

Title V Permit Evaluation

Site Number: A2246

Site Name: TriCities Waste Management

Site Address: 7010 Auto Mall Parkway, Fremont, CA 94538

EMISSION LIMITS AND MONITORING REQUIREMENTS:

The following sources were found to have no periodic monitoring for an applicable emission limit, monitoring was added as noted:

PM Sources

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Added Monitoring |
|---|--------------------------------|---|--|
| Landfill with Gas Collection System: S-1 | BAAQMD Regulation 6-301 | Ringelmann 1.0 for 3 minutes in any hour | BAAQMD Condition #8366, Part 12 Records of Site Watering and Road Cleaning |
| Woodwaste Stockpiles: S-5 | BAAQMD Regulation 6-301 | Ringelmann 1.0 for 3 minutes in any hour | BAAQMD Condition #15022, Part 3 Observation of Operations |
| Portable Diesel Engine: S-9 | BAAQMD Regulation 6-301 | Ringelmann 1.0 for 3 minutes in any hour | BAAQMD Condition #17680, Part 2 Observation for Visible Smoke |
| | BAAQMD Regulation 6-310 | 0.15 gr/dscf | None Recommended |

PM Discussion:

Visible Emissions

BAAQMD Regulation 6-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for a period or aggregate periods less than 3 minutes in any hour). In an effort to bring awareness to this limit, permit conditions were added to each of the above sources requiring the source operator to visually monitor the source for visible emissions while the source is in operation. While this approach does not guarantee compliance with Ringelmann 1.0, it does put the

responsibility of monitoring for visible emissions on the person who is best able to correct a visible emissions problem, the source operator.

Particulate Weight Limitation

The Portable Diesel Engine S-9 is subject to BAAQMD Regulation 6-310, limiting PM emissions to 0.15 gr/dscf. This compares to a PM10 emission factor of 0.31 lb/MMBTU (diesel fuel) from EPA AP-42 Table 3.3-2 “Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines”. If it is assumed that S-9 operates with exhaust gases containing 15% excess oxygen, the AP-42 factor can be compared to the Regulation 6-310 factor (0.15 gr/dscf @ 15% O₂) as follows:

From 40 CFR 60, Appendix A, Method 19, Table 19-1, a stoichiometric dry gas combustion factor of 9,190 dscf/MMBTU is given for distillate oil combustion. At 15% excess O₂, this factor becomes:

$$9,190 \times [21\% / (21\% - 15\%)] = 32,165 \text{ dscf (c.p.) / MMBTU}$$

Therefore, the conversion of 0.15 gr/dscf @ 15% O₂ to lb/MMBTU is:

$$(32,165 \text{ dscf/MMBTU}) \times (0.15 \text{ gr/dscf}) \times (\text{lb}/7000 \text{ gr}) = 0.689 \text{ lb/MMBTU}$$

Since this factor is well above the AP-42 factor of 0.31 lb/MMBTU (assumed to be average emissions for diesel engines), the addition of periodic monitoring to demonstrate compliance with this limit is not necessary.

TOC Source

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Monitoring |
|--|--|--|------------------|
| Landfill with Gas Collection System: S-1 | BAAQMD 8-34-303a and SIP 8-34-303 | 1000 ppmv as methane at 3 inches above surface | None Recommended |

TOC Discussion:

Surface leaks of total organic compounds (TOC) from the TriCities Landfill S-1 are currently limited to 1000 ppmv as methane. This limit will expire on 7/1/02 and be replaced by a more stringent limit of 500 ppmv as methane. New quarterly surface emissions monitoring and monthly cover integrity monitoring requirements will become effective on 7/1/02, in conjunction with the change to the surface leak limit. Implementation of the surface emission and cover monitoring plans requires a long lead time for preparing monitoring plans, obtaining District approval, purchasing equipment and/or engaging in contracts with testing companies. This facility is currently preparing a

monitoring plan as part of their Collection and Control System Design Plan. Because of the long lead time issues discussed above, the surface emissions and cover integrity monitoring plans could not be implemented any sooner than the scheduled effective date of 7/1/02. Therefore, no monitoring is recommended for the interim TOC surface emission limit of 1000 ppmv as methane.

SO2 Sources

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Monitoring |
|---|--------------------------------|--|-------------------|
| Landfill with Gas Collection System: S-1 Portable Diesel Engine: S-9 | BAAQMD Regulation 9-1-301 | Ground Level Concentrations: 0.5 ppm for 3 consecutive minutes, 0.25 ppm averaged over 60 consecutive minutes, 0.05 ppm averaged over 24 hours | None Recommended |

SO2 Discussion:

Area monitoring to demonstrate compliance with the ground level SO2 concentration requirements of Regulation 9-1-301 is at the discretion of the APCO and is not recommended in this case.

The Landfill Gas Enclosed Flare A-2 associated with the Landfill S-1 may emit SO2 as a result of combusting landfill gas containing sulfur compounds. However, because of the high dispersion rate of the exhaust gas leaving the flare, ground level SO2 concentrations are expected to be insignificant under most circumstances.

The Portable Diesel Engine S-9 is required by Regulation 9-1-304 and Permit Condition #17680 to be fired exclusively with low sulfur fuel, so excessive ground level concentrations of SO2 are not expected.

PERMIT SHIELD:

No permit shields were requested by the applicant.

ALTERNATE OPERATING SCENARIO:

No alternate operating scenario has been requested for this facility.

COMPLIANCE STATUS:

In their Title V application TriCities Waste Management certified that they were in full compliance with all applicable local, state, and federal air quality requirements. This certification was dated 3/11/97. The District's Enforcement Division has reviewed the compliance record of TriCities and has found that ongoing compliance with applicable air quality requirements can be reasonably assured (see Compliance Review Memo from Jim Guthrie, dated February 13, 2001).

ALIGNMENT OF INFORMATION IN APPLICATION AND PROPOSED PERMIT:

There are no significant discrepancies in the information provided in the application and that to be used in the proposed Title V Permit.