

Children’s Environmental Health Protection Site Summary

Wilmington

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Site Location:

Wilmington is located near the ports of Los Angeles and Long Beach in the south harbor area of Los Angeles County. Children’s Environmental Health Protection monitoring will be conducted near the Wilmington Park Elementary School. The site chosen for monitoring is adjacent to the school grounds on property owned by the Mahar House, a Los Angeles-based charitable organization. The Mahar House is located at 1115 Mahar Avenue.



Site Approval:

In the winter of 2000 representatives for the Mahar House granted the Air Resources Board (ARB) permission to install an ambient air monitoring station on the property of the Mahar House.

Expected Monitoring Start Date:

Collection of ambient air quality data is expected to begin on or about May 1, 2001.



1. Mahar House (Primary Site)
2. Hawaiian Elementary School (Secondary Site)

Reason for Choosing Wilmington:

Wilmington was chosen because of the location of high-risk facilities within the community and because of the proximity of those high-risk facilities to schools in the area. Wilmington is home to multiple oil refineries with

a combined refining capacity of over 250,000 barrels per day. Wilmington is also situated near the ports of Los Angeles and Long Beach, which are sources of diesel and fugitive emissions from bulk transport activities. There are an estimated 12 schools and childcare facilities in the area. The number of children attending Wilmington Park Elementary, plus those attending nearby Wilmington Park Children's Center, is approximately 1400.

Connection to Other Air Resources Board Programs:

Monitoring near Wilmington Park Elementary will be used to support the Community Health Program (<http://www.arb.ca.gov/ch/ch.htm>) and will give local residents and decision-makers better information on pollutant exposures and their associated health risks (http://www.arb.ca.gov/ch/assess_risk.htm). Data from the Wilmington site will also provide information for the ARB's program to mitigate the health risks from diesel particulate (<http://www.arb.ca.gov/diesel/background.htm>).

Additional exposure data will be collected at the Wilmington Park Elementary School by researchers from the Southern California Particle Center and Supersite (SCPCS). The mission of this research-based group is "...to identify and conduct the highest priority research for airborne particulate matter (PM) to ensure protection of the public health." The SCPCS data from the Wilmington Park Elementary School will enhance data collected by the ARB for the Children's Environmental Health Protection Program.



Wilmington Air Monitoring Station

Monitoring Parameters:

Criteria pollutants, air toxics, and meteorological parameters will be measured using standard methods. Special instruments and methods will be used to approximate the concentration of diesel particulate. The monitored pollutants will include carbon monoxide, ozone, oxides of nitrogen, sulfur dioxide, PM10, PM2.5 (real-time), and toxic gases and metals, including 1,3-butadiene, benzene, formaldehyde, and hexavalent chromium. Diesel particulate will be indexed to elemental carbon and black carbon measurements. Meteorological parameters will include wind speed, wind direction, ambient temperature, and relative humidity.

Monitoring Schedule:

Monitoring for gaseous criteria pollutants (carbon monoxide, ozone, oxides of nitrogen, and sulfur dioxide) will be continuous for the duration of the project. PM2.5 and black carbon measurements will be made continuously in real-time or near real-time. PM10 samples will be collected once every six days for mass analysis and for elemental carbon analysis. Samples collected for analysis of aldehydes, total metals, and hexavalent chromium will be conducted every sixth day. Air samples will also be collected every sixth day and analyzed for toxic compounds including 1,3-butadiene, benzene, and toluene. Meteorological information at the site will be collected continuously.

Anticipated End Date:

The ARB anticipates that ambient air monitoring will end at the Mahar House on or about May 1, 2002.

Monitoring at Multiple Sites in Wilmington:

Additional monitoring will be conducted at a secondary site, located at Hawaiian Elementary School (540 Hawaiian Avenue). Primary focus of the monitoring at this satellite site is to obtain more information about the concentration of diesel particulate from the freeways located to the west of the site and from the port activities located to the south.

Agencies/Resources/Roles:

The ARB is the lead agency for carrying out Children's Environmental Health Protection monitoring and has overall responsibility for the study. The South Coast Air Quality Management District (SCAQMD) provided assistance in selecting the Wilmington station. Laboratory analysis of all samples collected at

the Wilmington site will be performed by the ARB. ARB staff will conduct quality control and quality assurance activities.

Within the ARB, the Monitoring and Laboratory Division, Air Quality Surveillance Branch (Air Monitoring South Section and Special Purpose Monitoring Section) will have operational oversight for the station and will collect samples and perform instrument quality control checks on an ongoing basis. The Quality Management Branch (Operations, Planning and Assessment Section) will have the lead role in coordinating, tracking the project, validating the data, and preparing the initial project report. The Organic and Inorganic Laboratory Sections will perform analytical work.

The Planning and Technical Support Division is coordinating the Community Health Program and will use the data generated at the Mahar House monitoring station to support other Community Health studies currently under development. The information gathered may assist in developing health risk assessments at the neighborhood level. Public outreach for the program is being coordinated by the Planning and Technical Support Division.

Emission Sources:

The primary sources of emissions impacting the Wilmington area are refineries and the nearby port facilities. Other sources of air pollution in Wilmington include neighborhood-scale sources such as dry cleaners, chrome plating operations, and service stations.

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