



Linda S. Adams
Secretary for
Environmental Protection

Air Resources Board

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov



Arnold Schwarzenegger
Governor

December 21, 2007

Mr. Gary Rubenstein, Senior Partner
Sierra Research, Inc.
1801 J Street
Sacramento, California 95811

Per your request, the Air Resources Board (ARB) staff has reviewed (see Enclosure A) the diesel particulate matter emission inventory and air dispersion modeling results of the Union Pacific Railroad (UP) Intermodal Container Transfer Facility (ICTF)-Dolores facility for calendar year 2005 provided by Sierra Research, Inc.

Based on this emission inventory and air dispersion modeling analysis, we calculated the health impacts of the existing facility, on the estimated air diesel particulate matter concentrations from AERMOD modeling results. These health risks are presented in the enclosed isopleths of cancer risk for 70-year exposure and non-cancer chronic health hazard index (see Enclosures B and C, respectively).

This analysis and isopleths for the UP ICTF-Dolores modernization project is not related to the Railyard Health Risk Assessment being prepared pursuant to the 2005 Statewide Railyard Agreement. Please also note that ARB staff expects the UP ICTF Railyard Health Risk Assessment to be released in early 2008.

Should you have questions, please feel free to contact Mr. Harold Holmes, Manager, Engineering Evaluation Section, at (916) 324-8029 or Dr. Eugene Yang, Air Resources Engineer, Engineering Evaluation Section, at (916) 327-1510.

Sincerely,

Dean C. Simeroth, Chief
Criteria Pollutant Branch

Enclosures

cc: (See next page.)

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. Gary Rubenstein, Senior Partner
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cc: Mr. Harold Holmes, Manager
Engineering Evaluation Section

Dr. Eugene Yang, Air Resources Engineer
Engineering Evaluation Section

Mr. Gary Rubenstein, Senior Partner
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bcc: Lanny A. Schmid, Director
Environmental Operations Safety
Union Pacific Railroad
1400 Douglas Street, Stop 180
Omaha, Nebraska 68179-1030

Robert D. Fletcher, SSD
Robert D. Barham, SSD

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Branch #: 1021007

Enclosure A
ARB Review of UP ICTF Modernization Project
(December, 2007)

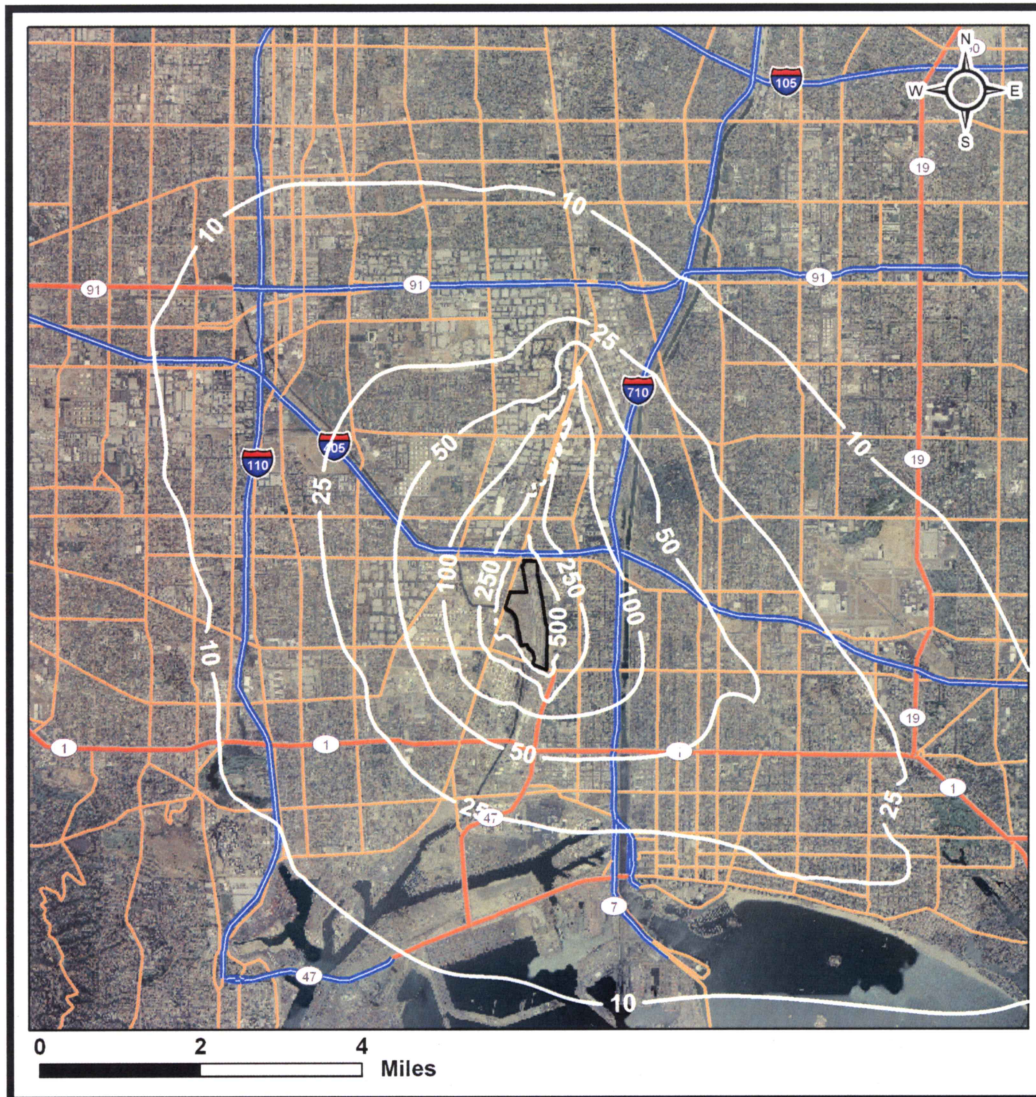
The Air Resources Board (ARB) staff has reviewed the emission inventory and dispersion modeling of the modernization project of Union Pacific Intermodal Container Transfer Facility (ICTF) and Dolores Railyards, conducted by Sierra Research, Inc. The methodologies of diesel PM emission inventory evaluation and dispersion model simulation are consistent with other health risk assessments performed by ARB in the past. ARB staff evaluated the cancer risk and non-cancer chronic health index using dispersion modeling results. The approach for cancer risk and non-cancer chronic health index are based on *ARB Draft Health Risk Assessment Guidance for Railyard and Intermodal Facilities* (ARB, 2006) and *Air Toxics Hot Spots Program Risk Assessment Guidelines* (OEHHA, 2003).

The potential cancer risks are presented by isopleths according to estimated diesel particulate matter (PM) air concentrations for a 70-year exposure, expressed as the incremental number of potential cancer cases that could be developed per million people exposed. The non-cancer risks are presented by various hazard index isopleths using the diesel PM reference exposure level.

The area with the greatest impact has an estimated potential cancer risk of over 500 chances in a million, occurring in a small area surrounding the UPRR ICTF Railyard within a quarter of mile from the facility boundary. As diesel PM air concentrations decrease from the sources, the estimated cancer risks also drop to the level of 50 chances in a million within a 2-mile distance, and continuously drop to a level of 10 in a million within another 4-mile distance. The affected population of the risk level greater than 10 in a million is estimated at about 650,000 within the receptor domain, as compared to 1.3 million of affected population from the four-combined Commerce railyards (i.e., UP Commerce; BNSF Commerce, Commerce Eastern and Sheila), and 1.4 million affected people from in-port diesel PM emissions from Ports of Los Angeles, and Long Beach. The potential risk at the point of maximum impact (PMI) and the maximum individual cancer risk are estimated at about 1,200 and 800 chances in a million, respectively. Both are located outside the ICTF property boundary on the eastern side.

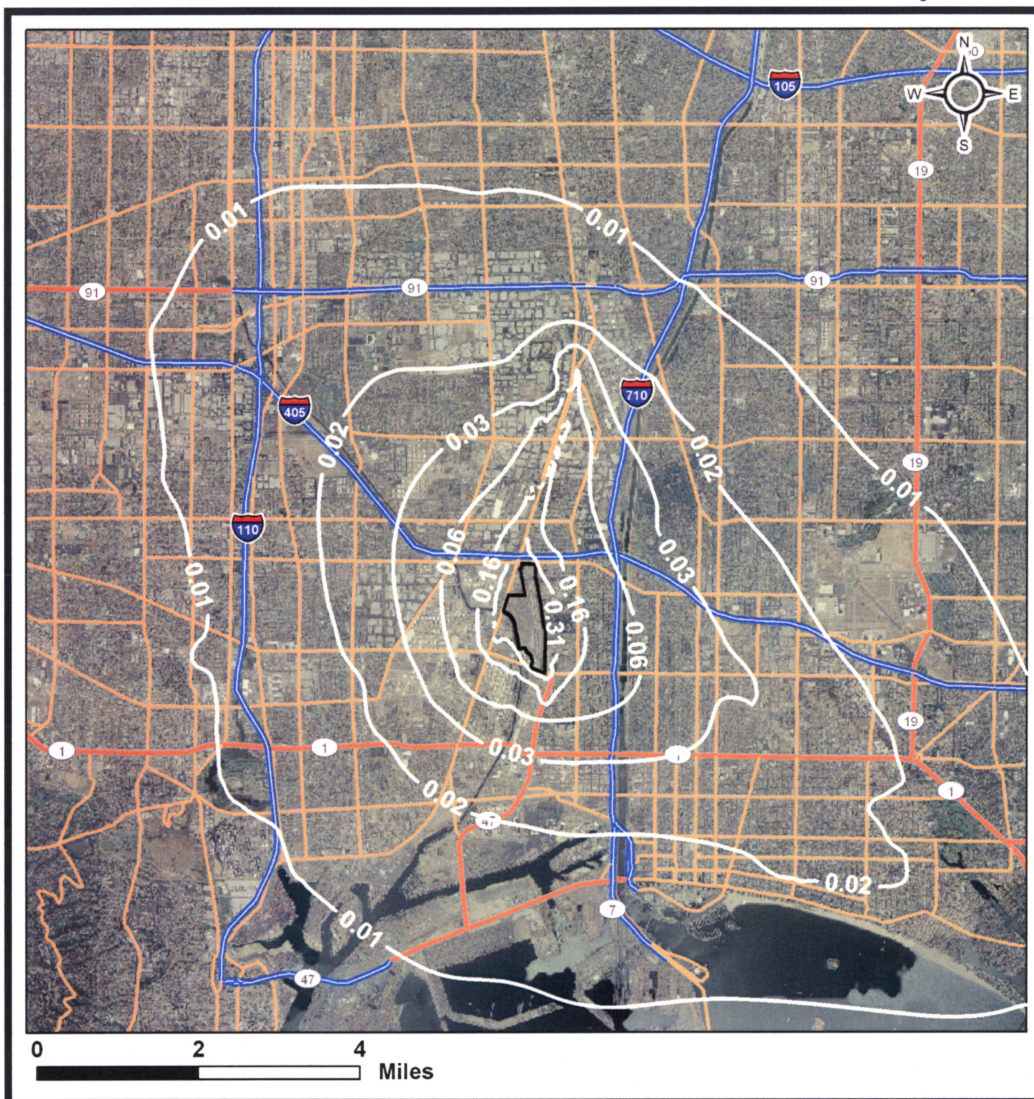
The potential non-cancer chronic health index from diesel PM emissions from modernization project are estimated to be less than 1.0. According to OEHHA Guidelines (OEHHA, 2003), these levels indicate that the potential non-cancer chronic public health risks are less likely to happen.

**Enclosure B:
Estimated Potential Cancer Risks (as chances per million) Associated
with Diesel PM Emissions from the UP ICTF Railyard**



Note: The data within this map is solely associated with the Union Pacific Rail Road ICTF Modernization Health Risk Assessment and is in no way associated with the Railyard Health Risk Assessment CARB is conducting pursuant to the 2005 ARB/Railroad Statewide agreement.

Enclosure C:
Estimated Non-Cancer Chronic Risks (Indicated as Hazard Indices)
Associated with Diesel PM emissions from the UP ICTF Railyard



Note: The data within this map is solely associated with the Union Pacific Rail Road ICTF Modernization Health Risk Assessment and is in no way associated with the Railyard Health Risk Assessment CARB is conducting pursuant to the 2005 ARB/Railroad Statewide agreement.