

White Paper

**Bay Area Air Quality Management District
Proposed
Regulation 11, Rule 18
Reduction of Risk from Air Toxic Emissions
at Existing Facilities**

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SUMMARY

Draft Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities (Draft Rule, Rule 11-18) is the Bay Area Air Quality Management District's (BAAQMD's) effort to protect public health from toxic air pollution from existing facilities. BAAQMD expects Rule 11-18 would substantially reduce health risks from various existing facilities by requiring the implementation of all technically and economically feasible risk reduction measures by significant sources of toxic air contaminants (TACs). The Draft Rule will affect publicly owned treatment works (POTWs). BAAQMD staff has identified diesel particulate matter, hydrogen sulfide, cadmium, and mercury as the primary risk drivers for POTWs.

Concerns POTWs have related to this Draft Rule include its compliance schedule, potential fiscal impact, control technology determinations, public notification, cross media impacts, and renewable energy production.

The Bay Area Clean Water Agencies (BACWA) provided written comment to BAAQMD staff regarding this Draft Rule on December 2, 2017 (see attached letter). BACWA, in coordination with the California Association of Sanitation Agencies (CASA), San Francisco Public Utilities Commission (SFPUC), and Central Contra Costa Sanitary District (CCCSD) addressed verbal comments to the Board (12/7/2016).

BAAQMD staff is currently on schedule to bring this Draft Rule to their Board for consideration in May 2017. However, due to comments from impacted facilities, staff may recommend that the evaluation of Rule 11-18 be extended (per BAAQMD 12/7/2016 Board meeting).

BACKGROUND

In order to address concerns regarding health impacts to communities located near facilities such as refineries, metal melting plants, POTWs, and stationary diesel generators, BAAQMD staff has drafted a rule that targets significant reductions in emissions of toxic air contaminants (TACs) from those sources. The Draft Rule applies to facilities whose emissions of TACs are projected to pose a significant risk to nearby residents and workers. Reductions of TACs would be achieved by setting a cap on the allowable risk for facilities across the Bay Area. BAAQMD staff is tasked with performing Health Risk Assessments (HRAs) to identify risk levels at facilities with potential to exceed the cap and then require appropriate measures to reduce risk to acceptable levels.

APPROACH AND SCHEDULE

The Draft Rule would use the annual toxic emissions inventories reported to the BAAQMD by sources that emit TACs. From the toxic emissions inventory data, BAAQMD would conduct a site-specific Health Risk Screening Analysis (HRSA). The

HRSA assesses the potential for adverse health effects from public exposure to routine and predictable emissions of TACs.

From these HRSAs, BAAQMD would determine each facility’s priority score (PS).

BAAQMD would conduct HRAs for all facilities with a cancer PS of ten or greater, or a non-cancer PS of one or greater. Once BAAQMD creates a model for the HRA, BAAQMD would validate the model using site specific parameters, including but not limited to meteorological data, receptor type and location, toxic emission rates and stack location and heights, and topography. The facility will be consulted in this validation step. Once the model is validated, BAAQMD would conduct HRAs to obtain preliminary results that would be shared with the interested public for review and comment before finalization.

Based on HRA results, BAAQMD would determine whether a facility is affected by Rule 11-18. The Draft Rule will affect facilities exceeding any of the risk action level thresholds – ten per million (10/M) cancer risk or 1.0 hazard index for both chronic and acute risk. BAAQMD is required to notify facilities of their health risk score.

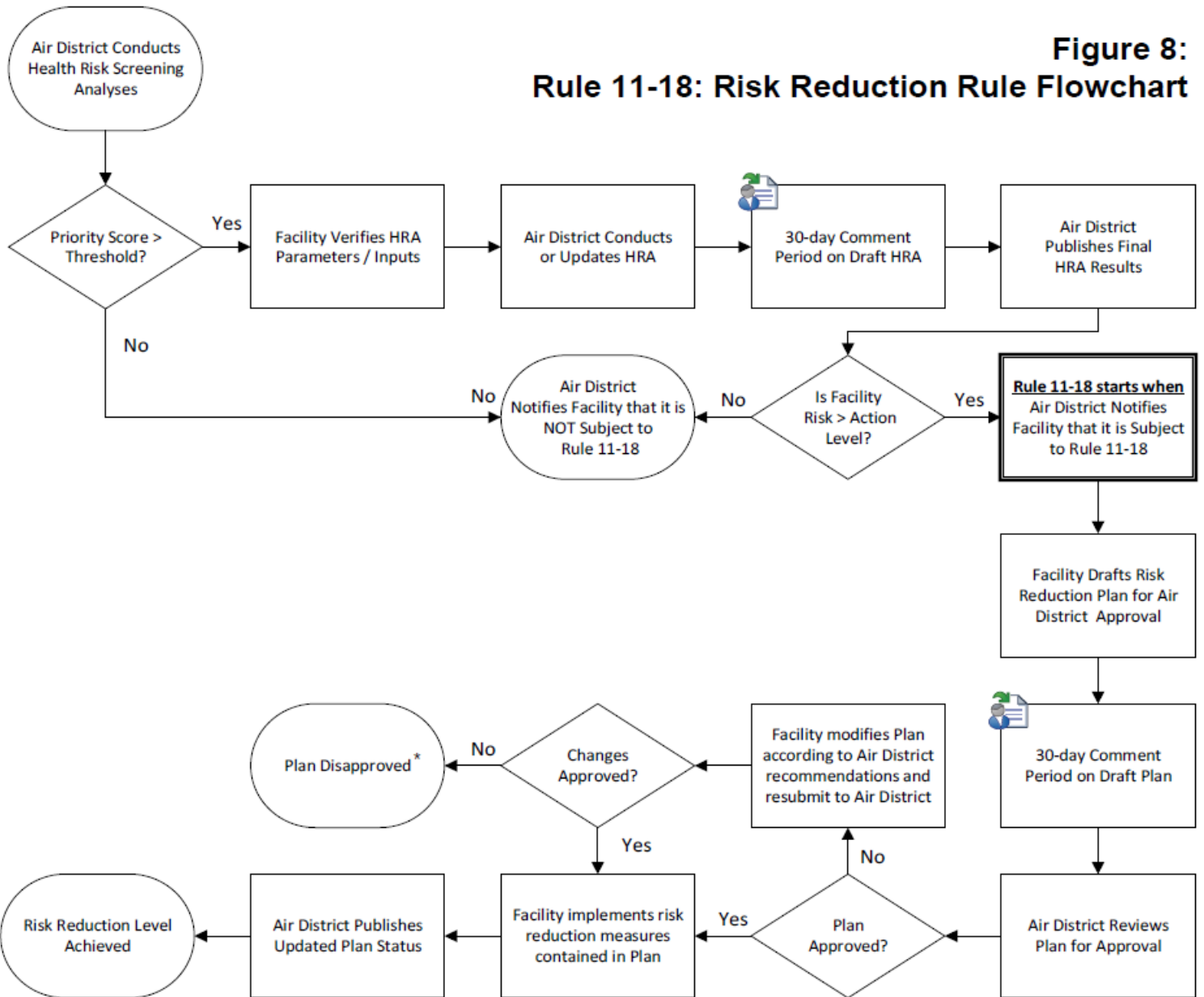
Facilities that pose a health risk in excess of the risk action level threshold would be required to reduce that risk below the threshold. The risk reduction is achieved through the implementation of a Risk Reduction Plan, prepared by the facility, and approved by BAAQMD. Facilities would have three years to implement the approved plan or demonstrate that all significant sources of TACs are controlled by Best Available Retrofit Control Technology (TBARCT). The Draft Rule is to be implemented in four phases based on either a facility’s PS or the source type (see Table 1).

Phase	Criterion	# of Facilities (est)	HRAs	Risk Reduction Plans	Plan Implementation
1	PS>250 cancer or PS>2.5 non-cancer	80	2017-2018	2018-2019	2019-2022
2	PS> 10 cancer or PS>1.0 non-cancer	350	2019-2021	2021-2022	2022-2025
3	Diesel IC Engines	600	2021-2023	2023-2024	2024-2027
4	Retail Gas Stations	130	2023-2024	2024-2025	2024-2028

PS= Prioritization Score (determined by Health Risk Screening Analysis)

See Figure 8 (below) copied from the BAAQMD draft staff report (October 2016) - providing a flowchart of the Draft Rule implementation process.

**Figure 8:
Rule 11-18: Risk Reduction Rule Flowchart**



* A disapproved plan would result in a violation of the Rule.

POTENTIAL AREAS OF CONCERN FOR POTWS

- **Health Risk Assessments**

Rule 11-18 proposes a 30-day deadline after the initial request by BAAQMD to provide the necessary information to complete a site specific HRA. Data collection for a facility-wide HRA can be complex, and time-consuming, and may require hiring a consultant. This process will likely cost POTWs between \$20,000 and \$200,000 to collect the data.

- **Development of Risk Reduction Plan**

Draft Rule 11-18 allows for 180 days to complete a Risk Reduction Plan for BAAQMD's review and approval. The development of risk reduction measures requires elaborate characterization studies, careful planning, and preliminary design of the air pollution control technologies to reduce toxic emissions. TBARCT for certain processes is not known and would require research to determine availability and appropriateness.

- **Risk Reduction Compliance Schedule**

Rule 11-18-proposes a three-year time frame to implement risk reduction measures. Impacts include planning, design and construction timelines; determination of TBARCT; financial feasibility; potential rate increases, lack of clarity about addressing projects that are already underway, etc.

- **Public Notification**

BAAQMD proposes public outreach to educate the public about existing facilities and the associated risk. Recent changes to risk factors and modeling protocols will most likely cause increased calculated health risk from facilities, even if the emissions are unchanged. This could bring increased public attention on POTWs.

- **Cross Media Considerations**

Complying with potentially conflicting discharge requirements has fiscal and operational impacts that warrant further consideration and investigation. Removal of TACs from the air emissions could impact discharge water/solids quality.

- **Renewable Energy Production**

The proposed rule may discourage the production and beneficial use of biogas for the generation of renewable energy or fuel, resulting in a wasted (flared) resource.

CURRENT RULE ADOPTION SCHEDULE

BAAQMD staff is currently on schedule to bring this rules to their Board for consideration in May 2017. However, due to comments from impacted facilities, staff may recommend that the evaluation of Rule 11-18 be extended (per BAAQMD 12/7/2016 Board meeting).

Recent and upcoming milestones are as follows:

- August 19, 2016: Project description for EIR posted for public review and comment.
- October 14, 2016: Publication of draft rules, and Initial Study for the EIR.
- October 27, 2016: Publication of draft staff report.
- November 9-17, 2016: Rule 11-18 Open Houses.
- December 2, 2016: End of initial comment period for draft rules and EIR Initial Study.
- March 3, 2017: Publication of rules, staff analysis, socioeconomic analysis, EIR.
- May 17, 2017: Board Hearing.

ATTACHMENTS

- BACWA comment letter to BAAQMD dated December 2, 2016. [BACWA-AIR-Comment-Letter-Proposed-Rule11-18-12-02-16-1.pdf](#).
- Draft Rule 11-18 [regulation-11-rule-18](#) .