

**RULE 3503            EMISSIONS INVENTORY AND HEALTH RISK  
ASSESSMENT FOR RAILYARDS**

- (a) Purpose  
This purpose of this rule is to determine criteria pollutant and toxic emissions from railyards and to conduct health risk assessments to estimate the cancer risk, chronic and acute hazard indices, and cancer burden caused by emissions at railyards.
  
- (b) Applicability  
This rule shall apply to railyards operated by Class I freight railroads and switching and terminal railroads in the district.
  
- (c) Definitions
  - (1) **CANCER BURDEN** means the estimated increase in the occurrence of cancer cases in a population subject to a MICR of greater than or equal to one in one million ( $1 \times 10^{-6}$ ) resulting from exposure to toxic air contaminants.
  - (2) **CLASS I FREIGHT RAILROAD** means a Class I railroad, as classified by the Surface Transportation Board in 49 CFR Part 1201 Subpart A, that primarily transports freight rather than passengers.
  - (3) **CRITERIA POLLUTANT** means air contaminants for which federal or state air quality standards have been established. They include nitrogen dioxide, volatile organic compounds, carbon monoxide, sulfur dioxide, and particulate matter less than 10 microns in diameter and less than 2.5 microns in diameter.
  - (4) **DEDICATED RAILYARD EQUIPMENT** means emission sources within a railyard that spend more than half of their operating hours at the railyard such as yard hostlers, forklifts, chassis lifters, or locomotive switchers.
  - (5) **FACILITY** means any source or grouping of sources or other air contaminant-emitting activities that are located on one or more contiguous properties within the Basin in actual physical contact, or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control). Such

- above-described groupings, if on noncontiguous properties, connected only by land carrying a pipeline, shall not be considered one facility.
- (6) HEALTH RISK ASSESSMENT means a detailed comprehensive analysis prepared to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure
  - (7) IDLING OR IDLING EVENT means the operation of a locomotive's propulsion engine for a period greater than 15 consecutive minutes at a time at which the main drive engine is not engaged in gear.
  - (8) IMPACT AREA means any location outside the boundaries of a railyard that has conducted a Health Risk Assessment pursuant to Rule 3503 at which a maximum individual cancer risk of 10 in-a-million or greater occurs.
  - (9) LOCOMOTIVE ENGINE means the main propulsion engine or engines incorporated into a locomotive or intended for incorporation into a locomotive.
  - (10) LOCOMOTIVE means, for the purpose of this rule, a self-propelled piece of on-track equipment designed for moving or propelling railroad cars that are designed to carry freight or other equipment, but which itself is not designed or intended to carry freight, passengers (other than those operating the locomotive) or other equipment. Other equipment that is designed for operation both on highways and rails; specialized railroad equipment for maintenance, construction, post accident recovery of equipment, and repairs, and other similar equipment; and vehicles propelled by engines with rated horsepower of less than 750 kW (1006 hp) are not locomotives (see 40 Code of Federal Regulations Parts 86 and 89 for this equipment).
  - (11) OPERATOR means the railroad responsible for operations in the District.
  - (12) PUBLIC NOTIFICATION LEVEL, for purposes of this rule, means a MICR of ten in one million ( $1.0 \times 10^{-6}$ ), cancer burden of 0.5, or a total acute or chronic HI of one (1.0) for any target organ system at any receptor location.
  - (13) RAILROAD means a commercial entity that operates locomotives to transport passengers or freight.

- (14) RAILROAD OPERATIONS means those operations associated with railroads such as line haul services, switching and terminal services; maintenance, service, and repair of locomotives and railcars; off-road and stationary equipment associated with activities such as loading, unloading, moving and transfer of passengers or freight, track repair and maintenance operations, and other similar operations conducted by a railroad
  - (15) RAILYARD means an area where railroad operations and associated railroad activities occur.
  - (16) SWITCHING AND TERMINAL RAILROAD means a non-Class I railroad engaged primarily in switching and/or terminal services for other railroads.
  - (17) TOXIC AIR CONTAMINANT, for the purpose of this rule, means an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health and is included in the AB 2588, Health and Safety Code Section 44300, et seq., list of toxic air contaminants.
  - (18) TRANSIENT RAILYARD EQUIPMENT means emission sources within a railyard that spend less than half of their operating hours at the railyard, such as line haul locomotives or delivery trucks.
- (d) Emissions Inventory
- (1) On or before (*12 months after date of adoption*) an operator of a railyard shall submit a facility-wide criteria pollutant and toxic air contaminant emissions inventory to the Executive Officer that includes the following information for all emission sources within the railyard:
    - (A) Identification of all dedicated and transient emission sources that are used or operated in the railyard, including:
      - (i) all stationary sources such as combustion equipment, processes, storage tanks, fueling stations, etc.
      - (ii) all on- and off-road mobile sources such as trucks, motor vehicles, locomotives, yard hostlers, forklifts, cranes, side loaders, empty handlers, chassis stacker, chassis loader, chassis flipper, internal combustion engines, etc.
    - (B) For dedicated railyard equipment, annual criteria pollutant and toxic air contaminant emissions shall be based on actual fuel use data specific to that emission source and engine information that is

specific to that emission source, including: engine type, model classification, model year, horsepower, emission factor, load factor, and any emissions control devices on the emission source;

- (C) For transient railyard equipment, the annual criteria pollutant and toxic air contaminant emission inventory shall be based on an average number of daily trips, the idling time, the duration of time the source is at the railyard, and emission factors that are representative of the fleet mix for each source category; and
  - (D) documentation of emission factors used and emission control efficiency claimed, such as manufacturer certification data or source tests.
- (2) The emissions inventory for criteria and toxic pollutants shall be prepared or specified for stationary sources in the applicable emissions inventory methodology established by the California Air Resources Board's, *Emissions Inventory Criteria and Guidelines (July 1997)*, or the most recently approved CARB revision to this document which addresses this emissions inventory and/or any subset of these Guidelines as specified by the Executive Officer, or other guidelines approved by the Executive Officer.
- (e) Health Risk Assessment
- (1) On or before (*12 months after date of adoption*) an operator of a railyard shall submit a Health Risk Assessment to the Executive Officer based on the facility-wide toxic air contaminant emissions inventory prepared pursuant to subdivision (d) that includes the following information:
    - (A) Facility name, address, and contact person;
    - (B) UTM coordinates for facility location and facility boundary vertices;
    - (C) Plot plan for the facility identifying entrance and exit of the facility, loading and unloading areas, fueling areas, service and maintenance areas, classification yards, locomotive parking area, and any other area within the railyard that where emission sources or operations contributing to emissions occur;
    - (D) Air dispersion model(s) used and the rationale for selection, model parameters and adjustments, if applicable, emission rates used in the modeling;

- (E) Receptor grid information, including fence-line receptors, with grid spacing of 100 meters or less;
  - (F) Meteorological data used and the rationale for selection;
  - (G) Risk assessment, based on an exposure duration of 70 years for residents and students and 40 years for workers, including appropriate multipathway factors; and
  - (H) Exposure isopleths identifying all areas in the surrounding communities showing a risk greater than the public notification level.
- (2) When preparing the Health Risk Assessment, the operator of a railyard shall follow the policies and procedures of the California Office of Environmental Health Hazard Assessment's (OEHHA), *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments* and/or any subset of this document, as specified by the Executive Officer, or alternative guidelines approved by the Executive Officer.
  - (3) If the policies and procedures of OEHHA direct the user to refer to their local air district for specific or additional requirements, the operator of the railyard shall follow the South Coast Air Quality Management District's, most recent *Supplemental Guidelines for Preparing Risk Assessments to Comply with the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)*.
- (f) Approval of the Health Risk Assessment
- (1) Within 180 days of submittal of the Health Risk Assessment pursuant to subdivision (e), the Executive Officer will approve or disapprove the Health Risk Assessment. The Executive Officer shall disapprove the Health Risk Assessment unless the Health Risk Assessment is:
    - (A) complete and contains the information required under paragraph (e)(1);
    - (B) accurate in representing the emission sources from all operations at the railyard; and
    - (C) the health risk assessment is conducted consistent with the policies and procedures specified under paragraphs (e)(2) and/or (e)(3).
  - (2) If the Executive Officer disapproves the Health Risk Assessment, the operator of a railyard shall revise and resubmit within 90 days after being

notified in writing of the decision. The revised submittal shall correct all deficiencies identified by the Executive Officer.

- (3) Within 90 days of the submittal of a revised Health Risk Assessment, the Executive Officer will approve or disapprove the revised Health Risk Assessment. The Executive Officer will modify the Health Risk Assessment to correct any deficiencies that the operator has not properly corrected and approve it as modified within 180 days of the disapproval of the second submittal or failure to resubmit.

(g) Updating Emissions Inventory and Health Risk Assessment

Beginning March 1, 2007, and every March 1st thereafter, the operator of a railyard shall update and submit:

- (1) the emissions inventory for criteria pollutants and toxic air contaminants emissions inventory for the previous calendar year, and
- (2) the Health Risk Assessment for the previous calendar year if there is an increase in total emissions of criteria pollutants or toxic air contaminants relative to the previous year's facility-wide risk level, or if the previous Health Risk Assessment did not show levels requiring public notification and the new results would require public notification.

(h) Public Notification Requirements

- (1) The operator of a railyard with an approved Health Risk Assessment showing that the risk that exceeds the Public Notification Level, shall notify the public within 180 days of the Executive Officer's approval of the Health Risk Assessment and every 12 months thereafter, until the total facility-wide risk is below the Public Notification Level.
- (2) The notification shall be provided in accordance with the most recently District approved "Public Notification Procedures for Phase I and II Facilities under the Air Toxics Hot Spots Information and Assessment Act." The location selected for the public notification meeting shall ensure that the people located within impact areas are not required to travel more than 5 miles.
- (3) The operator of a railyard required to conduct a public notification meeting under paragraphs (h)(1) and (h)(2) that is also required to submit a Risk Reduction Plan to the Executive Officer pursuant to Rule 3504, paragraph (c)(1), shall make available at the public notification meeting

the most recent annual progress report submitted to the Executive Officer pursuant to Rule 3504, paragraph (g)(1).

(i) Fees

The Health Risk Assessment shall constitute a plan for the purpose of fees assessed under Rule 306 – Plan Fees.

(j) Appealing Disapproval of Emissions Inventory and Health Risk Assessment

The operator of a railyard may appeal the disapproval by the Executive Officer of an emissions inventory or health risk assessment to the Hearing Board under Rule 216 – Appeals and Rule 221 - Plans. If the Hearing Board denies the appeal, the health risk assessment shall be revised, consistent with the findings and rulings by the Hearing Board and resubmitted within 90 days after the Board’s decision. The revised submittal shall correct all deficiencies identified by the Hearing Board.