

Attachment 2

**Analysis of BO 080128-01 as Amended by BO 130916-01
Under CH&SC § 40727.2 (a)**



Analysis of Board Order 080128-01 as Amended by Board Order 130916-01 Under CH&SC § 40727.2 (a)

(a) Analysis of existing requirements applicable to the same source or equipment.

Board Order 080128-01 applies to dust control requirements at Owens Lake, CA adopted pursuant to the 2008 Owens Valley PM10 State Implementation Plan and included as a maintenance measure in the 2010 Coso Junction PM10 Maintenance Plan. District rules and Board Orders that apply to dust control requirements at Owens Lake include the following:

District Rules

- 400 - 20% Opacity Limit
- 401 - Fugitive Dust Control
- 402 - Nuisance

District Rules 400, 401 and 402

These District rules apply to fugitive dust sources both on the Owens Lake bed and off the lake bed. However, through the 2008 Owens Valley SIP, dust control requirements that require the City of Los Angeles to control dust on the Owens Lake bed are ordered through board orders that specify which lake bed areas are to be controlled. Board Order 080128-01 as amended by Board Order 130916-01 addresses dust control measures on the lake bed. The District Rules can be found at <http://www.gbuapcd.org/rulesandregulations/index.htm>.

District Board Orders

- Hearing Board Order GB09-06: Findings and Order Granting Regular Variance from Requirements Set Forth in Governing Board Order 080128-01 (September 25, 2009) for Phase 7a Dust Control Area
- Board Order 110317-01: Findings and Decision of Governing Board Upon Hearing for Stipulated Order for Abatement (March 17, 2011)
- Board Order 130819-01: Findings and Decision of District Governing Board Upon Hearing for Stipulated Order for Abatement 110317 (August 19, 2013) for Phase 7a Dust Control Area

Hearing Board Order GB09-06 – Variance (September 25, 2009)

A variance was granted to the Los Angeles Department of Water and Power that extended the October 1, 2009 deadline for the completion of Moat & Row dust control measures on 3.5 square miles of the Owens Lake bed to October 1, 2010. The variance was needed because of the need to complete an environmental study and delays related to obtaining a lease from the State Lands Commission. The PM10 emissions that would have been emitting because of the one-year delay in implementing the Moat & Row dust control measures were offset by two variance conditions. 1) The variance conditions included implementing Best Available Control Measure (BACM) using gravel on two square miles of the lake bed outside the dust control boundaries required in the 2008 SIP, and 2) implementing temporary tilling on 3.5 square miles of the shallow flood BACM areas that were under construction and were to be flooding by October 2010. The 2.03

square mile gravel project was fully implemented by November 2012. Hearing Board Order GB09-06 is included in Board Order 130916-01 as Exhibit 2 (See Attachment 1).

Board Order 110317-01 – Stipulate Order for Abatement (March 17, 2011)

Due to the denial of a lease from the State Lands Commission to implement the Moat & Row dust control measure on 3.1 square miles of the Owens Lake bed, the District Governing Board issued a Stipulated Order for Abatement to install Best Available Control Measures on the 3.1 square mile area (known as the Phase 7a dust control area) by December 31, 2013, except for areas that will have managed vegetation BACM which will be fully implemented by December 31, 2015. The emissions from the Phase 7a area were offset by a \$6.5 million contribution to be used for Clean Air Projects within the District. These projects included paving roads and parking lots in the Owens Lake area, replacing over 450 non-EPA certified woodstoves with cleaner burning appliances, other assorted projects which provided air quality health benefits to people throughout the District. Information on projects that were funded can be found at <http://capp.gbuapcd.org/>. Governing Board Order 110317-01 is included in Board Order 130916-01 as Exhibit 3 (See Attachment 1).

Board Order 130819-01 – Modified Stipulated Order for Abatement (August 19, 2013)

Due to the discovery of cultural artifacts in the Phase 7a dust control areas, the City was delayed in its efforts to implement dust control measures. The District Governing Board issued a Modified Stipulated Order for Abatement that extended the deadline to implement BACM on the Phase 7a areas to December 31, 2015, except for areas that will have managed vegetation BACM which will be fully implemented by December 31, 2015. As part of this abatement order the City of Los Angeles will make a \$10 million public benefit contribution for the District to use to control PM10 emitted from the Keeler Dunes. Dust control measures are expected to be in place in the Keeler Dunes around the end of 2014. Governing Board Order 130819-01 is included in Board Order 130916-01 as Exhibit 6 (See Attachment 1).

Emissions and Air Quality Offset Analysis

Delays in the implementation of dust control measures in the Phase 7a area resulted in emissions beyond those projected in the 2008 Owens Valley SIP of about 9,059 tons of PM10 per year. However, these excess emissions were offset by the implementation of gravel BACM on 2.03 square miles of the lake bed. The completion of the gravel BACM project in November 2012 resulted in the reduction of 11,509 tons of PM10 per year. The gravel BACM area encompassed the former Study Area 1 and is shown in Exhibit 1 of the amended Board Order. In addition, dust control measures in the Keeler Dunes will result in future reductions of about 1,617 tons of PM10 per year. Table 1 shows the annual PM10 emissions from the Keeler Dunes, and the Phase 7a and Phase 8 dust control areas for the period from July 2008 through June 2012. During this four-year period, all of these areas were monitored through the Owens Lake Dust Identification Program. Prior to that period the monitoring network in the Phase 8 area was incomplete.

Period (July-June)	Keeler Dunes	Phase 7a	Phase 8
2008-09	1,128	5,866	4,970
2009-10	867	18,689	28,413
2010-11	1,504	5,741	11,280
2011-12	2,968	5,938	1,374
Average	1,617	9,059	11,509

Period (July-June)	Keeler Dunes	Phase 7a	Phase 8
2008-09	55	20	16
2009-10	53	39	26
2010-11	84	12	29
2011-12	92	15	6
Average	71	22	19

Although implementation of control measures in the Phase 7a areas was originally scheduled to be completed by October 1, 2010 under the Owens Valley SIP schedule, the gravel BACM controls implemented in November 2012 are four years or more ahead of the schedule when they would have been ordinarily ordered for control under the supplemental control requirement determination.¹ Until BACM is installed in the Phase 7a areas, the early emission reductions in the Phase 8 area can be considered to offset the emissions from the Phase 7a area.

Through the use of the Owens Lake Dust ID model the effects of implementing dust control measures in these areas was also analyzed. Table 2 shows the number of modeled violations of the federal PM10 standard that can be expected from the Keeler Dunes and the Phase 7a and

¹ This determination was issued by the District in 2011, but because of a LADWP appeal of the determination to CARB, the 2011 SCRCD was not confirmed until November 2012 when CARB upheld the District's determination. LADWP appealed the CARB decision to the Sacramento County Superior Court and is scheduled for trial in 2014.

Phase 8 dust control areas. The table shows the number of days each area caused a modeled violation of the federal standard during the period from July 2008 through June 2012. This shows that the average number of violations caused by the Phase 7a and Phase 8 areas each year are about the same, while the number of violations caused by PM10 from the Keeler Dunes is much higher. Because the Keeler Dunes are adjacent to the community of Keeler, implementing dust controls in this area is a high priority since it will have substantial benefits for protecting public health.

Although the delay in implementing BACM in the Phase 7a areas caused a two-year shortfall in the expected emission reduction trends for reasonable further progress (RFP, see Owens Valley SIP, Section 7.11), the early implementation of gravel BACM in the Phase 8 area puts the current emission reductions trend below the RFP line. In addition the Los Angeles Department of Water and Power's contribution of \$6.5 million for the Clean Air Projects and \$10 million to control dust from the Keeler Dunes will have long term air quality benefits for the residents of the District, especially those who live in Keeler.