



Placer County
— CALIFORNIA —

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Roseville Rail Yard Air Quality Study

The webpage is in chronological order. The most recent information is at the end.

Updated 2/15/12

On October 14, 2004, at the Placer County Air Pollution Control District's (District) Board of Directors meeting, the District released findings of a study, the [Roseville Rail Yard Study](#), conducted by the California Air Resources Board (ARB) on airborne particulate matter emissions from diesel-fueled locomotives at the Union Pacific J.R. Davis Yard in Roseville, California. The study was based upon locomotive diesel emissions at the facility and their related health risks from 1999 to 2000.

The District requested the study to:

1. Determine the level of risk to the public from the emissions at the railyard;
2. What that risk meant in comparable terms to other sources of diesel emissions;
3. What could be done to reduce the emissions, and thereby reduce the risks.

The ARB, in August 1998, had designated diesel particulate matter as a toxic air contaminant.

Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter, or PM, which includes carbon particles or "soot". The Study results indicated high concentrations of diesel PM in an area surrounding the Railyard. The level of health risk associated with these PM emissions depends on length of exposure and proximity to the yard. Further questions regarding the Study can be found on the [District Questions and Answers webpage](#).

October 14, 2004 APCD Board of Directors Meeting Information

- [Rail Yard Study Executive Summary](#) (pdf)
- [Rail Yard Study Staff Report](#) (pdf)
- [District Slide Presentation](#) (pdf)

- [Air Resources Board's Roseville Rail Yard Study](#) (pdf)
- [Union Pacific Slide Presentation](#) (pdf)
- [Office of Environmental Health Hazard Assessment Guide](#) (pdf)
- [Press Release](#) (pdf)

On December 9, 2004 the District's Board of Directors approved Resolution #04-21 authorizing the Chairman and the APCO to sign an [Agreement](#) with UPRR regarding mitigation measures and air monitoring for the Roseville Rail Yard. The Agreement that was signed has three main components:

- Mitigation Plan
- Grant Program
- Monitoring Project

On April 14, 2005, the District's Board of Directors received a briefing on the mitigation measures that were being evaluated for implementation at the railyard. The mitigation measures were targeted for implementation over three calendar years (2005, 2006, 2007), and specific to the Agreement in §2A (iv) is the requirement that "progress reports towards achieving the emissions reductions specified in section A (i) shall be presented to the District Board and community by the end of the calendar years 2005, 2006, and 2007." The commitment is for at least a 10% reduction of particulate matter emissions by the end of 2007 from the baseline year (1999-2000).

April 14, 2005 APCD Board of Directors Meeting Information

- [Union Pacific Railroad Company Mitigation Measures Evaluation - Executive Summary](#) (pdf)
- [Union Pacific Railroad Company Mitigation Measures Evaluation - Staff Report](#) (pdf)
- [Staff Slide Presentation](#) (pdf)
- [UPRR Slide Presentation](#) (pdf)

On December 8, 2005, the District Board of Directors received a comprehensive review of District involvement with the rail related activities at the Roseville Rail Yard leading up to and including the current status of the various elements of our Agreement for mitigation and air monitoring with Union Pacific. The Board has been updated frequently regarding portions of elements, however this report combines all the information to date into one document.

December 8, 2005 APCD Board of Directors Meeting (Informational)

- [An Update on the PCAPCD /UPRR Roseville Rail Yard Activities - Synopsis](#) (pdf)
- [Progress Report Pertaining to Mitigation Measures and Monitoring Activities for the Roseville Rail Yard - Staff Report](#) (pdf)

- [Staff Slide Presentation](#) (pdf)

April 13, 2006 APCD Board of Directors Meeting Information

- [Summary of Data Analysis on the Roseville Rail Yard Air Monitoring Project - 2005](#) (pdf)
- [First Year Data Analysis Report](#) (pdf)

July 13, 2006 California Air Resources Board - Statewide Railroad Agreement Public Meeting

- [Advanced Locomotive Emission Control System, Demonstration at Roseville Rail Yard Presentation](#) (pdf)

December 14, 2006 APCD Board of Directors Meeting Information

- [Staff Report Memo for the Presentation](#) (pdf)
- [Staff Slide Presentation](#) (pdf)

April 5, 2007 - ALECS Final Report Released

- [Press Release](#) (pdf)
- [Advanced Locomotive Emissions Control System Final Report](#) (pdf)
- [Union Pacific Railroad Comment Letter on Final Report](#) (pdf)
- [TAX Comment Letter on UP Comment Letter](#) (pdf)

April 12, 2007 - APCD Board of Directors Meeting Information

- [Summary of Data Analysis on the Roseville Rail Yard Air Monitoring Project - 2006](#) (pdf)
- [Staff Slide Presentation](#) (pdf)
- [Second Year Data Analysis Report](#) (pdf)

October 24, 2007 - The Supplemental Study of Elemental and Organic Aerosols Analysis for Roseville Rail Yard Monitoring Project

This report was prepared as an element of work sponsored by the United States Environmental Protection Agency via grant funding managed by the Placer County Air Pollution Control District. The purpose of this special study is to augment a more comprehensive elemental and organic analysis of aerosol samples collected during the summer of 2005 for locomotive diesel exhaust in Roseville, California. These samples were analyzed for particle sizes, metals, polycyclic aromatic hydrocarbons (PAHs), n-alkanes, sugars, and fatty acids. The results show that the particles collected by the samples were in the very fine to ultra-fine size fraction which is similar to diesel truck results presented in the literature. And the samples had higher concentration of PAHs than diesel truck emissions.

that are the basis of many risk assessments. The complete report can be downloaded below.

- [Supplemental Study Final Report 2007](#) (pdf)

August 14, 2008 - APCD Board of Directors Meeting Information

- [Summary of Data Analysis on the Roseville Rail Yard Air Monitoring Project - 2007](#) (pdf)
- [Staff Slide Presentation](#) (pdf)
- [Third Year Data Analysis Report](#) (pdf)

October 9, 2008 - APCD Board of Directors Meeting Information

- [Staff Report](#) (pdf)
- [Staff Report Addendum](#) (pdf)
- [Rule 515 - Stationary Rail Yard Control Emission Reduction Credits](#) (pdf)
- [Staff Slide Presentation](#) (pdf)
- [UPRR Comments and Presentation on Rule 515](#) (pdf)

August 20, 2009 - APCD Board of Director Meeting Information

On August 20, 2009, the District Board of Directors approved a contract with Sierra Research, Inc. to conduct a project which will evaluate computer modeled diesel particulate matter (DPM) levels around the Union Pacific Railroad (UPRR) - Roseville Rail Yard in comparison to monitored DPM levels. This follow-up research study is based upon the Roseville Rail Yard Air Monitoring Project (RRAMP). The RRAMP was a four-year (2005-2008) air monitoring study of the air pollutant impacts emanating from the UPRR Roseville Rail Yard facility. The proposed project results will help to quantify the level of potential bias in the air dispersion model for future modeling analysis and provide useful information regarding the interpretation of data collected in the RRAMP.

- [Staff Memo](#) (pdf)
- [Sierra Research Project Proposal](#) (pdf)

December 10, 2009 - APCD Board of Director Meeting Information

On December 10, 2009, the District Board of Directors received a comprehensive final report for the Roseville Rail Yard Air Monitoring Project (RRAMP) along with the final updates of the 2004 UPRR/PCAPCD Agreement (Agreement) form litigation plan, and the grant program with Union Pacific. This report is the culmination of four years of air monitoring and analysis of the data collected from the JR Davis Union Pacific Rail Yard site located in Roseville and the summary of mitigation measures and the grant program. The results of

RRAMP confirm that mitigation measures agreed to by UPRR in a 2004 Agreement have been met.

- [Board Memo and Final Report](#) (2.4MB) (pdf)
- [Staff Presentation](#) (pdf)

October 13, 2011 - APCD Board of Directors Meeting

On October 13, 2011, the APCD Board were presented with a final report on the evaluation of air dispersion modeling results compared to air monitoring concentration measurements at the JR Davis Union Pacific Rail Yard. The complete report can be found at this link: [UPRR Modeling Evaluation Study](#). The Board memo and accompanying documents can be found on the Board of Directors page.

Useful Links

- California Air Resources Board - [Rail Yard Emission Reduction Program](#)
- U.S. Environmental Protection Agency - [Locomotives](#)
- [Union Pacific Railroad](#)

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