

New Jersey Department of Environmental Protection  
Division of Air Quality  
Bureau of Technical Services  
Air Quality Evaluation Section  
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***RISK SCREENING POLICY  
AND  
SECOND-LEVEL RISK SCREENING***

**Risk Screening Policy**

The following risk management policy is in effect for the NJDEP Division of Air Quality risk screening worksheet/spreadsheet (first-level risk screening).

A. Carcinogens (Cancer-Causing Chemicals)

- Total incremental risk less than or equal to  $1 \times 10^{-6}$  (1E-6, or 1 in a million) is considered negligible.
- Total incremental risk greater than  $1 \times 10^{-6}$  is referred for second-level risk screening, described below.

B. Noncarcinogens

- Total hazard index less than or equal to 1 is considered negligible.
- Total hazard index greater than 1 is referred for second-level risk screening, described below.

*ROUNDING: Values less than or equal to 1.5 should be rounded down to 1.*

***If a source fails first-level risk screening, the applicant can modify the permit application, or the Air Quality Evaluation Section (AQEv) will conduct a second-level risk screening. The second-level risk screening can also be carried out by the applicant, with verbal approval from AQEv. A modeling protocol is not required.***

**PERMIT MODIFICATION ALTERNATIVE**

As an alternative to a second-level risk screening, the permit application may be modified by the applicant so that the calculated risk falls into the “negligible” category using the risk screening worksheet/spreadsheet.

Modifications can include a reduction in emissions, an increase in stack height, or a reduction in operating hours.

## INFORMATION REQUIRED FOR SECOND-LEVEL RISK SCREENING

For second-level risk screening, AQEv carries out a site-specific air quality dispersion modeling analysis to more accurately estimate ambient air concentrations, and to assess the effect of aerodynamic downwash on plume dispersion. This analysis takes into account actual site conditions, source parameters, and meteorology. In order to do this, the applicant must provide to AQEv a **detailed plot plan** with the information listed below.

### **Note that incomplete plot plans will not be accepted!**

1. A depiction of the site, drawn to scale (with the scale indicated)
2. Location of:  
All proposed emission points (stacks, vents, etc.)  
All buildings and structures on-site  
Facility property line
3. Location of buildings and structures immediately adjacent to the applicant's property, if they are located near the proposed emission points.
4. Height, width, and length of all buildings and structures.
5. An indication of true north. (If plant north is shown on the plot plan, the relationship between true north and plant north must be provided.)
6. In addition, a scaled map with the location of nearby residences and other sensitive receptors, such as hospitals, nursing homes, schools, and day care centers.

***Contact AQEv at 609-633-1110 if specific guidance is needed concerning the plot plan.***

The second-level risk screening analysis done by AQEv often predicts air concentrations lower than those estimated with the risk screening worksheet/spreadsheet. If the risk then falls into the “negligible” category (see Policy on previous page), no further risk assessment work needs to be done.

If the risk predicted by AQEv modeling analysis is still not “negligible,” the application will be referred to the NJDEP Air Quality Permitting Program Risk Management Advisory Committee for review. The Risk Management Advisory Committee may recommend that:

1. The applicant applies better air pollution controls to lower emissions.
2. The applicant changes stack characteristics for better dispersion to avoid downwash (for example, increases the stack height).
3. The applicant or the applicant’s consultant does a detailed site-specific (refined) risk assessment, based on air quality dispersion modeling.

*Permit applications with cancer risks greater than 1 in 10,000 ( $1 \times 10^{-4}$ , or 0.0001) will not be approved.*