Bay Area Air Quality Management District

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

Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT
MINOR REVISION

for

Keller Canyon Landfill Company
Facility #A4618

Facility Address:
901 Bailey Road
Pittsburg, CA 94565

Mailing Address:
901 Bailey Road
Pittsburg, CA 94565

Application Engineer: Carol Allen
Site Engineer: Carol Allen

Application: 14656

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STATEMENT OF BASIS

Keller Canyon Landfill Company; PLANT # 4618

APPLICATION # 14656

A. BACKGROUND

Site Description:

Keller Canyon Landfill Company (KCLC), a subsidiary of Allied Waste Industries, Inc., owns and operates the Keller Canyon Landfill Facility (Facility # A4618) in Pittsburg, CA. The current permit includes the following equipment: S-1, S-3, A-1, and A-2, which is described in detail below.

The S-1 Keller Canyon Landfill is an active Class II MSW landfill that is equipped with a continuously operated landfill gas collection system. The landfill is currently permitted to accept a maximum 3500 tons/day of refuse and is permitted to dispose of 38.4 million tons of decomposable waste in the landfill. As of June 30, 2006, the landfill contained 8.48 MM tons of decomposable waste. In addition to MSW, this site is allowed to accept designated wastes including petroleum-contaminated soils. From July 2005-June 2006, KCLC reported accepting 26,682 tons of contaminated soil.

All collected landfill gas is currently vented to the A-1 Landfill Gas Flare. This flare has maximum permitted capacities of 1744.8 MM BTU/day and 636,852 MM BTU/year and can process about 2438 scfm of landfill gas. For July 2005-June 2006, KCLC reported that A-1 burned an average of 1035 scfm of landfill gas. KCLC holds an Authority to Construct for a second flare (A-2 Landfill Gas Flare) that is capable of burning up to 76 MM BTU/hour of landfill gas (about 2500 scfm), but KCLC has not commenced construction on A-2 yet.

This facility also has a Yard and Green Waste Stockpile (S-3) that is permitted to accept up to 70,200 tons/year of waste material for recycling. For July 2005-June 2006, KCLC reported that S-3 accepted 0 tons/year of materials.

Minor Revision (Title V Application # 14656):

Keller Canyon Landfill Company submitted this application in order to incorporate modifications to the landfill gas collection system description into the Title V permit. These changes were approved by the District pursuant to NSR Applications # 12155 and # 14837. The District's Permit to Operate Report for Application # 12155 is attached in Appendix A. The District's Engineering Evaluation for Application # 14837 is attached in Appendix B.

KCLC also requested to modify permit conditions that identify the individual wells that are subject to alternative wellhead standards. These changes were approved by the District pursuant to NSR Application # 15013. The District's Engineering Evaluation for Application # 15013 is attached in Appendix C.

This Statement of Basis for Application # 14656 identifies and explains all proposed changes to the Title V permit.

B. EMISSIONS

As discussed in the Permit to Operate Report for Application # 12155 and the Engineering Evaluations for Applications # 14837 and # 15013, the proposed modifications to the landfill gas collection system description and wellhead limits will not result in any emission increases at the landfill.

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 Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because 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.

In addition, maximum permitted carbon monoxide (CO) emissions from this facility exceed 100 tons per year. Therefore, this facility is now a major facility as defined in Regulation 2-6-212.1, and it is also required to have an MFR permit pursuant Regulation 2-6-301.

The initial MFR Permit for this facility was issued on September 20, 2001 and was revised on December 17, 2003, March 16, 2006, September 20, 2006, and October 4, 2006. The Title V renewal permit is undergoing internal review. In this current action, the District is proposing to modify Condition # 17309, Part 20 by modifying the landfill gas collection system description and by modifying the list of wells that are subject to the site-specific alternative wellhead oxygen standard, which was previously approved pursuant to Application # 13196. The definition of significant revision is discussed below to determine if this application constitutes a significant MFR revision.

- Regulation 2-6-226.1 and 226.2: This application does not involve the incorporation of a change considered to be a major modification, or a modification under NSPS, NESHAPs, or Section 112 of the CAA. This project does not result in any increases in maximum permitted emissions.
- Regulation 2-6-226.3: This application does not involve the relaxation of any monitoring, record keeping or reporting requirements. The existing wellhead monitoring requirements will apply to the new vertical wells.
- Regulation 2-6-226.4: This application does not involve limits imposed to avoid an applicable requirement. No new limits are proposed.
- Regulation 2-6-226.5 and 226.6: This application does not involve the establishment of or change to any case-by-case emission limits or standards or any facility-specific determinations. Additional wells will be subject to the recently established alternative wellhead oxygen standard but no new standards are being proposed.
- Regulation 2-6-226.7: This application does not involve the incorporation of any requirements promulgated by the EPA.

Since this application does not involve any of the above actions, it does not require a significant revision. This application will involve MFR permit revisions other than those allowed under the definition of administrative amendment in Regulation 2-6-201. Therefore, this revision will be handled as a minor revision of the MFR Permit.

The proposed MFR permit revisions related to this application are described below. All proposed changes are clearly indicated in strikeout and underline formatting.

Title Page:

The District is proposing to change the responsible official and plant contact to Mr. Kevin Chiapello, as requested by the applicant.

Responsible Official	**Facility Contact**
~~Norm Christensen~~Kevin Chiapello, General Manager	~~Norm Christensen~~Kevin Chiapello, General Manager
925-458-9800	925-458-9800

Section I:

The District is not proposing any changes to this section.

Section II:

The District is proposing to update the number of landfill gas collection wells as described in Condition # 17309, Part 20a. The total number of installed landfill gas collection wells is also described in Table II-A and will be modified as shown below.

Table II A - Permitted Sources

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.

S-#	Description	Make or Type	Model	Capacity
S-1	Keller Canyon Landfill with Active Gas Collection System:	Class II Disposal Operations (MSW, commercial, industrial, construction, designated, and special wastes)		Max. Design Capacity (waste and cover, excluding final cover) = 75 million yd^3 (57.3 million m^3) Max. Waste Acceptance Rate = 3500 tons/day Max. Cumulative Waste In-Place = 38.4 million tons (34.8 million Mg)
	Gas Collection Wells			~~50~~ 88 vertical wells
S-3	Yard and Green Waste Stockpiles	Yard and Green Waste		225 tons/day

Sections III-V:

The District is not proposing any changes to these sections.

Section VI:

The District is proposing to modify Condition # 17309, Part 20, subparts a, b, and c. Part 20a describes the number of landfill gas collection system wells that have been installed as of January 1, 2006. Part 20b describes the landfill gas collection system modifications that have been authorized by the District. Part 20c identifies the alternative wellhead oxygen limit and lists the specific wells that are subject to this limit. This proposed action will: (1) increase the total number of operating wells (see Permit to Operate Report for Application # 12155 in Appendix A); (2) authorize additional well installations (see Engineering Evaluation for Application # 14837 in Appendix B); and (3) add wells to the list of wells that are subject to the alternative wellhead oxygen limit (see Engineering Evaluation for Application # 15013 in Appendix C). The specific proposed revisions to Condition # 17309, Part 20 are shown below.

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

(no changes to Parts 1 through 19)

20. Well Installation and Design Parameters:
The Permit Holder shall apply for and receive an Authority to Construct before modifying the landfill gas collection system described in subsection a below. Increasing or decreasing the number of wells or collectors or significantly changing the locations, depths or lengths of wells or collectors are all considered to be modifications that are subject to the Authority to Construct requirement.

a. The Permit Holder has been issued a Permit to Operate for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths of associated piping are as described in detail in Permit Application # 12155. The authorized number of landfill gas collection system components is the baseline count listed below plus any components added pursuant to Part ~~1~~20b as evidenced by start-up notification letters submitted to the District.

Well Station	Number of Wells
A	12
E	12
K	12
L	6
M	9
~~N~~	~~16~~
~~P~~	~~8~~
O	16
Q	10

R 11

b. The Permit Holder has been issued an Authority to Construct to allow for the landfill gas collection system modifications described below as of ~~June 9, 2005~~ August 9, 2006. Well and collector locations, depths, and lengths are as described in detail in Permit Application # ~~12155~~ 14837. Wells installed pursuant to Part 20b shall be added to Part 20a in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415.

~~- Install a minimum of 15 up to a maximum of 20 vertical gas collection wells.~~

~~- Install 2 wellhead stations that will provide flow rate control and monitoring points for the above wells.~~

- Install 4 to 17 vertical gas collection wells.
- Replace 15 existing vertical wells.
- Install 3 wellhead stations that will provide flow rate control and monitoring points for recently installed wells.

c. Each landfill gas collection system component listed in Part 20a 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 c(i), and the Permit Holder complies with all of the additional requirements for that component, as identified in subparts c(ii-vii).

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-E011, EW-E027, EW-K015, EW-K016, EW-K018, EW-K022, EW-K028, EW-K034, EW-K035RD, EW-M002, EW-M003, EW-M004, EW-M005, EW-M006, EW-M007, EW-M008, EW-M009, EW-O005, EW-O007, EW-O013, EW-O014, EW-O015, EW-R001(P), EW-R002(P), EW-R003(P), EW-R004(P), EW-R005(P), EW-R006(P), EW-R007(P)

ii. The Permit Holder shall demonstrate compliance with the alternative wellhead oxygen limit in subpart c(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 c(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 c(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 c(i). For each component in subpart c(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 c(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 c(v) have been achieved or the repair and compliance restoration requirements of subpart c(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 c(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 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.

(Basis: Regulations 8-34-303, 8-34-304, 8-34-305, 40 CFR 60.755(a) and 60.759)

(no changes to Parts 21 through 37)

Section VII-IX:

The District is not proposing any changes to these sections.

Section X:

The District is proposing to add the approval date for Application # 13196, which was inadvertently omitted from the October 4, 2006 version of the MFR Permit. As shown below, the District is summarizing the proposed revisions to Sections II and VI for Application # 14656.

X. REVISION HISTORY

...

Significant Revision (Application # 13196):~~[insert approval data]~~September 20, 2006

...

Minor Revision (Application # 14656): • Correct the responsible official and plant contact information on the Title Page. • In Table II-A, change the number of installed and operating landfill gas collection wells from 50 to 88.	**[insert approval data]**

- Modify well station descriptions and the number of wells at these well stations in Condition # 17309, Part 20a.
- Describe additional authorized collection system modifications in Condition # 17309, Part 20b.
- Identify additional wells that are subject to the alternative wellhead oxygen limit in Condition # 17309, Part 20c.
- Add the correct approval date for Application # 13196 and add the revision history for Application # 14656.

Sections XI-XII:

The District is not proposing any changes to these sections.

D. SUMMARY OF PROPOSED ACTIONS

The District recommends approval of a proposed minor revision of the MFR Permit for Site # A4618 that will:

- Change the Responsible Official and Plant Contact for Site # A4618.
- Modify the gas collection system description in Table II-A and in Condition # 17309, Parts 20a and 20b.
- Modify the list of wells that are subject to the alternative wellhead oxygen limit in Condition # 17309, Part 20c.
- Update the Section X Revision History.

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APPENDIX A

PERMIT TO OPERATE REPORT

APPLICATION # 12155

PERMIT TO OPERATE REPORT

Keller Canyon Landfill Company; Site # A4618

APPLICATION # 12155

A. BACKGROUND

On June 9, 2005, the District issued Keller Canyon Landfill Company (KCLC) an Authority to Construct pursuant to Application # 12155 for an expansion of the landfill gas collection system at the S-1 Keller Canyon Landfill. This Authority to Construct authorized KCLC to install between 15 and 20 new vertical wells and 2 new well stations.

B. START UP DATES AND ACTUAL WELL COUNTS

On October 21, 2005, KCLC notified the District that they had installed and started operating 13 wells. The new well ID numbers are identified on the as built maps submitted by KCLC in September 2006.

Condition # 17309 will need to be revised to reflect the actual well installations described above and to indicate that no additional well installations are authorized pursuant to Application # 12155. The remaining 7 wells that were authorized per ATC # 12155 but not installed will be reauthorized per Application # 14837.

C. STATEMENT OF COMPLIANCE

Regulation 8, Rule 34:

The landfill gas collection system expansion described above was necessary to ensure compliance with the surface leak limit in Regulation 8-34-303 in existing and newly filled waste areas. All of the new vertical wells are expected to comply with the wellhead limits in Regulation 8-34-305. KCLC will monitor the new wells in accordance with Regulation 8-34-505.

Federal Requirements:

NSPS for MSW Landfills: In the BAAQMD, compliance with Regulation 8, Rule 34 will ensure compliance with all applicable requirements of 40 CFR, Part 60, Subpart WWW. Specific applicable NSPS requirements are listed in the existing MFR Permit. Therefore, the installation of 13 vertical landfill gas collection wells is expected to ensure compliance with the NSPS surface leak limit. KCLC is expected to comply with all applicable NSPS wellhead limits and monitoring requirements for these new wells.

NESHAPs for MSW Landfills: Any landfills that are subject to the landfill gas collection and control requirements of either the NSPS for MSW Landfills or the EG for MSW Landfills are also subject to the NESHAPs for MSW Landfills (40 CFR, Part 63, Subpart AAAA). This NESHAP requires that subject facilities prepare and implement startup, shutdown, malfunction plans (SSM Plans) and additional reporting requirements. The facility's SSM Plan will include

the new gas collection system configuration. All applicable requirements are contained in the existing MFR permit, and this facility is expected to continue to comply with these requirements.

D. PERMIT CONDITION MODIFICATIONS

The District is proposing to modify Condition # 17309, Part 20, as indicated in strikeout and underline format below, in order reflect the actual well installations reported by KCLC and the completion of the Application # 12155 gas collection system expansion.

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

(no changes to Parts 1-19)

20. Well Installation and Design Parameters:
The Permit Holder shall apply for and receive an Authority to Construct before modifying the landfill gas collection system described in subsection a below. Increasing or decreasing the number of wells or collectors or significantly changing the locations, depths or lengths of wells or collectors are all considered to be modifications that are subject to the Authority to Construct requirement.

a. The Permit Holder has been issued a Permit to Operate for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths of associated piping are as described in detail in Permit Application # 12155. The authorized number of landfill gas collection system components is the baseline count listed below plus any components added pursuant to Part ~~1~~20b as evidenced by start-up notification letters submitted to the District.

Well Station	Number of Wells
A	12
E	12
K	12
L	6
M	9
~~N~~	~~16~~
~~P~~	~~8~~
O	16
Q	10
R	11

b. ~~The Permit Holder has been issued an Authority to Construct to allow for the landfill gas collection system modifications described below as of June 9, 2005. Well and collector locations, depths, and lengths are as described in detail in Permit Application # 12155.~~

~~- Install a minimum of 15 up to a maximum of 20 vertical gas collection wells.~~
~~- Install 2 wellhead stations that will provide flow rate control and monitoring points for the above wells.~~

c. ...

(no changes to Parts 21-37)

E. RECOMMENDATION

Issue a Permit to Operate subject to the revised conditions identified above for the following equipment:

S-1 Keller Canyon Landfill; abated by Flares (A-1 and A-2)

	signed by Carol S. Allen	10-2-06
By:	Carol S. Allen Senior Air Quality Engineer	Date

APPENDIX B

ENGINEERING EVALUATION

APPLICATION # 14837

ENGINEERING EVALUATION

Keller Canyon Landfill Company; Site # A4618

APPLICATION # 14837

A. BACKGROUND

Site Description:

Keller Canyon Landfill Company (KCLC), a subsidiary of Allied Waste Industries, Inc., owns and operates the Keller Canyon Landfill Facility (Facility # A4618) in Pittsburg, CA. The current permit includes the following equipment: S-1, S-3, A-1, and A-2, which is described in detail below.

The S-1 Keller Canyon Landfill is an active Class II MSW landfill that is equipped with a continuously operated landfill gas collection system. The landfill is currently permitted to accept a maximum 3500 tons/day of refuse and is permitted to dispose of 38.4 million tons of decomposable waste in the landfill. As of June 30, 2006, the landfill contained 8.48 MM tons of decomposable waste. In addition to MSW, this site is allowed to accept designated wastes including petroleum-contaminated soils. From July 2005-June 2006, KCLC reported accepting 26,682 tons of contaminated soil.

All collected landfill gas is currently vented to the A-1 Landfill Gas Flare. This flare has maximum permitted capacities of 1744.8 MM BTU/day and 636,852 MM BTU/year and can process about 2438 scfm of landfill gas. For July 2005-June 2006, KCLC reported that A-1 burned an average of 1035 scfm of landfill gas. KCLC holds an Authority to Construct for a second flare (A-2 Landfill Gas Flare) that is capable of burning up to 76 MM BTU/hour of landfill gas (about 2500 scfm), but KCLC has not commenced construction on A-2 yet.

This facility also has a Yard and Green Waste Stockpile (S-3) that is permitted to accept up to 70,200 tons/year of waste material for recycling. For July 2005-June 2006, KCLC reported that S-3 accepted 0 tons/year of materials.

Current Project:

KCLC submitted Application # 14837 to request an Authority to Construct for several modifications to the landfill gas collection system components for the S-1 Keller Canton Landfill. As waste filling progresses, the landfill gas collection systems needs to be expanded into the newly filled waste areas to ensure that sufficient landfill gas is collected to prevent surface leaks above the Regulation 8-34-303 limit. KCLC is requesting to install 4-17 vertical landfill gas extraction wells in recently filled areas. In addition, KCLC is requesting to replace 15 vertical wells that have been experiencing excessively high oxygen values: E009, E025, E027, K015, K016, K018, K033, K034, O003, O005, O007, O013, L041, M006, and M007. These wells will be replaced on a one for one basis resulting in no net change to the total number of gas collection wells. KCLC also plans to install three new manifold stations for perimeter wells. The existing wellheads for these perimeter wells will be buried by waste in the future. To facilitate future monitoring and control of these wells, the wells will be joined together at a raised manifold with a

single vacuum control and monitoring point for each group of wells. The affected wells are identified on the map in the application materials.

B. EMISSIONS

As discussed above, KCLC currently vents all of the collected landfill gas to the A-1 enclosed flare, which currently has about 1400 scfm of additional capacity available for gas control. The new collection system components (4-17 new wells and 15 replacement wells) are expected to increase the current landfill gas flow rate by no more than 800 scfm. The flare has sufficient capacity to handle this increased volume of landfill gas with no modifications. Therefore, this application will not result in any emission increases.

C. STATEMENT OF COMPLIANCE

Regulation 2, Rule 1:

This application is for a change of permit conditions at the S-1 Keller Canyon Landfill that will identify upgrades and replacements to components of the landfill gas collection system, which is part of the overall abatement system for the landfill. This condition change will not result in any emission increases at the facility. The Engineering Evaluation for this application uses fixed standards and objective measurements and does not involve any element of discretion. There is no possibility that this application could result in any significant adverse environmental impact. This change of permit conditions is categorically exempt from CEQA review pursuant to Regulation 2-1-312.1 and 2-1-312.2. Therefore, no further CEQA review is required.

The project is over 1000 feet from the nearest school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

Regulation 2, Rule 2:

Since this project will not result in any increases of maximum permitted emissions from S-1, this project is not subject to New Source Review or the requirements of Regulation 2, Rule 2.

Regulation 2, Rule 5:

Since this project will not result in any increases of maximum permitted emissions from S-1, this project is not subject to New Source Review for Toxic Air Contaminants.

Regulation 2, Rule 6:

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a designated facility as defined by BAAQMD Regulation 2-6-204. The NSPS for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart WWW) requires 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 and meets the

designated facility criteria listed in 40 CFR § 60.32c(c). Therefore, a Title V permit is required pursuant to Regulation 2-6-304.

In addition to being a designated facility, the maximum permitted CO emission rate for this site exceeds 100 tons/year of CO. Therefore, a Title V permit is required pursuant to Regulation 2-6-301 as well as Regulation 2-6-304.

This facility received its initial Title V permit on September 20, 2001. The permit was revised on December 17, 2003, March 16, 2006, and September 20, 2006. The District expects to issue the final permit for an administrative amendment shortly. The Title V renewal permit is undergoing internal review. This current project will require a minor revision of the MFR permit to incorporate the proposed permit condition revisions. The proposed MFR permit revisions related to this application are discussed in the Statement of Basis for Application # 14656.

Regulation 8, Rule 34:

The proposed landfill gas collection system expansion and component replacements are necessary to ensure compliance with the surface leak limit in Regulation 8-34-303 in newly filled and existing waste areas. The proposed installation of 4-17 vertical wells is expected to provide sufficient gas collection in the surrounding areas. Since all landfill gas will be continuously collected and vented to an approved control device, the S-1 Keller Canyon Landfill will comply with Regulation 8-34-301 and 301.1. The existing flare has sufficient capacity to handle the expected increase in landfill gas flow rate due to the new vertical wells. Since this increased flow rate will not exceed the current capacity of the flare, this increased landfill gas flow rate will not impact the flares' ability to comply with the NMOC emission limits in Regulation 8-34-301.3. The proposed vertical wells are expected to comply with the wellhead limits in Regulation 8-34-305. KCLC will monitor the new wells in accordance with Regulation 8-34-505. Any wellhead excesses that are discovered will be repaired in accordance with Regulation 8-34-414. This permit application constitutes a submittal of an amended Collection and Control System Design Plan for this facility, which is required pursuant to Regulation 8-34-408.

Federal Requirements:

NSPS for MSW Landfills: In the BAAQMD, compliance with Regulation 8, Rule 34 will ensure compliance with all applicable requirements of 40 CFR, Part 60, Subpart WWW. Specific applicable NSPS requirements are listed in the existing MFR Permit. The proposed installation of 4-17 vertical landfill gas collection wells and replacement of 15 wells is expected to ensure compliance with the NSPS surface leak limit. BFI is expected to comply with all applicable NSPS monitoring requirements for these new wells.

NESHAPs for MSW Landfills: Any landfills that are subject to the landfill gas collection and control requirements of either the NSPS for MSW Landfills or the EG for MSW Landfills are also subject to the NESHAPs for MSW Landfills (40 CFR, Part 63, Subpart AAAA). This NESHAP requires that subject facilities prepare and implement startup, shutdown, malfunction plans (SSM Plans) and additional reporting requirements. The facility's SSM Plan will need to be updated to include the new gas collection system configuration. The revised SSM Plan should be on-site prior to initial operation of the new vertical wells. All applicable requirements are contained in the existing MFR permit, and this facility is expected to continue to comply with these requirements.

D. PERMIT CONDITION MODIFICATIONS

The District is proposing to modify Condition # 17309, as indicated in strikeout and underline format below, to allow an expansion of the gas collection system described in Part 20.

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

(no changes to Parts 1-19)

20. Well Installation and Design Parameters:
The Permit Holder shall apply for and receive an Authority to Construct before modifying the landfill gas collection system described in subsection a below. Increasing or decreasing the number of wells or collectors or significantly changing the locations, depths or lengths of wells or collectors are all considered to be modifications that are subject to the Authority to Construct requirement.

a. The Permit Holder has been issued a Permit to Operate for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths of associated piping are as described in detail in Permit Application # 12155. The authorized number of landfill gas collection system components is the baseline count listed below plus any components added pursuant to Part 20b as evidenced by start-up notification letters submitted to the District.

Well Station	Number of Wells
A	12
E	12
K	12
L	6
M	9
O	16
Q	10
R	11

b. <u>The Permit Holder has been issued an Authority to Construct to allow for the landfill gas collection system modifications described below as of August 9, 2006. Well and collector locations, depths, and lengths are as described in detail in Permit Application # 14837. Wells installed pursuant to Part 20b shall be added to Part 20a in accordance with the procedures identified in Regulations 2-6-414 or 2-6-415.</u>

<u>- Install 4 to 17 vertical gas collection wells.</u>
<u>- Replace 15 existing vertical wells.</u>

- Install 3 wellhead stations that will provide flow rate control and monitoring points for recently installed wells.

c. ...

(no changes to Parts 21-37)

E. RECOMMENDATION

Issue an Authority to Construct for the following equipment modification:

S-1 S-1 Keller Canyon Landfill; abated by Flares (A-1 and A-2); modification of gas collection system to install 4-17 new vertical wells, replace 15 existing vertical wells, and install 3 wellhead stations.

signed by Carol S. Allen — 10-2-06

By: Carol S. Allen, Senior Air Quality Engineer — Date

APPENDIX C

ENGINEERING EVALUATION

APPLICATION # 15013

ENGINEERING EVALUATION

Keller Canyon Landfill Company; Site # A4618

APPLICATION # 15013

A. BACKGROUND

Site Description:

Keller Canyon Landfill Company (KCLC), a subsidiary of Allied Waste Industries, Inc., owns and operates the Keller Canyon Landfill Facility (Facility # A4618) in Pittsburg, CA. The current permit includes the following equipment: S-1, S-3, A-1, and A-2, which is described in detail below.

The S-1 Keller Canyon Landfill is an active Class II MSW landfill that is equipped with a continuously operated landfill gas collection system. The landfill is currently permitted to accept a maximum 3500 tons/day of refuse and is permitted to dispose of 38.4 million tons of decomposable waste in the landfill. As of June 30, 2006, the landfill contained 8.48 MM tons of decomposable waste. In addition to MSW, this site is allowed to accept designated wastes including petroleum-contaminated soils. From July 2005-June 2006, KCLC reported accepting 26,682 tons of contaminated soil.

All collected landfill gas is currently vented to the A-1 Landfill Gas Flare. This flare has maximum permitted capacities of 1744.8 MM BTU/day and 636,852 MM BTU/year and can process about 2438 scfm of landfill gas. For July 2005-June 2006, KCLC reported that A-1 burned an average of 1035 scfm of landfill gas. KCLC holds an Authority to Construct for a second flare (A-2 Landfill Gas Flare) that is capable of burning up to 76 MM BTU/hour of landfill gas (about 2500 scfm), but KCLC has not commenced construction on A-2 yet.

This facility also has a Yard and Green Waste Stockpile (S-3) that is permitted to accept up to 70,200 tons/year of waste material for recycling. For July 2005-June 2006, KCLC reported that S-3 accepted 0 tons/year of materials.

Current Project:

KCLC submitted Application # 15013 to request a Change of Conditions that would add twenty-four additional landfill gas collection wells to the current list of wells that are subject to an alternative wellhead standard. The alternative wellhead standards and the list of wells that are subject to these alternative standards are identified in Condition # 17309, Part 20c.

B. EMISSIONS

In accordance with Regulation 8-34-305, the District may establish alternatives to the wellhead standards listed in Regulation 8-34-305.1-4. The wellhead temperature (8-34-305.2), nitrogen (8-34-305.3) and oxygen (8-34-305.4) standards are intended to prevent subsurface fires and to give additional leeway in determining the proper operating levels for an adequately functioning well.

Therefore, subjecting a well to an alternative oxygen standard is not expected to influence surface emission leaks from the landfill and is not expected to cause emission increases.

KCLC has submitted information demonstrating that the twenty-four wells under review are adequately collecting landfill gas even though these wells have oxygen levels greater than 5% by volume. The high oxygen levels do not appear to be inhibiting anaerobic decomposition, and subsurface fires have not been observed at this site. Therefore, adding these twenty-four wells to the list of wells subject to the alternative oxygen standard of 15% by volume will not result in any emission increases.

C. STATEMENT OF COMPLIANCE

Regulation 2, Rule 1:

This application is for a change of permit conditions at the S-1 Keller Canyon Landfill that will not require any physical changes and that will not result in any emission increases at this facility. Therefore, this change of permit conditions is categorically exempt from CEQA review pursuant to Regulation 2-1-312.1 and 2-1-312.2, and no further CEQA review is required.

The project is over 1000 feet from the nearest school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

Regulation 2, Rule 2:

Since this project will not result in any increases of maximum permitted emissions from S-1, this project is not subject to New Source Review or the requirements of Regulation 2, Rule 2.

New Source Review for Toxic Air Contaminants:

Since this project will not result in any increases of maximum permitted emissions from S-1, this project is not subject to New Source Review for Toxic Air Contaminants.

Regulation 2, Rule 6:

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a designated facility as defined by BAAQMD Regulation 2-6-204. The NSPS for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart WWW) requires 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 and meets the designated facility criteria listed in 40 CFR § 60.32c(c). Therefore, a Title V permit is required pursuant to Regulation 2-6-304.

In addition to being a designated facility, the maximum permitted CO emission rate for this site exceeds 100 tons/year of CO. Therefore, a Title V permit is required pursuant to Regulation 2-6-301 as well as Regulation 2-6-304.

This facility received its initial Title V permit on September 20, 2001. The permit was revised on December 17, 2003, and March 16, 2006. The District expects to issue the final permits for a significant revision (under which the District had proposed to establish alternative wellhead standards for five wells) and an administrative amendment shortly. The Title V renewal permit is undergoing internal review. This current project will require a minor revision of the MFR permit to incorporate the proposed permit condition revisions. The proposed MFR permit revisions related to this application are discussed in the Statement of Basis for Application # 14656.

Regulation 8, Rule 34:

Regulation 8-34-305 states:

> **8-34-305** **Wellhead Requirements:** Effective July 1, 2002 and except as provided in Sections 8-34-119 or 120, each wellhead in the gas collection system shall meet the requirements of Sections 8-34-305.1 and 305.2 and either 305.3 or 305.4, unless the operator has discovered the excess and has satisfied all of the requirements of Section 8-34-414; or the operator has received permit conditions containing alternative operating levels:
>
> 305.1 Each wellhead shall operate under a vacuum (negative pressure); and
>
> 305.2 The landfill gas temperature in each wellhead shall be less than 55° C (131° F); and either
>
> 305.3 The nitrogen concentration in each wellhead shall be less than 20% by volume; or
>
> 305.4 The oxygen concentration in each wellhead shall be less than 5% by volume.

While Regulation 8-34-305.4 establishes a default wellhead oxygen (O_2) limit of 5% by volume, the preamble states that compliance with this limit may be demonstrated by meeting permit conditions containing alternative operating levels. Under Applications # 11378 and # 13196, the District establish an alternative operating level of 15% O_2 by volume for five wells. This current application will allow 24 additional wells to be subject to the alternative oxygen standard of 15% by volume. This elevated oxygen level is not expected to cause fires or to inhibit anaerobic decomposition. The permit holder is required to demonstrate compliance with this alternative standard in accordance with Regulation 8-34-505, which requires monthly monitoring of all landfill gas wells for gauge pressure, temperature, and oxygen content. To ensure that approving elevated oxygen levels at these wells will not result in emission increases, the District is requiring that surface emission monitoring frequency be increased in the vicinity of these wells.

Regulation 8-34-414 identifies a repair schedule that should be followed if an excess of a Regulation 8-34-305 wellhead limit is discovered. Permit conditions clarify that this repair schedule should also be followed if an excess of the alternative oxygen concentration limit is discovered. However, the District notes that a potential conflict exists in the language of Sections 414.3 and 414.4. Section 414.3 states that the gas collection system shall be expanded, if the wellhead excess cannot be repaired within 15 days of the date that the excess was first discovered. In some cases, a landfill gas collection system expansion is not the appropriate way to bring collection system wells back into compliance with applicable wellhead standards. This is especially true for excesses of temperature limits or oxygen concentration limits. If fire is the suspected cause of a temperature excess, the appropriate response would be to temporarily disconnected the well from vacuum and extinguish the fire. For some wellheads that have excess of the oxygen concentration limit, expanding the gas collection system could introduce more air

into the wells and could exacerbate the problem. For many cases of wellhead oxygen concentration excesses, the appropriate corrective action is to repair or replace the particular well, monitoring point, or landfill surface near this well/monitoring point. Such corrective actions could return the well to compliant status, but would not constitute an "expansion" of the gas collection system. Due to the logistics of the necessary repair or replacement activities, it may not be possible to complete all necessary corrective actions within 15 days. For wells subject to alternative wellhead oxygen limits that require a corrective action pursuant to Section 414.3, the landfill gas collection system does not need to be "expanded" to correct the wellhead excess, if other corrective actions can be completed within the time period allowed pursuant to Section 414.4.

Federal Requirements:

NSPS for MSW Landfills: In the BAAQMD, compliance with Regulation 8, Rule 34 will ensure compliance with all applicable requirements of 40 CFR, Part 60, Subpart WWW. Specific applicable NSPS requirements are listed in the existing MFR Permit. The pertinent standard is 40 CFR 60.753(c), which states:

> Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

As with Regulation 8-34-305, the NSPS allows for the establishment of alternative wellhead standards. These alternative standards must be approved by the administrator, which in this case is the District, prior to implementation. The MFR Permit review and approval process constitutes approval by the administrator of an alternative standard for 40 CFR 60.753(c). EPA will have the opportunity to review the District's proposed increase in the number of wells that are subject to the alternative oxygen standard pursuant to the MFR Permit review process. KCLC is expected to continue to comply with all applicable NSPS monitoring and record keeping requirements for the affected wells including: 40 CFR 60.755(a)(5), 60.756(a)(2), and 60.758(e).

NESHAPs for MSW Landfills: Any landfills that are subject to the landfill gas collection and control requirements of either the NSPS for MSW Landfills or the EG for MSW Landfills are also subject to the NESHAPs for MSW Landfills (40 CFR, Part 63, Subpart AAAA). This NESHAP requires that subject facilities prepare and implement startup, shutdown, malfunction plans (SSM Plans) and additional reporting requirements. All applicable requirements are contained in the existing MFR permit. This facility is expected to continue to comply with these requirements.

D. PERMIT CONDITION REVISIONS

The District is proposing to modify Condition # 17309, Part 20c by adding 24 new wells to subpart c(i), as indicated below.

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

(no changes to Parts 1-19)

20. Well Installation and Design Parameters:
The Permit Holder shall apply for and receive an Authority to Construct before modifying the landfill gas collection system described in subsection a below. Increasing or decreasing the number of wells or collectors or significantly changing the locations, depths or lengths of wells or collectors are all considered to be modifications that are subject to the Authority to Construct requirement.

a. The Permit Holder has been issued a Permit to Operate for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths of associated piping are as described in detail in Permit Application # 12155. The authorized number of landfill gas collection system components is the baseline count listed below plus any components added pursuant to Part 1b as evidenced by start-up notification letters submitted to the District.

Well Station	Number of Wells
A	12
E	12
K	12
L	6
M	9
N	16
P	8

b. The Permit Holder has been issued an Authority to Construct to allow for the landfill gas collection system modifications described below as of June 9, 2005. Well and collector locations, depths, and lengths are as described in detail in Permit Application # 12155.
- Install a minimum of 15 up to a maximum of 20 vertical gas collection wells.
- Install 2 wellhead stations that will provide flow rate control and monitoring points for the above wells.

c. Each landfill gas collection system component listed in Part 20a 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 c(i), and the Permit Holder complies with all of the additional requirements for that component, as identified in subparts c(ii-vii).

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-E011, EW-E027, EW-K015, EW-K016, EW-K018, EW-K022, EW-K028, EW-K034, EW-K035RD, EW-M002, EW-M003, EW-M004, EW-M005, EW-M006, EW-M007, EW-M008, EW-M009, EW-O005, EW-O007, EW-O013, EW-O014, EW-O015, EW-R001(P), EW-R002(P), EW-R003(P), EW-R004(P), EW-R005(P), EW-R006(P), EW-R007(P)

ii. The Permit Holder shall demonstrate compliance with the alternative wellhead oxygen limit in subpart c(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 c(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 c(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 c(i). For each component in subpart c(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 c(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 c(v) have been achieved or the repair and compliance restoration requirements of subpart c(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 c(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 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.

(Basis: Regulations 8-34-303, 8-34-304, 8-34-305, 40 CFR 60.755(a) and 60.759)

(no changes to Parts 21-37)

E. RECOMMENDATION

Issue a Change of Permit Conditions for the following equipment:

S-1 Keller Canyon Landfill; abated by Flares (A-1 and A-2):

signed by Carol S. Allen — 9-27-06

By: Carol S. Allen, Senior Air Quality Engineer — Date