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 AND ADMINISTRATVE AMENDMENT

for

Redwood Landfill, Inc.
Facility #A1179

Facility Address:
8950 Redwood Highway
Novato, CA 94948

Mailing Address:
P. O. Box 793
Novato, CA 94948

Application Engineer: Carol Allen
Site Engineer: Carol Allen

Applications: 14140 and 14220

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STATEMENT of BASIS

Redwood Landfill, Inc.; SITE # A1179

APPLICATIONS # 14140 and 14420

A. BACKGROUND

As discussed in previous Statements of Basis for the Major Facility Review (MFR) Permit for the Redwood Landfill, Inc. (Site # A1179), this facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. This facility has the "potential to emit," as defined by Regulation 2-6-218, more than 100 tons per year of a regulated air pollutant, specifically more than 100 tons per year of carbon monoxide. Therefore, this facility is required to have an MFR permit pursuant to Regulation 2-6-301.

This facility is also subject to the Title V operating permit requirements and Regulation 2, Rule 6, MFR permit requirements, because it is a designated facility as defined by 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 Subpart WWW and that has a design capacity of greater than or equal to 2.5 million megagrams (Mg) and 2.5 million cubic meters (m^3) to obtain an operating permit pursuant to Part 70. The landfill at this facility is subject to 40 CFR, Part 60, Subpart WWW and has design capacities of 14.6 million m^3 and 15.5 million Mg. Therefore, this facility is a designated facility and is required to have an MFR permit pursuant to 2-6-304.

The initial MFR Permit for this facility was issued on November 10, 2003. This MFR Permit was revised on November 10 2004, July 27, 2005, December 29, 2005, and April 18, 2006.

The main purposes of this current action are to: (a) add a significant source to the MFR permit that is currently exempt from District permit requirements and (b) add a new permitted source to the MFR permit. These proposed revisions are minor, because the revisions do not include any of the criteria that would require a significant revision. The District is also proposing an administrative amendment that will remove one permitted source from the MFR permit, because this source is no longer operational and will soon be removed from this facility.

This document will discuss the minor revisions proposed pursuant to Applications # 14140 and 14420. The engineering evaluations for the associated applications (Applications # 14139 and # 14421) are attached. These reports contain detailed discussions of the proposed equipment, emissions, applicable requirements, and proposed permit conditions. The attached proposed MFR permit shows all changes to the existing permit in strikeout/underline format. The permit will be formally re-issued after EPA's 45-day review period is complete.

Facility Description:

Redwood Landfill, Inc. operates the Redwood Landfill Facility in Novato, CA. This facility includes the active landfill (S-5 with about 12 million tons of refuse in place), a 120 MM BTU/hour enclosed landfill gas flare (A-50), a 90 MM BTU/hour enclosed landfill gas flare (A-51), a 5 MM BTU/hour leachate evaporator (S-50, which is currently non-operational and will be removed from this permit), sludge handling and composting operations (S-2, S-25, S-28, S-34, S-35, S-37, S-38, and S-39), temporary stockpiles for yard and green waste shredding operations

(S-41), soil stockpiles (S-42), a non-retail gasoline dispensing facility (S-55), and five diesel engines providing portable or standby power (S-45, S-46, S-47, S-48, and S-49).

Applications # 14139 and # 14140:

Redwood Landfill requested an exemption determination for a new portable horizontal grinder (56) and the portable diesel engine (S-57) that will power this grinder. S-56 and S-57 will process yard and green waste on a temporary basis at this site. The existing S-41 Temporary Yard and Green Waste Stockpiles supply the feed stock to S-56 and include stockpiles of the chipped wood product from S-56. As discussed in the Engineering Evaluation for Application # 14139 (see Appendix A), the District determined that S-56 and S-57 were exempt from BAAQMD permitting requirements pursuant to BAAQMD Regulation 2-1-105.3.8, because these devices are CARB registered portable equipment.

The CARB registration permits for S-56 and S-57 allow the portable horizontal grinder to emit up to 10 tons/year of PM_{10} and allow the portable diesel engine to emit up to 10 tons/year of NO_x. Since S-56 and S-57 are permitted to emit more than 2 tons/year each of a regulated air pollutant, these devices are significant sources as defined in BAAQMD Regulation 2-6-239. The S-57 Portable Diesel Engine is exempt from the requirement to have a Title V permit pursuant to BAAQMD Regulation 2-6-113. However, the S-56 Portable Horizontal Grinder is not exempt from Regulation 2, Rule 6. Therefore, Redwood Landfill submitted Application # 14140 to add S-56 to the MFR Permit for Site # A1179.

Applications # 14420 and # 14421:

Redwood Landfill is proposing to install up to eight solar powered aerators in an existing leachate pond. Previously, this leachate pond was determined to be exempt from BAAQMD permitting requirements pursuant to BAAQMD Regulation 2-1-123.2, because the pond was storing an aqueous liquid containing less than 1% VOC by weight. The installation of aerators in this leachate pond changes the purpose of the source from a storage operation to a wastewater treatment operation. The proposed wastewater treatment operation – the S-58 Aerated Leachate Pond – is not exempt and is required to have a BAAQMD Permit to Operate. Redwood Landfill submitted Application # 14421 to request an Authority to Construct and Permit to Operate for the S-58 Aerated Leachate Pond pursuant to the District's accelerated permitting program. The District issued a Temporary Permit to Operate for S-58 on April 20, 2006. Redwood Landfill submitted Application # 14420 to add the S-58 Aerated Leachate Pond to the MFR Permit for Site # A1179.

Administrative Amendment:

On May 10, 2006, Redwood Landfill notified the District that the S-50 Leachate Vaporate had been locked out to prevent future operation and would soon be removed from this facility. Redwood Landfill requested that S-50 be removed from both the BAAQMD and MFR permits for this facility. The definition in BAAQMD Regulation 2-6-201 states that the deletion of sources from the MFR Permit is an administrative amendment. This administrative amendment has been combined with the proposed minor permit revision actions identified above for convenience.

B. EMISSIONS

As discussed in the Engineering Evaluation for Application # 14139, the emissions from the S-56 Portable Horizontal Grinder and the S-57 Portable Diesel Engine are not considered to be emission increases that are subject to new source review because this equipment is exempt from District permitting requirements. However, the District has calculated the maximum potential emissions from S-56 and S-57 to ensure that this equipment will comply with all applicable requirements. Detailed emission calculations are presented in Appendix A. Since S-57 is exempt from MFR Permit requirements, only the emissions from S-56 are included in Table 1 below.

Detailed emission calculations for the S-58 Aerated Leachate Pond are described in the Engineering Evaluation for Application # 14421 in Appendix B. The maximum potential emissions for S-58 are summarized in Table 1.

This proposed permit revision will also remove the S-50 Leachate Vapaorator from the permit, which will reduce the maximum potential emissions from this facility. These reductions in maximum potential emissions and the overall changes in maximum potential emissions are summarized in Table 1.

Table 1. Changes to Maximum Potential Emissions at Redwood Landfill

Source Description	PM_{10}	CO	SO_2	NO_x	POC
S-56 Portable Horizontal Grinder	10.00				
S-58 Aerated Leachate Pond					0.08
S-50 Leachate Vaporator	-0.20	-1.83	-3.10	-1.83	-0.30
Overall Changes to Potential to Emit	+9.80	-1.83	-3.10	-1.83	-0.22
Current Potential to Emit (all equipment in Tables II-A and II-B)	225.38	117.18	55.68	35.02	33.71
Revised Potential to Emit (proposed equip. in Tables II-A & II-B)	235.18	115.35	52.58	33.19	33.49

C. PERMIT CONTENT

Since Statements of Basis were prepared for the initial MFR Permit and the subsequent revisions of this permit that fully describe and explain the legal and factual basis for the current MFR Permit, this report will only address the proposed revisions to the current MFR Permit.

The definition of significant revision is discussed below to determine if this current application constitutes a significant MFR revision.

- Regulation 2-6-226.1 and 226.2: This action 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.
- Regulation 2-6-226.3: This action does not involve the relaxation of any monitoring, record keeping or reporting requirements.
- Regulation 2-6-226.4: This action does not involve limits imposed to avoid an applicable requirement.

- Regulation 2-6-226.5 and 226.6: This action does not involve the establishment of or change to any case-by-case emission limits or standards or any facility-specific determinations.
- Regulation 2-6-226.7: This action does not involve the incorporation of any requirements promulgated by the EPA.

Since this action does not involve any of the above actions, it does not require a significant revision. This action will involve some MFR permit revisions other than those allowed under the definition of administrative amendment in Regulation 2-6-201, specifically the addition of two sources to this permit. Therefore, these modifications will be handled as a minor revision of the MFR Permit. The removal of one source from this permit will be handled as an administrative amendment.

Changes to the permit sections are described below in the order that they are presented in the permit.

Section I:

No changes are proposed for this section.

Section II:

This section of the permit lists all permitted or significant sources and all abatement or control devices for these sources. This administrative amendment will modify Table II-A by removing the S-50 Leachate Vaporator, which has been rendered non-operational and will be removed. This minor revision will modify Table II-A by adding two sources: S-56 and S-58. The proposed revisions to Table II-A are identified below in strike out and underline formatting. No changes are proposed for Table II-B.

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-50~~	~~Leachate Vaporator~~	~~Power Strategies~~		~~evaporating 5 gallons per minute of leachate, and burning 5 MM BTU/hour of landfill gas (propane may be used as start-up fuel)~~
S-55	Non-Retail Gasoline Dispensing Facility G # 8573 (Phase I is Two Point, Phase II is Vapor Balance)	1 Above Ground Tank 1 Gasoline Nozzle	Emco Wheaton 4005	1000 gallon capacity 10 gallons/minute

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-56	Portable Horizontal Grinder; equipped with integral water sprays; CARB Portable Equipment Registration Permit # 117378	Peterson Pacific Corporation	Model HC5400	80 tons/hour
S-58	Aerated Leachate Pond; equipped with up to eight solar powered aeration units	Custom Design; 10 acres		4500 gallons/hour leachate influent, 5 scfm of air per aeration unit

Section III:

No changes are proposed for this section.

Section IV:

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

For this revision, the District is proposing to delete Table IV-L, because the S-50 Leachate Vaporator is not operational and will be removed from this site. The subsequent table for the S-55 Gasoline Dispensing Facility will be renumbered as Table IV-L. The applicable requirements for the two new sources (S-56 and S-58) will be described in Tables IV-M and IV-N, respectively. Proposed revisions to the Section IV tables are identified below.

~~Table IV – L~~
~~Source-Specific Applicable Requirements~~
~~S-50 LEACHATE VAPORATOR~~

~~Applicable Requirement~~	~~Regulation Title or Description of Requirement~~	~~Federally Enforceable (Y/N)~~	~~Future Effective Date~~
~~BAAQMD Regulation 1~~	~~General Provisions and Definitions (5/2/01)~~		
~~1-523~~	~~Parametric Monitoring and Recordkeeping Procedures~~	~~N~~	
~~1-523.1~~	~~Reporting requirement for periods of inoperation > 24 hours~~	~~Y~~	
~~1-523.2~~	~~Limit on duration of inoperation~~	~~Y~~	
~~1-523.3~~	~~Reporting requirement for violations of any applicable limits~~	~~N~~	
~~1-523.4~~	~~Records of inoperation, tests, calibrations, adjustments, & maintenance~~	~~Y~~	
~~1-523.5~~	~~Maintenance and calibration~~	~~N~~	
~~SIP Regulation 1~~	~~General Provisions and Definitions (6/28/99)~~		
~~1-523~~	~~Parametric Monitoring and Recordkeeping Procedures~~	~~Y[1]~~	
~~1-523.3~~	~~Reports of Violations~~	~~Y[1]~~	
~~BAAQMD Regulation 6~~	~~Particulate Matter and Visible Emissions (12/19/90)~~		
~~6-301~~	~~Ringelmann No. 1 Limitation~~	~~Y~~	
~~6-305~~	~~Visible Particles~~	~~Y~~	
~~6-310~~	~~Particle Weight Limitation~~	~~Y~~	
~~6-401~~	~~Appearance of Emissions~~	~~Y~~	
~~BAAQMD Regulation 8, Rule 2~~	~~Organic Compounds-Miscellaneous Operation (6/15/94)~~	~~Y~~	
~~8-2-301~~	~~Miscellaneous Operations~~	~~Y~~	
~~BAAQMD Regulation 8, Rule 34~~	~~Organic Compounds – Solid Waste Disposal Sites (6/15/05)~~		
~~8-34-113~~	~~Limited Exemption, Inspection and Maintenance~~	~~Y~~	
~~8-34-113.1~~	~~Emission Minimization Requirement~~	~~Y~~	
~~8-34-113.2~~	~~Shutdown Time Limitation~~	~~Y~~	
~~8-34-113.3~~	~~Recordkeeping Requirement~~	~~Y~~	
~~8-34-301~~	~~Landfill Gas Collection and Emission Control System Requirements~~	~~Y~~	
~~8-34-301.1~~	~~Continuous Operation~~	~~Y~~	
~~8-34-301.2~~	~~Collection and Control Systems Leak Limitations~~	~~Y~~	
~~8-34-301.4~~	~~Limits for Other Emission Control Systems~~	~~Y~~	
~~8-34-408~~	~~Collection and Control System Design Plans~~	~~Y~~	
~~8-34-408.2~~	~~Sites With Existing Collection and Control Systems~~	~~Y~~	
~~8-34-411~~	~~Annual Report~~	~~Y~~	
~~8-34-412~~	~~Compliance Demonstration Tests~~	~~Y~~	
~~8-34-413~~	~~Performance Test Report~~	~~Y~~	

Table IV – L
Source-Specific Applicable Requirements
S-50 LEACHATE VAPORATOR

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
8-34-501	Operating Records	Y	
8-34-501.2	Emission Control System Downtime	Y	
8-34-501.3	Continuous Temperature Records for Enclosed Combustors	Y	
8-34-501.4	Testing	Y	
8-34-501.6	Leak Discovery and Repair Records	Y	
8-34-501.10	Gas Flow Rate Records for All Emission Control Systems	Y	
8-34-501.12	Records Retention for 5 Years	Y	
8-34-503	Landfill Gas Collection and Emission Control System Leak Testing	Y	
8-34-504	Portable Hydrocarbon Detector	Y	
8-34-507	Continuous Temperature Monitor and Recorded	Y	
8-34-508	Gas Flow Meter	Y	
BAAQMD Regulation 9, Rule 1	**Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)**		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
BAAQMD Regulation 9, Rule 2	**Inorganic Gaseous Pollutants – Hydrogen Sulfide (10/6/99)**		
9-2-301	Limitations on Hydrogen Sulfide	N	
40 CFR Part 60, Subpart A	**Standards of Performance for New Stationary Sources – General Provisions (8/27/01)**		
60.4(b)	Requires Submission of Requests, Reports, Applications, and Other Correspondence to the Administrator	Y	
60.7	Notification and Record Keeping	Y	
60.8	Performance Tests	Y	
60.11	Compliance with Standards and Maintenance Requirements	Y	
60.11(a)	Compliance determined by performance tests	Y	
60.11(d)	Control devices operated using good air pollution control practice	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.13(a)	Applies to all continuous monitoring systems	Y	
60.13(b)	Monitors shall be installed and operational before performing performance tests	Y	
60.13(e)	Continuous monitors shall operate continuously	Y	
60.13(f)	Monitors shall be installed in proper locations	Y	
60.13(g)	Multiple monitors are required for multiple stacks	Y	
60.14	Modification	Y	
60.15	Reconstruction	Y	

Table IV – L
Source-Specific Applicable Requirements
S-50 LEACHATE VAPORATOR

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.19	General Notification and Reporting Requirements	Y	
40 CFR Part 60, Subpart WWW	**Standards of Performance for New Stationary Sources – Standards of Performance for Municipal Solid Waste Landfills (2/24/99)**		
60.752	Standards for Air Emissions from Municipal Solid Waste Landfills	Y	
60.752 (b)(2)(iii)	Route collected gases to a control system meeting the following:	Y	
60.752 (b)(2)(iii)(B)	Reduce NMOC emissions by 98% by weight or reduce NMOC outlet concentration to less than 20 ppmv as hexane at 3% O2, dry basis, as demonstrated by initial performance test within 180 days of start-up.	Y	
60.752 (b)(2)(iv)	Operate in accordance with 60.753, 60.755, and 60.756	Y	
60.753	Operational Standards for Collection and Control Systems	Y	
60.753(e)	Vent all collected gases to a control system complying with 60.752(b)(2)(iii). If collection or control system inoperable, shut down gas mover and close all vents within 1 hour	Y	
60.753(f)	Operate the control system at all times when collected gas is routed to the control system	Y	
60.754	Test Methods and Procedures	Y	
60.754(d)	Test Methods for Performance Test (Method 18 or 25C)	Y	
60.755	Compliance Provisions	Y	
60.755(e)	Provisions apply at all times except during startup, shutdown, or malfunction, provided the duration of these shall not exceed 5 days for collection systems or 1 hour for control systems.	Y	
60.756	Monitoring of Operations	Y	
60.756(b)	Enclosed combustors shall comply with (b)(1) and (b)(2)	Y	
60.756(b)(1)	Temperature monitor and continuous recorder (not required for boilers and process heaters with capacity > 44 MW)	Y	
60.756(b)(2)	Device that records flow to or bypass of the control device	Y	
60.756 (b)(2)(i)	Install, calibrate, and maintain a device that records flow to the control device at least every 15 minutes.	Y	
60.756 (b)(2)(ii)	Secure a bypass valve in closed position with a lock-and-key configuration and inspect seal and lock monthly	Y	
60.756(e)	Procedures for requesting alternative monitoring parameters	Y	
60.757	Reporting Requirements	Y	
60.757(f)	Submit Annual Reports containing information required by (f)(1) through (f)(6)	Y	
60.757(f)(1)	Value and length of time for exceedance of parameters monitored per 60.756(a), (b) or (d)	Y	

Table IV – L
Source-Specific Applicable Requirements
S-50 LEACHATE VAPORATOR

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.757(f)(2)	Description and duration of all periods when gas is diverted from the control device by a by-pass line	Y	
60.757(f)(3)	Description and duration of all periods when control device was not operating for more than 1 hour	Y	
60.758	Recordkeeping Requirements	Y	
60.758(b)	Collection and Control Equipment Records (retain for life of control equipment except 5 years for monitoring data)	Y	
60.758(b)(2)	Control System Records - enclosed combustors other than boilers or process heaters with heat input > 44 MW	Y	
60.758 (b)(2)(i)	Combustion temperature measured every 15 minutes and averaged over the same time period as the performance test	Y	
60.758 (b)(2)(ii)	Percent NMOC reduction achieved by the control device	Y	
60.758(c)	Records of parameters monitored pursuant to 60.756 and periods of operation when boundaries are exceeded (retain for 5 years).	Y	
60.758(c)(1)	Exceedances subject to record keeping are	Y	
60.758 (c)(1)(i)	All 3-hour periods when average combustion temperature was more than 28 C below the average combustion temperature during the most recent complying performance test	Y	
60.758(c)(2)	Records of continuous flow to control device or monthly inspection records if seal and lock for bypass valves	Y	
40 CFR Part 63, Subpart A	**National Emission Standards for Hazardous Air Pollutants: General Provisions (4/22/04)**		
63.4	Prohibited activities and circumvention	Y	
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	Y	
63.6(e)	Operation and maintenance requirements and SSM Plan	Y	
63.6(f)	Compliance with non-opacity emission standards	Y	
63.10(b)(2) (i-v)	Records for startup, shutdown, malfunction, and maintenance	Y	
63.10(d)(5)	Startup, Shutdown, and Malfunction (SSM) Reports	Y	
40 CFR Part 63, Subpart AAAA	**National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (1/16/03)**		
63.1955	What requirements must I meet?	Y	
63.1955(a)(1)	Comply with 40 CFR Part 60, Subpart WWW	Y	
63.1955(b)	Comply with 63.1960-63.1985, if a collection and control system is required by 40 CFR Part 60, Subpart WWW or a State Plan implementing 40 CFR Part 60, Subpart Cc	Y	

~~Table IV – L~~
~~Source-Specific Applicable Requirements~~
~~S-50 LEACHATE VAPORATOR~~

~~Applicable Requirement~~	~~Regulation Title or Description of Requirement~~	~~Federally Enforceable (Y/N)~~	~~Future Effective Date~~
~~63.1955(c)~~	~~Comply with all approved alternatives to standards for collection and control systems plus all SSM requirements and 6-month compliance reporting requirements~~	~~Y~~	
~~63.1960~~	~~How is compliance determined?~~	~~Y~~	
~~63.1965~~	~~What is a deviation?~~	~~Y~~	
~~63.1975~~	~~How do I calculate the 3-hour block average used to demonstrate compliance?~~	~~Y~~	
~~63.1980~~	~~What records and reports must I keep and submit?~~	~~Y~~	
~~63.1980(a)~~	~~Comply with all record keeping and reporting requirements in 40 CFR Part 60, Subpart WWW or the State Plan implementing 40 CFR Part 60, Subpart Cc, except that the annual report required by 40 CFR 60.757(f) must be submitted every 6 months~~	~~Y~~	
~~63.1980(b)~~	~~Comply with all record keeping and reporting requirements in 40 CFR Part 60, Subpart A and 40 CFR Part 63, Subpart A, including SSM Plans and Reports~~	~~Y~~	
~~**BAAQMD Condition # 19609**~~			
~~Part 1~~	~~Leachate throughput limits (Cumulative Increase)~~	~~Y~~	
~~Part 2~~	~~Abatement requirements for leachate vapors (Cumulative Increase)~~	~~Y~~	
~~Part 3~~	~~Fuel limitations (Cumulative Increase)~~	~~Y~~	
~~Part 4~~	~~Landfill gas throughput limits and flow meter requirements (Cumulative Increase)~~	~~Y~~	
~~Part 5~~	~~NOx emission limits (Cumulative Increase)~~	~~Y~~	
~~Part 6~~	~~CO emission limits and alternative landfill gas throughput/CO concentration limits (Cumulative Increase)~~	~~Y~~	
~~Part 7~~	~~NMOC destruction efficiency requirement and alternative concentration limit (Cumulative Increase, Regulation 8-34-301.4, and 40 CFR 60.752(b)(2)(iii)(B))~~	~~Y~~	
~~Part 8~~	~~Record keeping requirements (Cumulative Increase, Regulations 2-6-501 and 8-34-501, and 40 CFR 60.758)~~	~~Y~~	
~~Part 9~~	~~Source testing requirements (Cumulative Increase, Regulations 8-34-301.4 and 8-34-412, and 40 CFR 60.752(b)(2)(iii)(B))~~	~~Y~~	

~~1. This section has been removed from BAAQMD Regulations because it has been superseded. Nevertheless, the source must comply with this regulation until US EPA has reviewed and approved (or disapproved) the District's revision of the regulation.~~

Table IV – ~~M~~L
Source-Specific Applicable Requirements
S-55 NON-RETAIL GASOLINE DISPENSING FACILITY # 8573

...			

Table IV – M
Source-Specific Applicable Requirements
S-56 PORTABLE HORIZONTAL GRINDER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 6	**Particulate Matter and Visible Emissions (12/19/90)**		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-311	Process Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
BAAQMD Condition # 22940			
Part 1	Incorporation of Conditions for CARB Portable Equipment Registration Permit # 117378 (CARB PERP)	N	
CARB	**Registration Permit # 117378**		
Part 1	Locations Where the Registration Permit is not Valid	N	
Part 2	General Operating and Maintenance Requirements for Grinder	N	
Part 3	Registration Permit Identification	N	
Part 4	US EPA Notification Requirements	N	
Part 5	Residence Time Limitation for This Equipment and Any Replacement Units	N	
Part 6	Limitations on the Validity of the Registration Permit	N	
Part 7	Public Nuisance Restriction	N	
Part 8	Permit Applicability Restrictions	N	
Part 9	Change of Ownership Requirements	N	
Part 10	District Authorization Requirement for Non-Valid Locations	N	
Part 11	Prohibited Materials	N	
Part 12	Visible Emission Limitation	N	
Part 13	Ringelmann 1 and Opacity Limitations	N	
Part 14	Daily PM10 Emission Limit	N	
Part 15	Watering Requirements	N	
Part 16	Annual PM10 Emission Limit	N	
Part 17	Daily Throughput Limitations and Records	N	
Part 18	Annual Throughput Limitation	N	
Part 19	Road Paving and Watering Requirements	N	
Part 20	Wood Waste Watering Requirements	N	

Table IV – M
Source-Specific Applicable Requirements
S-56 PORTABLE HORIZONTAL GRINDER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Part 21	General Operating and Maintenance Requirements for Water Sprays	N	
Part 22	Daily Records Requirements	N	
Part 23	Records Availability and Retention	N	
Part 24	District Notification Requirements	N	
Part 25	Exemption from District Notification Requirements	N	
Part 26	Notification Requirements for Equipment Replacements	N	

Table IV – N
Source-Specific Applicable Requirements
S-58 AERATED LEACHATE POND

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 8, Rule 8	**Organic Compounds – Wastewater Collection and Separation Systems (9/15/04)**		
8-8-113	Exemption, Secondary Wastewater Treatment Processes and Stormwater Sewer Systems	Y	
BAAQMD Condition # 23052			
Part 1	Throughput Limit for Leachate Influent (POC Offsets and NSR for TAC)	Y	
Part 2	POC Concentration Limit for Leachate Influent (POC Offsets)	Y	
Part 3	TAC Concentration Limits for Leachate Influent (NSR for TAC)	N	
Part 4	Analytical Testing Requirements for Leachate Influent (POC Offsets and NSR for TAC)	Y	
Part 5	Record Keeping Requirements (POC Offsets and NSR for TAC)	Y	

Section V:

No changes are proposed for this section.

Section VI:

For the administrative amendment, the District is proposing to delete all of Condition # 19609, which applies to the S-50 Leachate Vaporator. The District is also proposing to delete references to the S-50 Leachate Vaporator that are contained in Condition # 19867, Parts 16 and 19.

For the minor revision, the District is proposing to add Condition # 22940 for S-56 and Condition # 23052 for S-58. The reasons for each proposed modification and each new condition are explained in more detail below followed by the proposed changes to the permit conditions in strikeout/underline format.

Condition # 19606 for S-50

This entire condition (Parts 1-9) is being deleted because it applies only to the S-50 Leachate Vaporator, and S-50 is being removed from the permit.

Condition # 19867 for S-5, A-18, A-50, and A-51

Part 16: The S-50 Leachate Vaporator was part of the landfill gas control system for Redwood Landfill because it was fueled by landfill gas. Therefore, this device is identified in Part 16. Since S-50 is being removed, the Part 16 references to S-50 are being deleted. Since the S-50 Leachate Vaporator was only capable of burning 5 MM BTU/hour of landfill gas (less than 3% of the total control system capacity), removing this device from the control system will not impair Redwood Landfill's ability to collect and control landfill gas.

Part 19: When S-50 was operating, leachate vapors from S-50 were vented to the A-50 Landfill Gas Flare for control. Part 19 reflected that the flares (A-50 and A-51) were permitted to control these leachate vapors in addition to landfill gas from S-5. Since S-50 is being removed, it is no longer necessary for A-50 and A-51 to be permitted to control leachate vapors. A-50 and A-51 will now be permitted to control only landfill gas collected from Redwood Landfill.

Condition # 22940 for S-56

Part 1: This condition was added to incorporate by reference the CARB Portable Equipment Registration Program (PERP) conditions for Registration Permit # 117378 and to add a basis for these conditions. The text of these conditions is contained in Appendix C. All of the conditions were imposed by CARB in order to ensure that the portable horizontal grinder would comply with the Portable Equipment Registration Program requirements. Therefore, the basis for these conditions was identified as CARB PERP. Since CARB's PERP is not federally enforceable and the equipment is exempt from District permit requirement, none of these conditions are federally enforceable.

Condition # 23052 for S-58

Part 1: The throughput limit in this part defines the maximum permitted capacity for this leachate pond, which was provided by Redwood Landfill, based on a maximum annual average influent flow rate of 75 gpm. In addition, the throughput limit is used in conjunction with the concentration limits in Parts 2 and 3 to calculate the

maximum permitted precursor organic compound (POC) and toxic air contaminant (TAC) emissions from S-58.

Part 2: The POC concentration limit was established using analytical data collected for the last three years pursuant to Regional Water Quality Control Board (RWQCB) requirements. Based on this data, the District does not expect the concentration of POC in the leachate influent to ever exceed 500 ppb by weight. This concentration level was used in conjunction with the leachate influent limit in Part 1 to calculate the maximum permitted POC emissions for S-58. Although the POC emission increases from S-58 are very small, these POC emission increases are subject to offset requirements, because the maximum permitted POC emission rate for this facility exceed 10 tons/year. Offsets were supplied from the District's small facility banking account because total facility emissions will remain less than 35 tons/year of POC.

Part 3: The concentration levels of various toxic air contaminants in the leachate influent were determined using analytical data collected for RWQCB. Based on this data, the emission rates for most toxic air contaminants (all detected compounds except benzene, 1,4-dichlorobenzene, and vinyl chloride) were three or more orders of magnitude below the Regulation 2, Rule 5 risk screen trigger levels and were insignificant. However, the maximum projected emission rates for benzene, 1-4 dichlorobenzene, and vinyl chloride were only about one third of the Regulation 2, Rule 5 risk screen trigger level. The concentration levels in Part 3 reflect the maximum concentration for each significant TAC that will not exceed a risk screen trigger level at the maximum influent rate in Part 1. Since BAAQMD regulation 2, Rule 5 and the District's NSR Program for toxic air contaminants are not federally enforceable, these concentration limits are not federally enforceable. If a Part 3 concentration limit is exceeded, the applicant must submit an application for a risk screening analysis on S-58.

Part 4: The existing RWQCB testing requirements will be adequate for demonstrating compliance with the concentration limits in Parts 2 and 3. These sample collection and analysis requirements and related air quality definitions and calculation procedures are described in Part 4.

Part 5: Records will be necessary to demonstrate compliance with the Part 1 leachate influent limit. These record keeping requirements and the standard records availability and records retention language are identified in Part 5.

~~**Condition # 19609**~~
~~**FOR: S-50 LEACHATE VAPORATOR**~~

~~1. The total throughput of leachate to the S-50 Leachate Vaporator shall not exceed 2,628,000 gallons during any consecutive 12 month period and shall not exceed 7200 gallons during any one day. (Basis: Cumulative Increase)~~

~~2. All leachate vapors generated at S-50 shall be vented to the properly operating A-50 Landfill Gas Flare. In order to assure compliance with~~

~~this condition, S-50 shall be equipped with automated shut down controls that will discontinue the operation of S-50 and prevent the release of leachate vapors to the atmosphere in the event that A-50 is not operating or is not achieving the minimum temperature requirement. (Basis: Cumulative Increase)~~

~~3. The S-50 Leachate Vaporator shall be fired on landfill gas. Propane may be used during start-up. (Basis: Cumulative Increase)~~

~~4. The total throughput of landfill gas (with an HHV of 500 BTU/scf) to S-50 shall not exceed 87,600,000 scf during any consecutive 12-month period and shall not exceed 240,000 scf during any one day. These throughput limits may be reduced in the future in order to maintain compliance with Part 6 below. In order to demonstrate compliance with this part, the S-50 Leachate Vaporator shall be equipped with a properly operating continuous gas flow meter.
(Basis: Cumulative Increase)~~

~~5. Nitrogen oxides (NO_x) emissions from S-50 shall not exceed 10.0 pounds, calculated as NO_2, per day. Compliance with this emission limit may be demonstrated by meeting the following concentration limit. The concentration of NO_x in the combustion flue gases from S-50 shall not exceed 63 ppmv, corrected to 3% oxygen, dry basis. If a compliance demonstration test indicates that the nitrogen oxide concentration will exceed 63 ppmv, the Permit Holder shall reduce the landfill gas flow rate to S-50 and retest the unit to determine the maximum landfill gas flow at which nitrogen oxide emissions will not exceed 10.0 pounds per day. The table below describes several maximum landfill gas flow rates and maximum NO_x concentrations that will satisfy this condition.
(Basis: Cumulative Increase)~~

~~LFG Flow Rate, scf/hour~~	~~PPM NOx at 3% O2, dry~~
~~9500~~	~~66~~
~~9000~~	~~70~~
~~8000~~	~~79~~
~~6000~~	~~105~~

~~6. Carbon monoxide (CO) emissions from S-50 shall not exceed 10.0 pounds per day. Compliance with this emission limit may be demonstrated by meeting the following concentration limit. The concentration of CO in the combustion flue gases from S-50 shall not exceed 103 ppmv, corrected to 3% oxygen, dry basis. If a compliance demonstration test indicates that the carbon monoxide concentration will exceed 103 ppmv, the Permit Holder shall reduce the landfill gas flow rate to S-50 and retest the unit to determine the maximum landfill gas flow at which carbon monoxide emissions will not exceed 10.0 pounds per day. The table below describes~~

several maximum landfill gas flow rates and maximum CO concentrations that will satisfy this condition. (Basis: Cumulative Increase)

LFG Flow Rate, scf/hour	PPM CO at 3% O2, dry
9500	109
9000	115
8000	129
6000	172

7. The S-50 Leachate Vaporator shall either achieve a minimum destruction efficiency of 98% by weight for total non-methane organic compounds in the landfill gas or shall emit no more than 15 ppmv of NMOC as C6 from P-50. (Basis: Cumulative Increase, Regulation 8-34-301.34, and 40 CFR 60.752(b)(2)(iii)(B))

8. In order to demonstrate compliance with Parts 1 and 4, the Permit Holder shall maintain the following records in a District approved logbook:
   a. record the operating times for the S-50 Leachate Vaporator for each operating day,
   b. calculate and record, on a weekly basis, the landfill gas flow rate and leachate flow rate to S-50 using flow meter data or other appropriate measurements,
   c. calculate and record, on a weekly basis, the amount of leachate processed by S-50 during each operating day using daily operating time data and weekly leachate flow rate data recorded above,
   d. calculate and record, on a weekly basis, the amount of landfill gas burned by S-50 during each operating day using daily operating time data and weekly landfill gas flow rate data recorded above, and
   e. summarize the above records, on a monthly basis.

   All leachate throughput records, landfill gas flow rate records, and source test results shall be retained on site for a minimum of five years and shall be made available to District staff upon request. (Basis: Cumulative Increase, Regulations 2-6-501 and 8-34-501, and 40 CFR 60.758)

9. In order to demonstrate compliance with Parts 5-7 above and Regulation 8, Rule 34, Sections 301.4 and 412, the Permit Holder shall ensure that a District approved source test is conducted annually on S-50. Each annual source test shall determine the following:
   a. landfill gas flow rate to S-50 (dry basis);
   b. concentrations (dry basis) of total non-methane organic compounds (NMOC) in the landfill gas;
   c. stack gas flow rate from S-50 (dry basis);
   d. concentrations (dry basis) of NO_x, CO, NMOC, and O_2 in the stack gas;
   e. NO_x and CO daily emission rates from S-50;

~~f. the NMOC destruction efficiency achieved by S-50; and~~
~~g. the average combustion zone temperature in S-50 during the test period.~~

~~Each annual source test shall be conducted no earlier than 9 months and no later than 12 months after the previous annual source test. The Source Test Section of the District shall be contacted to obtain approval of the source test procedures at least 14 days in advance of each source test. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement Division and the Source Test Section within 45 days of the test date.~~
~~(Basis: Cumulative Increase, Regulations 8-34-301.4 and 8-34-412, and 40 CFR 60.752(b)(2)(iii)(B))~~

Condition # 19867

FOR: S-5 REDWOOD LANDFILL WITH GAS COLLECTION SYSTEM; A-18 WATER SPRAYS; A-50 LANDFILL GAS FLARE, AND A-51 LANDFILL GAS FLARE

No Changes to Parts 1-15.

16. During all times that the landfill gas collection system is operating, all collected landfill gas shall be vented to ~~either the A-50 Landfill Gas Flare alone or A-50 and the S-50 Leachate Vaporator. Upon start-up of the A-51 Landfill Gas Flare, collected landfill gas shall be vented to~~ one of the following control system configurations: A-50 Landfill Gas Flare and A-51 Landfill Gas Flare operating concurrently~~;~~ or A-51 operating alone~~; A-50, A-51, and S-50 operating concurrently; or A-51 and S-50 operating concurrently. Up to 5 MM BTU/hour (approximately 167 scfm) of landfill gas may be diverted from a flare and used as fuel at the S-50 Leachate Vaporator.~~ In order to assure compliance with this condition, ~~the~~ A-50 and A-51 ~~Landfill Gas Flares~~ shall be equipped with local and remote alarms and auto restart capabilities. (Basis: 8-34-301.1, 8-34-301.3, and 40 CFR 60.752(b)(2)(iii))

No Changes to Parts 17-18.

19. The A-50 and A-51 Landfill Gas Flares shall be fired on landfill gas ~~and may also be used to abate leachate vapors from the S-50 Leachate Vaporator~~. (Basis: RACT and Regulation 2-2-112)

No Changes to Parts 20-32.

Condition # 22940

FOR: S-56 PORTABLE HORIZONTAL GRINDER

*1. The conditions issued by CARB with Portable Equipment Registration Permit # 117378 are hereby incorporated by reference. (CARB PERP)

CARB PERP # 117378
FOR: REDWOOD LANDFILL, PORTABLE HORIZONTAL GRINDER

1. This registration is not valid for operation within the boundaries of the California Outer Continental Shelf and State Territorial Waters.
2. The equipment unit shall be properly maintained and kept in good operating condition at all times,
3. The registration identification device shall be affixed in a visible location on the registered portable equipment unit at all times and a legible copy of the registration certificate shall be kept on site with the portable equipment unit, and shall be made accessible to the Air Resources Board or district representative upon request.
4. The owner or operator must notify the United States Environmental Protection Agency and comply with 40 CFR 52.21 if:
   a. the portable equipment unit is part of a facility defined as a major source under 40 CFR 51.166 or 52.21, and
      i. the facility is located within 10 kilometers of a Class I area; or
      ii. the portable equipment unit, operating in conjunction with other registered portable equipment units, is part of a the stationary source and would be defined as a major modification to the stationary source under 40 CFR 51.166 or 52.21; or
   b. the portable equipment unit, operating in conjunction with other registered portable equipment units, would be defined as a major stationary source, as defined under 40 CFR 51.166 or 52.21.
5. The equipment unit and any replacement equipment unit shall not reside at the same location for more than 12 consecutive months.
6. The registration certificate is not valid for operation at any given location where a local air district has issued a permit to operate for the same equipment unit or where other air contaminant emitting equipment, excluding engines, is operating as a stationary source and the operation of this equipment unit would qualify as part of the stationary source. A stationary source is any building, structure, facility, of installation which emits any affected pollutant directly or as a fugitive emission. Building, structure, facility, or installation includes all pollutant emitting activities which are under the same ownership operation, or which are owned or operated by entities which are under common control; belong to the same two-digit standard industrial classification code or by virtue of being part of a common industrial process, manufacturing process, or connected process involving a common raw material; and are located on one or more contiguous or adjacent properties.
7. The operation of this equipment unit shall not cause a public nuisance.
8. The portable equipment unit shall not be operated under both statewide registration and a district permit at any specific location.
9. When this equipment unit is sold, the new owner shall submit a change of ownership application. The existing registration is not valid for the new

owner until the application has been filed and all applicable fees have been paid.

10. The operator of a portable engine or equipment unit shall obtain district authorization prior to operation at any specific location where the Statewide registration is not valid.
11. Materials containing hazardous waste or materials that may potentially lead to emissions of toxic air contaminants shall not be processed by this unit. Hazardous wastes and toxic air contaminants are any substances that may cause or contribute to an increase in serious illness, or may pose a potential hazard to human health. Examples of such materials include, but are not limited to: wood railroad ties, serpentine rock, chemically treated wood, construction or demolition debris containing asbestos, and contaminated soil.
12. There shall be no visible emissions beyond the property line on which the equipment is being operated.
13. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in anyone hour which is as dark or darker than Ringelmann 1 or equivalent 20 percent opacity.
14. Emissions shall not exceed 82 pounds per day of PM10.
15. Open areas shall be maintained adequately wet to prevent fugitive emissions in excess of 20 percent opacity or Ringelmann 1.
16. Emissions of particulate matter less than 10 microns (PM 10), exclusive of emissions emitted directly from the associated portable engine, shall not exceed 10 tons per year per district.
17. Maximum daily throughput shall not exceed 820 tons per day when the equipment unit is operated by itself. When operating together with other equipment units as part of an onshore project, the daily throughput shall be tracked to ensure that total project PMl 0 emissions do not exceed 82 pounds per day. Compliance with this provision shall be determined daily by monitoring and recording total throughput of all registered equipment units operating as part of a project. Records shall include running totals of material throughput for each equipment unit multiplied by the corresponding PM10 emission factor included on each registration. The PM10 emission factor for this unit is 0.1 pounds PM10 per ton of material processed. These records are to be made accessible to the Air Resources Board or district representative upon request. An onshore project is one or more registered engines or equipment units operated at one location under the same or common ownership or control, and used to perform a single activity.
18. Maximum annual throughput shall not exceed 200,000 tons per year.
19. All roads subject to vehicular traffic shall be either paved or adequately watered to minimize fugitive particulate matter emissions.
20. The wood waste shall be kept sufficiently moist to prevent dust emissions.
21. Water spray equipment shall be properly maintained and used whenever the unit is in operation, unless there are no visible emissions.
22. Daily records shall include a log of date, registration number, location(s) at which the equipment was operated (identified by district, county or specific location), type of material processed, and throughput of material processed.
23. Daily records shall be maintained at a central place of business for five years, and made accessible to the Executive Officer or district upon request.
24. If a registered portable equipment unit will be in a district for more than five days, the operator shall notify the district in writing, facsimile, electronic

mail, or telephone within two working days of coming into the district. Notification shall include: the registration number of the equipment unit, name and phone of the responsible official, and estimated number of days the equipment unit will be located in the district. If the district has not been notified because the owner or operator did not expect the duration of operation to trigger notification, the operator shall notify the district within 12 hours of determining the portable equipment unit will be operating in the district more than five days.

25. District notification is not required when operating within the boundaries of the Bay Area Air Quality Management District.
26. The owner of a registered portable equipment unit shall notify the Executive Officer in writing within five days of replacing the registered portable equipment unit with an identical replacement. The notification shall include: company name, responsible official, phone number, registration number, make, model, throughput, and description of the mechanical breakdown, serial number of the identical replacement, and applicable fees.

Condition # 23052
FOR: S-58 AERATED LEACHATE POND

1. The total leachate influent rate to the S-58 Aerated Leachate Pond, excluding non-contact storm water runoff, shall not exceed 39.42 million gallons during any consecutive 12-month period. (Basis: POC Offsets and NSR for TAC)

2. The average concentration of POC in the leachate influent to S-58 shall not exceed 500 ppb by weight. (Basis: POC Offsets)

*3. The average concentrations of specified toxic air contaminants in the leachate influent to S-58 shall not exceed the limits identified in subparts a-c below. (Basis: NSR for TAC)
   a. no more than 19 ppb by weight of benzene
   b. no more than 48 ppb by weight of 1,4-dichlorobenzene
   c. no more than 7 ppb by weight of vinyl chloride

4. To demonstrate compliance with Parts 2 and 3 above, the Permit Holder shall conduct annual analyses on the leachate influent to the S-58 Aerated Leachate Pond in accordance with the following procedures. (Basis: POC Offsets and NSR for TAC)
   a. Leachate samples shall be collected from at least two leachate wells per year on a rotating basis in accordance with Waste Discharge Requirement Order Number 95-110.
   b. Each leachate sample shall be analyzed for the concentration by weight of critical organic compounds (COC), benzene, 1,4-dichlorobenzene, and vinyl chloride. These concentrations shall be determined using Regional Water Quality Control Board methods

that measure wastewater for the concentration of each organic compound having a carbon number of C-14 or less using gas chromatography. The COC concentration is equal to the sum of all detected concentrations minus the concentration of any compound excluded from COC pursuant to Regulation 8-8-210. Alternatively, COC concentration may be determined in accordance with Regulation 8-8-601.

c. For each sample analyzed, the concentration of POC shall be calculated by subtracting the detected concentration for any non-precursor organic compounds (NPOC) from the total COC concentration determined above. NPOC are defined in Regulation 2-1-207 and include but are not limited to: acetone, methylene chloride, perchloroethylene, 1,1,1 trichloroethane, many chlorofluorocarbons, and most perfluorocarbons compounds.

d. For each annual wastewater testing event, the Permit Holder shall calculate and record the average concentrations (in ppb by weight) of POC, benzene, 1,4-dichlorobenzene, and vinyl chloride for all of the samples analyzed pursuant to subpart a. If a concentration is reported as non-detect for a compound, the detection limit for that compound shall be used for this average concentration computation.

e. The Permit Holder shall retain all analytical results, calculations, and records required by this part for at least five years from the date of entry. All records shall be kept on site or made available to District staff upon request.

5. To demonstrate compliance with Part 1, the Permit Holder shall calculate and record the total leachate flow rate to S-58 for each month (gallons/month) and the total cumulative flow rate to S-58 for each rolling 12-month period (millions of gallons/year). The monthly leachate flow rate records shall clearly identify each leachate pump station that contributed to the total monthly flow rate, the procedures used to calculate the monthly leachate flow rate to S-58, and any records necessary to verify these calculated flow rates. These records shall be retained for at least five years from the date of entry. All records shall be kept on site or made available to District staff upon request. (Basis: POC Offsets and NSR for TAC)

Section VII:

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

Table VII-L for the S-50 Leachate Vaporator is being deleted because this equipment has been shut down. The subsequent table for S-55 Non-Retail Gasoline Dispensing Facility # 8573 (Table VII-M) will be renumbered as Table VII-L.

The District is proposing to add Table VII-M for S-56 Portable Horizontal Grinder. The source is subject to a federally enforceable visible particulate emission limit of Ringelmann 1. CARB PERP #117378, Parts 20 and 21 require the operator to observe the emissions from S-56 during all operations and to use water sprays to reduce visible emissions if any are detected. Visual observation of a particulate emission source during operation is a standard method of monitoring for visible emissions from particulate matter sources such as grinders. S-56 is also subject to a federally enforceable particulate emission rate limit determined in accordance with BAAQMD Regulation 6-311. S-56 has a maximum throughput rate of 80 tons/hour (160,000 pounds/hour). Since this throughput rate exceeds 57,320 pounds/hour, Regulation 6-311 limits particulate matter emissions to 40 pounds/hour. Based on the maximum allowable emission rate for S-56 of 0.1 pounds PM_{10}/ton wood waste (from CARB PERP # 117378, Part 17), S-56 will emit a maximum of 8 pounds/hour of PM_{10}. Since this maximum allowable PM_{10} emission rate is far below the emission limit of 40 pounds/hour and source testing for the fugitive emissions from this source would be cost prohibitive, additional monitoring to demonstrate compliance with this hourly emission limit is not appropriate. None of the other emission rate or throughput limits for S-56 are federally enforceable. Throughput records and emission calculations will be used to demonstrate compliance with the non-federally enforceable emission rate limits and throughput limits.

The District is proposing to add Table VII-N for S-58 Aerated Leachate Pond. This source will be subject to a federally enforceable leachate throughput limit. The District is proposing to require that Redwood Landfill maintain monthly records of leachate influent delivered to the pond to demonstrate compliance with this annual throughput limit (limit applies to a rolling 12-month period). Records are a standard method of demonstrating compliance with throughput limits. S-58 will also be subject to a federally enforceable limit on the concentration of POC in the leachate influent. This POC concentration limit combined with the leachate influent limit will limit POC emissions on an annual basis. The District is proposing to require annual analyses on the leachate influent to S-58 to demonstrate compliance with the POC concentration limit. GC analysis of the wastewater is a standard method of demonstrating compliance with wastewater concentration limits. Since the POC emission limit is an annual limit, annual analysis is an appropriate frequency. Although the proposed concentration limits for benzene, 1,4-dichlorobenzene, and vinyl chloride are not federally enforceable limits, the District is proposing to require annual analyses to demonstrate compliance with these concentration limits, which will ensure that toxic air contaminant emissions do not exceed a risk screen trigger level.

~~**Table VII – L**~~
~~**Applicable Limits and Compliance Monitoring Requirements**~~
~~S-50 LEACHATE VAPORATOR~~

~~Type of Limit~~	~~Citation of Limit~~	~~FE Y/N~~	~~Future Effective Date~~	~~Limit~~	~~Monitoring Requirement Citation~~	~~Monitoring Frequency (P/C/N)~~	~~Monitoring Type~~

~~Table VII – L~~
~~Applicable Limits and Compliance Monitoring Requirements~~
~~S-50 LEACHATE VAPORATOR~~

~~Type of Limit~~	~~Citation of Limit~~	~~FE Y/N~~	~~Future Effective Date~~	~~Limit~~	~~Monitoring Requirement Citation~~	~~Monitoring Frequency (P/C/N)~~	~~Monitoring Type~~
~~Leachate Through-put~~	~~BAAQMD Condition # 19609, Part 1~~	~~Y~~		~~7200 gallons per day and 2,628,000 gallons per 12-month period~~	~~BAAQMD Condition # 19609, Part 8~~	~~P/D~~	~~Records~~
~~Landfill Gas Through-put~~	~~BAAQMD Condition # 19609, Part 4~~	~~Y~~		~~240,000 scf per day and 87,600,000 scf per 12-month period~~	~~BAAQMD Condition # 19609, Parts 4 and 8~~	~~C~~	~~Gas Flow Meter and Records~~
~~Gas Flow~~	~~BAAQMD 8-34-301, 301.1, and 301.4~~	~~Y~~		~~Vent all collected gases to a properly operating control system and operate control system continuously.~~	~~BAAQMD 8-34-501.10 and 508 and BAAQMD Condition # 19609, Parts 4 and 8~~	~~C~~	~~Gas Flow Meter and Recorder (every 15 minutes) and Records~~
~~Gas Flow~~	~~40 CFR 60.752 (b)(2)(iii) and 60.753(e) and (f)~~	~~Y~~		~~Vent all collected gases to a properly operating control system and operate control system at all times when gas is vented to it~~	~~40 CFR 60.756(b)(2) (i or ii) and 60.758(c)(2)~~	~~C or P/M~~	~~Gas Flow Meter and Recorder (every 15 minutes) or Monthly Inspection of Bypass Valve and Lock and Records~~
~~Collection and Control Systems Shutdown Time~~	~~BAAQMD 8-34-113.2~~	~~Y~~		~~240 hours per year and 5 consecutive days~~	~~BAAQMD 8-34-501.1~~	~~P/D~~	~~Operating Records~~
~~Control System Startup Shutdown or Mal-function~~	~~40 CFR 60.755(e)~~	~~Y~~		~~1 hour per event~~	~~40 CFR 60.7(b), 60.757(f)(2) and (f)(3)~~	~~P/D~~	~~Operating Records (all occurrences and duration of each)~~

~~Table VII – L~~
~~Applicable Limits and Compliance Monitoring Requirements~~
~~S-50 LEACHATE VAPORATOR~~

~~Type of Limit~~	~~Citation of Limit~~	~~FE Y/N~~	~~Future Effective Date~~	~~Limit~~	~~Monitoring Requirement Citation~~	~~Monitoring Frequency (P/C/N)~~	~~Monitoring Type~~
~~Startup Shutdown or Malfunction Procedures~~	~~40 CFR 63.6(e)~~	~~Y~~		~~Minimize Emissions by Implementing SSM Plan~~	~~40 CFR 63.1980(a-b)~~	~~P/E~~	~~Records (all occurrences, duration of each, corrective actions)~~
~~Periods of Inoperation for Parametric Monitors~~	~~BAAQMD 1-523.2~~	~~Y~~		~~15 consecutive days per incident and 30 calendar days per 12-month period~~	~~BAAQMD 1-523.4~~	~~P/D~~	~~Operating Records for All Parametric Monitors (for gas flow and temperature monitors)~~
~~Continuous Monitors~~	~~40 CFR 60.13(e)~~	~~Y~~		~~Requires Continuous Operation except for breakdowns, repairs, calibration, and required span adjustments~~	~~40 CFR 60.7(b)~~	~~P/D~~	~~Operating Records for All Continuous Monitors (for gas flow and temperature monitors)~~
~~Total Carbon Emissions~~	~~BAAQMD 8-2-301~~	~~Y~~		~~15 pounds/day or 300 ppm, dry basis (applies to emissions from leachate vapors after control by A-50 Flare)~~	~~BAAQMD Condition # 19609, Parts 2 and 8~~	~~P/D~~	~~Records and Operating Restrictions~~

~~Table VII – L~~
~~Applicable Limits and Compliance Monitoring Requirements~~
~~S-50 LEACHATE VAPORATOR~~

~~Type of Limit~~	~~Citation of Limit~~	~~FE Y/N~~	~~Future Effective Date~~	~~Limit~~	~~Monitoring Requirement Citation~~	~~Monitoring Frequency (P/C/N)~~	~~Monitoring Type~~
~~TOC (Total Organic Compounds Plus Methane)~~	~~BAAQMD 8-34-301.2~~	~~Y~~		~~1000 ppmv as methane (component leak limit)~~	~~BAAQMD 8-34-501.6 and 503~~	~~P/Q~~	~~Quarterly Inspection of collection and control system components with portable analyzer and Records~~
~~Non-Methane Organic Compounds (NMOC)~~	~~BAAQMD 8-34-301.4~~	~~Y~~		~~98% removal by weight OR < 120 ppmv, dry basis @ 3% O_2, expressed as methane~~	~~BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition # 19609, Parts 8 and 9~~	~~P/A~~	~~Annual Source Tests and Records~~
~~NMOC~~	~~BAAQMD Condition # 19609, Part 7~~	~~Y~~		~~98% removal by weight OR < 15 ppmv, dry basis @ 3% O_2, expressed as hexane~~	~~BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition # 19609, Parts 8 and 9~~	~~P/A~~	~~Annual Source Tests and Records~~
~~NMOC~~	~~40 CFR 60.752(b)(2)(iii)(B)~~	~~Y~~		~~98% removal by weight OR < 20 ppmv dry @ 3% O_2, expressed as hexane~~	~~40 CFR 60.8 and 60.752(b)(2)(iii)(B) and 60.758 (b)(2)(ii)~~	~~P/E~~	~~Initial Source Test and Records~~
~~Opacity~~	~~BAAQMD 6-301~~	~~Y~~		~~Ringelmann No. 1 for < 3 minutes/hr~~	~~None~~	~~N~~	~~NA~~
~~FP~~	~~BAAQMD 6-310~~	~~Y~~		~~≤ 0.15 grains/dscf~~	~~None~~	~~N~~	~~NA~~

~~Table VII – L~~
~~Applicable Limits and Compliance Monitoring Requirements~~
~~S-50 LEACHATE VAPORATOR~~

~~Type of Limit~~	~~Citation of Limit~~	~~FE Y/N~~	~~Future Effective Date~~	~~Limit~~	~~Monitoring Requirement Citation~~	~~Monitoring Frequency (P/C/N)~~	~~Monitoring Type~~
~~SO_2~~	~~BAAQMD 9-1-301~~	~~Y~~		~~Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 min. and ≤0.05 ppm for 24 hours~~	~~None~~	~~N~~	~~NA~~
~~SO_2~~	~~BAAQMD 9-1-302~~	~~Y~~		~~≤ 300 ppm, dry basis~~	~~BAAQMD Condition # 19867, Parts 18a and 31~~	~~P/Q~~	~~Quarterly Landfill Gas Analysis~~
~~H_2S~~	~~BAAQMD 9-2-301~~	~~N~~		~~Property Line Ground Level Limits: ≤ 0.06 ppm, averaged over 3 minutes and ≤ 0.03 ppm, averaged over 60 minutes~~	~~None~~	~~N~~	~~NA~~
~~NOx~~	~~BAAQMD Condition # 19609, Part 5~~	~~Y~~		~~10.0 pounds per day (calculated as NO_2), or ≤ 63 ppmv @ 3% O_2, dry OR LFG scf/hour — PPM NOx @ 3% O_2: 9500 — 66; 9000 — 70; 8000 — 79; 6000 — 105~~	~~BAAQMD Condition # 19609, Part 9~~	~~P/A~~	~~Annual Source Test~~
~~CO~~	~~BAAQMD Condition # 19609, Part 6~~	~~Y~~		~~10.0 pounds per day, or ≤ 103 ppmv @ 3% O_2, dry, OR LFG scf/hour — PPM CO @ 3% O_2: 9500 — 109; 9000 — 115; 8000 — 129; 6000 — 172~~	~~BAAQMD Condition # 19609, Part 9~~	~~P/A~~	~~Annual Source Test~~

Table VII – ~~M~~L
Applicable Limits and Compliance Monitoring Requirements
S-55 NON-RETAIL GASOLINE DISPENSING FACILITY # 8573

Table VII – M
Applicable Limits and Compliance Monitoring Requirements
S-56 PORTABLE HORIZONTAL GRINDER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD 6-301	Y		< Ringelmann 1.0 for 3 minutes in any hour	CARB PERP # 117378, Parts 20 and 21	P/E	Observation of Sources in Operation and Use of Water Sprays to Prevent Visible Emissions
Opacity	CARB PERP # 117378, Parts 13 and 15	N		< Ringelmann 1.0 for 3 minutes in any hour and < 20% Opacity	CARB PERP # 117378, Parts 20 and 21	P/E	Observation of Sources in Operation and Use of Water Sprays to Prevent Visible Emissions
FP	BAAQMD 6-311	Y		$E = 0.026(P)^{0.67}$ where: E = Allowable Emission Rate (lb/hr); and P = Process Weight Rate (lb/hr) Maximum Allowable Emission Rate = 40 lb/hr For P >57,320 lb/hr	None	N	NA
PM10	CARB PERP # 117378, Part 14	N		< 82 pounds per day	CARB PERP # 117378, Parts 17 and 22	P/D	Throughput Records and Emission Calculations

Table VII – M
Applicable Limits and Compliance Monitoring Requirements
S-56 PORTABLE HORIZONTAL GRINDER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
PM10	CARB PERP # 117378, Part 16	N		< 10 tons per year	CARB PERP # 117378, Parts 17 and 22	P/D	Throughput Records and Emission Calculations
Wood Waste Through-put	CARB PERP # 117378, Part 17	N		< 820 tons per day	CARB PERP # 117378, Parts 17 and 22	P/D	Throughput Records
Wood Waste Through-put	CARB PERP # 117378, Part 18	N		< 200,000 tons per year	CARB PERP # 117378, Parts 17 and 22	P/D	Throughput Records

Table VII – N
Applicable Limits and Compliance Monitoring Requirements
S-58 AERATED LEACHATE POND

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Leachate Through-put	BAAQMD Condition # 23052, Part 1	Y		< 39.42 million gallons per 12-month period	BAAQMD Condition # 23052, Part 5	P/M	Calculations and Records
Organic Com-pounds in Leachate	BAAQMD Condition # 23052, Part 2	Y		Average Concentration: < 500 ppbw of POC	BAAQMD Condition # 23052, Part 4	P/A	Analysis of Leachate Influent, Calculations, and Records
Organic Com-pounds in Leachate	BAAQMD Condition # 23052, Part 3	N		Average Concentration: < 19 ppbw of benzene < 48 ppbw of 1,4-dichlorobenzene < 7 ppbw of vinyl chloride	BAAQMD Condition # 23052, Part 4	P/A	Analysis of Leachate Influent, Calculations, and Records

Section VIII:

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

For the administrative revision, the District is proposing to delete several citations in Table VIII related to S-50 Leachate Vaporator. These sections are no longer applicable because S-50 has been shut down. For the proposed minor revision, the District is proposing to add several test method citations related to S-56 and S-58.

Table VIII
Test Methods

Applicable Requirement	**Description of Requirement**	**Acceptable Test Methods**
...		
BAAQMD Condition # 13123, Part 5	Ringelmann No. 1 Limitation	Manual of Procedures, Volume I, Evaluation of Visible Emissions
~~BAAQMD Condition # 16066, Part 3~~	~~Ringelmann No. 1 Limitation~~	~~Manual of Procedures, Volume I, Evaluation of Visible Emissions~~
~~BAAQMD Condition # 19609, Parts 4 and 6~~	~~Landfill Gas Throughput Limits for Leachate Vaporator~~	~~APCO Approved Gas Flow Meter and Recorder~~
~~BAAQMD Condition # 19609, Part 5~~	~~NOx Emission Limit for Leachate Vaporator~~	~~Manual of Procedure, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling; and~~ ~~Manual of Procedure, Volume IV, ST-14, Oxygen, Continuous Sampling~~
~~BAAQMD Condition # 19609, Part 6~~	~~CO Emission Limit for Leachate Vaporator~~	~~Manual of Procedure, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling; and~~ ~~Manual of Procedure, Volume IV, ST-14, Oxygen, Continuous Sampling~~
~~BAAQMD Condition # 19609, Part 7~~	~~NMOC Emission Limits for Leachate Vaporator~~	~~Manual of Procedures, Volume IV, ST-14, Oxygen, Continuous Sampling; and~~ ~~Manual of Procedures, Volume IV, ST-7, Organic Compounds; or EPA Reference Method 18, 25, 25A, or 25C~~

Table VIII
Test Methods

Applicable Requirement	Description of Requirement	Acceptable Test Methods
~~BAAQMD Condition # 19609, Part 9~~	~~Annual Compliance Demonstration Tests~~	~~Manual of Procedures, Volume IV, ST-17, Stack Gas Velocity and Volumetric Flow Rate; ST-23 Water Vapor; ST-14, Oxygen, Continuous Sampling; ST-13A, Oxides of Nitrogen, Continuous Sampling; ST-6, Carbon Monoxide, Continuous Sampling; and Manual of Procedures, Volume IV, ST-7, Organic Compounds or EPA Reference Methods 18, 25, 25A, or 25C~~
...		
BAAQMD Condition # 19867, Part 30	Annual Compliance Demonstration Tests	Manual of Procedures, Volume IV, ST-17, Stack Gas Velocity and Volumetric Flow Rate; ST-23 Water Vapor; ST-14, Oxygen, Continuous Sampling; ST-13A, Oxides of Nitrogen, Continuous Sampling; ST-6, Carbon Monoxide, Continuous Sampling; and Manual of Procedures, Volume IV, ST-7, Organic Compounds or EPA Reference Methods 18, 25, 25A, or 25C
BAAQMD Condition # 23052, Part 2	POC Concentration Limit for Leachate Influent	Regional Water Quality Control Board Methods SW846 8260B; or Manual of Procedures, Volume III, Lab Method 33; AND Calculation Procedures in BAAQMD Condition # 23052, Part 4
BAAQMD Condition # 23052, Part 3	Individual Organic Compound Limits for Leachate Influent	Regional Water Quality Control Board Methods SW846 8260B; AND Calculation Procedures in BAAQMD Condition # 23052, Part 4
CARB EO G-70-160, paragraph 10	Leak Free Emergency Vent	Manual of Procedures, Volume IV, ST-38, Gasoline Dispensing Facility Static Pressure Integrity Test Aboveground Vaulted Tanks or ARB Test Method TP 201.3B Determination of Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities with Above-Ground Storage Tanks
CARB EO G-70-160, paragraph 12	Disconnection Liquid Leaks for Phase I Systems	BAAQMD Enforcement Division, Policies and Procedures, Regulation 8, Rule 33, Bulk Gasoline Distribution Facilities and Gasoline Delivery Vehicles Guidelines, Section 5.B.1.
CARB PERP # 117378, Parts 13 and 15	Ringelmann No. 1 and Opacity Limits	Manual of Procedures, Volume I, Evaluation of Visible Emissions; or EPA Reference Method 9
CARB PERP # 117378, Parts 14 and 16	PM10 Emission Limits	Throughput Records and Calculation Procedures in CARB PERP # 117378, Parts 17 and 22.

Section IX:

No changes are proposed for this section.

Section X:

This section summarizes the revisions that have been made to the permit since it was initially issued. The changes associated with this administrative revision and this proposed minor revision are summarized in Section X as indicated below.

...

Administrative Revision (Applications 14140 and 14420): [Insert Approval Date]

- Remove the S-50 Leachate Vaporator from Table II-A.
- Delete Tables IV-L and VII-L and renumber subsequent tables.
- Delete BAAQMD Condition # 19609.
- Delete references to the S-50 Leachate Vaporator from BAAQMD Condition # 19867, Parts 16 and 19 and from Table VIII.

Minor Revision (Applications 14140 and 14420): [Insert Approval Date]

- Add S-56 Portable Horizontal Grinder and S-58 Aerated Leachate Pond to Table II.
- Add Tables IV-M and VII-M for S-56 and Tables IV-N and VII-N for S-58.
- Add BAAQMD Condition # 22940 and the conditions from CARB PERP # 117378 for S-56.
- Add BAAQMD Condition # 23052 for S-58.
- Add test method reference for S-56 and S-58 in Table VIII.
- Add the term PERP to the Section XI Glossary.

Section XI:

The District is proposing to add the following term to the Section XI Glossary:

PERP
Portable Equipment Registration Program

Section XII:

No changes are proposed for this section.

D. DIFFERENCES BETWEEN THE APPLICATIONS AND THE PROPOSED PERMIT:

The application materials for the minor MFR revision related to adding the S-56 Portable Horizontal Grinder to the MFR Permit for Site # A1179 are contained in Application # 14140. The application materials request the addition of both S-56 Portable Horizontal Grinder and S-57

Portable Diesel Engine to the MFR permit. However, as discussed in the Background Section of this Statement of Basis, the S-57 Portable Diesel Engine is exempt from MFR Permit requirements pursuant to Regulation 2-6-113. Therefore, S-57 was not included in the proposed minor revision. A detailed discussion of applicable requirements for S-56 was not included in the application materials. This proposed minor revision includes a detailed discussion of all applicable requirements, emission limits, monitoring requirements, and test methods for S-56.

The application materials for the minor MFR revision related to adding the S-58 Aerated Leachate Pond to the MFR Permit for Site # A1179 are contained in Application # 14420. A detailed discussion of applicable requirements for S-56 was not included in the application materials. This proposed minor revision includes a detailed discussion of all applicable requirements, emission limits, monitoring requirements, and test methods for S-58.

The application materials for Applications # 14140 and # 14420 did not specifically include a request for an administrative amendment to delete the S-50 Leachate Vaporator. However, Waste Management submitted a letter to the District dated May 10, 2006 stating that the S-50 Leachate Vaporator was no longer operating and requesting that the District remove S-50 from the permits for Site # A1179. Since the removal of a source constitutes an administrative amendment, the District is proposing to include this administrative amendment in a single action along with the minor amendments discussed above.

E. SUMMARY OF PROPOSED ACTIONS:

The District recommends approval of an administrative amendment of the MFR Permit for Site # A1179 that will:

- Remove the S-50 Leachate Vaporator and all associated permit conditions and tables from the permit.
- Renumber subsequent tables in Sections IV and VII.
- Delete references to S-50 from BAAQMD Condition # 19867, Parts 16 and 19 and from Table VIII.

The District recommends approval of a proposed minor revision of the MFR Permit for Site # A1179 that will:

- Add the S-56 Portable Horizontal Grinder and all associated permit conditions and tables to the permit.
- Add the S-58 Aerated Leachate Pond and all associated permit conditions and tables to the permit.
- Add the term PERP to the Section XI Glossary.

APPENDIX A

ENGINEERING EVALUATION

for

APPLICATION # 14139

ENGINEERING EVALUATION REPORT

APPLICATION # 14139

Redwood Landfill, Inc.; Site # A1179

A. BACKGROUND

Redwood Landfill submitted Application # 14139 in order to obtain an exemption determination for a portable horizontal grinder and the associated portable diesel engine that will be used on a temporary basis at this site. The proposed equipment is described below.

S-56 **Portable Horizontal Grinder**; Peterson Pacific Corporation, Model HC5400, 80 tons/hour; equipped with integral water sprays; CARB Portable Registration Permit # 117378.

S-57 **Portable Diesel Engine for Horizontal Grinder**; Caterpillar, Model 3412 E, 860 bhp, 44.8 gals/hour of diesel oil; CARB Portable Registration Permit # 117376.

Redwood Landfill has a CARB registration permit for this portable grinder, which allows the grinder to emit up to 82 pounds/day and 10.0 tons/year of PM_{10}. In accordance with Regulation 2-6-239, the portable grinder is considered to be a significant source, because it will emit more than 2 tons/year of a regulated air pollutant. Therefore, Redwood Landfill must include this equipment in the Title V permit even though it is exempt from District permit requirements. This application was prepared to verify the exempt status of the grinder and engine and to have District source numbers assigned to this equipment to facilitate inclusion of this equipment in the Title V permit.

B. EXEMTPION DETERMINATION

In accordance with Regulation 2-1-105.3.8, wood chippers and associated engines are exempt from District permit requirements if the equipment complies with all applicable requirements of the Statewide Portable Equipment Registration Program. These requirements are identified in Title 13, Article 5, Sections 2450-2465 of the California Code of Regulations (CCR). The major requirements of this program are as follows:

- The type of portable equipment must satisfy the applicability criteria. [Basis: §2451(b-c)]
- The equipment must remain portable and can be used only on a temporary basis at any one site. In particular, equipment cannot reside at a location for more than 12 consecutive months. The owner/operator cannot circumvent this requirement by replacing a unit with a different unit that is intended to perform the same or similar functions, by moving a unit from one location to another, or by putting a unit in storage. [Basis: §2452(z)]
- The emissions from the equipment shall not interfere with the attainment or maintenance of a California or federal ambient air quality standard. [Basis: §2455(a)]
- Engines greater than 50 bhp [Basis: §2456(d)] shall use fuels meeting CARB standards [Basis: §2456(d)(2)], shall comply with all engine specific emission limits [Basis: §2456(d)(5-8)] and shall comply with the following additional emission limits:
  - $\leq$ 0.1 gr/dscf of PM_{10} corrected to 12% CO_2 [Basis: §2456(d)(3)]
  - $\leq$ Ringelmann 1.0 or $\leq$ 20% Opacity for periods more than 3 minutes per hour [Basis: §2456(d)(4)]
  - $\leq$ 550 pounds/day of CO [Basis: §2456(g)(1)]
  - $\leq$ 150 pounds/day of PM_{10} [Basis: §2456(g)(2)]
  - $\leq$ 10 tons/year each of PM_{10}, CO, NO_x, SO_x, and VOC [Basis: §2456(g)(3)]
- Emissions from units other than engines shall comply with the following emission limits:
  - $\leq$ 10 tons/year of PM_{10} per District [Basis: §2457(a)(1)]
  - $\leq$ 82 pounds/day of PM_{10} [Basis: §2457(a)(2)]

- Comply with all source specific emission limits identified in §2457(b). For example, tub grinders and trommel screens shall use water as needed to prevent any visible emissions beyond the property line and to ensure that emissions are ≤ Ringelmann 1.0 or ≤ 20% Opacity for periods more than 3 minutes per hour. [Basis: §2457(b)(5)]
- Owners must comply with all applicable notification, record keeping, and reporting requirements. [Basis: §2455(d), §2458, and §2459]

Redwood Landfill has obtained portable equipment registration permits from CARB for the proposed equipment: Registration # 117376 for the Portable Diesel Engine and Registration # 11738 for the Portable Horizontal Grinder. As described below, this equipment is expected to comply with all applicable requirements of CARB's portable equipment registration program.

- Wood chippers and associated diesel engines are specifically identified in the examples of portable equipment listed in §2451(b)(2).
- Both registration permits contain permit conditions that prohibit the equipment (and any replacement equipment) from residing at the same location for more than 12 consecutive months.
- Emissions from the proposed tub grinder and engine are not expected to interfere with the attainment or maintenance of a California or federal ambient air quality standard.
- The registration permit for the engine contains permit conditions that identify all applicable emission limits and that will ensure compliance with all emission limits except one: the limit of 10 tons/year of NO_x per District. The District will add a fuel usage limit to the source description and the Title V permit that will ensure compliance with this NO_x emission limit.
- The registration permit for the tub grinder contains permit conditions that identify all applicable emission limits and throughput limits necessary to ensure compliance with these emission limits.
- Both registration permits contain permit conditions that describe all applicable notification and reporting requirements. The tub grinder registration permit also contains daily record keeping requirements that will ensure compliance with all tub grinder throughput and emission limits. The District will add daily record keeping requirements for engine operating time and engine fuel usage to the Title V permit to ensure compliance with the daily CO and PM_{10} emission limits and the annual NO_x, CO, PM_{10}, SO_x, and VOC emission limits.

When the owner/operator is meeting the requirements of Registration Permit # 11738, the S-56 Portable Horizontal Grinder is expected to comply with all applicable requirements of CARB's portable equipment registration program. Therefore, the S-56 Portable Horizontal Grinder is exempt from District permit requirements pursuant to Regulation 2-1-105.3.8.

After the addition of a fuel usage limit and record keeping requirements to the Title V permit for Site # A1179 and when the owner/operator is also meeting the requirements of Registration Permit # 11736, the S-57 Portable Diesel Engine is expected to comply with all applicable requirements of CARB's portable equipment registration program. Therefore, the S-57 Portable Diesel Engine is exempt from District permit requirements pursuant to Regulation 2-1-105.3.8.

C. EMISSIONS

Maximum potential emissions from the S-56 Portable Horizontal Grinder and the S-57 Portable Diesel Engine are presented below.

S-56 Portable Horizontal Grinder:

The CARB Registration Permit for this grinder allows throughput rates of: 80 tons/hour, 820 tons/day, and 200,000 tons/year. The maximum allowable particulate emission rate is 0.1 pounds of PM_{10} per ton of material processed. In order to achieve this emission rate, CARB requires the facility to keep the wood waste moist and to use the integral water sprays during grinding. CARB also requires that this source have visible emissions that do not exceed 20% opacity and that do not exceed Ringelmann 1.0. The maximum potential emissions are summarized below.

Table 1. Maximum Potential Emissions from S-56 Portable Horizontal Grinder

Emission Rate lbs/ton	Throughput tons/day	PM_{10} Emissions pounds/day	Throughput tons/year	PM_{10} Emissions tons/year
0.1	820	82.00	200,000	10.000

S-57 Diesel Engine for Horizontal Grinder:

In addition to issuing a registration permit for this engine, CARB has also issued certified emission factors for this engine family (2CPXL27.0HRP) burning CARB diesel fuel with a maximum sulfur content of 0.05% by weight. From CARB EO U-R-001-0188, the certified emission factors are: 8.4 g NO_x/kW-hr, 1.4 g CO/kW-hr, 0.11 g PM_{10}/kW-hr, and 0.1 g HC/kW-hr and the maximum fuel usage rate is 304.8 pounds/hour of diesel oil. The emission factors are summarized in Table 2a below.

Table 2a. Emission Factors for S-57 Diesel Engine

Pollutant	Emission Factor pounds / pound of fuel	Emission Factor pounds / gallon fuel	CARB Certified Factors g/kW-hour	Certified Emission Factors g/bhp-hour	Databank Emission Factor pounds/M gal
NO_x			8.4	6.264	276.64
CO			1.4	1.044	46.11
PM_{10}			0.11	0.082	3.62
POC			0.1	0.075	3.29
SO_2	9.9905E-4	7.0932E-3		0.161	7.09

1. CARB certified diesel fuel contains a maximum of 0.05% sulfur by weight. All of the sulfur in the fuel is assumed to be emitted from the engine as sulfur dioxide: 1.998 lbs SO_2/lb S in fuel.
2. The fuel density is assumed to be 7.1 pounds/gallon.
3. The SO_2 certified emission factor is calculated based on the engine consuming 304.8 pounds/hour of fuel at the maximum rating of 860 bhp, or:
   (9.9905E-4 lbs SO_2/lb fuel)*(0.35442 lbs fuel/bhp-hour)*(453.59 g/lb) = 0.1606 g/bhp-hr.
4. The other conversion factors used are 745.7 Watts/bhp, 1000 Watts/kW, and 453.59 grams/pound.

Based on the CARB throughput limits for the horizontal grinder and the maximum operating rate of the grinder, the grinder is expected to operate 10.25 hours/day and 2500 hours/year. These operating rates, the CARB certified emission factors, the maximum fuel usage rate and maximum fuel sulfur content will be used to determine maximum possible emissions from S-57.

Table 2b. Maximum Possible Emissions from S-57 Portable Diesel Engine
at Maximum Expected Operating Times and Maximum Rated Power Output (860 bhp)

Pollutant	Emission Rate g/bhp-hour	Operating Rate hours/day	Maximum Emissions pounds/day	Operating Rate hours/year	Maximum Emissions tons/year
NO_x	6.264	10.25	121.73	2500	14.845
CO	1.044	10.25	20.29	2500	2.474
PM_{10}	0.082	10.25	1.59	2500	0.194
POC	0.075	10.25	1.45	2500	0.177
SO_2	0.161	10.25	3.12	2500	0.381

In order to qualify for CARB's portable equipment registration program, this engine may not emit more than 10.0 tons/year of POC, CO, NO_x, PM_{10}, or SO_2 per engine (see CCR Title 13, Article 5, Section 2456(g)). As shown in Table 2b, maximum potential emissions of NO_x will exceed 10.0 tons/year at the maximum possible operating rates of 2500 hours/year of operation, 860 bhp, and 762,000 pounds/year (107,324 gallons/year) of diesel oil. Therefore, the Permit Holder must limit either the operating time or the fuel usage rate at this engine in order to retain the portable equipment registration permit from CARB. The operating time and fuel usage limits that are equivalent to 10.0 tons/year of NO_x emissions are calculated below:

Operating Time Limit: = (10.0 tons NO_x/year) / (14.845 tons NO_x/year) * (2500 hours/year)
= 1684 hours/year

Fuel Usage Limit: = (10.0 tons NO_x/year) * (2000 lbs NO_x/ton NO_x) / (276.64 lbs NO_x/M gal) * (1000 gals/M gal) = 72,295 gallons/year

The fuel usage limit calculated above will be included in the source description in order to ensure that S-57 will meet the CARB qualification criteria for registration of portable diesel engines. Maximum potential emissions at this maximum allowable fuel usage rate are summarized below in Table 2c.

Table 2c. Maximum Potential Annual Emissions from S-57 Portable Diesel Engine at the Maximum Allowable Annual Fuel Usage Rate

Pollutant	Emission Rate pounds / M gallon	Maximum Fuel Usage Rate gallons/year	Revised Maximum Emissions tons/year
NO_x	276.64	72,295	10.000
CO	46.11	72,295	1.667
PM_{10}	3.62	72,295	0.131
POC	3.29	72,295	0.119
SO_2	7.09	72,295	0.256

As shown in Table 2c, the maximum potential NO_x emissions from S-57 will exceed 2 tons/year. Therefore, the S-57 Portable Diesel Engine is a significant source and must also be included in the Title V permit for A1179.

Since the S-56 Portable Horizontal Grinder and S-57 Portable Diesel Engine are exempt from District permit requirements, the emissions from this equipment are not subject to new source review and are not included in the inventory of plant-wide cumulative emission increases.

D. STATEMENT OF COMPLIANCE

Regulation 2, Rule 1 (CEQA and Public School Notifications):

CEQA applies to "new" or "modified" sources that are required to obtain an Authority to Construct from the District. The equipment covered by this application are exempt from the District's requirement to obtain an Authority to Construct and are not considered to be either "new" or "modified" sources. Therefore, CEQA does not apply to any of the equipment discussed in this application.

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 (New Source Review) and Rule 5 (NSR of Toxic Air Contaminants):

These NSR regulations do not apply to the equipment discussed in this application, because the devices are exempt from District permitting requirements and are therefore not "new" sources.

Regulation 2, Rule 6 (Major Facility Review):

The BAAQMD implements the Title V Operating Permit requirements of the Clean Air Act through BAAQMD Regulation 2, Rule 6, which requires subject facilities to obtain a Major Facility Review (MFR) Permit. This facility is subject to MFR Permit requirements pursuant to Regulation 2-6-301, because it has the potential to emit more than 100 tons per year of carbon monoxide. It is also subject to MFR Permit requirements pursuant to Regulation 2-6-304, because it is a designated facility that is subject to the requirements of 40 CFR, Part 60, Subpart WWW.

The District issued the initial MFR Permit for this facility on November 10, 2003. This MFR Permit was revised on November 10 2004, July 27, 2005, and December 29, 2005. A minor revision of the MFR Permit for this facility was proposed on January 30, 2006 and remains on EPA comment until March 17, 2006.

As discussed in the Background and Emission Sections of this report, major facilities that have sources that are exempt from District permit requirements but that have "significant" emissions must include these exempt significant sources in the MFR Permit for that facility. Redwood Landfill has submitted Application # 14140 to add S-56 and S-57 to the MFR Permit for Site # A1179. MFR Permit revisions will be discussed in the Statement of Basis for Application # 14140.

Regulation 6 (Particulate Matter and Visible Emissions):

The S-56 Portable Horizontal Grinder is subject to Regulation 6-311, which limits emissions at maximum operation to 40 pounds/hour. The maximum hourly emission rate from S-56 is calculated below:

S-56 Maximum Hourly Emissions: (80 tons/hour)*(0.1 pounds/ton) = 8.0 pounds/hour

Therefore, S-56 is expected to comply with Regulation 6-311.

The S-57 Portable Diesel Engine is also subject to Regulation 6. Regulation 6-305 requires that any emission point have no visible emissions. Properly operated diesel engines are expected to comply with this requirement. Since the displacement of the proposed engine is greater than 1500 cubic inches, S-57 is subject to Regulation 6-301, which limits particulate emissions to no greater than Ringelmann 1.0, and Regulation 6-303, which limits particulate emissions to no greater than 20% Opacity for periods longer than 3 minutes in any hour. These particulate limits are the same as the state portable equipment registration program limits, and S-57 is expected to comply with these limits.

Regulation 8, Rule 2 (Miscellaneous Operations):

This rule applies to diesel oil fired IC engines. Regulation 8-2-301 limits total carbon emissions to either 15 pounds/day or to an exhaust stack concentration of 300 ppmv. From Table 2c, maximum emissions are 1.45 pounds of POC per day. Therefore, S-57 will comply with Regulation 8-2-301 by emitting less than 15 pounds/day of total carbon.

Regulation 9, Rule 1 (Sulfur Dioxide):

The S-57 Portable Diesel Engine is subject to Regulation 9, Rule 1. Regulation 9-1-302 limits the SO_2 concentration in an exhaust point to 300 ppmv. The maximum SO_2 emission rate from S-57 is 0.3045 pounds/hour, which is equivalent to 0.031 sdcfm of SO_2. Using the EPA F-Factor for diesel oil (9190 sdcf/MMBTU) and the maximum fuel flow rate of 42.93 gallons/hour of oil, the exhaust rate is calculated to be:

$(9190 \text{ sdcf}/10^6 \text{ BTU})*(137{,}000 \text{ BTU/gal})*(42.93 \text{ gals/hr})/(60 \text{ min/hr}) = 900.8 \text{ sdcfm}$

The concentration of SO_2 in the exhaust is estimated below.

(0.031 sdcfm of SO_2) / (900.8 sdcfm of exhaust) * (10^6 ppmv / sdcf/sdcf) = 34.4 ppmv of SO_2
Since the expected SO_2 concentration in the exhaust (34 ppmv) is less than 300 ppmv, the S-57 Portable Diesel Engine will comply with Regulation 9-1-302.

Regulation 9-1-304 limits the sulfur content of liquid fuels to 0.5% by weight. Since S-57 will only use diesel oil containing less than 0.05% sulfur by weight, S-57 will comply with this limit.

Regulation 9, Rule 8 (Nitrogen Oxides and Carbon Monoxide From Stationary Internal Combustion Engines):

Although Regulation 9, Rule 8 applies to internal combustion engines, the S-57 Portable Diesel Engine is exempt from Sections 301, 302, and 502 pursuant to Regulation 9-8-110.2. Sections 330, 331, and 530 do not apply to S-57, because S-57 is not an emergency standby engine. Therefore, Regulation 9, Rule has no sections that apply to S-57 and will not be listed as an applicable rule for S-57.

State Requirements:

CARB's Airborne Toxic Control Measure (ATCM) for Diesel PM from Portable Engines (CCR Title 17, Section 93116) applies to portable diesel fueled engines that are rated at 50 bhp or more. S-57 will comply with CCR § 93116.3(a) by using CARB diesel fuel. S-57 satisfies CCR § 93116.3(b) because it is a certified engine that meets the applicable certification standards for it's model year (S-57 complies with Section 93116.3(b)(1)(A)). To comply with CCR § 93116.3(b)(3), this engine will either need to be equipped with verified control technology or replaced with an engine complying with EPA Tier 4 emission limit standards. Other future state standards and record keeping requirements are described in CARB's registration permit conditions.

Federal Requirements:

Portable tub grinders and portable diesel engines are not subject to any source-specific NSPS or NESHAP requirements.

The S-57 Portable Diesel Engine is subject to 40 CFR Part 89 Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines pursuant to Section 89.102 (greater than 560 kW and manufactured after January 1, 2000). Per Table 1 of Section 89.112, this engine (Model Year 2002, 860 bhp – 640 kW) is subject to Tier 1 emission standards, which limit emissions to: 9.2 g NO_x/kW-hr, 1.3 g HC/kW-hr, 11.4 g CO/kW-hr, and 0.54 g PM_{10}/kW-hr. Section 89.113 limits opacity to: 20% during acceleration mode, 15% during lugging mode, and 50% peak during either of the above modes. The engine family (2CPXL27.0HRP) has been certified to comply with these emission and opacity standards.

E. PERMIT CONDITIONS

Permit conditions are not typically issued to sources that are exempt from District permit requirements. However, the permit conditions in CARB's registration permits must be included in the Title V permit. These conditions will be included by reference as indicated below. In addition, the District will limit the fuel usage rate at S-57 to ensure that that this engine will qualify for the portable equipment registration program and exemption from District permitting requirements. Record keeping requirements will be added to ensure compliance with this fuel usage limit.

Condition # 22940
For: S-56 Portable Horizontal Grinder

1. The conditions issued by CARB with Portable Equipment Registration Permit # 117378 are hereby incorporated by reference:

Condition # 22941
For: S-57 Portable Diesel Engine

1. The conditions issued by CARB with Portable Equipment Registration Permit # 117376 are hereby incorporated by reference:

2. To qualify for the CARB Portable Equipment Registration Program and BAAQMD Regulation 2-1-503.8, this engine shall not emit more than 10.0 pounds/day of NO_x. To ensure that this emission limit will be satisfied, this engine shall use no more than 72,295 gallons of fuel (diesel oil) during any consecutive 12 month period. To demonstration compliance with this fuel usage limit, the operator of S-57 shall maintain daily records of the type and amount of all fuels used in S-57. These records shall also describe the site location and operating times for each location that the engine was operated at. All fuel usage and operating records shall be summarized on a monthly basis showing the type of fuel used and the total amount of fuel used per month per site. All fuel usage and operating records shall be made available to any District or CARB staff upon request and shall be retained with the engine for a minimum of five years from the date of entry.

F. RECOMMENDATION

Issue an Exemption Letter for the following equipment.

S-56 **Portable Horizontal Grinder**; Peterson Pacific Corporation, Model HC5400, 80 tons/hour; equipped with integral water sprays; CARB Portable Registration Permit # 117378; exempt per BAAQMD Regulation 2-1-105.3.8.

S-57 **Portable Diesel Engine for Horizontal Grinder**; Caterpillar, Model 3412 E, 860 bhp, 44.8 gals/hour of diesel oil, using no more than 72,295 gallons/hour of diesel oil; CARB Portable Registration Permit # 117376; exempt per BAAQMD Regulation 2-1-105.3.8.

signed by Carol S. Allen 3/13/2006
By: Carol S. Allen March 13, 2006
Senior Air Quality Engineer Date

APPENDIX B

ENGINEERING EVALUATION

for

APPLICATION # 14421

ENGINEERING EVALUATION REPORT

APPLICATION # 14221

Redwood Landfill, Inc.; Site # A1179

A. BACKGROUND

Redwood Landfill submitted Application # 14221 in order to obtain an Authority to Construct and Permit to Operate for an Aerated Leachate Pond (S-58). A leachate pond has been located at this facility for many years. However, the leachate pond is currently exempt from permit requirements pursuant to Regulation 2-1-123.2, because it is storing aqueous liquid containing less than 1% by weight organic compounds.

Redwood Landfill is proposing to install up to eight solar powered aeration units within this leachate pond. These aeration units will encourage the volatilization of organic compounds from the pond water, which constitutes a wastewater treatment operation. Since the aerated leachate pond will no long be acting as a storage operation, Regulation 2-1-232.2 will no longer apply. Since there are no applicable permit exemptions for wastewater treatment operations such as this aerated leachate pond, a permit is required for this proposed aeration project.

The proposed S-58 Aerated Leachate Pond qualifies for the Accelerated Permit Program (Regulation 2-1-106), because total POC and NPOC emissions are each expected to be less than 10 pounds per day (106.1), all toxic emissions are expected to be less than the Table 2-5-1 trigger levels (106.2), and the source is not located within 1000 feet of a school (106.3). The application was deemed complete on April 20, 2006, and the District issued a Temporary Permit to Operate on April 20, 2006.

B. EMISSIONS

Maximum potential emissions from the S-58 Aerated Leachate Pond were determined using a mass balance approach. The District assumed that 100% of the organic compounds contained in the leachate influent to the pond would be emitted to the atmosphere due to aeration of the leachate pond. Redwood Landfill stated that the maximum leachate influent rate would be 75 gallons per minute (4500 gallons/hour). The District assumed that leachate would be pumped into the pond at this rate for 24 hours/day and 365 days/year.

Redwood Landfill provided analytical data on samples from four different leachate wells (GR-7R, GR-8R, GR-9R, and GR-11R) spanning three years. This leachate well data was used to predict the maximum expected concentrations of Critical Organic Compounds (COCs, which include all detected organic compounds except carbon disulfide), Precursor Organic Compounds (POCs, which include all COCs except acetone), Non-Precursor Organic Compounds (NPOCs, which include acetone only), and Toxic Air Contaminants (TACs). For each constituent, the maximum projected influent concentration was determined by summing the maximum detected concentration and the 95% confidence interval and then rounding the result up to one significant figure. The maximum projected influent concentrations, maximum projected emission rates, and TAC trigger levels for POCs, NPOCs, and each TAC are summarized in Table 1.

Table 1. Maximum Expected Emissions from S-58 Aerated Leachate Pond

	gpm	gals/hour	gals/day	gals/year	lbs/gal
Max. Leachate Inflow	75	4500	108000	39420000	8.5
	PPBW	**lbs/hour**	**lbs/day**	**tons/year**	
Total POC	500	0.019	0.459	0.084	
Total NPOC	300	0.011	0.275	0.050	
Toxic Air Contaminants	**Max. PPBW**	**Emissions lbs/hour**	**Trigger lbs/hour**	**Emissions lbs/year**	**Trigger lbs/year**
Benzene	10	0.000	2.9	3.4	6.4
Carbon Disulfide	30	0.001	14.0	10.1	31000
Chlorobenzene	10	0.000	NA	3.4	39000
1,4 Dichlorobenzene	20	0.001	NA	6.7	16
Ethyl Benzene	20	0.001	NA	6.7	77000
Methyl Ethyl Ketone	390	0.015	29.0	130.7	39000
Styrene	4	0.000	46.0	1.3	35000
Toluene	30	0.001	82.0	10.1	12000
Vinyl Chloride	4	0.000	400.0	1.3	2.4
Xylenes	40	0.002	49.0	13.4	27000

C. STATEMENT OF COMPLIANCE

Regulation 2, Rule 1 (CEQA and Public School Notifications):

The District has permit handbook chapters for several small or low emitting wastewater treatment operations: BAAQMD Permit Handbook Chapter 3.3 “Wastewater (Oil-Water) Separator” and Chapter 9.1 “Airstripping”. The proposed project involves aerating wastewater, which is very similar to the ground water airstripping operations described in Chapter 9.1. The contaminant concentrations in the landfill’s leachate are similar to the concentrations that might be found in contaminated ground water. Therefore, using the emission calculation procedures described in Chapter 9.1 is appropriate for the evaluation of S-58.

Although the emission calculation procedures for the S-58 Aerated Leachate Pond follow the procedures described in Permit Handbook Chapter 9.1, this chapter specifically discusses ground water airstripping operations that are subject to Regulation 8, Rule 47. S-58 is exempt from Regulation 8, Rule 47, because it is an industrial airstripping operation and not a ground water airstripping operation, and is instead subject to Regulation 8, Rule 8 Wastewater Collection and Separation Systems. Previously, Regulation 8, Rule 8 applied only to oil-water separators. The District developed Permit Handbook Chapter 3.3 for oil-water separators subject to Regulation 8, Rule 8. In September 2004, Regulation 8, Rule 8 was modified and now applies to wastewater collection and separation systems. Since emissions from secondary wastewater treatment operations such as S-58 are expected to be very low, these operations are exempt from the Regulation 8, Rule 8 control requirements. Since both S-58 and oil-water separators are subject to Regulation 8, Rule 8, it is appropriate to use the rule applicability criteria, BACT and TBACT requirements, and other procedures described in Permit Handbook Chapter 3.3 to evaluate S-58.

As discussed above, the Engineering Evaluation for this application satisfies the Regulation 2-1-427 procedures for ministerial evaluations because it uses the fixed standards and objective measurements described in BAAQMD Permit Handbook Chapters 3.3 and 9.1 and does not involve any element of discretion. The project satisfies the Regulation 2-1-428 criteria for approval of a ministerial permit application, because S-58 will comply with all applicable rules, the emissions can be calculated using

standardized emission calculation procedures, and BACT does not apply. Therefore, in accordance with Regulation 2-1-312, this application is considered ministerial. 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 (New Source Review)

As shown in Table 1, the maximum expected emissions from S-58 are 0.459 pounds/day of POC and 0.275 pounds/day of NPOC. Since the emissions are less than 10.0 pounds per day each of POC and NPOC, Regulation 2-2-301 does not apply, and BACT is not required for either pollutant.

From Table 1, maximum annual emissions from S-58 are 0.084 tons/year of POC and 0.050 tons/year of NPOC. Pursuant to Regulation 2-2-302, offsets are required for the POC emission increases if the facility is or will be permitted to emit more than 10 tons/year of POC. Pursuant to the May 2006 potential to emit determination (summarized in Table 2 below), total facility wide emissions including S-58 will be 33.91 tons/year of POC. Therefore, POC offsets are required. Since the facility wide potential to emit will not exceed 35 tons/year of POC, the District will supply the required offsets - at a ratio of 1.0 to 1.0 – from the small facility banking account.

Table 2. Facility Wide Potential to Emit for Plant # 1179, May 2006

Source #	Source Description	Maximum Annual Emissions (tons/year)					
		NOx	CO	POC	NPOC	PM10	SO2
S-2	Sewage Sludge Storage, main pond			0.106		0.106	
S-5	Redwood Landfill, waste decomposition			20.424	0.208		
S-5	Redwood Landfill, waste disposal			0.000		212.030	
S-5	Redwood Landfill, contaminated soil disposal			0.312			
S-5	Redwood Landfill, VOC-laden soil as daily cover			2.638			
S-25	Yard and Green Waste Stockpiles					0.010	
S-28	Co-Compost Biosolids Feed Stockpiles			0.200		0.004	
S-34	Active Compost and Co-Compost Windrows			0.300		0.030	
S-35	Compost and Co-Compost Curing Piles			0.050		0.005	
S-37	Compost and Co-Compost Final Product Storage Piles			0.025		0.005	
S-38	On-Site Material Hauling					3.390	
S-39	Trommell Screening Processes					0.009	
S-41	Temporary Stockpiles for Yard and Green Waste Shredding Operations					2.430	
S-42	Soil Stockpiles, including VOC-laden soil			2.638		0.026	
S-45	Diesel Engine, Pump	3.109	2.545	0.184		0.261	0.049
S-46	Diesel Engine, Tipper	3.094	0.276	0.183		0.258	0.043
S-47	Diesel Engine, Pump	2.707	0.682	0.110		0.220	0.035
S-48	Diesel Engine, Screen	1.903	0.098	0.087		0.025	0.046
S-49	Diesel Engine, Back-Up Generator	0.031	0.004	0.001		0.001	0.001
S-50	Leachate Vaporator	1.824	1.824	0.303	0.001	0.197	3.100
S-55	Gasoline Dispensing Facility G# 8573			0.987			
S-56	Horizontal Grinder (exempt)					10.000	
S-57	Diesel Engine for Portable Horizontal Grinder (exempt)	10.000	1.667	0.120		0.131	0.257
S-58	Aerated Leachate Pond			0.084	0.050		
A-50	Landfill Gas Flare	11.175	55.875	2.579	0.009	3.186	26.205
A-51	Landfill Gas Flare	11.175	55.875	2.579	0.009	3.186	26.205
Total	**All Sources and Abatement Devices**	**45.018**	**118.846**	**33.909**	**0.276**	**235.509**	**55.941**

Regulation 2, Rule 5 (NSR of Toxic Air Contaminants):

Regulation 2, Rule 5 applies to projects as defined in Regulation 2-5-216. Since S-58 is the only source at this facility related to wastewater treatment, there are no other related applications from this site. Therefore, the S-58 Aerated Leachate Pond constitutes the entire project.

As shown in Table 1, the maximum hourly and maximum annual emissions of Toxic Air Contaminants (TAC) from S-58 will not exceed any of the risk screen trigger levels listed in Table 2-5-1. For most compounds, the emission rates are far below the trigger levels. However, the emissions of benzene, 1,4-dichlorobenzene, and vinyl chloride are about half of the respective chronic trigger levels. Analytical testing of the leachate from the leachate wells will be required to ensure that emissions from S-58 will not exceed the risk screen trigger levels for these three compounds. The concentrations that result in emissions equal to the trigger levels are: 19 ppbw of benzene, 48 ppbw of 1,4-dichlorobenzene, and 7 ppbw of vinyl chloride. Pursuant to Regulation 2-5-110, S-58 is not subject to Regulation 2, Rule 5 because the TAC emissions will not exceed any trigger levels. Therefore, a risk screening analysis is not required, and TBACT does not apply.

Regulation 2, Rule 6 (Major Facility Review):

The BAAQMD implements the Title V Operating Permit requirements of the Clean Air Act through BAAQMD Regulation 2, Rule 6, which requires subject facilities to obtain a Major Facility Review (MFR) Permit. This facility is subject to MFR Permit requirements pursuant to Regulation 2-6-301, because it has the potential to emit more than 100 tons per year of carbon monoxide. It is also subject to MFR Permit requirements pursuant to Regulation 2-6-304, because it is a designated facility that is subject to the requirements of 40 CFR, Part 60, Subpart WWW.

The District issued the initial MFR Permit for this facility on November 10, 2003. This MFR Permit was revised on November 10 2004, July 27, 2005, December 29, 2005, and April 18, 2006. Redwood Landfill has submitted Application # 14420 to add S-58 to the MFR Permit for Site # A1179. MFR Permit revisions will be discussed in the Statement of Basis for Application # 14420.

Regulation 8, Rule 8 (Wastewater Collection and Separation Systems):

This rule applies to wastewater collection and separation systems handling liquids from industrial processes that contain organic compounds. For the purposes of this rule a landfill is considered to be an industrial process. Leachate from landfills is expected to contain organic compounds. Therefore, leachate collection and treatment systems are subject to Regulation 8, Rule 8.

As defined in Regulation 8-8-208, secondary treatment processes include aerated lagoons such as the proposed S-58 Aerated Leachate Pond. Regulation 8-8-113 exempts these secondary treatment processes from the control requirements of this rule including Sections 301, 302, 306, and 308. Sections 303, 304, 305, and 307 apply to specific types of equipment other than aerated ponds. Sections 312-314 only apply to wastewater collection system components at petroleum refineries. There are no monitoring or record keeping requirements applicable to secondary wastewater treatment operations that are not located at petroleum refineries.

Federal Requirements:

Leachate treatment and storage operations are not subject to any NSPS or NESHAP requirements.

D. PERMIT CONDITIONS

The District is proposing to impose permit conditions on S-58 in order to ensure that emissions from S-58 will not exceed the maximum permitted emission rates described in this application. The limits on total annual leachate influent rate and POC concentration are necessary to ensure that POC emissions will not exceed the amount of POC offsets provided by the District. Since the POC emission rate is far below the BACT trigger level, a daily emission limit is not necessary. The limits on leachate influent rate and concentrations of benzene, 1,4-dichlorobenzene, and vinyl chloride will ensure that the TAC emissions from S-58 do not exceed any risk screen trigger levels.

Annual analytical testing at the leachate wells, which is already required by the Regional Water Quality Control Board (RWQCB) pursuant to Waste Discharge Order Number 95-110, can be used to demonstrate compliance with the POC and TAC concentration limits discussed above. Analytical analysis is a standard method of demonstrating compliance with wastewater concentration limits. For example, Regulation 8-8-601 requires influent sampling and analysis for dissolved critical organic compounds for various industrial wastewater treatment operations. Regulation 8-47-602 requires influent sampling and analysis by RWQCB methods for ground water air strippers. Since the limits being evaluated are annual limits and the average leachate concentration has been found to be well below the established limit (i.e. average of 135 ppbw of POC compared to a limit of 500 ppbw of POC), annual analysis is an appropriate frequency.

Records of the total leachate influent rate will be required to demonstrate compliance with the leachate influent rate limit at S-58. Record keeping is a standard method demonstrating compliance with wastewater throughput limits. Monthly records are necessary to determine the total leachate influent rate for a rolling 12-month period.

Condition # 23052
For: S-58 Aerated Leachate Pond

1. The total leachate influent rate to the S-58 Aerated Leachate Pond, excluding non-contact storm water runoff, shall not exceed 39.42 million gallons during any consecutive 12-month period. (Basis: POC Offsets and NSR for TAC)

2. The average concentration of POC in the leachate influent to S-58 shall not exceed 500 ppb by weight. (Basis: POC Offsets)

3. The average concentrations of specified toxic air contaminants in the leachate influent to S-58 shall not exceed the limits identified in subparts a-c below. (Basis: NSR for TAC)
   a. no more than 19 ppb by weight of benzene
   b. no more than 48 ppb by weight of 1,4-dichlorobenzene
   c. no more than 7 ppb by weight of vinyl chloride

4. To demonstrate compliance with Parts 2 and 3 above, the Permit Holder shall conduct annual analyses on the leachate influent to the S-58 Aerated Leachate Pond in accordance with the following procedures. (Basis: POC Offsets and NSR for TAC)
   a. Leachate samples shall be collected from at least two leachate wells per year on a rotating basis in accordance with Waste Discharge Requirement Order Number 95-110.
   b. Each leachate sample shall be analyzed for the concentration by weight of critical organic compounds (COC), benzene, 1,4-dichlorobenzene, and vinyl chloride. These concentrations shall be determined using Regional Water Quality Control Board methods that measure wastewater for the concentration of each organic compound having a carbon number of C-14 or less using gas chromatography. The COC concentration is equal to the sum of all detected concentrations minus the concentration of any compound excluded from COC pursuant to Regulation 8-8-210. Alternatively, COC concentration may be determined in accordance with Regulation 8-8-601.

c. For each sample analyzed, the concentration of POC shall be calculated by subtracting the detected concentration for any non-precursor organic compounds (NPOC) from the total COC concentration determined above. NPOC are defined in Regulation 2-1-207 and include but are not limited to: acetone, methylene chloride, perchloroethylene, 1,1,1 trichloroethane, many chlorofluorocarbons, and most perfluorocarbons compounds.

d. For each annual wastewater testing event, the Permit Holder shall calculate and record the average concentrations (in ppb by weight) of POC, benzene, 1,4-dichlorobenzene, and vinyl chloride for all of the samples analyzed pursuant to subpart a. If a concentration is reported as non-detect for a compound, the detection limit for that compound shall be used for this average concentration computation.

e. The Permit Holder shall retain all analytical results, calculations, and records required by this part for at least five years from the date of entry. All records shall be kept on site or made available to District staff upon request.

5. To demonstrate compliance with Part 1, the Permit Holder shall calculate and record the total leachate flow rate to S-58 for each month (gallons/month) and the total cumulative flow rate to S-58 for each rolling 12-month period (millions of gallons/year). The monthly leachate flow rate records shall clearly identify each leachate pump station that contributed to the total monthly flow rate, the procedures used to calculate the monthly leachate flow rate to S-58, and any records necessary to verify these calculated flow rates. These records shall be retained for at least five years from the date of entry. All records shall be kept on site or made available to District staff upon request. (Basis: POC Offsets and NSR for TAC)

E. RECOMMENDATION

Waive the Authority to Construct, and issue the Permit to Operate for the following equipment.

S-58 **Aerated Leachate Pond**; 4500 gallons/hour of leachate influent; equipped with up to eight solar powered aeration units, 5 scfm each.

	signed by Carol S. Allen	5/18/2006
By:	Carol S. Allen	May 18, 2006
	Senior Air Quality Engineer	Date