

Bay Area Air Quality Management District

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**Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT
MINOR REVISION**

**for
Redwood Landfill, Inc.
Facility #A1179**

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Application: 22891

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STATEMENT of BASIS

Redwood Landfill, Inc.; SITE # A1179

APPLICATION # 22891

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 (m³) 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 19.114 million m³ (25 million yd³) and 21.033 million Mg (23.185 million tons). 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, April 18, 2006, July 13, 2006, September 20, 2006, August 28, 2007, and October 24, 2007. This MFR Permit was renewed on April 5, 2012.

The main purpose of this current action is to add new permitted equipment that was approved pursuant to a District New Source Review (NSR) permit application. This document will discuss the minor revisions proposed pursuant to Applications #22891. The engineering evaluation for the associated NSR application (Application #22889) is included in Appendix A. This report contains 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.

Minor Revisions: Add S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays

Facility Description:

Redwood Landfill, Inc. operates the Redwood Landfill Facility in Novato, CA. This facility includes an active MSW landfill and associated operations (S-5, S-41, S-76, and S-77). The landfill accepts about 200,000 tons/year of waste materials and contains about 13 million tons of waste materials. Landfill gas is collected and controlled by two 90 MM BTU/hour enclosed landfill gas flares (A-51 and S-60).

This facility also includes sludge handling and composting operations (S-2, S-34, S-39, S-41, and S-56), a non-retail gasoline dispensing facility (S-55), an aerated leachate pond (S-58), an emergency standby diesel engine/generator (S-49), and three portable diesel fired non-road engines (S-57, S-61, and S-62).

Applications # 22889 and # 22891:

Pursuant to NSR Application #22889, Redwood Landfill requested an Authority to Construct and Permit to Operate for a new Dry Waste Materials Recovery Facility (Dry Waste MRF). The Dry Waste MRF (S-63) is a sorting operation that separates recyclable materials from construction and demolition debris. All equipment is electrically powered. S-63 includes a conveyor system, magnetic and hand sorting areas, a 9 inch screen, a 2 inch screen, and water sprays (A-63) to control dust. The District received Application # 22889 on December 17, 2010 and issued an Authority to Construct for S-63 Dry Waste MRF abated by A-63 Water Sprays on May 24, 2012. As of May 2014, this operation was under construction but construction was not expected to be completed until late 2014. The District extended this Authority to Construct, and it now expires on May 23, 2016.

Since this project has very low PM₁₀ emission increases and does not include any of the significant permit revision criteria identified in Regulation 2-6-226.1-7, this project is deemed to require a minor revision of the MFR permit. Redwood Landfill submitted Application # 22891 on December 17, 2010 to request this minor revision of the Title V permit.

B. EMISSIONS

As discussed in the Engineering Evaluation for Application #22891, the maximum permitted emissions from the S-63 Dry Waste MRF will be: 0.698 tons/year of PM₁₀. The permitting of this source will increase the site-wide maximum permitted emissions by 0.7 tons/year of PM₁₀.

Upon start-up of S-63, vehicle traffic that had been delivery construction and demolition debris to the landfill for disposal will be diverted to the Dry Waste MRF delivery area. Since this delivery area is located close to the facility entrance, this project is expected to reduce road dust emissions emanating from on-site vehicle traffic by shortening the typical travel distance for the construction and demolition debris delivery trucks.

Minor Revisions: Add S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays

However, the District is not proposing any changes to the current road dust emission limit, which is identified in Condition # 19867, Part 3.

C. PERMIT CONTENT

Since a Statement of Basis was prepared for the most recent version of the MFR Permit for Site # A1179 (the April 5, 2012 renewal permit) that fully describes and explains the legal and factual basis for the current permit, this report will only address the proposed revisions to this current MFR Permit.

The definition of significant revision is discussed below to further explain why the current application does not constitute 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 a new source to this permit. Therefore, this modification will be handled as a minor revision of the MFR Permit.

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

Section I:

This section contains administrative requirements and conditions that apply to all facilities.

Changes to Section I:

- The District is updating the amendment dates for BAAQMD Regulation 2, Rules 1 and 4 in Section I-A of the MFR permit.

Minor Revisions: Add S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays

Section II:

This section of the permit lists all permitted or significant sources and all abatement or control devices for these sources. Each source is identified by an S and a number (e.g., S-24). Each abatement device is identified by an A and a number (e.g., A-25).

Changes to Section II:

- In Table II-A, the District is adding a new source: S-63 Dry Waste Materials Recovery Facility.
- In Table II-B, the District is adding a new abatement device: A-63 Water Sprays.

Section III:

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit.

Changes to Section III:

- The District is updating the amendment dates for BAAQMD Regulation 2, Rule 1 and BAAQMD Regulation 5 in Table III of the MFR permit.

Section IV:

Section IV of the permit contains citations to all of the applicable requirements. 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.

Changes to Section IV:

- The District is adding Table IV-J for S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays. Upon start-up, this operation will be subject to District regulations and permit conditions, but there are no applicable NSPS, NESHAP, or state regulations for this operation.

Section V:

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

- “409.10 A schedule of compliance containing the following elements:
- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
 - 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
 - 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines

Minor Revisions: Add S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays

for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.”

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit contains only sections 2-6-409.10.1 and 2-6-409.10.2.

Changes to Section V:

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

Section VI:

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO which limits a source’s operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.

All changes to existing permit conditions are clearly shown in “strike-out/underline” format in the proposed permit. When the permit is issued, all ‘strike-out’ language will be deleted and all “underline” language will be retained, subject to consideration of comments received.

Additional monitoring has been added, where appropriate, to assure compliance with the applicable requirements. In particular, Condition # 25260, Part 5 requires that the owner/operator observe all operations of S-63 and take correction action if any visible emissions are observed to ensure compliance with the Regulation 6-1-301 Ringelmann 1.0 limit.

Changes to Section VI:

- The District is adding a new set of conditions for S-63 Dry Waste Materials Recovery Facility and A-63 Water Sprays: Condition # 25260, Parts 1-6. These conditions are described in the Engineering Evaluation for Application # 22889 (See Appendix A.)

Minor Revisions: Add S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays

Section VII:

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

The District has reviewed all monitoring and has determined the existing monitoring is adequate with the following exceptions.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

PM Sources

# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
Dry Waste MRF (S-63) Abated by Water Sprays (A-63)	BAAQMD 6-1-311 and SIP 6-311	$E = 0.026(P)^{0.67}$ where E = Allowable Emissions (lbs/hr) P = Process Rate (lbs/hr) and $E \leq 40$ pounds/hour if $P > 57,320$ lbs/hr	None

Regulation 6-1-311 limits the particulate emissions based on the processing rate for the operation. As discussed in the Engineering Evaluation for Application # 22889 (see Appendix A), the maximum daily processing rate of 400 tons/day equates to an average of 44,444 pounds/hour for the maximum expected 18 hour work day. Based on this processing rate, Regulation 6-1-311 limits the maximum hourly emission rate to: 33.8 pounds of particulate matter per hour. Based on the standard AP-42 emission calculation procedures for S-63 and A-63, this operation will emit a maximum of 4.48 pounds/day of PM₁₀, or 0.25 pounds/hour of PM₁₀. The compliance margin for the Regulation 6-1-311 emission limit is 135:1. Due to the very high compliance margin and low emission rate for S-63 (0.7 tons/year of PM₁₀), the District determined that these calculation procedures are adequate to demonstrate compliance with the Regulation 6-1-311 limit and that additional particulate monitoring is not justifiable. Therefore, the District is not proposing any additional particulate emissions monitoring for S-63 related to the Regulation 6-1-311 limit.

Changes to Section VII:

- The District is adding Table VII-J that applies to S-63 and A-63.

Minor Revisions: Add S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays

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.

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

Changes to Section VIII:

- The District is adding a description of appropriate test procedures for the PCB, hexavalent chromium, and crystalline silica concentration limits identified in Condition # 25260, Parts 2a-c.

Section IX:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Title V permits.

This facility has the second type of permit shield for S-42 and S-76.

The new equipment (S-63 and A-63) does not need a permit shield.

Changes to Section IX:

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

Section X:

This section contains the details of issuance and revisions for each permit.

Changes to Section X:

- The District is adding the details of this minor revision to this section.

Minor Revisions: Add S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays

Section XI:

This section contains terms that may be unfamiliar to the general public or EPA.

Changes to Section XI:

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

D. ALTERNATIVE OPERATING SCENARIOS

No alternate operating scenarios have been requested for S-63 and A-63.

E. COMPLIANCE STATUS

The S-63 Dry Waste Materials Recovery Facility and the A-63 Water Sprays are still under construction and are not operating yet. The District expects that Redwood Landfill will comply with all applicable requirements upon start-up of this equipment.

F. DIFFERENCES BETWEEN THE APPLICATION AND THE PROPOSED PERMIT

The application materials for the minor MFR revision related to adding the S-63 Dry Waste Materials Recovery Facility and A-63 water Sprays to the MFR Permit for Site # A1179 are contained in Application # 22891. The Applicant indicated on the Stationary Source Summary Form (page 2) that the application involves a source subject to MACT requirements. Although this facility does have some sources that are subject to MACT requirements, the equipment covered by this minor revision (specifically S-63 and A-63) are not subject to any MACT, NSPS, or NESHAP requirements. On the Total Stationary Source Emissions Forms, the Applicant indicated that this equipment would have 0.131 tons/year of PM10 emissions. The District determined that S-63 abated by A-63 would have a maximum of 0.7 tons/year of PM10 emissions. On the Applicable Requirements and Compliance Summary Form, the Applicant indicated BAAQMD Regulation 6-301 and 6-305 as the only applicable requirements. These sections are actually SIP provisions of Regulation 6. The District has included these SIP provisions in Table IV-J, plus a number of additional sections in SIP Regulation 6 and BAAQMD Regulation 6, Rule 1 that will apply to this operation. The District has also included the applicable permit conditions in Table IV-J. This proposed minor revision also includes a detailed discussion of all emission limits, monitoring requirements, and test methods for S-63 and A-63.

Minor Revisions: Add S-63 Dry Waste Material Recovery Facility and A-63 Water Sprays

G. SUMMARY OF PROPOSED ACTIONS

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

- Add the S-63 Dry Waste Materials Recovery Facility and the A-63 Water Sprays and all associated permit conditions and tables to the MFR permit for Site # A1179.

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APPENDIX A

ENGINEERING EVALUATION

for

APPLICATION # 22889

ENGINEERING EVALUATION
for
Dry Waste Materials Recovery Facility
Redwood Landfill Company; PLANT # 1179
APPLICATION # 22889

A. BACKGROUND

Redwood Landfill Company operates the Redwood Landfill Facility in Novato, CA (Site # A1179). This site includes an active MSW landfill, landfill gas collection and control equipment, green waste processing operations, composting operations, and several stationary and portable diesel engines that provide primary or emergency power to auxiliary equipment and buildings.

The May 2008 EIR for Redwood Landfill Company's (RLC) landfill expansion (see Application # 20607) required that RLC build and operate a recycling and recovery operation for construction and demolition debris pursuant to mitigation measure 3.6.4b. In response to this mitigation measure requirement, RLC submitted this application to request an Authority to Construct for a new source: S-63 Dry Waste Materials Recovery Facility (MRF) that would be located on the southwestern edge of the property boundary for this site.

The equipment would include a conveyor system equipped with hand sort stations, a magnet, and several screens. All equipment would be electrically powered with enclosures over the sorting and screening areas and water sprays (A-63) near drop points to minimize particulate emissions. The proposed Dry Waste MRF will process up to 400 tons/day and up to 124,800 tons/year of dry construction and demolition (C&D) debris such as wallboard, lumber, shingles, metal, concrete, rock, brick, cardboard, plastic, and other dry wastes, will separate out metals, glass, and other recyclable materials. No hazardous or designated wastes will be processed at this source. At S-63, the C&D wastes will be sorted into: recyclable materials, overs (> 9 inches), 2-9 inch materials, and fine materials (< 2 inches). Recyclable materials will be removed from the site (up to 270 tons/day). The fines may be used as cover material at the landfill.

B. EMISSIONS FROM NEW EQUIPMENT

The proposed S-63 Dry Waste MRF will emit particulate matter during each material transfer operation and from the screening operations. The applicant indicated that this system will include four transfer operations: unloading material from delivery trucks into a stockpile, transferring material from this stockpile onto the conveyor, material removal at the hand and magnetic sort areas, and final load out from the conveyors into the sorted stockpiles. Dust emissions from these material transfer operations are determined using the drop emissions equation from AP-42 Chapter 13.2.4:

$$E \text{ lbs PM/ton per transfer} = k * 0.0032 * [(U/5)^{1.3}] / [(M/2)^{1.4}]$$

where, k = particle size multiplier: k = 0.35 for PM₁₀ and k = 0.053 for PM_{2.5}
 U = mean wind speed (mph): 8 mph, reported by applicant
 M = material moisture content (%): 2%, minimum for water spray use

$$E_{PM10} = 0.350 * 0.0032 * [(8/5)^{1.3}] / [(2/2)^{1.4}] = 2.063E-3 \text{ lbs PM}_{10}/\text{ton}/\text{transfer}$$

$$E_{PM2.5} = 0.053 * 0.0032 * [(8/5)^{1.3}] / [(2/2)^{1.4}] = 3.125E-4 \text{ lbs PM}_{2.5}/\text{ton}/\text{transfer}$$

S-63 Dry Waste Materials Recovery Facility and A-63 Water Sprays

Material Transfer Emissions:

$$(2.063E-3 \text{ lbs PM}_{10}/\text{ton}/\text{transfer}) * (400 \text{ tons}/\text{day}) * (4 \text{ drop transfers}) = 3.30 \text{ lbs}/\text{day PM}_{10}$$

$$(3.125E-4 \text{ lbs PM}_{2.5}/\text{ton}/\text{transfer}) * (400 \text{ tons}/\text{day}) * (4 \text{ drop transfers}) = 0.50 \text{ lbs}/\text{day PM}_{2.5}$$

$$(2.063E-3 \text{ lbs PM}_{10}/\text{ton}/\text{transfer}) * (124,800 \text{ tons}/\text{yr}) * (4 \text{ drop transfers}) / (2000 \text{ lbs}/\text{ton})$$

$$= 0.515 \text{ tons}/\text{year PM}_{10}$$

$$(3.125E-4 \text{ lbs PM}_{2.5}/\text{ton}/\text{transfer}) * (124,800 \text{ tons}/\text{yr}) * (4 \text{ drop transfers}) / (2000 \text{ lbs}/\text{ton})$$

$$= 0.078 \text{ tons}/\text{year PM}_{2.5}$$

In addition to material transfer emissions, this process includes a 9 inch shaker screen and a 2 inch screen for materials smaller than 9 inches. These screens are assumed to have emissions that are similar to screens used for the processing of aggregate. From AP-42 Table 11.19.2-2, footnote b, wet suppression results in moisture contents of 0.55%-2.88%. The minimum moisture content achieved by the water sprays is expected to be at least 2%; therefore, the proposed system is expected to operate like a wet suppression controlled screen for aggregate processing. The Table 11.19.2-2 emission factors for the wet suppression controlled screening operations are: 7.4E-4 lbs PM₁₀/ton and 5.0E-5 lbs PM_{2.5}/ton for larger screens and 2.2E-3 lbs PM₁₀/ton for fines screens. No data was available for PM_{2.5} emissions from fines screens. For this application, PM_{2.5} emissions from fines screens are assumed to be 50% of the PM₁₀ emissions.

9 Inch Screen Emissions:

$$(7.4E-4 \text{ lbs PM}_{10}/\text{ton}) * (400 \text{ tons}/\text{day}) = 0.30 \text{ lbs}/\text{day PM}_{10}$$

$$(5.0E-5 \text{ lbs PM}_{2.5}/\text{ton}) * (400 \text{ tons}/\text{day}) = 0.02 \text{ lbs}/\text{day PM}_{2.5}$$

$$(7.4E-4 \text{ lbs PM}_{10}/\text{ton}) * (124,800 \text{ tons}/\text{yr}) / (2000 \text{ lbs}/\text{ton}) = 0.046 \text{ tons}/\text{year PM}_{10}$$

$$(5.0E-5 \text{ lbs PM}_{2.5}/\text{ton}) * (124,800 \text{ tons}/\text{yr}) / (2000 \text{ lbs}/\text{ton}) = 0.003 \text{ tons}/\text{year PM}_{2.5}$$

2 Inch Screen Emissions:

$$(2.2E-3 \text{ lbs PM}_{10}/\text{ton}) * (400 \text{ tons}/\text{day}) = 0.88 \text{ lbs}/\text{day PM}_{10}$$

$$(1.1E-3 \text{ lbs PM}_{2.5}/\text{ton}) * (400 \text{ tons}/\text{day}) = 0.44 \text{ lbs}/\text{day PM}_{2.5}$$

$$(2.2E-3 \text{ lbs PM}_{10}/\text{ton}) * (124,800 \text{ tons}/\text{yr}) / (2000 \text{ lbs}/\text{ton}) = 0.137 \text{ tons}/\text{year PM}_{10}$$

$$(1.1E-3 \text{ lbs PM}_{2.5}/\text{ton}) * (124,800 \text{ tons}/\text{yr}) / (2000 \text{ lbs}/\text{ton}) = 0.069 \text{ tons}/\text{year PM}_{2.5}$$

Table 1. Total Particulate Emissions for Dry Waste MRF (S-63 and A-63)

	PM10 Pounds/Day	PM10 Tons/Year	PM2.5 Pounds/Day	PM2.5 Tons/Year
Transfers	3.30	0.515	0.50	0.078
9 In. Screen	0.30	0.046	0.02	0.003
2 In. Screen	0.88	0.137	0.44	0.069
Total	4.48	0.698	0.96	0.150

S-63 Dry Waste Materials Recovery Facility and A-63 Water Sprays

Road dust emissions are created during vehicle travel on paved and unpaved roads throughout the site. Under Condition # 19867, Part 3, site-wide particulate emissions due to vehicle travel related to waste and cover material delivery, placement, and compaction operations are limited to 992.5 pounds/day of PM10 and 154.25 tons/year of PM10. Initially, these emissions were attributed to S-5, but in 2011, these road dust emissions were transferred to S-76 and S-77. As a result of the installation of the MRF, existing trucks hauling construction and demolition (C&D) debris will be diverted from waste disposal areas on the north side of the entrance road to the MRF processing area, which is immediately south of the truck scales, but no additional C&D truck trips are expected. The new travel route will be on paved roads. The MRF process will result in additional employees (up to 28 trips/day for 312 days/year) and additional trucks to pick up recyclable materials for delivery to off-site locations (up to 30 trips/day removing 270 tons/day of materials off-site for 312 days/year). The employee parking lot will also be paved. The road dust particulate emissions for the new MFR facility versus the current disposal route emissions are compared below.

Table 2. Road Dust Emissions Comparison

	PM10 Pounds/Day	PM10 Tons/Year	PM2.5 Pounds/Day	PM2.5 Tons/Year
Travel to & from MFR	17.77	2.764	2.65	0.412
Travel to Disposal Area	91.10	14.030	9.78	1.505
Difference	- 73.33	- 11.266	- 7.13	- 1.093

As shown above, road dust emissions due to vehicle travel to the new MFR facility are expected to be much less than road dust emissions emitted during travel on the current haul route for construction and demolition debris vehicles. Therefore, no particulate emission increases due to road dust will occur. All road dust emissions for this site will continue to be attributed to S-76 and S-77 until the new production system emission calculation procedure is established. Since the PM10 emission limits in Condition # 19867, Part 3 will not be changed, these expected reductions in road dust emissions will not generate any on-site PM10 emission reduction credits.

C. CUMULATIVE EMISSION INCREASES

As shown in Table 3, this application results in a net increase in PM10 emissions. As discussed in Section D below, PM10 offsets are not required because this facility is not a major source of PM10 emissions (non-fugitive PM10 emissions are less than the 100 ton/year threshold).

Table 3. Cumulative Emission Increases for Application # 22889 (Tons/Year)

	NO _x	CO	POC	PM ₁₀	SO ₂
Current Balance	9.104	96.014	6.520	5.140	32.024
Emission Increases				0.698	
On-Site Credits				0.000	
Net Increases	9.104	96.014	6.520	5.838	32.024
Offset Ratio	1.15		1.15		
Offsets Required	10.470		7.498		
ERCs Surrendered *	10.470		7.500		

* Sufficient ERCs to offset prior NO_x and POC emission increases were surrendered pursuant to Applications # 21287 and # 20607, but the credits have not yet been accounted for in databank. Permit operations is working on these corrections.

D. STATEMENT OF COMPLIANCE

Regulation 2, Rule 1:

The conveyors and screens in this application were evaluated in the May 2008 Redwood Landfill Final EIR, Second Amendment that was certified by the County of Marin. District staff reviewed the certified final EIR and determined that the proposed operation will meet the requirements of this EIR and is expected to comply with all applicable District requirements. The District is proposing permit conditions that will ensure compliance with these applicable requirements. No additional air quality mitigation measures (beyond those required by the final EIR) were deemed necessary. Therefore, this application has satisfied all requirements of Regulation 2-1-310. 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:

As shown in Table 1, particulate emissions from the S-63 Dry Waste Material Recovery Facility (after control by the A-63 Water Sprays) will not exceed 10 pounds/day of PM₁₀. Therefore, BACT is not triggered for S-63.

Regulation 2-2-303 offset requirements for PM₁₀ and SO₂ emission increases only apply if the site is determined to be a major facility of either PM₁₀ or SO₂. From Regulation 2-1-204.1, fugitive emissions are only included for the source categories specified in 40 CFR 70.2. Since landfills are not one of these specified categories, the fugitive landfill emissions are excluded from the major facility determination. Total site-wide non-fugitive emissions are: 20 tons/year of PM₁₀ and 65 tons/year of SO₂. Since these non-fugitive site-wide emission rates do not exceed 100 tons/year, this site is not a major facility of PM₁₀ or SO₂, and offsets are not required for these pollutants.

This site is not a PSD facility, because the total site-wide potential to emit for each pollutant is less than 250 tons/year of non-fugitive emissions. Since this site is not a PSD facility, the PSD requirements do not apply.

New Source Review for Toxic Air Contaminants:

Redwood Landfill will not process and hazardous or designated wastes at S-63. Redwood Landfill's waste discharge requirements for designated wastes will ensure that TAC emissions do not exceed any trigger levels for all but three compounds: PCB, chromium (VI), and crystalline silica. More stringent waste processing limits will be imposed for materials containing these compounds to ensure that emissions of these compounds will not exceed the District's risk screen trigger levels. Since emissions will not exceed any risk screen trigger levels, Regulation 2, Rule 5 does not apply to this application.

Regulation 2, Rule 6:

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act (40 CFR, Part 70) and BAAQMD Regulation 2, Rule 6, Major Facility Review (MFR), because it is a major facility for CO emissions and also because it is a designated facility (Redwood Landfill was subject to NSPS requirements due to a 1995 height increases at the landfill). Therefore, this facility is required to have an MFR permit pursuant to Regulations 2-6-301 and 2-6-304.

The MFR Permit for this facility was initially issued on November 10, 2003 and was renewed on April 5, 2012. This application to add 1 new source to this facility will require a minor revision of the Title V permit. This Title V permit revision will be handled pursuant to Application # 22893.

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Regulation 6, Rule 1:

The S-63 Dry Waste MRF is subject to Regulation 6, Rule 1. Regulation 6-1-301 limits the visible emissions from this source to Ringelmann 1.0. No visible particulate emissions are expected from this operation, which uses water sprays to control particulate emissions. Permit conditions will require the operator to observe this source during all operations to ensure that the water sprays are effective at preventing visible emissions. The operator will be required to add additional water sprays wherever necessary to prevent visible emission from occurring.

All emissions from S-63 are fugitive in nature. Since there are no stacks from this operation, the Regulation 6-1-310 grain loading stack limit does not apply.

Regulation 6-1-311 limits particulate emissions from processing operations. If the processing rate is greater than 57,320 pounds/hour (28.66 tons/hour), Regulation 6-1-311 limits particulate emissions to 40 pounds/hour. For lower processing rates, Regulation 6-1-311 uses the following equation to establish the emission limit (E, pounds/hour):
 $E = 0.026 * (P^{0.67})$

S-63 will process a maximum of 400 tons/day and will operate up to 18 hours/day, resulting in an average processing rate (P) of 44,444 pounds/hour (22.2 tons/hour).
 $E = 0.026 * (44,444^{0.67}) = 33.8$ pounds/hour

As shown in Table 1, maximum daily particulate emissions are expected to be 4.48 pounds/day. For 18 hours/day of operation, average hourly particulate emissions will be 0.25 lbs/hour of PM10.

These hourly emissions are far below the 33.8 pound/hour limit calculated above, with a compliance margin of 135:1. Given this high compliance margin, daily throughput records and observation of the source during operation will provide adequate monitoring to demonstrate compliance with the Regulation 6-1-311 hourly particulate emissions limit.

State and Federal Regulations:

There are no state or federal air pollutant limitations that apply to this operation (no applicable CARB ATCMs and no applicable NSPS or NESHAP requirements).

E. PERMIT CONDITIONS

The District is proposing Condition # 25260 for S-63 and A-63 to ensure compliance with District requirements.

Condition # 25260

FOR: S-63 DRY WASTE MATERIAL RECOVERY FACILITY; AND A-63 WATER SPRAYS

1. The total amount of waste materials processed by the S-63 Dry Waste Material Recovery Facility shall not exceed 400 tons during any day and shall not exceed 124,800 tons during any consecutive 12 month period. (Basis: Cumulative Increase)
2. The waste materials processed at S-63 shall not contain any designated or hazardous wastes or regulated asbestos containing materials (RACM). If any waste materials are processed at S-63 that are not designated or hazardous wastes but do contain PCBs, hexavalent chromium (chromium VI), or crystalline silica, the operator shall comply with the following additional waste processing limitations (2a-2c), unless the operator can demonstrate to the satisfaction of the APCO that processing such material will not result in emissions in excess of an acute or chronic trigger level identified in Regulation 2, Rule 5, Table 2-5-1 Toxic Air Contaminant Trigger Levels. (Regulation 2-5-110)
 - a. For waste materials processed at S-63 that contain PCB, the operator shall either ensure that the waste materials processed contain no more than 2.4E-4 ppm by weight of PCB, or the operator

S-63 Dry Waste Materials Recovery Facility and A-63 Water Sprays

- shall ensure that no more than 4800 tons of waste containing PCB are processed at S-63 during any consecutive 12 month period.
- b. For waste materials processed at S-63 that contain hexavalent chromium (chromium VI), the operator shall either ensure that the waste materials processed contain no more than 5.5E-1 ppm by weight of hexavalent chromium, or the operator shall ensure that no more than 33,000 tons of waste containing hexavalent chromium are processed at S-63 during any consecutive 12 month period.
 - c. For waste materials processed at S-63 that contain crystalline silica, the operator shall either ensure that the waste materials processed contain no more than 8.5% by weight of crystalline silica, or the operator shall ensure that no more than 10,600 tons of waste containing crystalline silica are processed at S-63 during any consecutive 12 month period.
3. The loading and unloading operations, transfer points, and screens associated with S-63 shall be abated by the A-63 Water Sprays, as necessary to ensure compliance with Part 5. (Basis: Cumulative Increase and Regulations 6-1-301 and 6-1-305)
 4. The owner/operator shall employ best management practices including sweeping, watering, and other housekeeping procedures in order to minimize dust emissions from S-63, the associated storage areas, parking lots, and roadways, as necessary to ensure compliance with Part 5. (Basis: Regulations 1-301, 6-1-301, and 6-1-305)
 5. Visible dust emissions from S-63 shall not exceed Ringelmann 1.0 or result in fallout on adjacent properties in such quantities as to cause a public nuisance per Regulation 1-301. To ensure compliance with this Part and with Regulations 6-1-301 and 6-1-305, the owner/operator shall visually observe all material handling operations associated with S-63 and shall immediately initiate corrective actions, if any visible dust emissions are detected that persist for longer than 3 minutes in an hour. (Basis: Regulation 1-301, 6-1-301, and 6-1-305)
 6. To demonstrate compliance with Parts 1 and 2, the owner/operator shall maintain the following records in a District approved log and shall make these records available to District staff upon request. All records shall be retained for at least five years from the date of entry. These record-keeping requirements shall not replace the record-keeping requirements contained in any applicable District or state regulations. (Basis: Cumulative Increase and Regulation 2-5-110)
 - a. Record the total amount of waste materials processed at S-63 on a daily basis.
 - b. Summarize the daily waste acceptance records on a monthly basis.
 - c. Summarize the monthly waste acceptance records for each consecutive rolling 12-month period.
 - d. Maintain copies of the waste acceptance procedures for S-63 and sufficient additional records or other documentation for materials delivered to S-63 that contain PCB, hexavalent chromium, or crystalline silica to verify compliance with Part 2.
 - e. Maintain a copy of the operating practices that are required to be employed at S-63 and surrounding areas to minimize particulate emissions from these operations.

End of Conditions

Engineering Evaluation:
Application # 22889

Plant # 1179, Redwood Landfill, Inc.
8950 Redwood Highway, Novato, CA 94948

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F. RECOMMENDATION

Issue an Authority to Construct for the following sources subject to Condition # 25260:

S-63 Dry Waste Material Recovery Facility: including sorting line, 9 inch screen, 2 inch screen, and associated conveyors; 400 tons/day; abated by A-63, Water Sprays.

By: _____
Carol S. Allen
Supervising Air Quality Engineer

Date