

# Regulation 11-18

## Health Risk Assessment and Risk Reduction Plan

### Frequently Asked Questions

#### **What is Regulation 11-18?**

Regulation 11-18 requires that facilities reduce health risks from stationary sources of toxic air pollution. The rule applies to facilities where health risks on the surrounding community exceed a health risk threshold called a risk action level. [Regulation 11-18](#) was adopted by the Air District on November 15, 2017.

#### **What are risk action levels?**

Risk action levels are health risk thresholds established by the Air District in Regulation 11-18. Facilities that have a facility health risk above a risk action level are required to reduce health risks below the risk action levels. The risk action levels are:

- Cancer risk of 10 in million or higher,
- Chronic hazard index of 1.0 or higher, or
- Acute hazard index of 1.0 or higher.

The final risk action levels in Regulation 11-18 are the most stringent in the nation.

#### **What is a Health Risk Assessment (HRA)?**

A health risk assessment, or HRA, is a scientific tool designed to help the Air District determine which potential hazards from facilities are most significant on a community. HRA results are used to determine where to focus efforts and resources to improve air quality and protect public health. Scientific methods used in HRA cannot be used to link individual illnesses to chemical exposures.

A HRA estimates the increase in health risks for people living, working or attending school near a facility that may result from exposure to a facility's emissions of toxic air pollutants. HRAs use a computer program called an air dispersion model to predict how facility emissions move into the surrounding community. For each potential community location, health impacts are calculated using standardized information about breathing rates, daily activities, and pollutant toxicity, which are published by the California Office of Environmental Health Hazard Assessment.

#### **What types of health risks are considered?**

Air District HRAs estimate three types of health impacts:

1. Cancer risk,
2. Non-cancer health impacts due to long term exposures (called a chronic hazard index), and
3. Non-cancer health impacts due to short term exposures (called an acute hazard index).

#### **What is cancer risk?**

Cancer risk is an estimate of the chance that an individual will develop cancer during their lifetime. A cancer risk of 10 in a million indicates that a person has an additional risk of 10 chances in a million (0.001%) of developing cancer during their lifetime as a result of the air pollution scenario being evaluated.

**What is hazard index (non-cancer health impacts)?**

Hazard index is an estimate of the likelihood that an individual will experience non-cancer health effects (e.g., cardiovascular, neurological, respiratory, etc.). An acute hazard index estimates the likelihood of a person experiencing non-cancer health effects when they are exposed to a toxic pollutant concentration for a 1-hour period. A chronic hazard index estimates the likelihood of non-cancer health effects when a person is exposed to a toxic pollutant concentration for a 1-year period or longer. A hazard index less than 1.0 indicates that people are not likely to experience any non-cancer health effects.

**What do the results of the health risk assessment mean for public health?**

Health risk assessments show the highest health risks from stationary sources of pollution at a facility for a theoretical individual living, working, or attending school nearby under worst-case exposure assumptions. Health risk assessment information is used to identify where and how to reduce health risks.

Regulation 11-18 HRAs **do not include** mobile sources (cars, trucks, or off-road equipment) of pollution associated with a facility, do not reflect cumulative impacts from multiple facilities located near each other, and do not include road traffic or other transportation sources in the area. The Air District is working directly with the communities to target these types of health risks and risk reduction through the Community Health Protection Program.

**What is a significant risk source?**

A significant risk source is any stationary source that has a cancer risk of 1 in a million or higher, a chronic hazard index of 0.2 or higher, or an acute hazard index of 0.2 or higher, as demonstrated by a Regulation 11-18 HRA.

**What strategies are required to improve health outcomes?**

Any facility that has a health risk at or above a risk action level must either reduce their total stationary source health risks below all risk action levels or demonstrate that all significant risk sources are using the best available retrofit emission controls for toxics, or TBARCT. Impacted facilities must develop and implement risk reduction plans (RRP). Risk reduction measures may include installation of abatement equipment, changes to processes or operations, relocation of sources or other modifications to their facility that reduce air pollution exposure to the community.

**What is a Risk Reduction Plan (RRP)?**

A risk reduction plan is an Air District approved document that identifies the risk reduction measures that the facility plans to implement. These risk reduction measures must either demonstrate that all stationary source health risks from the facility are reduced below the risk action levels or that each significant source is achieving TBARCT.

**When is a facility required to submit a RRP?**

A facility is required to submit a RRP if the final HRA determines that a health risk exceeds a risk action level. The facility will be notified in writing that a RRP is required concurrent with the posting of the final HRA. The facility will have 6 months to submit a draft RRP.

**Who reviews and approves the RRP?**

The Air District will review the facility's draft RRP to ensure that it is complete and that the proposed risk reduction measures will meet Regulation 11-18 requirements. The Air District will make the draft RRP

available for public comment. All comments on the plan will be considered before the Air District takes final action on the plan.

### **What is TBARCT?**

TBARCT is best available retrofit control technology for toxics and is defined in Regulation 11-18-204. TBARCT is a stringent control technology or emission limitation that has been achieved for a source type or that is feasible for a source type when considering costs for retrofit controls and other health, environmental, or energy impacts.

### **What happens after a RRP is approved?**

The facility must submit annual reports to the Air District describing the progress made toward implementing the RRP until full compliance with Regulation 11-18 risk reduction requirements has been demonstrated. During this implementation phase, the facility must submit any permit applications that are required for abatement equipment or other facility changes to reduce toxic air pollution contributing to increased health risks.

### **When will health risks be reduced?**

After the Air District approves the risk reduction plan, the facility must generally complete installation of all risk reduction measures within five years of plan approval. If technical feasibility or economic burden issues are identified, the Air District may extend this implementation period.

### **Where can I find HRA and RRP documents?**

The Air District web site (<https://www.baaqmd.gov/community-health/facility-risk-reduction-program/facility-risk-reduction-list>) identifies the facilities that Air District staff is currently evaluating for Regulation 11-18. A draft HRA report is posted for each facility as soon as it is complete. This draft HRA report identifies the facility's health risks, sources of significant risk, and risk reduction requirements. The public is invited to provide comments on each HRA report.

If risk reduction is required, the facility will be required to submit a risk reduction plan (RRP) for Air District approval. RRP will also be posted at the above locations. The public will also have an opportunity to provide comments on these plans.

### **How can I stay involved?**

Subscribe to email notifications regarding Regulation 11-18 activities at:

<https://www.baaqmd.gov/community-health/facility-risk-reduction-program>

Identify facilities of interest using the searchable table on the web site at:

<https://www.baaqmd.gov/community-health/facility-risk-reduction-program/facility-risk-reduction-list>

Provide comments on HRA reports and RRP. Comments may be submitted on-line, by email, or in writing to the Air District Contact identified for the site.