Bay Area Air Quality Management District

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Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT
MINOR REVISION

for

Browning-Ferris Industries of CA, Inc.
Facility #A2266

Facility Address:
12310 San Mateo Road
Half Moon Bay, CA 94019

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Half Moon Bay, CA 94019

Application Engineer: Carol Allen
Site Engineer: Carol Allen

Application: 23392

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STATEMENT of BASIS

Browning-Ferris Industries of CA, Inc.; SITE # A2266

APPLICATION #23392

Major Facility Review Permit: Minor Revision

A. BACKGROUND

Site Description:

Browning-Ferris Industries of CA, Inc. (BFI) operates the Los Trancos Canyon Landfill Facility located on Ox Mountain in Half Moon Bay, CA. This facility includes an active landfill (S-1), three landfill gas flares (A-7, A-8, and A-9), a non-retail gasoline dispensing facility (S-5), and stockpiles of green waste (S-12).

As required by District and federal regulations, the S-1 Los Trancos Canyon Landfill is equipped with landfill gas collection and control systems that are designed to reduce the emissions of methane, precursor organic compounds, and toxic air contaminants from the landfill. All areas of the landfill that contain decomposable waste include vertical wells or horizontal collectors (perforated piping systems) that are buried in the waste and connected to blowers. The blowers operate continuously to maintain a vacuum within the piping systems, which draws the landfill gas into the piping systems, and then vent this collected landfill gas to the control systems.

The primary control system for this facility is the off-site energy plant, Site # B7040, that is owned and operated by an independent company, Ameresco Half Moon Bay, LLC. The off-site energy plant includes six lean burn internal combustion engines that use treated landfill gas from S-1 as fuel. BFI operates three on-site landfill gas flares (A-7, A-8, and A-9) that operate as back-up devices to the energy plant. In 2010, BFI collected an average of 3425 scfm of landfill gas with an average methane content of 59%. About 99% of this collected gas was delivered to the off-site energy plant, while 1% was burned in the on-site flares. However, the flares have sufficient capacity to handle all of the landfill gas that is currently being collected in the event that the energy plant is unable to operate.

Minor Revisions:

Application # 23392 involves Minor Revisions to the Title V Permit for Site # A2266. The District is proposing to incorporate permit condition revisions for the S-1 Los Trancos Canyon Landfill that were approved by the District pursuant to NSR Application # 23391 (see Appendix A),. These permit condition revisions will update the current landfill gas collection system descriptions, authorize new gas collection system alterations that are necessary for expansion and repair of the current gas collection

system, and update the list of components that are subject to alternative wellhead standards. The District is also proposing to make a number of non-substantive revisions to the permit. During the most recent annual District permit renewal cycle, the District split the landfill source (S-1) into three source numbers (S-1, S-21, and S-22) to better represent the different processes and activities that occur at active landfills. These source number changes are proposed to be reflected in this Title V permit revision by adding the new source numbers and new source descriptions to Table II-A, modifying the titles of Tables IV-A and VII-A, and adding the new source numbers to the source list for Condition # 10164. The District is proposing to add missing BAAQMD and SIP requirements to Section I.A and Table III. The District is updating regulatory amendment dates in Section I.A, Table III, and Table IV-A. And finally, in Table IV-A, the District is proposing to correct the descriptions of several requirements and to add several missing requirements. The specific permit revisions are discussed in detail in Section C.

B. EMISSIONS

As explained below, these permit revisions do not result in any emission increases. The proposed permit condition revisions will not allow the increase of any emission limits and will not change any data (such as throughput rate limits, emission factors, concentrations, or control efficiency standards) that was used to establish maximum permitted emission levels for a source or abatement device at this site. The regulatory updates will not affect any of the currently applicable limits either.

As discussed in the Engineering Evaluation for the Application #23391 (see Appendix A), the flares have sufficient excess capacity to handle all of the additional landfill gas that may be collected from the additional vertical wells and horizontal collectors that are authorized to be installed as part of the landfill gas collection system. The removal of gas collection system components is subject to permit conditions that will limit the amount and duration of well shut downs and that will require monitoring to verify that well shut downs do not result in surface or component emission leaks. Therefore, the gas collection system alterations described in the permit conditions will not require any changes to the existing permitted emission limits for the landfill or the flares.

The other proposed permit changes simply involve the description of the landfill source and will not allow an expansion of the landfill or any changes to the current throughput or operating rate limits. The regulatory changes involve updating amendment dates and adding missing sections of existing general requirements. These changes will not subject to the landfill or flares to any new limits. Therefore, these changes are not substantial and will have no impact on emissions.

C. PROPOSED MFR PERMIT MODIFICATIONS

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review, because it is a major facility as defined by BAAQMD Regulation 2-6-212.1. It is a major facility because it has the "potential to emit," as defined by BAAQMD Regulation 2-6-218, of more than 100 tons per year of a regulated air pollutant (in this case, carbon monoxide). Therefore, this facility is required to have an MFR permit pursuant to Regulation 2-6-301.

In addition, it is a designated facility as defined by BAAQMD Regulation 2-6-204. The Standards of Performance for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart WWW) require the owner or operator of a landfill that is subject to this part and that has a design capacity of greater than or equal to 2.5 million megagrams and 2.5 million cubic meters to obtain an operating permit pursuant to Part 70. This facility is subject to this NSPS because it commenced construction after May 30, 1991 and has design capacities that are larger than 2.5 million Mg and larger than 2.5 million m^3. Therefore, this facility is required to have an MFR permit pursuant to Regulation 2-6-304.

The initial MFR Permit for this facility was issued on October 1, 2001, was renewed on October 1, 2007, and was last revised on May 18, 2010. This application will require a minor revision of the current MFR permit to incorporate the proposed permit condition revisions and other permit corrections.

The proposed MFR permit revisions related to this application are described below. Brief descriptions of the regulatory amendments that are being included in this Title V permit revision are provided below followed by a discussion of the specific changes to each section of the Title V permit.

Summary of Regulatory Amendments:

- The District amended BAAQMD Regulation 1 on May 4, 2011. This amendment date will be updated in Section I-A, Table III, and Table IV-A of the Title V permit.
- The descriptions and amendment dates for BAAQMD and SIP Regulation 2, Rule 1 will be corrected in Table III.
- The District adopted BAAQMD Regulation 2, Rule 5 on June 15, 2005 and amended it on January 6, 2010. This rule was missing from Section I-A, and it will be added to Section I-A with the most recent amendment date.
- The SIP version of Regulation 2, Rule 6 (as approved by EPA through 6/23/95) is missing and will be added to Section I-A.
- CARB revised two diesel engine related ATCMs. The amendments to the ATCM for stationary compression ignition engines became effective on May 19, 2011. The amendments to the ATCM for portable engines became effective on February 19, 2011. These dates were updated in Table III.

- EPA revised the following subparts on September 13, 2010: 40 CFR Part 61, Subpart A; 40 CFR Part 60, Subpart A; and 40 CFR Part 63, Subpart A. The amendment dates for these subparts were updated in Tables III and IV-A.

Section I:

- The District is updating the regulatory amendment dates for BAAQMD Regulation 1 in Section I.A.
- The District is adding BAAQMD Regulation 2, Rule 5 and SIP Regulation 2, Rule 6 to Section I.A

Section II:

- The District is modifying the description of the Los Trancos Landfill by splitting the existing source number (S-1) into three source numbers (S-1, S-21, and S-22) to better represent the different processes and activities that occur at active landfills. The waste decomposition process will remain under S-1. The activities that primarily generate particulate emissions (vehicle travel, waste and cover material dumping, and various other disposal and cover activities) are described under S-21 (waste and cover material dumping) and S-22 (excavating, bulldozing, and compacting activities). These source description changes are identified in Table II-A.
- The District is updating the description of the landfill gas collection system pursuant to landfill gas collection well start-up and decommissioning notifications received since April 2010. The District is also authorizing additional landfill gas collection system alterations that are necessary to maintain, repair, and expand the gas collection system in order to meet District and CARB landfill gas surface emission limitations. These gas collection system alterations are identified in Table II-A, and they are reflected in revisions to Condition # 10164, Parts 17 and 18 (see Section VI). See Appendix A for additional details.

Section III:

- In Table III Generally Applicable Requirements, the District is updating regulatory amendment dates for: BAAQMD Regulation 1; BAAQMD Regulation 2, Rule 1; California Health and Safety Code Title 17, Sections 93115 and 93116; and 40 CFR Part 61, Subpart A.
- In Table III, the District is correcting the description of BAAQMD and SIP Regulation 2, Rule 1 and BAAQMD Regulation 2, Rule 5.
- The District is adding a missing provision (SIP 2-1-429) to Table III.

Section IV:

- In the title of Table IV-A, the District is revising the descriptions of the sources that are subject to Table IV-A requirements to reflect the source description changes for S-1, S-21, and S-22 that were discussed above in Section II.
- In Table IV-A, the District is updating regulatory amendment dates for BAAQMD Regulation 1; 40 CFR Part 60, Subpart A; and 40 CFR Part 63, Subpart A.
- In Table IV-A, the District is correcting the descriptions of BAAQMD Regulations 8-34-305.1-4 and 8-34-507.
- In Table IV-A, the District is adding several missing sections from 40 CFR Part 63, Subpart A. These missing sections are the higher level regulatory citations for a subsection that is currently identified in the permit. For example, subsection 63.5(b) is currently cited in Table IV-A, but section 63.5 is missing, and the District is adding section 63.5 with this proposed revision.
- The District is adding 40 CFR Part 63.1955(a) to Table IV-A, which indicates that the landfill must meet either subpart (a)(1) or (a)(2). Subpart (a)(1) applies to landfills subject to the NSPS provisions. The District is adding this missing provision to Table IV-A. The District is removing 40 CFR Part 63.1955(a)(2), which only applies to landfills subject to the EG provisions.

Section V:

- The District is not making any changes to this section.

Section VI:

The District is revising Condition # 10164 pursuant to start-up and decommissioning notifications received since April 2010 and the landfill gas collection system alterations approved under NSR Application # 23391 (see Appendix A). The reasons for the specific permit condition changes are discussed below in the order that the conditions appear in the Title V permit.

Condition # 10164 for S-1 abated by A-7, A-8, and A-9; S-21; and S-22:

Title: The District is revising the descriptions of the sources that are subject to Condition # 10164 to reflect the source description changes for S-1, S-21, and S-22 that were discussed above in Section II.

Part 17: The District is updating the description of the landfill gas collection system in Part 17 to include previously authorized alterations that have been completed since the Title V renewal permit was issued and to include additional gas collection system alterations that have been recently approved by the District. The Engineering Evaluation Report for this permit condition changes is attached in Appendix A. The collection system description in Table II-A is also being updated.

Part 18: This part describes operating requirements for the landfill gas collection system and includes alternative wellhead standards that have previously been approved for specific components of the gas collection system. Part 18b identifies the specific components that are subject to an alternative oxygen concentration standard. Several of the components identified in Part 18b have been decommissioned, and the District is removing these decommissioned components from Part 18b.

Section VII:

- In the title of Table VII-A, the District is revising the descriptions of the sources that are subject to Table VII-A limits to reflect the source description changes for S-1, S-21, and S-22 that were discussed above in Section II.

Section VIII:

- The District is not making any changes to this section.

Section IX:

- The District is not making any changes to this section.

Section X:

- A summary of these permit amendments is being added to the Section X Revision History.

Section XI:

- The District is not making any changes to this section.

D. SUMMARY OF PROPOSED ACTIONS

The District recommends approval of the following minor revision of the MFR Permit for Site # A2266:

- Correct amendments dates and add missing rules to Section I.A.
- Correct the source description for S-1 and add new source descriptions (S-21 and S-22) in Table II-A.
- Correct regulatory citations and update amendment dates in Tables III and IV-A.
- Add new source descriptions to Tables IV-A and VII-A and Condition #10164.
- Update gas collection system description and authorized alterations in Condition # 10164, Parts 17 and 18.
- Update Section X Revision History.

APPENDIX A

ENGINEERING EVALUATION

FOR

APPLICATION # 23391

Engineering Evaluation

for

Landfill Gas Collections System Alterations at S-1 Los Trancos Canyon Landfill

Browning Ferris Industries of CA, Inc.; PLANT # 2266

APPLICATION # 23391

A. BACKGROUND

Browning-Ferris Industries of CA, Inc. (BFI) operates the Los Trancos Canyon Landfill Facility located on Ox Mountain in Half Moon Bay, CA. This facility includes an active MSW landfill, three landfill gas flares, a non-retail gasoline dispensing facility (GDF), and stockpiles of green waste.

The Los Trancos Canyon Landfill (S-1) has two distinct fill areas. The upper canyon area has reached full capacity and has been inactive since 1995, while the lower canyon area is actively accepting up to 835,000 tons/year of waste. The two fill areas combined contain 21.3 million tons of decomposable materials as of 12-31-2010 (about 94% of maximum capacity). As the final filling stages progress, the two fill areas will join into a single contiguous landfill. Each fill area is equipped with an active landfill gas collection system. These collection systems may also be joined together in the future if necessary for optimization of gas collection rates.

The collected landfill gas is vented to either the Ameresco Half Moon Bay landfill gas energy plant (Plant # 17040, which includes six landfill gas fired IC engines and one landfill gas/waste gas fired flare) or to one or more of the three on-site landfill gas flares (A-7, A-8, or A-9).

As of September 9, 2010, the gas collection systems for the Los Trancos Canyon Landfill consisted of 207 vertical wells and a system of horizontal collectors with 17 monitoring points. Pursuant to Application #15190, the remaining gas collection system alterations were: install up to 2 new vertical wells and 4 new horizontal collectors and decommission up to 15 vertical wells and 5 horizontal collectors. On April 15, 2011, the applicant notified the District that 5 vertical wells had been decommissioned. As of April 15, 2011, the gas collection system consisted of 202 vertical wells and 17 horizontal collectors, and the site was authorized to: install up to 2 new vertical wells and 4 new horizontal collectors and decommission up to 10 vertical wells and 5 horizontal collectors.

Under Application # 23391, the applicant requested to install up to 100 new vertical wells and 20 horizontal collectors and to decommission up to 150 vertical wells and 15 horizontal collectors. These alterations were intended to replace any remaining alterations that had been authorized under Application # 15190. The District approved an accelerated permit for the requested gas collection system alterations effective June 14, 2011.

For Application #23391, the District has received seven start-up or decommissioning notifications, which are summarized below:

Table 1. Summary of Notifications Received for Application # 23391

Date	Decommission	Install & Start-Up
August 4, 2011	- 3 vertical wells	
August 29, 2011	- 1 vertical well	
September 1, 2011	- 9 vertical wells - 2 horizontal collectors (1)	+ 21 vertical wells
September 9, 2011	- 7 vertical wells - 1 horizontal collector (1)	
September 12, 2011	- 14 vertical wells	
September 29, 2011	-1 vertical well	
October 27, 2011		+ 1 horizontal collector

(1) In their 9/1/11 and 9/9/11 notifications, Cornerstone indicated that EW-W-3-A, EW-W-4-A, and EW-W-2-A were decommissioned. Cornerstone identified these components as vertical wells, but District records indicated that these components were horizontal collectors. The lists in Tables 1 and 2 and in Part 17 of the permit conditions are consistent with District records.

Date	Replacement (2)	Replacement (2)
September 9, 2011	- 5 vertical wells	+ 5 vertical wells

(2) When a new well will be located in essentially the same area as an existing well, it may be eligible to be considered a well replacement rather than a decommissioning of an existing well followed by a start of a new well. If the new well will be installed and operational within the time frame allowed by Regulation 8, Rule 34 (no more than 5 days after the shutdown date for the well being replaced), then this action shall be considered a one-for-one component replacement. Such replacements are considered to be more like routine repairs and are not limited or counted toward the decommission/installation limits in the permit conditions. However, the new wells have been renumbered and these changes are reflected in Table 2.

To date, the applicant has decommissioned 35 vertical wells, installed 21 vertical wells, decommissioned 3 horizontal collectors, and installed 1 horizontal collector pursuant to Application # 23391 for a net change of: -14 vertical wells and -2 horizontal collectors. The gas collection system for the S-1 Los Trancos Canyon Landfill now contains 188 vertical wells and 15 horizontal collectors. The current list of gas collection system components is presented in Table 2 on the following page. All components listed in Table 2 are located in waste and are considered to be part of the main landfill gas collection system. These components should be operating under vacuum continuously.

The District is proposing to issue a Change of Conditions to identify the collection system alterations that have been completed to date and to authorize additional gas collection system alterations for S-1. The additional authorized gas collection alterations are: install up to 79 vertical wells and 19 horizontal collectors and decommission up to 115 vertical wells and 12 horizontal collectors. These gas collection system alterations will have no expiration date.

Occasionally, landfill gas will inadvertently migrate into other piping systems (such as the leachate collection and removal system), into casings for monitoring probes, or into other cap protrusions that are located in or near the waste area. To prevent landfill gas from escaping into the atmosphere via these potential gas migration locations, the applicant may connect leachate risers, probe casings, and other protrusions to the gas collection vacuum system. In such cases, the vacuum connection does not need to be operated continuously. The applicant may connect (or disconnect) any potential gas migration locations to the vacuum system as needed to control or prevent landfill gas emission leaks from these locations. These other vacuum connection locations are not identified in Table 2, because they are not part of the main landfill gas collection system.

Table 2a. Vertical Landfill Gas Collection Wells Operating as of December 31, 2011

Vertical Wells	Vertical Wells	Vertical Wells	Vertical Wells	Vertical Wells	Vertical Wells
EW-W01	EW-W44	EW-85	EW-125	EW-158	EW-W-1-F
EW-W02	EW-W45	~~EW-86~~	EW-126	EW-159	EW-W-1-G
EW-W03	EW-W46	~~EW-87~~	EW-127	EW-160	EW-W-1-H
EW-W04	~~EW-W47~~	EW-88	EW-128	EW-161	EW-W-1-I
EW-W05	EW-W48	~~EW-89~~	~~EW-129~~	EW-162	EW-W-1-J
EW-W06	EW-W49	~~EW-90~~	~~EW-130~~	EW-163	EW-W-1-K
~~EW-W07~~	EW-W50	EW-91	EW-131	EW-164	EW-W-1-L
EW-W08	EW-51	EW-92	EW-132	EW-165	EW-W-1-M
~~EW-W09~~	EW-52	EW-93	EW-133A	EW-166	EW-W-1-N
EW-W10	EW-53	EW-94	EW-133B	EW-167	EW-W-1-O
EW-W12	EW-54	~~EW-95~~	EW-134A	EW-168	EW-W-1-P
EW-W13	EW-55	EW-96	EW-134B	EW-169	EW-W-1-Q
EW-W15	EW-56	~~EW-97~~	EW-135	EW-170	EW-W-1-R
EW-W16	EW-57	~~EW-98~~	EW-136	EW-171	EW-W-1-S
EW-W17	EW-58	EW-99	EW-137A	EW-172	EW-W-1-T
EW-W18	EW-59	EW-100	EW-137B	EW-173	EW-W-1-U
EW-W19	EW-60	EW-101	EW-138	EW-174	~~EW-W-1-V~~
~~EW-W20~~	EW-61	~~EW-102~~	EW-139A	EW-175	~~EW-W-1-W~~
~~EW-W21~~	EW-62	EW-103	EW-139B	EW-176	~~EW-W-1-X~~
~~EW-W22~~	EW-63	EW-104	EW-140A	EW-177	EW-PEW01
EW-W23	EW-64	EW-105	EW-140B	EW-178	EW-PEW02
EW-W24	EW-65	EW-106	EW-141	EW-179	EW-PEW03
EW-W25	EW-66	EW-107	EW-142	EW-180	EW-PEW04
EW-W26	~~EW-67~~	EW-108	EW-143	EW-181	~~EW-PEW05~~
~~EW-W27~~	EW-69	EW-109	EW-144A	EW-182	EW-PEW06
~~EW-W28~~	EW-70	~~EW-110~~	EW-144B	EW-183	~~EW-PEW07~~
~~EW-W29~~	EW-71	~~EW-111~~	EW-145	EW-184	EW-PEW08
EW-W31	EW-72	EW-112	EW-146	EW-185	~~EW-PEW09~~
EW-W32	EW-73	EW-113	EW-147A	EW-186	EW-PEW10
EW-W33	EW-74	EW-114	EW-147B	EW-187	~~EW-PEW11~~
~~EW-W34~~	EW-75	EW-115	~~EW-148~~	EW-188	~~EW-PEW12~~
EW-W35	EW-76	EW-116	~~EW-149~~	EW-189	~~EW-PEW13~~
EW-W36	EW-77	EW-117	~~EW-150~~	EW-190	~~EW-PEW14~~
~~EW-W37~~	~~EW-78~~	EW-118	EW-151		~~EW-PEW15~~
EW-W38	EW-79	EW-119	EW-152		EW-PEW30
~~EW-W39~~	EW-80	EW-120	EW-153		~~EW-1A~~
~~EW-W40~~	~~EW-81~~	EW-121	EW-154		EW-1B
~~EW-W41~~	EW-82	EW-122	EW-155		EW-1C
EW-W42	EW-83	EW-123	EW-156		EW-1D
~~EW-W43~~	EW-84	EW-124	EW-157		EW-1E

* Decommissioned components are shown in strikeout format and are highlighted in yellow.
New components are shown in underline format and are highlighted in green.
Replacement components are highlighted in blue with strikeout and underline formatting to identify the affected well IDs.

Table 2b. Horizontal Landfill Gas Collectors Operating as of October 12, 2010

Horizontal Collectors
EW-W-1-A
~~EW-W-2-A~~
~~EW-W-3-A~~
~~EW-W-4-A~~
EW-HOR
HC-650-1
HC-650-2
HC-650-3
HC-650-4
HC-650-5
HC-650-6
HC-F01
HC-F02
HC-F03
HC-F04
HC-F05
HC-F06
HC-SW
Total = 15

* Decommissioned components are shown in strikeout format and are highlighted in yellow.
New components are shown in underline format and are highlighted in green.
Replacement components are highlighted in blue with strikeout and underline formatting to identify the affected well IDs.

B. STATEMENT OF COMPLIANCE

Regulation 8, Rule 34

The Los Trancos Canyon Landfill's Active Landfill with Gas Collection System (S-1) is expected to comply with Regulation 8 Rule 34 Section 301 by:
(a) continuously operating the gas collection system (188 vertical wells and 15 horizontal collectors),
(b) having no leaks (exceeding 1000 ppmv) from the gas collection system, and
(c) and continuously venting all of the collected gases to either on-site or off-site control devices.

A comparison of the 2010 landfill gas collection rate (3425 scfm of landfill gas at about 59% methane) to the 2010 projected landfill generation rate (6712 scfm of landfill gas at 50% methane) indicates that BFI is collecting about 60% of the methane that the landfill is expected to be generating. Although this gas collection system (GCS) capture efficiency is lower than the target GCS gas capture efficiency of 75%, it appears to be adequate since no prevalent surface emission leaks have been observed. The LANDGEM program may be overestimating the gas generation potential for this site, since the annual average rainfall in Half Moon Bay is 28 inches (just over the non-arid threshold of 25 inches per year). If the arid area methane generation rate constant (k=0.02) is used instead of k=0.04 (for areas with more than 25 inches/year of rainfall), the projected gas generation rate for 2010 drops to 4242 scfm and the capture rate increases to 95%.

The S-1 Los Trancos Canyon Landfill is also subject to 8-34-303, which limits leaks on the surface of the landfill to less than 500 ppmv as methane. The collection system alterations completed pursuant to this

application are intended to prevent surface emission leaks greater than this standard. BFI has not found any wide spread or non-repairable surface emission leaks above this standard in the last few years.

Since the measured gas collection rate is adequate and surface leaks have not been detected, the gas collection system appears to be functioning properly.

C. Permit Conditions

The following permit condition revisions are necessary to reflect the landfill gas collection system alterations that have been completed to date. As discussed previously, the remaining approved collection system alterations now have no expiration date.

Condition # 10164

For: S-1 LOS TRANCOS CANYON LANDFILL; A-7 LANDFILL GAS FLARE; A-8 LANDFILL GAS FLARE; AND A-9 LANDFILL GAS FLARE:

No Changes to Parts 1-16

17. The Permit Holder of S-1 shall have a properly operated and properly maintained landfill gas collection system in both the Lower and Upper Canyon Fill Areas. (Basis: Regulations 2-1-301, 8-34-301.1, 8-34-305, and NSPS: 40 CFR 60.752(b)(2)(ii), 60.755(a) and 60.759)
    a. The authorized number of landfill gas collection system components is the baseline count listed below plus any components installed and minus any components decommissioned pursuant to subpart 17b, as evidenced by start-up and decommissioning notification letters submitted to the District.
        - ~~207~~ 188 vertical wells
        - ~~17~~ 15 monitoring points for horizontal collectors
    b. The Permit Holder has been authorized to perform the landfill gas collection system alterations listed below pursuant to Permit Application # ~~15190~~23391. All collection system alterations shall comply with subparts 17b(i-vii) below. Wells installed pursuant to Part 17b shall be added to Part 17a in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415.
        i. The authorized collection system alterations are:
            - Install up to ~~2~~79 vertical gas collection wells.
            - Permanently decommission up to ~~15~~115 vertical wells
            - Install up to ~~4~~19 horizontal collectors
            - Permanently decommission up to ~~5~~12 horizontal collectors
        ii. The Permit Holder shall apply for and receive a Change of Conditions from the District before implementing any changes to the landfill gas collection system described in subpart 17a other than those allowed by subpart 17b(i). Installing, decommissioning, and relocating vertical wells and horizontal collectors are alterations that are subject to this requirement, unless this change constitutes a replacement as defined in subpart 17b(iii) below.
        iii. Replacement of landfill gas collection system components with identical or functionally equivalent components will not be deemed an alteration and will not subject to the Authority to Construct requirement under the following circumstances. If a well or collector will be shut down and replaced by a new well or collector in essentially the same location as the old component and this decommission/installation will be accomplished in accordance with Regulations 8-34-117 and 8-34-118, then this activity shall be considered a component replacement that is not subject to the Authority to Construct requirement. For each

individual well or collector replacement, this subpart authorizes a maximum vacuum disconnection time of five consecutive days for compliance with Regulation 8-34-117.5. The disconnected component and the new component shall not be counted toward the subpart 17b(i) limits; the numbers of replacement wells and replacement collectors are not limited. Alterations, repairs, or replacements of non-perforated piping sections (such as risers, laterals, or header pipes), piping connectors, or valves are not subject to the Authority to Construct requirement.

iv. At least three days prior to initiating operation of a well or collector installed pursuant to subpart 17b, the Permit Holder shall submit a start-up notice to the District that contains the component ID number for each new well or collector and the anticipated initial start-up date for each new component.

v. For each well or collector that is permanently decommissioned after June 19, 2007, the Permit Holder shall submit a decommissioning notice to the District within no later than three working days after the component was disconnected from vacuum system. This decommissioning notice shall contain the component ID for each well or collector that was decommissioned, the date and time that each component was disconnected from the vacuum system, and the reason the component was decommissioned.

vi. Within six months of installing a new component or permanently decommissioning an existing component, the Permit Holder shall prepare an updated map of the landfill gas collection system that identifies the ID numbers and locations of all operable wells and collectors. On this map or in accompanying documentation, the Permit Holder shall summarize all component changes that were made since the last map was prepared. The previous collection system map, the updated collection system map, and the component change summary shall be provided to District staff upon request.

vii. If the Permit Holder has a net reduction (number of decommissioned components minus the number of installed components) of more than five components within a 120-day period, the Permit Holder shall submit a more comprehensive decommissioning notice to the District. In addition to the information required by subpart 17b(v), this comprehensive decommissioning notice shall include the maps and documentation required by subpart 17b(vi), shall identify all component changes that have occurred but that are not included on the most recently updated map, shall identify any components that are temporarily disconnected from vacuum pursuant to subpart 18c, shall provide estimated vacuum reconnection dates for these components, shall include a list of all well installations that are expected to occur within the next 120 days, and shall discuss the reasons why this reduction in gas collection components is not expected to result in surface emission leaks. Upon request, the Permit Holder shall provide wellhead monitoring data, surface leak monitoring data, records of repair attempts made to date, and other information to support the need for a net collection component reduction of more than five wells. The District may require additional surface monitoring to verify that this net component reduction is not causing landfill surface leaks. The District will notify the Permit Holder in writing of any additional surface monitoring that is required pursuant to this subpart.

18. Operating Requirements for Landfill Gas Collection Systems and Collection System Components:

a. The landfill gas collection systems described in Part 17a shall be operated continuously, unless the Permit Holder complies with all applicable provisions of Regulation 8, Rule 34, Section 113. Individual wells shall not be disconnected or removed, nor isolation valves shut completely off, unless the Permit Holder complies with all applicable requirements of Regulation 8, Rule 34, Sections 113, 116, and 117 or with Part 18c below. (Basis: Regulations 8-34-301.1 and 8-34-404)

b. Each landfill gas collection system component listed in Part 17a shall be operated in compliance with the wellhead limits of Regulation 8-34-305, unless an alternative wellhead limit has been approved for that component, as identified in subpart b(i), and the Permit Holder complies with all of the additional requirements for that component, as identified in subparts b(ii-vii). (Basis: Regulations 8-34-303, 8-34-304, 8-34-305, 40 CFR 60.755(a) and 60.759)

i. The nitrogen and oxygen concentration limits in Regulation 8-34-305.3 and 8-34-305.4 shall not apply to the landfill gas collection wells listed below, provided that the oxygen concentration in each of the following wells does not exceed 15% by volume.

~~EW-1A~~	EW-W04	~~EW-W07~~	~~EW-W09~~
EW-W10	EW-W13	EW-W17	~~EW-W21~~
~~EW-W34~~	EW-W38	~~EW-W40~~	~~EW-W41~~
EW-PEW01	EW-PEW02	EW-PEW03	EW-PEW04
EW-PEW06	~~EW-PEW15~~	EW-W-1-L	~~EW-W-1-V~~
~~EW-W-1-W~~	~~EW-W-1-X~~	~~EW-W-2-A~~	and HC-F06

ii. The Permit Holder shall demonstrate compliance with the alternative wellhead oxygen limit in subpart b(i) by monitoring each wellhead for oxygen on a monthly basis, in accordance with the provisions of Regulations 8-34-505 and 8-34-604.

iii. All test dates, wellhead oxygen concentration data, any deviations from the subpart b(i) limit, repair actions, repair dates, re-monitoring dates and results, and compliance restoration dates shall be recorded in a District approved log and made available to District staff upon request in accordance with Regulations 8-34-34-501.4, 8-34-501.9, and 8-34-414.

iv. To demonstrate that the alternative wellhead oxygen limit in subpart b(i) will not cause surface emission leaks, the Permit Holder shall conduct additional surface emission monitoring in the vicinity of each component listed in subpart b(i). For each component in subpart b(i), the Permit Holder shall maintain a map showing the location of the buried collection component and identifying the approximate radius of influence for the component. For each component in subpart b(i), the Permit Holder shall monitor for landfill surface emissions – in accordance with Regulations 8-34-506 and 8-34-607 – at three representative points on the landfill surface that are within the radius of influence of the component and that are not more than 15 meters from the surface location of the component. This additional surface emission monitoring shall be conducted on a monthly basis for a period of at least six consecutive months.

v. If no excesses of the Regulation 8-34-303 surface emission limit are detected in the vicinity of a component for six consecutive months, the Permit Holder may discontinue the additional monthly surface emission monitoring in the vicinity of that component and shall continue with the

routine quarterly surface emission monitoring requirements in the vicinity of that component.

vi. If one or more excesses of the Regulation 8-34-303 surface emission limit are detected in the vicinity of a component during a six consecutive month period, the Permit Holder shall follow all applicable requirements for recording and reporting the excess and shall follow the Regulation 8-34-415 repair schedule for landfill surface leak excesses. The additional monthly surface emission monitoring in the vicinity of that component shall continue until either the no surface excess requirements of subpart b(v) have been achieved or the repair and compliance restoration requirements of subpart b(vii) have been satisfied.

vii. If excesses of the Regulation 8-34-303 surface emission limit are detected in the vicinity of a component for three or more monitoring events during a six consecutive month period, the subpart b(i) alternative wellhead oxygen limit shall be revoked for that component. The Permit Holder shall conduct all necessary repairs to the landfill gas collection well, to any piping associated with the well or the remote wellhead monitoring system, to valves, flanges, or other connectors, and to any test ports or other openings that are necessary to eliminate air intrusion into the well or the monitoring point, to prevent impairment of vacuum application or vacuum adjustment at the collection well, and to restore the collection well and associated monitoring point to proper function. The Permit Holder shall complete all of the above repairs and any necessary landfill surface repairs and shall restore compliance with the Regulation 8-34-303 surface emission limit (in the vicinity of that component) and the Regulation 8-34-305.4 wellhead oxygen concentration limit by the earlier of the following dates: (a) within 120 days of the date that the first excess was discovered if the three excess events are discovered within a single quarterly period pursuant to the re-monitoring requirements of 8-34-415 or (b) within 60 days of detection of the third excess.

c. The Permit Holder may temporarily disconnect individual wells or collectors from the vacuum system, provided that all requirements of this subpart are satisfied. (Basis: Regulation 8-34-404)

i. No more than five (5) landfill gas collection system components (wells or collectors) may be temporarily disconnected from the vacuum system at any one time pursuant to subpart 18c.

ii. For each individual well or collector that is disconnected from the vacuum system pursuant to subpart 18c, the total vacuum system disconnection time shall not exceed 120 days during any 12-month period.

iii. Collection system components that are disconnected from the vacuum system are not subject to wellhead limits (Regulation 8-34-305 or subpart 18b above) or to monthly wellhead monitoring requirements (Regulation 8-34-505) during this vacuum disconnection time.

iv. Wells or collectors that are temporarily disconnected from the vacuum system continue to be subject to the component leak limit (Regulation 8-34-301.2) and the quarterly leak testing requirement (Regulation 8-34-503) at all times. In addition, the Permit Holder shall conduct the following component leak monitoring at each component that has been disconnected from the vacuum system pursuant to subpart 18c: test for component leaks using the procedures identified in Regulation 8-34-602 within 10 calendar days of disconnection from vacuum and again within 1 month of disconnection from vacuum. If a component leak is

detected at the well, the Permit Holder shall take all steps necessary to reduce the leak below the applicable limit, including reconnecting the well to the vacuum system, if no other corrective action measures are successful within the time frames allowed by Rule 34.

v. For each well disconnection event, the Permit Holder shall record each affected well ID number, all well disconnection dates and times, all well reconnection dates and times, all related monitoring dates and monitoring results in a District approved log. This log shall also include an explanation of why the temporary well shut down was necessary and shall describe all adjustments or repairs that were made in order to allow this well to operate continuously, to reduce leaks, or to achieve compliance with an applicable limit. All records shall be retained for a minimum of five years and shall be made available to District staff upon request.

No Changes to Parts 19-33

D. RECOMMENDATION

Issue a Change of Permit Conditions for the gas collection system described below subject to the revised Condition # 10164.

S-1 Los Trancos Canyon Landfill with Gas Collection System including: 188 vertical wells and 15 horizontal collectors.

	signed by Carol S. Allen	January 5, 2012
By:	Carol S. Allen Supervising Air Quality Engineer	Date