with all record keeping and reporting requirements in 40 CFR Part 60, Subpart WWW or the State Plan implementing 40 CFR Part 60, Subpart Cc, except that the annual report required by 40 CFR 60.757(f) must be submitted every 6 months	Y	
63.1980(b)	Comply with all record keeping and reporting requirements in 40 CFR Part 60, Subpart A and 40 CFR Part 63, Subpart A, including SSM Plans and Reports	Y	
<b>BAAQMD Condition #1437</b>			
Part 1	Design capacity and waste acceptance rate limits (Regulation 2-1-301)	Y	
Part 2	Handling procedures for soils containing VOCs (Regulations 8-40-301, 8-40-304, and 8-40-305)	Y	
Part 3	Low VOC soils for landfill cover (Regulations 2-1-403, 8-40-205 and 8-40-604)	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV – A**  
**Source-Specific Applicable Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;**  
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<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
Part 4	Particulate emission control measures (Regulations 2-1-403, 6-1-301, and 6-1-305)	Y	
Part 5	Control requirements for collected landfill gas (Regulation 8-34-301)	Y	
Part 6	Landfill gas collection system description (Regulations 2-1-301, 8-34-301.1, 8-34-303, 8-34-304, and 8-34-305 )	Y	
Part 7	Landfill gas collection system operating requirements (Regulation 8-34-301.1)	Y	
Part 8	Flare heat input limits (Regulation 2-1-301)	Y	
Part 9	Flare combustion zone temperature (Regulations 2-5-302 and 8-34-301.3)	Y	
Part 10	Flare NOx limit (RACT)	Y	
Part 11	Flare CO limit (RACT)	Y	
Part 12	Annual source test (RACT, Regulations 2-1-301, 8-34-301.3, 8-34-412, and 9-1-302)	Y	
Part 13	Annual landfill gas characterization test (Regulations 2-5-302 and 8-34-412)	Y	
Part 14	Landfill gas condensate injection rate (Regulation 2-5-302)	N	
Part 15	Recordkeeping requirements (Cumulative Increase, Regulations 2-1-301, 2-6-501, 6-1-301, 6-1-305, 8-2-301, 8-34-301, 8-34-304, 8-34-501, and 9-1-302)	Y	
Part 16	Reporting periods and due dates for the Regulation 8, Rule 34 annual report (Regulation 8-34-411 and 40 CFR Part 63.1980(a))	Y	
Part 17	Alternate wellhead temperature limits (Regulations 8-34-301.2, 8-34-303, 8-34-305)	Y	
Part 18	Alternate wellhead temperature limit additions (Regulation 8-34-305)	Y	
Part 19	Alternate leachate collection systems operating requirements (Regulations 2-6-501, 8-34-305, 8-34-404, 8-34-414, 8-34-501.4, 8-34-501.9)	Y	

## **V. SCHEDULE OF COMPLIANCE**

The permit holder shall comply with all applicable requirements cited in this permit. The permit holder shall also comply with applicable requirements that become effective during the term of this permit on a timely basis.

## VI. PERMIT CONDITIONS

Any condition that is preceded by an asterisk is not federally enforceable.

### **Condition #1437**

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

1. The owner/operator shall comply with the following waste acceptance and disposal limits and shall obtain the appropriate New Source Review permit, if one of the following limits is exceeded:
  - a. Except for temporary emergency situations approved by the Local Enforcement Agency, the total waste accepted and placed at the landfill shall not exceed 2600 tons in any day. (Basis: Regulation 2-1-301)
  - b. The total cumulative amount of all decomposable materials placed in the landfill shall not exceed 19.84 million tons. Exceedance of the cumulative tonnage limit is not a violation of the permit and does not trigger the requirement to obtain a New Source review permit, if the operator can, within 30 days of the date of discovery of the exceedance, provide documentation to the District demonstrating, in accordance with BAAQMD Regulation 2-1-234.3, that the limit should be higher. (Basis: Regulation 2-1-234.3)
  - c. The maximum design capacity of the landfill (total volume of all wastes placed in the landfill) shall not exceed 36.40 million cubic yards. (Basis: Regulation 2-1-301)
2. Handling Procedures for Soil Containing Volatile Organic Compounds
  - a. The procedures listed below in subparts b-l do not apply if the following criteria are satisfied. However, the record keeping requirements in subpart m, below, are applicable.
    - i. The owner/operator has appropriate documentation demonstrating that either the organic content of the soil or the organic concentration above the soil is below the “contaminated” level (as defined in Regulation 8, Rule 40, Sections 205, 207, and 211). The handling of soil containing VOCs in concentrations below the “contaminated” level is subject to Part 3 below.



## VI. Permit Conditions

### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- ii. The owner/operator has no documentation to prove that soil is not contaminated, but source of the soil is known and there is no reason to suspect that the soil might contain organic compounds.
- b. The owner/operator shall provide verbal notification to the Compliance and Enforcement Division of the owner/operator's intention to accept contaminated soil at the facility at least 24 hours in advance of receiving the contaminated soil. The owner/operator shall provide an estimate of the amount of contaminated soil to be received, the degree of contamination (range and average VOC Content), and the type or source of contamination.
- c. Any soil received at the facility that is known or suspected to contain volatile organic compounds (VOCs) shall be handled as if the soil were contaminated, unless the owner/operator receives test results proving that the soil is not contaminated. To prove that the soil is not contaminated, the owner/operator shall collect soil samples in accordance with Regulation 8-40-601 within 24 hours of receipt of the soil by the facility. The organic content of the collected soil samples shall be determined in accordance with Regulation 8-40-602.
  - i. If these test results indicate that the soil is still contaminated or if the soil was not sampled within 24 hours of receipt by the facility, the owner/operator must continue to handle the soil in accordance with the procedures set forth in subparts e-1, below, until the soil has completed treatment or has been placed in a final disposal location and adequately covered. Storing soil in a temporary stockpile or pit is not considered treatment. Co-mingling, blending, or mixing of soil lots is not considered treatment.
  - ii. If these test results indicate that the soil – as received at the facility – has an organic content of 50 ppmw or less, then the soil is no longer contaminated and shall be handled in accordance with the procedures in Part 3 instead of Part 2, subparts e-1.

## VI. Permit Conditions

### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- d. Any contaminated soil received at the facility shall be clearly identified as contaminated soil, shall be handled in accordance with subparts e-l. below, and shall be segregated from non-contaminated soil. Contaminated soil lots may not be co-mingled, blended, or otherwise mixed with non-contaminated soil lots prior to treatment, reuse, or disposal. Mixing soil lots in an attempt to reduce the overall concentration of the contaminated soil or to circumvent any requirements or limits is strictly prohibited.
- e. On-site handling of contaminated soil shall be limited to no more than 2 on-site transfers per soil lot. For instance, unloading soil from off-site transport vehicles into a temporary storage pile is 1 transfer. Moving soil from a temporary storage to a staging area is 1 transfer. Moving soil from a temporary storage pile to a final disposal site is 1 transfer. Moving soil from a staging area to a final disposal site is 1 transfer. Therefore, unloading soil from off-site transport into a temporary storage pile and then moving the soil from that temporary storage pile to the final disposal site is allowed. Unloading soil from off-site transport into a staging area and then moving the soil from that staging area to the final disposal site is allowed. However, unloading soil from off-site transport to a temporary storage pile, moving this soil to a staging area, and then moving the soil again to a final disposal site is 3 on-site transfers and is not allowed.
- f. If the contaminated soil has an organic content of less than 500 ppmw, the contaminated soil shall be treated, deposited in a final disposal site, or transported off-site for treatment within 90 days of receipt at the facility.
- g. If the contaminated soil has an organic content 500 ppmw or more, the contaminated soil shall be treated, deposited in a final disposal site, or transported off-site for treatment within 45 days of receipt at the facility.

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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- h. All active storage piles shall meet the requirements of Regulation 8-40-304 by using water sprays, vapor suppressants or approved coverings to minimize emissions. The exposed surface area of any active storage pile (including the active face at a landfill) shall be limited to 6000 ft<sup>2</sup>. The types of storage piles that may become subject to these provisions include (but are not limited to) truck unloading areas, staging areas, temporary stockpiles, soil on conveyors, bulldozers or trucks, the active face of a landfill, or other permanent storage pile at the final disposal location.
- i. All inactive storage piles shall meet the requirements of Regulation 8-40-305 including the requirement to cover contaminated soil during periods of inactivity longer than one hour. The types of storage piles that may become subject to these provisions include (but are not limited to) soil on trucks or other on-site equipment, staging areas, temporary stockpiles, and the permanent storage pile at the final disposal location. District approved coverings for inactive storage piles include continuous heavy-duty plastic sheeting (in good condition, joined at the seams, and securely anchored) or encapsulating vapor suppressants (with re-treatment as necessary to prevent emissions).
- j. The owner/operator must:
  - i. Keep contaminated soil covered with continuous heavy-duty plastic sheeting (in good condition, joined at the seams, and securely anchored) whenever soil is to be stored in temporary stockpiles or during on-site transport in trucks. Soil in trucks shall not be left uncovered for more than 1 hour.
  - ii. Establish a tipping area for contaminated soils near the active face that is isolated from the tipping area for other wastes.
  - iii. Spray contaminated soil with water or vapor suppressant immediately after dumping the soil from a truck at the tipping area.
  - iv. Ensure that all contaminated soil is transferred from the tipping area to the active face immediately after spraying with water or vapor suppressant.

## VI. Permit Conditions

### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- v. Ensure that contaminated soil in the tipping area is not disturbed by subsequent trucks. Trucks shall not drive over contaminated soil in the tipping area or track contaminated soil out of the tipping area on their wheels.
- vi. Spray contaminated soil on the active face with water or vapor suppressant (to keep the soil visibly moist) until the soil can be covered with an approved covering.
- vii. Limit the area of exposed soil on the active face to no more than 6000 ft<sup>2</sup>.
- viii. Ensure that contaminated soil spread on the active face is completely covered on all sides with one of the following approved coverings: at least 6 inches of clean compacted soil, at least 12 inches of compacted garbage, or at least 12 inches of compacted green waste.
- ix. Ensure that covering of soil on the active face is completed within one hour of the time that the soil was first dumped from a truck at the tipping area.
- k. Contaminated soil shall not be used as daily, intermediate, or final cover material for landfill waste operations unless the requirements of Regulation 8, Rule 40, Sections 116 or 117 have been satisfied.
- l. Contaminated soil is considered to be a decomposable solid waste pursuant to Regulation 8, Rule 34. All contaminated soil disposed of at a site shall be included in any calculations of the amount of decomposable waste in place that are necessary for annual reporting requirements or for purposes of 8-34-111 or 8-34-304.
- m. The owner/operator shall keep the following records for each lot of soil received, in order to demonstrate on-going compliance with the applicable provisions of Regulation 8, Rule 40.

## VI. Permit Conditions

### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- i. For all soil received by the facility (including soil with no known contamination), record the arrival date at the facility, the soil lot number, the amount of soil in the lot, the organic content or organic concentration of the lot (if known), the type of contamination (if any), and keep copies of any test data or other information that documents whether the soil is contaminated (as defined in 8-40-205) or not contaminated, with what, and by how much.
- ii. If the soil is tested for organic content after receipt by the facility, record the sampling date, test results, and the date that these results were received.
- iii. For all on-site handling of contaminated soil, use a checklist or other approved method to demonstrate that appropriate procedures were followed during all on-site handling activities. One checklist shall be completed for each day and for each soil lot (if multiple lots are handled per day).
- iv. For soil aerated in accordance with 8-40-116 or 117 record the soil lot number, the amount of soil in the lot, the organic content, the final placement date, the final placement location, and describe how the soil was handled or used on-site.
- v. For final disposal at a landfill, record on a daily basis the soil lot number, the amount of soil placed in the landfill, the disposal date, and the disposal location.

All records shall be retained for at least 5 years from the date of entry and shall be made available for District inspection upon request.

(basis: Regulations 8-40-301, 8-40-304 and 8-40-305)

## VI. Permit Conditions

### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

3. Low VOC soil (soil that contains 50 ppmw or less of VOC) is not considered to be “contaminated soil” and may be used as daily, intermediate, or final cover material for landfill waste operations if the organic concentration above the soil does not exceed 50 ppmv (expressed as methane, C1). To demonstrate compliance with this requirement, each lot of soil to be used as cover material shall be randomly screened for VOC surface emissions (in such a manner as to be representative of the entire lot) using the testing procedures outlined in Regulation 8-40-604. The owner/operator shall keep the following records for each lot of soil subject to this requirement:
  - a. The soil lot number as established in part 2m.i. (above).
  - b. The time and date of the soil screening.
  - c. The name and affiliation of the person performing the monitoring.
  - d. The results of the screening and an acknowledgement that the procedures outlined in Regulation 8-40-604 were used.Soil presumed to be low VOC soil that is found to have a surface VOC concentration greater than 50 ppmv as described above shall be considered contaminated soil and will be subject to the requirements of part 2 of these conditions. (basis: Regulations 2-1-403, 8-40-205, 8-40-604)
4. Water and/or dust suppressants shall be applied to all unpaved roadways, active soil removal, and fill areas as necessary to prevent visible particulate emissions. Paved roadways shall be kept sufficiently clear of dirt and debris to prevent visible particulate emissions from vehicle traffic or wind. (basis: Regulations 2-1-403, 6-1-301, and 6-1-305)
5. All collected landfill gas shall be vented to properly operating Landfill Gas Flare (A-12). Raw landfill gas shall not be vented to the atmosphere, except for unavoidable landfill gas emissions that occur during collection system installation, maintenance, or repair that is performed in compliance with Regulation 8, Rule 34, Sections 113, 116, 117, or 118 and for component or surface leaks that do not exceed the limits specified in 8-34-301.2 or 8-34-303. (basis: Regulation 8-34-301)

## VI. Permit Conditions

### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

6. The owner/operator shall apply for and receive a Change of Conditions from the District before altering the landfill gas collection system described in Parts 6a-b below. Increasing or decreasing the number of wells or collectors, changing the length of collectors, or changing the locations of wells or collectors are alterations that are subject to this requirement.

a. The owner/operator has been issued a Permit to Operate for the landfill gas collection system and leachate collection system components listed below. Well and collector locations, depths, and lengths are as described in detail in Permit Applications #2232, #7835, #11730, #17016, and #21786.

	Current
Total Number of Vertical Landfill Gas Extraction Wells:	58
Total Number of Horizontal Landfill Gas Trench Collectors:	0
Total Number of Leachate Collection Wells:	1

b. The owner/operator is authorized to make the landfill gas collection system and leachate collection system component alterations listed below. Specific details regarding well alterations are described in Permit Application #23446.

	Minimum	Maximum
Install new Vertical Gas Extraction Wells:	0	45
Replace Vertical Gas Extraction Wells:	0	103
Decommission Vertical Gas Extraction Wells:	0	40
Install new Horizontal Trench Collectors	0	5
Decommission Horizontal Trench Collectors	0	2
Install new Leachate Cleanout Risers	0	15
Decommission Leachate Cleanout Risers	0	8

Wells installed, relocated, replaced, or shutdown pursuant to Part 6b shall be added to or removed from Part 6a in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415. The owner/operator shall maintain records of the decommissioning date for each well that is shutdown and the initial operation date for each new or relocated well.

(basis: Regulations 2-1-301, 8-34-301.1, 8-34-303, 8-34-304, 8-34-305)

## VI. Permit Conditions

### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

7. The landfill gas collection system described in Part 6a shall be operated continuously as defined in Regulation 8-34-219, except for leachate collection wells that are specifically allowed to operate less than continuously pursuant to Part 19. Wells shall not be shut off, disconnected or removed from operation without written authorization from the APCO, unless the owner/operator complies with all applicable requirements of Regulation 8, Rule 34, Sections 113, 116, 117, and 118 and Condition #1437, Part 19. (basis: Regulation 8-34-301.1)
8. The owner/operator shall ensure that the heat input to the A-12 Landfill Gas Flare does not exceed 3,576 million Btu per day and does not exceed 1,305,240 million Btu per year. In order to demonstrate compliance with this part, the owner/operator shall calculate and record, on a monthly basis, the maximum daily and total monthly heat input to the flare based on: (a) the landfill gas flow rate recorded pursuant to part 15h, (b) the average methane concentration in the landfill gas measured in most recent source test, and (c) a high heating value for methane of 1013 BTU per cubic foot at 60 degrees F. (basis: Regulation 2-1-301)
9. The minimum combustion zone temperature of the Flare A-12 shall be determined by the results of the most recent source test in which compliance with all applicable requirements was demonstrated. The minimum combustion zone temperature shall be 1428 degrees F, which was determined from the average temperature measured during the complying source test on 1/20/09 minus 50 degrees F. Once the minimum temperature has been established, it shall be maintained during all periods of flare operation. Compliance with the temperature limit shall be based on a 3-hour averaging period. Under no circumstances shall the minimum flare temperature be less than 1,400 degrees F. Based on the results of required source testing of the flare, the APCO may add an explicit temperature limit to the conditions for the Flare A-12 in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415. (Basis: Regulations 2-5-302 and 8-34-301.3)
10. The owner/operator shall ensure that emissions of Nitrogen Oxides (NO<sub>x</sub>) from the Flare A-12 do not exceed 0.05 pounds per million BTU (calculated as NO<sub>2</sub>). (basis: RACT)



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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

11. The owner/operator shall ensure that emissions of Carbon Monoxide (CO) from the Flare A-12 do not exceed 0.3 pounds per million BTU. (basis: RACT).
12. To demonstrate compliance with Regulation 8, Rule 34, Sections 301.3 and 412, and the above requirements, the owner/operator shall ensure that a District approved source test is conducted on the Landfill Gas Flare (A-12) within 90 days of startup, followed by annual source tests thereafter. The owner/operator shall obtain prior approval from the Source Test Manager for the location of sampling ports and source testing procedures. The startup and annual source tests shall determine the following:
  - a. landfill gas flow rate to the flare (dry basis);
  - b. concentrations (dry basis) of carbon dioxide (CO<sub>2</sub>), nitrogen (N<sub>2</sub>), oxygen (O<sub>2</sub>), methane (CH<sub>4</sub>), and total non-methane organic compounds (NMOC) in the landfill gas;
  - c. stack gas flow rate from the flare (dry basis);
  - d. concentrations (dry basis) of nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), CH<sub>4</sub>, NMOC, SO<sub>2</sub>, and O<sub>2</sub> in the flare stack gas;
  - e. the NMOC destruction efficiency achieved by the flare; and
  - f. the average combustion temperature in the flare during the test period.Annual source tests shall be conducted no later than 12 months after the previous source test. The Source Test Section of the District shall be contacted to obtain approval of the source test procedures at least 14 days in advance of each source test. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement Division and to the Source Test Section within 60 days of the test date. (basis: RACT, Regulations 2-1-301, 2-5-302, 8-34-301.3, 8-34-412, and 9-1-302)

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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

13. The owner/operator shall conduct a characterization of the landfill gas concurrent with the annual source test required by part 12 above. The landfill gas sample shall be drawn from the main landfill gas header. In addition to the compounds listed in part 12b, the landfill gas shall be analyzed for all the compounds listed in the most recent version of EPA's AP-42 Table 2.4-1 excluding acetone, carbon monoxide, and mercury. All concentrations shall be reported on a dry basis. The test report shall be submitted to the Compliance and Enforcement Division within 60 days of the test date. After conducting three annual landfill gas characterization tests, the owner/operator may request to remove specific compounds from the list of compounds to be tested for if the compounds have not been detected, have no significant impact on the cancer risk determination for the site, and have no significant impact on the hazard index determination for the site. (basis: Regulations 2-5-302 and 8-34-412)
- \*14. The landfill gas condensate injection rate into the flare shall not exceed 5 gallons per minute. Total landfill gas condensate injection throughput shall not exceed 1,500,000 gallons during any consecutive twelve-month period. The owner/operator may submit a written petition to the District to increase the landfill gas condensate injection rate subject to current District-approved source test results. (basis: Regulation 2-5-302)
15. To demonstrate compliance with the above conditions, the owner/operator shall maintain the following records in a District approved logbook.
  - a. The total amount of municipal solid waste received at S-1 recorded on a daily basis. A summary of the daily waste acceptance records for each calendar month.
  - b. For each area or cell that is not controlled by a landfill gas collection system, a record of the date that waste was initially placed in the area or cell. The cumulative amount of waste placed in each uncontrolled area or cell recorded on a monthly basis.
  - c. If the owner/operator plans to exclude an uncontrolled area or cell from the collection system requirement, the owner/operator shall also record the types and amounts of all non-decomposable waste placed in the area and the percentage (if any) of decomposable waste placed in the area.
  - d. Low VOC soil screening data, pursuant to part 3.

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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- e. The dates, locations, and frequency per day of all watering activities on unpaved roads or active soil or fill areas. The dates, locations, and type of any dust suppressant applications. The dates and description of all paved roadway cleaning activities. All records shall be summarized monthly.
- f. The initial operation date for each new landfill gas well and collector.
- g. An accurate map of the landfill that indicates the locations of all refuse boundaries and the locations of all wells and collectors (using unique identifiers) that are required to be operating continuously pursuant to part 6a. Any areas containing only non-decomposable waste shall be clearly identified. This map shall be updated at least once a year to indicate changes in refuse boundaries and to include any newly installed wells and collectors.
- h. The operating times and the landfill gas flow rate to the A-12 Landfill Gas Flare recorded on a daily basis. A monthly summary of the heat input to A-12, pursuant to part 8 shall be calculated and recorded.
- i. Continuous records of the combustion zone temperature for the A-12 Landfill Gas Flare during all hours of operation.
- j. Records of all test dates and test results performed to maintain compliance with parts 12 and 13 above or any applicable rule or regulation.
- k. Records of landfill gas condensate injection throughput and the duration of the injection recorded daily.

All records shall be maintained on site or shall be made readily available to District staff upon request for at least 5 years from the date of entry. These recordkeeping requirements do not replace the recordkeeping requirements contained in any applicable rules or regulations.

(basis: Cumulative Increase, 2-1-301, 2-6-501, 6-1-301, 6-1-305, 8-2-301, 8-34-301, 8-34-304, 8-34-501, and 9-1-302)

- 16. The annual report required by BAAQMD Regulation 8-34-411 shall be submitted in two semi-annual increments. The reporting periods and report submittal due dates for the Regulation 8-34-411 report shall be synchronized with the reporting periods and report submittal due dates for the semi-annual MFR Permit monitoring reports that are required by Section I.F. of the MFR Permit for this site. (basis: Regulation 8-34-411 and 40 CFR Part 63.1980(a))

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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

17. The gas collection system operating requirements listed below shall replace the well head requirements identified in Regulation 8-34-305.2 through 8-34-305.4 for the specified wells and collectors. All wells and collectors remain subject to the Regulation 8-34-305.1 requirement to maintain vacuum at each well head.
  - a. The Regulation 8-34-305.2 temperature limit shall not apply to the Wells 36 through 39, 43 through 44, 45, 51, 52, 53, 56, 57, 58, 59, 60, 64, 65, 66, 74, 75, 76, 77, 78, 79, 80, 81, 86, and 87 and any other wells for which the District has approved a higher operating temperature value, provided that the landfill gas temperature at each of the identified wells (except Wells 56, 75, and 80) does not exceed 145 degrees F (63 degrees C) and that the temperature at Wells 56, 75, and 80 does not exceed 156 degrees F (69 degrees C).
  - b. The owner/operator shall demonstrate compliance with the alternative wellhead landfill gas temperature limit in 17(a) above by monitoring the temperature of each wellhead on a monthly basis, in accordance with Regulation 8-34-505.
  - c. All records to demonstrate compliance with Part 17(a) and all applicable sections of BAAQMD Regulation 8, Rule 34 shall be recorded in a District-approved log and made available to District staff upon request in accordance with Regulation 8-34-501.4, 501.9, and 414.
  - d. If the temperatures measured at any of the Part 17(a) wells are found to exceed the temperature limit in Part 17(a), the owner/operator shall take all measures necessary to investigate the possibility of subsurface fires, including landfill gas testing for carbon monoxide (CO) on those landfill gas collection wells in Part 17(a) that exceed the operating temperature limit. If a fire is suspected, the owner/operator shall employ all means as appropriate to extinguish the fire, repair the well(s), and bring the well(s) back into service according to Section 8-34-414.  
(basis: Regulations 8-34-301.2, 8-34-303, and 8-34-305)
  
18. If any other well has a temperature of 131 degrees F or higher, the owner/operator may elect to add this component to the list of alternative temperature limit wells in Part 17 if all of the following requirements are met:
  - a. The wellhead temperature does not exceed 145 degrees F.

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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- b. The carbon monoxide (CO) concentration in the wellhead gases does not exceed 500 ppmv.
- c. The component does not exceed any wellhead limit other than temperature and had no excesses of wellhead limits (other than temperature) during the past 120 days prior to adding this component to the list in this subpart, unless the excess is positive pressure at the well from the well vacuum being reduced to eliminate any potential over pull that could contribute to a landfill fire.
- d. Prior to adding a component to the list in Part 17, the owner/operator shall monitor the gas in the wellhead for CO concentration at least two times, with no more than 15 days between tests. CO monitoring shall continue on a monthly basis, or more frequently if required below, until the owner/operator is allowed to discontinue CO monitoring per subpart e(ii)(3).
- e. The owner/operator shall comply with all applicable monitoring and recordkeeping requirements below:
  - i. The owner/operator shall demonstrate compliance with the alternative wellhead temperature limit by monitoring and recording the temperature of the landfill gas in the wellhead on a monthly basis, in accordance with Regulations 8-34-501.4, 8-34-501.9, and 8-34-505.
  - ii. If the temperature of the landfill gas in the wellhead exceeds 140 degrees F, the owner/operator shall investigate the possibility of a subsurface fire at the wellhead by monitoring CO concentration in the wellhead gases and by searching for smoke, smoldering odors, combustion residues, and other fire indicators in the wellhead and in the landfill area near the wellhead. Within 5 days of triggering a fire investigation, the owner/operator shall measure the CO concentration in the landfill gas at the wellhead using a portable CO monitor, CO Draeger tube, or an EPA-approved test method. CO monitoring shall continue according to the frequency specified below:

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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

1. If the CO concentration is greater than 500 ppmv, the owner/operator shall immediately take all steps necessary to prevent or extinguish the subsurface fire, including disconnecting the well from the vacuum system if necessary. If the well is not disconnected from the vacuum system or upon reconnecting the well to the vacuum system, the owner/operator shall monitor the well for CO concentration, wellhead temperature, and other fire indicators on at least a weekly basis until CO concentration drops to 500 ppmv or less.
  2. If the CO concentration is less than or equal to 500 ppmv but greater than 100 ppmv, the owner/operator shall monitor for CO concentration at least twice per month (not less than once every 15 days) until the CO concentration drops to 100 ppmv or less. Wellhead temperature and other fire indicators shall be evaluated at each of these semi-monthly monitoring events.
  3. If the CO concentration is less than or equal to 100 ppmv, the owner/operator shall monitor for CO concentration on a monthly basis. CO monitoring may be discontinued if three consecutive CO measurements are 100 ppmv or less and the wellhead temperature during each of these three monitoring events is 140 degrees F or less. If the component has three or more CO measurements of 100 ppmv or less but the wellhead temperature was greater than 140 degrees F, the owner/operator must receive written approval from the District before discontinuing the monthly CO monitoring at that component.
- iii. The owner/operator shall record the dates and results of all monitoring events required by this subpart in a District-approved log. If subpart 18e(ii) or 18e(ii)(1) applies, the owner/operator shall also record all actions taken to prevent or extinguish the fire.

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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- f. Within 30 days of adding a component to the list in this subpart, the owner/operator shall notify the District in writing that the operator is requesting to add the component to the list of alternative temperature limit wells. This notification shall include the well ID number, a map of the collection system to identify the location of the well, and the dates and results of all monitoring conducted on the well to verify that the above requirements have been satisfied.
- g. If the Regulation 8-34-414 repair schedule has been invoked for the wellhead temperature excess and the owner/operator has met the requirement in Sections 414.1 and 414.2, then compliance with the requirements of the subpart shall be deemed an acceptable resolution of the wellhead temperature excess in lieu of the collection system expansion specified in Section 414.3 and 414.4.

(basis: Regulation 8-34-305)

- 19. The leachate collection system operating requirements listed below shall replace the operating requirements identified in Regulation 8-34-301.1, 8-34-305.1, 8-34-305.3, and 8-34-305.4 for the leachate collection risers (LCRs) LR-04 and any other LCRs for which the District has approved for inclusion in Part 19. All LCRs remain subject to the landfill gas temperature limit in Regulation 8-34-305.2.
  - a. The Regulation 8-34-305.3 and 8-34-305.4, the nitrogen and oxygen content limits, shall not apply, provided that each LCR is operated at a oxygen concentration not to exceed 15% by volume.
  - b. If compliance with Part 19(a) requires turning off the vacuum to a LCR, the Regulation 8-34-301.1 continuous operation and 8-34-305.1 negative pressure requirement shall not apply if the owner/operator ensures the pressure at the affected LCR does not exceed 0.5 inches water column. This allowance for less than continuous operation will expire on October 30, 2013, unless the owner/operator requests renewal of this provision pursuant to Regulation 8-34-404 and the District approves the request.

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### Condition #1437

For: S-1 Kirby Canyon MSW Landfill – Waste Decomposition Process; Equipped with Landfill Gas Collection System; abated by A-12, Enclosed Landfill Gas Flare with Condensate Injection System; S-22 Kirby Canyon MSW Landfill – Waste and Cover Material Dumping; and S-23 Kirby Canyon MSW Landfill – Excavating, Bulldozing, and Compacting Activities

- c. The owner/operator shall demonstrate compliance with the oxygen content limit in 19(a) alternative wellhead pressure limit in 19(b) by installing and maintaining a District-approved vacuum/pressure gauge at each LCR and by monitoring and recording the oxygen content and pressure at each affected LCR on a monthly basis, in accordance with Regulation 8-34-501 and 8-34-505.
- d. The owner/operator may elect to add additional LCRs to these alternate operating conditions by notifying the District in writing of this request, with identification of the LCR ID number(s) and submittal of the information required by Regulation 8-34-404.
- e. All records to demonstrate compliance with Part 19 and all applicable sections of BAAQMD Regulation 8, Rule 34 shall be recorded in a District-approved log and made available to District staff upon request for at least 5 years from date of entry.

(basis: Regulations 8-34-305, 8-34-404, 8-34-414, 8-34-501.4, and 8-34-501.9)



**VII. APPLICABLE LIMITS & COMPLIANCE MONITORING REQUIREMENTS**

This section has been included to summarize the applicable emission limits contained in Section IV, Source-Specific Applicable Requirements, of this permit. The following tables show the relationship between each emission limit and the associated compliance monitoring provisions, if any. The monitoring frequency column indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown using the following codes: annual (A), quarterly (Q), monthly (M), weekly (W), daily (D), or on an event basis (E). No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring, and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.

This section is only a summary of the limits and monitoring requirements. In the case of a conflict with any requirement in Sections I-VI, the preceding sections take precedence over Section VII.

**Table VII – A  
 Applicable Limits and Compliance Monitoring Requirements  
 S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS FLARE WITH CONDENSATE INJECTION SYSTEM;  
 S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;  
 S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Collection System Installation Dates	BAAQMD 8-34-304.1	Y		For Inactive/Closed Areas: collection system components must be installed and operating by 2 years + 60 days after initial waste placement	BAAQMD 8-34-501.7 and 501.8 and BAAQMD Condition #1437, Parts 15b-c and 15f-g	P/E	Records

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED**  
**WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS**  
**FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Collection System Installation Dates	BAAQMD 8-34-304.2	Y		For Active Areas: Collection system components must be installed and operating by 5 years + 60 days after initial waste placement	BAAQMD 8-34-501.7 and 501.8 and BAAQMD Condition #1437, Parts 15b-c and 15f-g	P/E	Records
Collection System Installation Dates	BAAQMD 8-34-304.3	Y		For Any Uncontrolled Areas or Cells: collection system components must be installed and operating within 60 days after the uncontrolled area or cell accumulates 1,000,000 tons of decomposable waste	BAAQMD 8-34-501.7 and 501.8 and BAAQMD Condition #1437, Parts 15a-c and 15f-g	P/E	Records
Gas Flow	BAAQMD 8-34-301 and 301.1	Y		Landfill gas collection system shall operate continuously, except as described in Condition #1437, Part 19, and all collected gases shall be vented to a properly operating control system	BAAQMD 8-34-501.10 and 508, and Condition #1437, Part 19e	C	Gas Flow Meter and Recorder (every 15 minutes), and Records

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED**  
**WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS**  
**FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Gas Flow	BAAQMD Condition #1437, Parts 5, 6, 7, and 19	Y		Landfill gas collection system shall operate continuously, except as described in Condition #1437, Part 19, and all collected gases shall be vented to a properly operating control system	BAAQMD Condition #1437, Parts 15f-h and 19e	P/D	Records of Landfill Gas Flow Rates, Collection and Control Systems Downtime, Collection System Components, and Component Downtime
Collection and Control Systems Shutdown Time	BAAQMD 8-34-113.2	Y		≤ 240 hours/year and ≤ 5 consecutive days	BAAQMD 8-34-501.1	P/D	Operating Records
Periods of Inoperation for Parametric Monitors	BAAQMD 1-523.2	Y		≤ 15 consecutive days per incident and ≤ 30 calendar days per 12 month period	BAAQMD 1-523.4	P/D	Operating Records for All Parametric Monitors
Continuous Monitors	40 CFR 60.13(e)	Y		Requires Continuous Operation except for breakdowns, repairs, calibration, and required span adjustments	40 CFR 60.7(b)	P/D	Operating Records for All Continuous Monitors

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED**  
**WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS**  
**FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Wellhead Pressure	BAAQMD 8-34-305.1	Y		< 0 psig, except for leachate collection risers subject to Part 19 of Condition 1437	BAAQMD 8-34-414, 501.9 and 505.1 and BAAQMD Condition #1437, Part 19e	P/M	Monthly Inspection and Records
Wellhead Pressure	BAAQMD Condition #1437, Part 19b	Y		≤ 0.5 inches water column for leachate collection risers subject to Part 19 of Condition 1437	BAAQMD Condition #1437, Parts 19c and 19e	P/M	Monthly Inspection and Records
Temperature of Gas at Wellhead	BAAQMD 8-34-305.2	Y		< 55 °C, except for wells subject to Part 17 of Condition 1437	BAAQMD 8-34-414, 501.9 and 505.2	P/M	Monthly Inspection and Records
Temperature of Gas at Wellhead	BAAQMD Condition #1437, Parts 17a and 18a	Y		≤ 145 °F (≤ 63 °C), for wells subject to Part 17 of Condition 1437 (except Well 56), and ≤ 156 °F (≤ 69 °C), for Well 56, 75, 80	BAAQMD Condition #1437, Parts 17b and 18e	P/M	Monthly Inspection and Records
Gas Concentrations at Wellhead	BAAQMD 8-34-305.3 or 305.4	Y		N <sub>2</sub> < 20% by volume <b>OR</b> O <sub>2</sub> < 5% by volume, except for leachate collection risers subject to Part 19 of Condition 1437	BAAQMD 8-34-414, 501.9 and 505.3 or 505.4	P/M	Monthly Inspection and Records

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED**  
**WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS**  
**FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Gas Concentrations at Wellhead	BAAQMD Condition #1437, Part 19a	Y		$O_2 \leq 15\%$ by volume, for leachate collection risers subject to Part 19 of Condition 1437	BAAQMD Condition #1437, Parts 19c and 19e	P/M	Monthly Inspection and Records
Gas Concentrations at Wellhead	BAAQMD Condition #1437, Part 18b	Y		$CO \leq 500$ ppmv, for leachate collection risers subject to Parts 17 and 18 of Condition 1437 that have a wellhead $T > 140$ °F	BAAQMD Condition #1437, Parts 18e	P/E	Portable Monitor Inspections and Records
Well Shutdown Limits for Well Raising	BAAQMD 8-34-116.2	Y		No more than 5 wells at a time or 10% of total collection system, whichever is less	BAAQMD 8-34-116.5 and 501.1	P/D	Records
Well Shutdown Limits for Well Raising	BAAQMD 8-34-116.3	Y		$\leq 24$ consecutive hours per well	BAAQMD 8-34-116.5 and 501.1	P/D	Records
Well Shutdown Limits for Repair, Construction, Fire	BAAQMD 8-34-117.4	Y		No more than 5 wells at a time or 10% of total collection system, whichever is less	BAAQMD 8-34-117.6 and 501.1	P/D	Records
Well Shutdown Limits for Repair, Construction, Fire	BAAQMD 8-34-117.5	Y		$\leq 24$ consecutive hours per well	BAAQMD 8-34-117.6 and 501.1	P/D	Records

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED**  
**WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS**  
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**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Landfill Construction Activity Limits	BAAQMD 8-34-118.5	Y		Excavated refuse covered immediately and disposed of $\leq 24$ hours	BAAQMD 8-34-118.9 and 501.1	P/D	Records
Landfill Construction Activity Limits	BAAQMD 8-34-118.6	Y		Drilled wells and excavated trenches covered $\leq 8$ hours	BAAQMD 8-34-118.9 and 501.1	P/D	Records
TOC (Total Organic Compounds Plus Methane)	BAAQMD 8-34-301.2	Y		Component Leak Limit: $\leq 1000$ ppmv as methane	BAAQMD 8-34-501.6 and 503	P/Q	Quarterly Inspection of collection and control system components with OVA and Records
TOC	BAAQMD 8-34-303	Y		Surface Leak Limit: $\leq 500$ ppmv as methane at 2 inches above surface	BAAQMD 8-34-415, 416, 501.6, 506 and 510	P/M, Q, and E	Monthly Visual Inspection of Cover, Quarterly Inspection with OVA of Surface, Various Reinspection Times for Leaking Areas, and Records

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED**  
**WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS**  
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**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Non-Methane Organic Com-pounds (NMOC)	BAAQMD 8-34-301.3	Y		≥ 98% removal by weight OR < 30 ppmv, dry basis @ 3% O <sub>2</sub> , expressed as methane (applies to A-12 Flare only)	BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition #1437, Part 12	P/A	Initial and Annual Source Tests and Records
Temperature of Combustion Zone (CT)	BAAQMD Condition #1437, Part 9	Y		CT ≥ 1428 °F, averaged over any 3-hour period (applies to A-12 Flare only)	BAAQMD 8-34-501.3 and 507, and BAAQMD Condition #1437, Part 15i	C	Temperature Sensor and Recorder (continuous)
Total Carbon	BAAQMD 8-2-301	Y		≤ 15 pounds/day or ≤ 300 ppm, dry basis (applies only to aeration of or use as cover soil of soil containing ≤ 50 ppmw of volatile organic compounds)	BAAQMD Condition # 1437, Parts 3, 15d	P/E	Inspection with Portable Organic Vapor Analyzer and Records
Amount of Contaminated Soil Aerated or Used as Cover	BAAQMD 8-40-116.1 and BAAQMD Condition # 1437, Part 2	Y		≤ 1 cubic yard per project	BAAQMD Condition # 1437, Part 2m	P/E	Records

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED**  
**WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS**  
**FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Amount of Contaminated Soil Aerated or Used as Cover	BAAQMD 8-40-116.2 and BAAQMD Condition #1437, Part 2	Y		≤ 8 cubic yards per project, provided organic content ≤ 500 ppmw and limited to 1 exempt project per 3 month period	BAAQMD Condition # 1437, Part 2m	P/E	Records
Amount of Contaminated Soil Aerated or Used as Cover	BAAQMD 8-40-301 and BAAQMD Condition #1437, Part 2	Y		Prohibited for Soil with Organic Content >50 ppmw unless exempt per BAAQMD 8-40-116, 117, or 118	BAAQMD Condition # 1437, Part 2m	P/E	Records
Onsite Transfers of Contaminated Soil	BAAQMD Condition #1437, Part 2e	Y		≤ 2 onsite transfers per contaminated soil lot	BAAQMD Condition # 1437, Part 2m	P/E	Records
Disposal of Contaminated Soil	BAAQMD Condition #1437, Part 2f	Y		For contaminated soil with organic content < 500 ppmw, treatment, final deposit, or offsite transport ≤ 90 days of receipt	BAAQMD Condition # 1437, Part 2m	P/E	Records
Disposal of Contaminated Soil	BAAQMD Condition #1437, Part 2g	Y		For contaminated soil with organic content ≥ 500 ppmw, treatment, final deposit, or offsite transport ≤ 45 days of receipt	BAAQMD Condition # 1437, Part 2m	P/E	Records



## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 KIRBY CANYON MSW LANDFILL – WASTE DECOMPOSITION PROCESS; EQUIPPED**  
**WITH LANDFILL GAS COLLECTION SYSTEM; ABATED BY A-12 ENCLOSED LANDFILL GAS**  
**FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Amount of Accidental Spillage	BAAQMD 8-40-117 and BAAQMD Condition # 1437, Part 2	Y		Soil Contaminated by Accidental Spillage of $\leq 5$ Gallons of Liquid Organic Compounds	None	N	N/A
Total Aeration Project Emissions	BAAQMD 8-40-118 and BAAQMD Condition # 1437, Part 2	Y		$\leq 150$ pounds VOC per project and toxic air contaminant emissions $<$ BAAQMD Table 2-5-1 trigger levels	BAAQMD Condition #1437, Part 2m	P/E	Records
Low VOC Soil	BAAQMD Condition # 1437, Part 3	Y		Soil with Organic Vapor Concentration $\leq 50$ ppmv Acceptable as Cover Material	BAAQMD 8-40-604 and BAAQMD Condition # 1437, Part 3	P/E	Surface Organic Vapor Monitoring
Opacity	BAAQMD 6-1-301	N		Ringelmann No. 1 for $\leq 3$ minutes/hr (applies to S-22 and S-23)	BAAQMD Condition #1437, Part 15e	P/E, M	Records of all site watering and road cleaning events
Opacity	BAAQMD 6-1-301	N		Ringelmann No. 1 for $\leq 3$ minutes/hr (applies to A-12 Flare)	None	N	N/A

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
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**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
FP	BAAQMD 6-1-310	N		≤ 0.15 grains/dscf (applies to A-12 Flare only)	None	N	N/A
Opacity	SIP 6-301	Y		Ringelmann No. 1 for ≤ 3 minutes/hr (applies to S-22 and S-23)	BAAQMD Condition #1437, Part 15e	P/E, M	Records of all site watering and road cleaning events
Opacity	SIP 6-301	Y		Ringelmann No. 1 for ≤ 3 minutes/hr (applies to A-12 Flare)	None	N	N/A
FP	SIP 6-310	Y		≤ 0.15 grains/dscf (applies to A-12 Flare only)	None	N	N/A
SO <sub>2</sub>	BAAQMD 9-1-301	Y		Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 min. and ≤ 0.05 ppm for 24 hours (applies to A-12 Flare only)	None	N	N/A
SO <sub>2</sub>	BAAQMD Regulation 9-1-302	Y		≤ 300 ppm (dry basis) (applies to A-12 Flare only)	BAAQMD Condition #1437, Part 12	P/A	Annual Source Test
H <sub>2</sub> S	BAAQMD 9-2-301	N		Property Line Ground Level Limits: ≤ 0.06 ppm, averaged over 3 minutes and ≤ 0.03 ppm, averaged over 60 minutes	None	N	N/A

## VII. Applicable Limits and Compliance Monitoring Requirements

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**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NO <sub>x</sub>	BAAQMD Condition #1437, Part 10	Y		≤ 0.05 lb/MMBTU (calculated as NO <sub>2</sub> )	BAAQMD Condition #1437, Part 12	P/A	Annual Source Test
CO	BAAQMD Condition #1437, Part 11	Y		≤ 0.3 lb/MMBTU	BAAQMD Condition #1437, Part 12	P/A	Annual Source Test
Amount of Waste Accepted	BAAQMD Condition #1437, Part 1a	Y		≤ 2600 tons/day (except for temporary situations approved by the LEA)	BAAQMD Condition #1437, Part 15a	P/D	Records
Amount of Waste Accepted	BAAQMD Condition #1437, Part 1b	Y		≤ 19,840,000 tons (cumulative amount of decomposable materials)	BAAQMD Condition #1437, Part 15a	P/D	Records
Amount of Waste Accepted	BAAQMD Condition #1437, Part 1c	Y		≤ 36,400,000 yd <sup>3</sup> (cumulative amount of all wastes)	BAAQMD Condition #1437, Part 15a	P/D	Records
Heat Input	BAAQMD Condition #1437, Part 8	Y		≤ 3,576 MM BTU per day and ≤ 1,305,240 MM BTU per year (applies to A-12 Flare only)	BAAQMD Condition #1437, Parts 8, 15h	P/D	Records
Landfill Gas Condensate Injection in Flare	BAAQMD Condition #1437, Part 14	N		≤ 5 gallons per minute and ≤ 1,500,000 gallons per year	BAAQMD Condition #1437, Part 15k	P/D	Records

## VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
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**FLARE WITH CONDENSATE INJECTION SYSTEM;**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING;**  
**S-23 KIRBY CANYON MSW LANDFILL – EXCAVATING, BULLDOZING, AND**  
**COMPACTING ACTIVITIES**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Startup Shutdown or Malfunction Procedures	40 CFR 63.6(e)	Y		Minimize Emissions by Implementing SSM Plan	40 CFR 63.1980(a-b)	P/E	Records (all occurrences, duration of each, corrective actions)

## VIII. TEST METHODS

The test methods associated with the emission limit of a District regulation are generally found in Section 600 et seq. of the regulation. The following table indicates only the test methods associated with the emission limits included in Section VII, Applicable Limits & Compliance Monitoring Requirements, of this permit.

**Table VIII**  
**Test Methods**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
BAAQMD 6-1-301 and SIP 6-301	Ringelmann No. 1 Limitation	Manual of Procedures, Volume I, Evaluation of Visible Emissions; or US EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources
BAAQMD 6-1-303.1 and SIP 6-303	Ringelmann No. 2 Limitation	Manual of Procedures, Volume I, Evaluation of Visible Emissions; or US EPA Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources
BAAQMD 6-1-310 and SIP 6-310	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulate Sampling or US EPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources
BAAQMD 8-2-301 and SIP 8-2-301	Organic Compound Emission Limitation for Miscellaneous Operations	Manual of Procedures, Volume IV, ST-7, Non-Methane Organic Carbon Sampling; or EPA Reference Method 25 Determination of Total Gaseous Nonmethane Organic Emissions as Carbon, or EPA Reference Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer
BAAQMD 8-34-301.2	Collection and Control System Component Leak Limitations	EPA Reference Method 21, Determination of Volatile Organic Compound Leaks
BAAQMD 8-34-301.3	NMOC Limits for Flares	Manual of Procedures, Volume IV, ST-7, Non-Methane Organic Carbon Sampling and ST-14, Oxygen, Continuous Sampling; or EPA Reference Method 18, 25, 25A, or 25C
BAAQMD 8-34-303	Landfill Surface Leak Limit	EPA Reference Method 21, Determination of Volatile Organic Compound Leaks
BAAQMD 8-34-305.1	Wellhead Gauge Pressure	APCO Approved Device
BAAQMD 8-34-305.2	Temperature Limit for Gas at Wellheads	APCO Approved Device
BAAQMD 8-34-305.3	Nitrogen Concentration Limit in Gas at Wellheads	EPA Reference Method 3C, Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources
BAAQMD 8-34-305.4	Oxygen Concentration Limit in Gas at Wellheads	EPA Reference Method 3C, Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources

## VIII. Test Methods

**Table VIII  
 Test Methods**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
BAAQMD 8-34-412	Compliance Demonstration Test	EPA Reference Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography, Method 25, Determination of Total Gaseous Nonmethane Organic Emissions as Carbon, Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, or Method 25C, Determination of Nonmethane Organic Compounds (NMOC) in MSW Landfill Gases
BAAQMD 8-40-116.2	Organic Content Limit for Small Volume Exemption	BAAQMD 8-40-601 and EPA Reference Methods 8015B and 8021B
BAAQMD 8-40-301	Limits on Uncontrolled Aeration of Contaminated Soil	BAAQMD 8-40-601 and EPA Reference Methods 8015B and 8021B; or EPA Reference Method 21
BAAQMD 9-1-301	Limitations on Ground Level Concentrations (SO <sub>2</sub> )	Manual of Procedures, Volume VI, Part 1, Ground Level Monitoring for Hydrogen Sulfide and Sulfur Dioxide
BAAQMD 9-1-302	General Emission Limitation (SO <sub>2</sub> )	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling
BAAQMD 9-2-301	Limitations on Hydrogen Sulfide	Manual of Procedures, Volume VI, Part 1, Ground Level Monitoring for Hydrogen Sulfide and Sulfur Dioxide
40 CFR 60.8	Performance Tests	EPA Reference Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography, Method 25, Determination of Total Gaseous Nonmethane Organic Emissions as Carbon, Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, or Method 25C, Determination of Nonmethane Organic Compounds (NMOC) in MSW Landfill Gases
BAAQMD Condition #1437, Part 2	Acceptance Criteria for Soils containing VOCs (VOC determination)	BAAQMD 8-40-601 and EPA Reference Methods 8015B and 8021B; or EPA Reference Method 21
BAAQMD Condition #1437, Part 3	Low VOC Soils for Landfill Cover	BAAQMD 8-40-601 and EPA Reference Methods 8015B and 8021B; and EPA Reference Method 21
BAAQMD Condition #1437, Part 8	Heat Input Limits	APCO approved gas flow meter and APCO approved calculation procedure described in BAAQMD Condition # 1437, Part 8
BAAQMD Condition #1437, Part 9	Flare Combustion Temperature Limit	APCO Approved Device

## VIII. Test Methods

**Table VIII  
 Test Methods**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
BAAQMD Condition #1437, Part 10	Flare NOx Limit	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD Condition #1437, Part 11	Flare CO Limit	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD Condition #1437, Part 12	Compliance Demonstration Test	Manual of Procedures, Volume IV, ST-17, Stack Gas Velocity and Volumetric Flow Rate; ST-23 Water Vapor; ST-14, Oxygen, Continuous Sampling; ST-13A, Oxides of Nitrogen, Continuous Sampling; ST-6, Carbon Monoxide, Continuous Sampling; and Manual of Procedures, Volume IV, ST-7, Organic Compounds or EPA Reference Methods 18, 25, 25A or 25C
BAAQMD Condition #1437, Part 13	Characterization of landfill gas	EPA Reference Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography, Method 25, Determination of Total Gaseous Non-methane Organic Emissions as Carbon, Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, or Method 25C, Determination of Non-methane Organic Compounds (NMOC) in MSW Landfill Gases; and Manual of Procedures, Volume III, Method 44 Determination of Reduced Sulfur Gases and Sulfur Dioxide in Effluent Samples by Gas Chromatographic Methods
BAAQMD Condition #1437, Parts 17a and 18a	Temperature Limit for Gas at Wellheads	APCO Approved Device
BAAQMD Condition #1437, Part 18b	Carbon Monoxide Concentration Limit for Gas at Wellheads	APCO Approved Portable Analyzer
BAAQMD Condition #1437, Part 19a	Oxygen Concentration Limit for Gas at Wellheads	EPA Reference Method 3C, Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources

## VIII. Test Methods

**Table VIII**  
**Test Methods**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
BAAQMD Condition #1437, Part 19b	Pressure Limit at Wellhead for Components that are Disconnected from Vacuum	APCO Approved Device



## IX. PERMIT SHIELD

### A. SUBSUMED REQUIREMENTS

Pursuant to District Regulations 2-6-233.2 and 2-6-409.12, as of the date this permit is issued, the federally enforceable monitoring, recordkeeping, and reporting requirements cited in the following table for the source or group of sources identified at the top of the table are subsumed by the monitoring, recordkeeping, and reporting for more stringent requirements or by a “hybrid” monitoring scheme. The District has determined that compliance with the requirements listed below and elsewhere in this permit will assure compliance with the substantive requirements of the subsumed monitoring requirements. Enforcement actions and litigation may not be initiated against the source or group of sources covered by this shield based on the subsumed monitoring requirements cited.

**Table IX-A**  
**S-22 KIRBY CANYON MSW LANDFILL – WASTE AND COVER MATERIAL DUMPING**

Subsumed Requirement Citation	Title or Description	Streamlined Requirements	Title or Description
8-2-601	Determination of Compliance (for organic compound emissions as total carbon)	8-40-604	Measurement of Organic Concentration (to classify soil as “contaminated” or “not contaminated”)

The Regulation 8, Rule 2 total carbon test procedure is subsumed by the Regulation 8, Rule 40 VOC test procedure for the active landfilling operation (S-22) because testing performed pursuant to Regulation 8-40-604 will rule out the need to test in accordance with Regulation 8-2-601.

Regulation 8, Rule 2 “Miscellaneous Operations” is only applicable to sources of precursor organic compounds that are not otherwise limited by Regulation 8 or Regulation 10 rules. In the case of the Kirby Canyon MSW Landfill, Regulation 8, Rule 2 would apply only to cover soil that contains some VOC, but is not defined as “contaminated soil” by Regulation 8-40-205. Soil which has an organic content exceeding 50 ppmw or that registers an organic concentration greater than 50 ppmv (expressed as methane, C1) is subject to Regulation 8, Rule 40.

Regulation 8-2-301 limits organic compound emissions (expressed as total carbon) from an operation to 15 pounds per day, if the emission from the operation has an organic compound concentration greater than 300 ppmv (expressed as total carbon,

## **IX. Permit Shield**

dry basis). Since soil found not to be contaminated using the procedures of Regulation 8-40-604 will have a surface VOC concentration of less than 50 ppmv (expressed as methane, C1) it can reasonably be assumed that the concentration is also less than 300 ppmv (total carbon, dry basis) as determined by the procedures of Regulation 8-2-601. Since the operation complies with the 300 ppmv limit, it complies with Regulation 8-2-301.

In summary, measurements conducted under Regulation 8-40-604 that show surface VOC concentrations less than 50 ppmv (expressed as methane, C1) are conclusive to demonstrate compliance with Regulation 8-2-301.

## **X. REVISION HISTORY**

**Title V Permit Issuance (Application 2619):** **July 10, 2003**

**Minor Revision (Applications 7300, 7835, 8255, and 9220):** **January 12, 2005**

- Updated gas collection well totals in the Landfill source description to reflect recent construction activities.
- Added existing Diesel IC Engines S-3 and S-4 to Title V permit.
- Added proposed Landfill Gas Fired IC Engine Generator Sets S-5, S-6, and S-7.
- Removed proposed Landfill Gas Fired IC Engine Generator Set S-2. (Application #3539 withdrawn by applicant)
- Added new Landfill Gas Flare A-11 and removed existing Flare A-10.
- Updated Generally Applicable Requirements (Table III).
- Updated tables and permit conditions to reflect the additions and removals of permitted and proposed equipment.
- Updated tables to remove future effective dates that have since passed.
- Added Section X “Revision History” and renumbered the “Glossary” and “Applicable State Implementation Plan” as Sections XI and XII.

**Minor Revision (Application #11729):** **July 13, 2006**

- Update the gas collection well total in Table II A, S-1 to reflect recent construction under Authority to Construct #11729.
- Modify Sections III and IV state that SIP standards are now found on EPA's website and are not included as part of the permit. The updated website address has been added.
- Modify Permit Condition #1437, part 6 to account for changes to the landfill gas collection system.
- Add paragraph to standard text of Section VII to clarify that Sections I-VI take precedence if there is a conflict with the VII Tables.
- Remove Section XII “Applicable State Implementation Plan”. The address for EPA's website is now found in Sections III and IV.

**Minor Revision (Application #14076):** **January 28, 2007**

- Add new Portable Compressor Diesel Engine to Title V permit.
- Add facility-wide NOx emissions limit via new Permit Condition #23023.

## X. Revision History

### **Minor Revision (Application 15618):**

**November 13, 2008**

- Change Responsible Official and Plant Contact.
- Delete flare A-11 and replace with new flare A-12 and A-12 requirements.
- Delete sources S-5, S-6, S-7, which were not installed.
- Delete sources S-3, S-4, which were removed from service.
- Add alternate well temperature limits.
- Update well count and add proposed gas collection system modifications.

### **Permit Renewal (Application 17168):**

**March 2, 2012**

- Change Business Name, Address, Responsible Official, and Facility Contact.
- Add and revise introduction in Section I, III, IV, VII, and VIII to conform to current standard text.
- Incorporate source number changes into this permit that were implemented pursuant to the BAAQMD annual permit renewal process. The active landfill, Source S-1, was split into three sources (S-1, S-22, and S-23) that represent different processes and activities that occur at active landfills. The new source numbers were added to Tables II-A, IV-A, VII-A, IX-A and Condition # 1437.
- Identify S-8 as exempt from major facility review in Table II-C and remove all other references to S-8 from Sections IV-VIII of the permit.
- Correct and update regulatory references and amendment dates throughout the permit.
- Add several missing BAAQMD and federal regulations to Table III, and add several new California regulations to Table III.
- Update permit conditions to incorporate changes from NSR applications, including landfill collection system well count (NSR Applications #21786 and 23446), alternate operating conditions for specific wells (NSR Application #19359), and minimum flare temperature. Add the related new applicable requirements to Tables IV-A and VII-A (BAAQMD Regulations 8-34-404 and 8-34-501.5 and Condition #1437, Parts 18-19. Correct citation of condition bases. Update references to these changes throughout the permit.
- Add symbols to Table VII-A to clarify limits.
- For Table VIII, add missing test methods and remove obsolete or unnecessary test methods.
- Clarify the applicability of the permit shield in Section IX.
- Add this permit renewal to the Section X Revision History.
- Add terms to the Section XI Glossary.

## **XI. GLOSSARY**

### **ACT**

Federal Clean Air Act

### **APCO**

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

### **ARB**

Air Resources Board

### **ATCM**

Airborne Toxic Control Measure

### **BAAQMD**

Bay Area Air Quality Management District

### **BACT**

Best Available 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)

### **CCR**

The California Code of Regulations

### **CEM**

A “continuous emission monitor” is a monitoring device that provides a continuous direct measurement of some pollutant (e.g. NO<sub>x</sub> concentration) in an exhaust stream.

### **CEQA**

California Environmental Quality Act

## **XI. Glossary**

### **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.

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

Methane

### **CI**

Compression Ignition

### **CO**

Carbon Monoxide

### **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 Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 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

### **E6, E9, E12**

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, 4.53E6 equals  $(4.53) \times (10^6) = (4.53) \times (10 \times 10 \times 10 \times 10 \times 10 \times 10) = 4,530,000$ . Scientific notation is used to express large or small numbers without writing out long strings of zeros.

### **EG**

Emission Guidelines

### **EPA**

The federal Environmental Protection Agency.

## **XI. Glossary**

### **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 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

### **FP**

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

### **FR**

Federal Register

### **Grains**

1/7000 of a pound

### **H<sub>2</sub>S or H<sub>2</sub>S**

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.

### **H&SC**

Health and Safety Code

### **Hg**

Mercury

### **HHV**

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

### **LEA**

Local Enforcement Agency

## **XI. Glossary**

### **LFG**

Landfill gas

### **Major Facility**

A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (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 Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

### **MIN or Min.**

Minimum

### **MOP**

The District's Manual of Procedures.

### **MSW**

Municipal solid waste

### **MW**

Molecular weight

### **N<sub>2</sub> 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.



## **XI. Glossary**

### **NMHC**

Non-methane Hydrocarbons (Same as NMOC)

### **NMOC**

Non-methane Organic Compounds (Same as NMHC)

### **NO<sub>2</sub>**

Nitrogen Dioxide

### **NO<sub>x</sub> 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 Federal Clean Air 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 pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

### **O<sub>2</sub> or O<sub>2</sub>**

Oxygen

### **Offset Requirement**

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO<sub>x</sub>, PM<sub>10</sub>, and SO<sub>2</sub>.

### **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**

Particulate Matter

## **XI. Glossary**

### **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 those 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.

### **RMP**

Risk Management Plan

### **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.

### **SO<sub>2</sub> 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.

### **TAC**

Toxic Air Contaminant

### **TBACT**

Best Available Control Technology for Toxics

### **THC**

Total Hydrocarbons (NMHC + Methane)

### **Title V**

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

## XI. Glossary

### **TOC**

Total Organic Compounds (NMOC + Methane, Same as THC)

### **TPH**

Total Petroleum Hydrocarbons

### **TRMP**

Toxic Risk Management Policy

### **TRS**

Total Reduced Sulfur

### **TSP**

Total Suspended Particulate

### **TVP**

True Vapor Pressure

### **VOC**

Volatile Organic Compounds

### **Symbols:**

<	=	less than
>	=	greater than
≤	=	less than or equal to
≥	=	greater than or equal to

### **Units of Measure:**

atm	=	atmospheres
bhp	=	brake-horsepower
btu	=	British Thermal Unit
BTU	=	British Thermal Unit
°C	=	degrees Centigrade
cfm	=	cubic feet per minute
dscf	=	dry standard cubic feet
°F	=	degrees Fahrenheit
ft <sup>3</sup>	=	cubic feet
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
gr	=	grains
hp	=	horsepower

## XI. Glossary

### Units of Measure:

hr	=	hour
in	=	inches
kW	=	kilowatt
lb	=	pound
lbmol	=	pound-mole (eq. to molecular weight of compound x lb)
m <sup>2</sup>	=	square meter
m <sup>3</sup>	=	cubic meters
min	=	minute
mm	=	million
MM	=	million
MM BTU	=	million BTU
MMcf	=	million cubic feet
Mg	=	mega grams
MW	=	megawatts
ppb	=	parts per billion
ppbv	=	parts per billion, by volume
ppm	=	parts per million
ppmv	=	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
yd	=	yard
yd <sup>3</sup>	=	cubic yards
yr	=	year