

State of California



California Environmental Protection Agency

AIR RESOURCES BOARD

Staff Report

**Analysis of the Coso Junction
PM10 Redesignation Request and
Maintenance Plan**

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I. BACKGROUND

The Coso Junction Planning Area (Coso Junction) was initially designated as a PM10 nonattainment area in 1987 along with the Indian Wells Valley and Trona areas. Together they comprised the Searles Valley PM10 nonattainment area. The Great Basin Unified Air Pollution Control District (District) adopted the first PM10 attainment plan for the Coso Junction portion of the Searles Valley PM10 nonattainment area in November 1991. The Coso Junction attainment demonstration was based on controlling dust from Owens Lake. In August 2002, the US Environmental Protection Agency (U.S. EPA) redesignated the Searles Valley into three separate PM10 nonattainment areas; Coso Junction, Indian Wells Valley, and Trona.

On May 19, 2010, the U.S. EPA finalized its determination in the Federal Register that Coso Junction attained the 24-hour PM10 standard. Based on their clean data finding, U.S. EPA has determined that certain nonattainment area requirements do not apply, including those for reasonable further progress (RFP), an attainment demonstration, reasonably available control measures (RACM), and contingency measures, because these provision's sole purpose is to achieve attainment of the standard. On May 17, 2010, the District adopted the PM10 Redesignation Request and Maintenance Plan (Plan) for Coso Junction. The Plan officially requests that this area be redesignated to attainment for the PM10 standard and charts the course for continued maintenance of the standard. The concerted adoption of controls on Owens Lake resulted in the Coso Junction attaining the 24-hour PM10 standard based on 2007-2009 PM10 data.

II. REDESIGNATION REQUIREMENTS

Air Resources Board (ARB) staff reviewed the Coso Junction PM10 Maintenance Plan within the context of the Clean Air Act (Act), which identifies the following requirements an area must meet to be redesignated to attainment:

- A. The PM10 standard has been attained;
- B. The District has an approved State Implementation Plan (SIP) and the State has met all applicable Act requirements for PM10 in the nonattainment area;
- C. The improvement in PM10 air quality is due to permanent and enforceable emission reductions; and
- D. U.S. EPA has approved a maintenance plan.

The Act also sets the general framework for maintenance plans¹. Each PM10 maintenance plan must provide for continued maintenance of the PM10 standard for ten years after redesignation and includes the following components:

1. Attainment emission inventory;

¹ Calcagni, John, Memorandum, *Procedures for Processing Requests to Redesignate Areas to Attainment*, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, September 4, 1992. <http://www.epa.gov/ttn/oarpg/t5/memoranda/redesignmem090492.pdf>

2. Maintenance demonstration;
3. Commitment to continue the monitoring network operation;
4. Commitment for verification of continued attainment; and
5. Contingency plan to promptly correct any violation of the PM10 standard that occurs after the area has been redesignated.

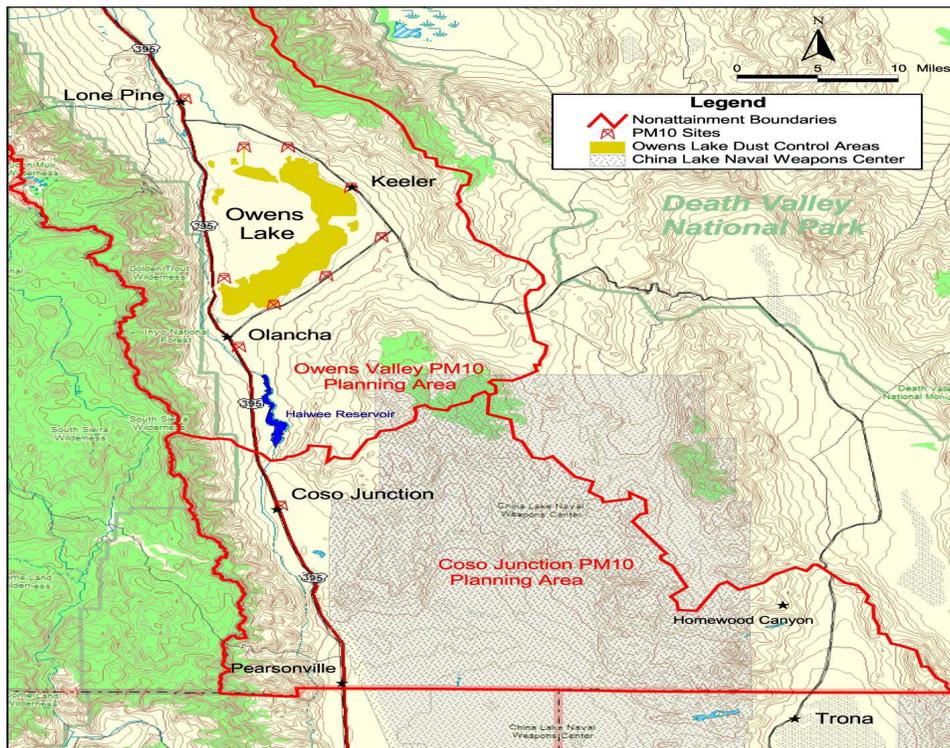
III. EVALUATION OF THE COSO JUNCTION PLAN

Based on review of the Coso Junction PM10 Maintenance Plan and the District's supporting technical analysis, ARB staff concurs that the Plan meets the Act's requirements. The following sections describe the major elements of the Plan and the redesignation request.

A. Coso Junction Attains the 24-Hour PM10 Standard

PM10 is measured at one monitoring station in Coso Junction (Figure 1). A TEOM (tapered element oscillating microbalance) collects hourly PM10 samples at this site. The 24-hour standard is met when the estimated number of exceedances measured over a three year period averages one or less per year. Daily PM10 monitoring data collected at Coso Junction over the last 3 years has shown on average no more than 1 exceedance of the PM10 standard per year as required to demonstrate attainment of the federal standard. Figure 1 illustrates the Coso Junction PM10 nonattainment area, monitor locations, and the area's close proximity to Owens Lake.

Figure 1. PM10 Monitoring Stations in Coso Junction



On three days over the 2007 to 2009 period, the 24-hour standard was exceeded due to high wind conditions that suspended fugitive dust from an unpaved parking area and from Owens Lake. The owner of the unpaved parking area was notified and the area was graveled in 2008 and surfaced with asphalt in 2009 to control fugitive dust. Table 1 shows the maximum 24-hour concentration at the Coso Junction site between 2007 and 2009 and average exceedance days, demonstrating attainment.

Table 1. Coso Junction PM10 Data from 2007 to 2009

Monitoring Station	Observed Maximum 24-hour Concentration ($\mu\text{g}/\text{m}^3$)			24-Hour Exceedance Days	3-year Average Exceedance Days
	2007	2008	2009	2007-2009	2007-2009
Coso Junction	283	137	168	3	1

B. The State Has Met Applicable Act Requirements

ARB and the District have met all of the Act requirements applicable for a moderate PM10 nonattainment area to be considered for redesignation. Due to the clean data finding, this Plan will serve as meeting the requirement of an approved SIP.

C. Improvement in Coso Junction’s PM10 Air Quality is Due to Permanent and Enforceable Reductions in Emissions

Coso Junction is an isolated area with a population of roughly 100 people. The main source of PM10 pollution in Coso Junction is transport of fugitive dust from the Owens Valley. In 1998, the Owens Valley SIP was adopted and approved by the U.S. EPA including a control strategy that required dust controls on 16.5 square miles of the lakebed. Under the Owens Valley SIP, the City of Los Angeles is responsible for mitigating the dust generated from Owens Lake in order to bring the area into attainment with the PM10 standard. (GBUAPCD, 1998) The Owens Valley SIP was revised in 2003 to expand dust controls to 29.8 square miles of the lake bed by December 31, 2006. The City of Los Angeles successfully implemented these control measures by the required deadline.

In 2008, the Owens Valley SIP was amended to expand control requirements to a total of 43.1 square miles of the Owens Lake bed. The City of Los Angeles is expected to have dust control measures implemented on 39.6 square miles of the lakebed by April 1, 2010, and then to expand the control area to 43.1 square miles by October 1, 2010. Overall, PM10 emissions from the Owens Lake bed have been reduced by 90% since 2000 when the City of Los Angeles initiated efforts to control windblown dust at Owens Lake. Thus, the improvement in Coso Junction is due to permanent and enforceable reductions.

D. Maintenance Plan

The Coso Junction PM10 Maintenance Plan includes the following components: emission inventory; commitment to continue monitoring network operation; commitment for verification of continued attainment; and contingency plan.

1. Attainment Emission Inventory

An emission inventory is a critical tool used to support evaluation, control, and mitigation of air pollution which is comprised of a systematic listing of the sources of air pollutants along with the amount of pollutants emitted from each source or category over a given period of time. Emission inventories are estimates of the air pollutant emissions released into the environment – they are not direct ambient concentration measurements. To determine the expected emissions in future years, emission inventories incorporate the effects of growth and existing regulations (baseline inventories). An attainment inventory identifies the level of emissions during the period when air quality data show attainment.

The Coso Junction PM10 Maintenance Plan presents an updated 2009 attainment inventory of direct PM10 emissions split by source subcategory. Inventory updates include the latest point, area, and mobile source emissions for the Coso Junction. Total PM10 emissions are estimated at 1,427 pounds per day for the Coso Junction, which is less than 0.1% of the emissions caused by windblown dust from Owens Lake. In addition to the 2009 adjusted baseline PM10 emissions, the Coso Junction PM10 Maintenance Plan provides emission projections out to 2025. No significant growth or changes in the emission inventory are expected for Coso Junction through the year 2025.

Table 2. Coso Junction PM10 Emissions Inventory

Daily PM10 Emissions for 2009 through 2025	
Stationary Sources	Pounds/day
California Lightweight Pumice	167
China Lake Naval Air Weapons Station	84
Coso Operating Company	953
Halliburton Services	20
Twin Mountain Rock	58
Area Sources	
Unpaved Roads	33
Paved Roads	101
Mobile Sources	
On Road Motor Vehicles	12
Total PM10 (pounds per day)	1,427

2. Maintenance Demonstration

Coso Junction is projected to maintain attainment with the PM10 standards due to ARB, District, and other State and local control measures already in place. No significant growth or changes in the emission inventory are expected for Coso Junction through the year 2025. Thus, Coso Junction is expected to maintain the PM10 standard. In addition, regional PM10 emissions are projected to decrease even further in the future as a result of the additional controls on Owens Lake.

3. PM10 Monitoring Network

The District commits to continue PM10 monitoring to verify continued attainment of the PM10 standard. The existing PM10 monitoring network in Coso Junction includes a PM10 TEOM monitor located at the Highway 395 rest area in Coso Junction (Figure 1). Federal regulations require daily sampling at the site reporting peak PM10 concentrations. This real-time PM10 monitor meets this daily monitoring requirement.

4. Verification of Continued Attainment

To verify continued attainment of the PM10 standard, the District commits to continue daily PM10 monitoring at the Coso Junction rest area to help ensure new sources of PM10 are identified and controlled, if necessary.

5. Contingency Plan

The Act requires the maintenance plan to include contingency provisions for prompt correction of any PM10 standard violation that might occur after the area has been redesignated to attainment. The maintenance plan is not required to contain fully adopted contingency measures that will go into effect without further state action as is required in attainment SIPs. Instead, for maintenance plans, the area must have a plan to ensure that contingency measures are adopted once they are triggered.

District staff believes the control strategy and contingency requirements in the 2008 Owens Valley PM10 SIP are adequate to protect air quality in the Coso Junction area. Therefore, no additional contingency measures will be needed to ensure future compliance with the federal PM10 standard in Coso Junction.

IV. STAFF RECOMMENDATION

ARB staff has reviewed the PM10 Redesignation Request and Maintenance Plan for Coso Junction and consulted with District staff during this review. ARB staff finds that the Coso Junction PM10 Maintenance Plan meets all applicable Act requirements. ARB staff believes that implementation of this Plan will continue to maintain PM10 levels below the national air quality standard in Coso Junction. Therefore, we recommend that the Board adopt the Coso Junction PM10 Maintenance Plan as a revision to the California SIP for submittal to U.S. EPA. In addition, ARB staff recommends that the Board approve the District's request that Coso Junction be redesignated from nonattainment to attainment for the national PM10 standard.