

Board Order 080128-01 Attachment B

2008 Owens Valley Planning Area Supplemental Control Requirements Determination Procedure

BACKGROUND

The State Implementation Plan (SIP) adopted by the Great Basin Unified Air Pollution Control District (District) in 2003 required the City of Los Angeles (City) to install and operate PM₁₀ controls on a total of 29.8 square miles of the dried Owens Lake bed by the end of 2006. The 2003 SIP also contained a provision and procedures for an annual review of air quality monitoring data by the District's Air Pollution Control Officer (APCO) in order to determine if controls were needed on additional areas beyond the 29.8 square miles in order for the Owens Valley Planning Area to attain or maintain the federal 24-hour PM₁₀ National Ambient Air Quality Standard (NAAQS). If additional controls were needed, the 2003 SIP provided for the APCO to require the City to implement the necessary controls. This annual review and possible requirement for additional controls is known as the Supplemental Control Requirements (SCR) determination. The 2003 SIP required that SCR determinations use data collected starting July 1, 2002.

In December 2005, after analyzing data collected from July 2002 through June 2004, the District's APCO made the first SCR determination under the provisions of the 2003 SIP. The City objected to the APCO's analysis and submitted an alternative analysis of the data. After reviewing the City's analysis, the APCO revised the SCR determination in April 2006. The City also objected to the revised determination and filed a lawsuit against the District in May 2006. In June 2006 the City and the District entered into settlement negotiations in an attempt to resolve their disputes.

In December 2006 a final Settlement Agreement was approved by the District and the City. This agreement is Attachment A to Board Order 080128-01. Among other issues, the Settlement Agreement provides for modifications to be made to the 2003 SIP's SCR determination procedure. These modifications are incorporated into this revised 2008 SCR determination procedure.

CONDITIONS

The 2008 Owens Lake Dust Source Identification Program Protocol (Protocol) (Attachment C) contains the procedures to collect, screen, analyze and model the data used by the District's APCO to determine if exceedances of the 24-hour PM₁₀ NAAQS have occurred and additional Supplemental Controls are necessary on the Owens Lake bed. The following actions may be taken by the APCO and will not be considered a change to the Protocol:

- Add, remove or move PM₁₀ monitors and meteorological stations
- Replace TEOMs with any other USEPA-approved Reference or Equivalent Method monitors that collect hourly concentration data
- Replace Sensits with any other sand flux monitor (SFM) that collects hourly data
- Replace Cox Sand Catchers with any other SFM

- Add, remove or move SFMs as long as the maximum grid cell size for modeling remains at one square kilometer
- Calculate “from-the-lake” wind directions for new PM₁₀ monitor sites
- Determine default K-factors for new source areas

The Protocol and these Supplemental Control Requirements (SCR) specify many assumptions and decision trees to be followed that may need to be changed in the future. The following changes to the Protocol and the SCR may be made by written agreement of the APCO and the General Manager of the City of Los Angeles (City) Department of Water and Power:

- The background value of 20 µg/m³ may be changed to another value or a procedure may be established to calculate the background from upwind/downwind lake bed monitors
- The default K-factors may be updated
- The default seasonal cut points may be updated
- The CalPUFF modeling system may be changed to another USEPA guideline model
- The procedure for determining the sand flux from a Dust Control Measure (DCM) area may be updated
- The K-factor screening criteria may be updated
- From-the-lake wind directions in Attachment B, Table 1 may be changed to avoid including off-lake sources
- Non-reference or non-equivalent method special purpose PM₁₀ monitors may be added
- Procedures for determining source area boundaries may be updated
- Methods for directly measuring source area emission rates may be implemented

DEFINITIONS

A ***shoreline or near-shore PM₁₀ monitor*** is a fixed or portable USEPA-approved Federal Reference Method or Equivalent Method PM₁₀ Monitor located approximately on the 3600-foot elevation (historic shoreline) contour, or within the Owens Valley Non-Attainment Area above the 3600-foot elevation. The existing shoreline or near-shore PM₁₀ monitors are at Keeler, Flat Rock, Shell Cut, Dirty Socks, Olancha, Bill Stanley and Lone Pine (see Attachment B, Map 1).

A ***special purpose PM₁₀ monitor*** is a fixed or portable USEPA-approved Federal Reference Method or Equivalent Method PM₁₀ monitor installed upwind of or near potential dust source areas on the lake bed below the 3600-foot elevation. These lake bed PM₁₀ monitors will be used to monitor new dust sources areas to generate new K-factors and to evaluate model predictions at the PM₁₀ sites. They shall not be used to monitor compliance with the NAAQS and the data will not be submitted to USEPA’s Aerometric Information and Retrieval System (AIRS).

An ***exceedance*** is a midnight to midnight Pacific Standard Time 24-hour average PM₁₀ concentration greater than 150 µg/m³ measured by a shoreline or near-shore PM₁₀ monitor.

From-the-lake wind directions are determined by extending two straight lines from the PM₁₀ monitor site to the points on the 3600-foot contour of the Owens Lake bed that maximize the angle in the direction of the lake bed between the two straight lines. From-the-lake and non-lake wind directions for the existing PM₁₀ monitor sites are shown in Attachment B, Table 1.

Physical evidence of a source area boundary consists of Global Positioning System (GPS) data, visual observations, photographic observations, video observations, or any other method described for this purpose in the Dust ID Protocol.

BACM are Best Available Control Measures/Most Stringent Measures (MSM) defined as the dust controls determined to be BACM/MSM for Owens Lake in Paragraphs 15, 16 and 17 of Board Order 080128-01. If, in the future, the District changes or deletes existing BACM or adds new BACM, then the dust controls are those as revised by the latest District action.

Implements BACM control measures means BACM are constructed and meeting the performance standards outlined Paragraphs 15, 16 and 17 of Board Order 080128-01.

Extreme violators are areas currently required to implement BACM, but BACM are found to be insufficient to adequately control emissions.

Environmental analysis document complete means that a project level environmental document has been certified covering the location and the BACM/MSM selected for implementation by the City.

GENERAL SCR DETERMINATION PROCEDURE

1. If the City is in compliance with Paragraphs 1 and 3 of Board Order 08128-01 regarding the amount, timing and operation of existing and future dust controls, the APCO will not issue additional written SCR determinations until after May 1, 2010 and will not use data collected prior to April 1, 2010 for new determinations, except for Study Areas as provided in Paragraph 2, below. This will allow the City time to complete construction and implementation of the additional PM₁₀ controls within the 2008 Total Dust Control Area.
2. After May 1, 2010, the APCO will recommence written SCR determinations using the latest SCR procedure. Recommended determinations will use data collected only after April 1, 2010, except in those areas delineated as Study Areas. SCR determinations for Study Areas shall use data collected after July 1, 2006. The APCO shall make SCR determinations at least once in every calendar year. SCR determinations shall make reasonable efforts to account for impacts caused by Dust Control Measure construction activities.
3. If, pursuant to Paragraph 2, herein, the APCO determines that a monitored or modeled exceedance of the federal 24-hour PM₁₀ NAAQS caused by emissions from the lake bed has occurred at or above the historic shoreline:
 - A. The APCO, based on all available information, including, visual observation, physical evidence, monitoring and modeling, and in consultation with the City, will identify the need for additional controls, monitoring, or both.
 - (i) If the APCO identifies the need for additional controls and/or increased MDCE on existing controls, the APCO shall issue a written SCR determination to the City.

- (ii) If the City does not agree with the APCO's determination, the City may, within 60 days of the APCO's determination, submit to the District an alternative analysis of the data used by the APCO to make the determination.
 - (iii) If the City submits an alternative analysis, the APCO shall consider the City's analysis and has full and sole discretion to withdraw, modify or confirm the SCR determination. If the APCO takes action to withdraw or modify the SCR determination, he shall do so within 60 days of the City's submittal of the alternative analysis.
 - (iv) If the APCO issues a modified SCR determination or confirms the initial SCR determination and the City does not agree with the APCO's action, the City may initiate the Dispute Resolution Process pursuant to Paragraph 32 of the 2006 Settlement Agreement between the District and the City (Attachment A to Board Order 080128-01). The APCO may modify the SCR determination based on the outcome of the Dispute Resolution Process.
 - (v) In the event the Parties are unable to resolve disagreements over the APCO's SCR determinations through the Dispute Resolution Process, the City may appeal the APCO's SCR determinations to the California Air Resources Board (CARB) under the provisions of Health and Safety Code Section 42316. The CARB will act within 90 days on the City's appeal.
 - (vi) The implementation of additional control measures under the SCR determination process will be considered contingency measures under Section 172(c)(9) of the federal Clean Air Act and will be implemented automatically upon final action of the SCR determination.
- B. The City shall prepare and submit for the APCO's consideration and written approval, which approval shall not be unreasonably withheld, a Remedial Action Plan as described in Paragraph 6 to address the exceedance(s). The City shall submit the Remedial Action Plan within 60 days of the date the SCR determination becomes final.
- C. If the City proposes in their Remedial Action Plan to decrease the control efficiency in any previously controlled dust source area, the City must demonstrate that the proposed strategy will control dust sources to the extent that there are no modeled exceedances at the shoreline based on:
- (i) new dust event(s) that caused or contributed to a modeled or monitored exceedance,
 - (ii) dust events that took place from July 2002 through June 2006 based on the results of the MDCE Selection Process Spreadsheet as set forth in the 2006 Settlement Agreement, and
 - (iii) that previously determined control efficiency levels are maintained in (a) all areas that are required to have 99% control efficiency or higher in the 2003 SIP Dust Control Area and (b) new dust source areas that are not included in the MDCE Selection Process Spreadsheet.

D. The District may, as appropriate, also issue Notices of Violation.

4. In the event:

- A. The APCO has made a written determination pursuant to Paragraph 3 that an exceedance of the federal standard, occurring after April 1, 2010, resulted from a Control Area or portion of a Control Area treated with the Moat & Row PM₁₀ control measure; and
- B. That Control Area or portion of a Control Area causing the exceedance was remediated by the City as provided in Paragraph 6 below; and
- C. That Control Area or a portion of that Control Area is subsequently the sole cause of an exceedance of the federal standard at or above the historic shoreline, (i.e., an exceedance occurred after the City's initial attempt to remediate that area under Paragraph 6);

then the City shall convert that Control Area, or that portion of that Control Area, from Moat & Row to MDCE-BACM or BACM as described in Paragraphs 15, 16 and 17 of Board Order 080128-01, to address the exceedance described in Paragraph 4.C., for all or the portion of that Control Area that caused the subsequent exceedance, under the time deadlines provided for in Paragraph 9.

- 5. If the APCO determines that Moat & Row constitutes BACM or MDCE-BACM as provided for in Attachment D of Board Order 080128-01, "2008 Procedure for Modifying Best Available Control Measures (BACM) for the Owens Valley Planning Area," then upon issuance of such written determination, the provisions of Paragraph 4 that require the City to convert to BACM or MDCE-BACM may be satisfied by applying the BACM or MDCE-BACM approved under this Paragraph 5.
- 6. A Remedial Action Plan prepared by the City pursuant to Paragraph 3.B will contain a description of:
 - A. Any and all needed changes, repairs or enhancements to DCMs, including one or some combination of the following:
 - (i) Maintenance of facilities (*e.g.*, berms, moats and rows);
 - (ii) Changes to Shallow Flood or Managed Vegetation facilities or operations (*e.g.*, increase in wetness cover extent, improved wetness cover distribution, enhancement of vegetation);
 - (iii) Augmentation (*e.g.*, more moats and rows) or enhancement (*e.g.*, surface-protecting elements) of Moat & Row areas;
 - (iv) Transition of Moat & Row areas to BACM, or MDCE-BACM.

- B. Any and all needed expansion of DCMs, and specific plans for expanding the measures.
 - C. A schedule for the work to be performed to implement the changes, clearly indicating the point at which facilities will be operational and effective at design levels.
7. The Schedule of Contingency Measures incorporated as part of this Procedure as Attachment B, Exhibit 1 sets forth a non-exclusive list of items that shall be included by the City in its Remedial Action Plans, described in Paragraph 6, and the timing required for their implementation.
 8. Before any full-scale Moat & Row areas are operational, the City shall submit to the District a conceptual design and schedule for possible implementation of BACM or MDCE-BACM to each Moat & Row area consistent with Paragraph 4. These designs and schedules are the potential contingency measures to be implemented by the City where a transition from Moat & Row to another DCM is needed, or where such transition is required pursuant to Paragraph 4.
 9. Areas to be transitioned from Moat & Row to BACM or MDCE-BACM will be operational within the times set forth in the Moat & Row Transition Schedule incorporated as Attachment B, Exhibit 2. DCMs for new areas will be operational within the times set forth in the DCM Operation Schedule incorporated as Attachment B, Exhibit 3. In all cases, the time allowed for implementation of control measures shall not include any time between the City's appeal to the California Air Resources Board under the provisions of Health and Safety Code Section 42316 and resolution of such an appeal.

DETAILED SCR DETERMINATION PROCEDURE

Exceedances of the federal 24-hour PM₁₀ National Ambient Air Quality Standard of 150 µg/m³ at or above the historic shoreline of Owens Lake (elevation 3600 feet above mean sea level) can either be measured directly via a PM₁₀ monitor or they can be modeled using the procedures set forth in the latest Owens Lake Dust Source Identification Program Protocol. Set forth below are the two procedures to be used by the APCO in making SCR determinations: the first uses directly monitored exceedances and the second uses modeled exceedances.

A. MONITORED EXCEEDANCES

A.1 – Do lake bed source areas cause or contribute to a monitored 24-hour average PM₁₀ concentration greater than 150 µg/m³ at an historic shoreline PM₁₀ monitor or at a near-shore PM₁₀ monitor?

Any event that causes a monitored 24-hour average PM₁₀ concentration greater than 150 µg/m³ at a shoreline or near-shore PM₁₀ monitor will be evaluated to determine if lake bed dust source areas caused or contributed to the exceedance. The following steps will be used to screen hourly PM₁₀ concentrations to determine if a lake bed source area caused or contributed to a monitored exceedance:

- 1) For hourly average from-the-lake wind directions, use the recorded hourly PM₁₀ concentration.
- 2) For hourly average non-lake wind directions or missing data, replace the recorded hourly PM₁₀ concentration with the background concentration of 20 µg/m³.

- 3) Average the adjusted hourly concentrations from steps 1 and 2 for the 24-hour period from midnight to midnight, Pacific Standard Time.

If the 24-hour average of the adjusted hourly PM₁₀ concentrations exceeds 150 µg/m³ at the monitor site, go to A.2. If not, go to B.1.

A.2 – Is there physical evidence of lake bed emissions and/or air quality modeling sufficient to define boundaries for the area to be controlled?

Source Delineation.

If possible, the boundary of a dust source area will be delineated by a GPS survey. Under certain circumstances, the surveyed boundary of the dust source area will not result in a closed polygon. If the GPS survey yields a partial boundary and not a closed polygon, then the polygon area may be closed, if the length of the closure is equal to or less than one-half kilometer or is less than 20 percent of the surveyed source area perimeter, whichever is smaller. The ends of the partial surveyed area boundary will be completed with a straight line, unless survey notes or visual observations indicate that a different shaped boundary should be used. If the surveyed source area boundary has a complex shape, then the partial boundary to be closed will use the best available field and visual data to connect the two ends and form the polygon. Boundaries of existing controlled areas or other previously located boundaries will be used in place of a GPS survey boundary, if the survey notes or visual observations indicate the erosion area extends to that boundary.

If the GPS boundary described above is not available, the area will be defined by any one or a combination of GPS surveying, visual observations, and video observations or any other method described in the Dust ID Protocol (Attachment C).

If neither the GPS boundary nor other physical evidence, as described above, is available, the default area size will be one square kilometer centered on the sand flux monitor (SFM), or one grid cell if the SFMs are in a closer array.

If there is physical evidence, as described above, to define the boundaries for the area to be controlled, and no K-factor for that area or no sand catch data above one gram for the sampling period from a sand flux sampler located within a 30 degree upwind cone centered on the wind direction of the defined source, then modeling cannot be performed. Go to A.3.

Modeling.

If sand flux data is available for the exceedance identified in A.1, the District will model the event. Modeling will be performed following the latest Dust ID Modeling Protocol using the source area determined above.

The order of priority for applying K-factors in the model will be:

- 1) When available, the District will use event specific storm-average K-factors to model dust events at the PM₁₀ monitor if there are three or more hours of screened hourly K-factors for a 48-hour period. If not,

- 2) The District will use the most recent temporal and spatial 75-percentile hourly K-factors to model events, if there are nine or more screened hourly K-factors for a period and they are determined by the methods described in the most current Dust ID Protocol. If not,
- 3) The District will use the default K-factors in Attachment B, Table 2 to model events, based on the month of the event being investigated and the K-factor area.

Only those on-lake and off-lake dust sources with sand flux data will be included in the model. All data collected by the District pursuant to this Section shall be shared with the City within 30 days of final data review.

The modeling results will be used to prioritize multiple upwind source areas for control, or to determine the fraction of a single upwind source area that needs to be controlled.

Go to A.3

If neither physical evidence nor model results are available, go to A.5.

A.3 – District directs City to implement dust controls.

Source areas in A.2 that cause or contribute to an exceedance may be new source areas, or may be emissions from areas with existing dust controls. The APCO will determine, in writing, that conditions specified in Section A.1 were met for a specified area determined by A.2. For emissions from areas with existing dust controls, the City will have the choice of increasing the controls in the existing dust control areas or controlling other contributing sources that will result in lowering the monitored impact below the 150 $\mu\text{g}/\text{m}^3$ exceedance threshold, if such areas exist. If the APCO identifies the need for additional controls, the APCO shall issue a written SCR determination to the City.

If the City does not agree with the APCO's determination, the City may, within 60 days of the APCO's determination, submit to the District an alternative analysis of the data used by the APCO to make the determination. If the City submits an alternative analysis, the APCO shall consider the City's analysis and may withdraw, modify or confirm the SCR determination. If the APCO takes action to withdraw or modify the SCR determination, he shall do so within 60 days of the City's submittal of the alternative analysis.

If the APCO issues a modified SCR determination or confirms the initial SCR determination and the City does not agree with the APCO's final action, the City may initiate the Dispute Resolution Process pursuant to Paragraph 32 of the 2006 Settlement Agreement between the District and the City (Attachment A to Board Order 080128-01). The APCO may modify the SCR determination based on the Dispute Resolution Process.

In the event the Parties are unable to resolve disagreements over the APCO's SCR determinations through the Dispute Resolution Process, the City may appeal the APCO's SCR determinations to the California Air Resources Board (CARB) under the provisions of Health and Safety Code Section 42316 (Section 42316). The CARB will act within 90 days on the City's appeal.

The City shall prepare and submit for the APCO's consideration and written approval, which approval shall not be unreasonably withheld, a Remedial Action Plan as described in Paragraph 6 to address the exceedance(s). The City shall submit the Remedial Action Plan within 60 days of the date the SCR determination becomes final.

Go to A.4.

A.4 – City implements dust controls.

DCMs for new areas will be operational within the times set forth in the DCM Operation Schedule incorporated as Attachment B, Exhibit 3. The City is solely responsible for all environmental impact analyses required by the California Environmental Quality Act and for all required permits and leases.

A.5– District collects additional physical evidence and installs sand flux monitors in suspected areas.

If there is insufficient physical evidence and no sand flux monitor data to determine the emissive area on the lake bed that caused the monitored or modeled exceedance, the District will install Sensits and Cox Sand Catchers (CSC) sand flux monitors in the suspected area in a sampling array with a maximum spacing of one kilometer. The District will also continue to collect other physical evidence.

B. MODELED EXCEEDANCES

B.1 – Does the Dust ID model predict a 24-hour shoreline concentration greater than 150 $\mu\text{g}/\text{m}^3$, including background?

Dispersion Modeling Analysis.

At least once a year, the District will examine the Dust ID information and dispersion model to determine if there have been any modeled shoreline exceedances since the period included in the last model run. Modeling will be performed following the 2008 Owens Lake Dust Source Identification Program (Dust ID) Protocol (Attachment C).

K-factors.

New K-factors may be generated from PM_{10} concentrations measured at any shoreline or near-shore PM_{10} monitor using the methods described in the Dust ID Protocol. The order of priority for applying K-factors in the model will be:

- 1) The current temporal and spatial 75th percentile hourly K-factors. The District will use the current modeling period temporal and spatial 75th percentile hourly K-factors to model events, if there are nine or more hourly K-factors for an agreed upon seasonal period and area determined by the methods described in the most current Dust ID Protocol.
- 2) If there is no agreement on seasonal cut-points, the default cut points, as shown in Attachment B, Table 2, will be used with number 1, above.
- 3) If there is no agreement on area, the default areas, as shown in Attachment B, Map 1, will be used with number 1, above.

- 4) If there are fewer than nine hourly K-factors for any area and period, go to 5), below.
- 5) Default K-factors from Attachment B, Table 2. The District will use the K-factors in Attachment B, Table 2 to model events, based on the month of the event being investigated and the K-factor area. If the new dust source area is not within a K-factor area shown in Attachment B, Table 2, the APCO shall determine the default K-factor for the new source area based on the default K-factors of areas with similar soil characteristics.

Source Area Size, Location and Sand Flux.

The boundary of a dust source area will be delineated by a GPS survey. Under certain circumstances, the surveyed boundary of the dust source area will not result in a closed polygon. If the GPS survey yields a partial boundary and not a closed polygon, then the polygon area may be closed, if the length of the closure is equal to or less than one-half kilometer or is less than 20 percent of the surveyed source area perimeter, whichever is smaller. The ends of the partial surveyed area boundary will be completed with a straight line, unless survey notes or visual observations indicate that a different shaped boundary should be used. If the surveyed source area boundary has a complex shape, then the partial boundary to be closed will use the best available field and visual data to connect the two ends and form the polygon. Boundaries of existing controlled areas or other previously located boundaries will be used in place of a GPS survey boundary, if the survey notes or visual observations indicate the erosion area extends to that boundary.

If the GPS boundary described above is not available, the area will be defined by any one or a combination of GPS surveying, visual observations, and video observations or any other method described in the Dust ID Protocol.

The details of how to delineate source area boundaries are contained in the Dust ID Protocol.

If neither the GPS boundary nor the other physical evidence as described above is available, the default area size will be one square kilometer centered on the SFM, or one grid cell if the SFM are in a closer array.

All data collected by the District pursuant to this Section shall be shared with the City within 30 days of final data review. If the modeling shows that lake bed source areas have caused or contributed to any modeled shoreline PM₁₀ impact greater than 150 µg/m³ for a 24-hour average, go to B.7. If not, go to B.2.

B.2 – Is the modeled concentration less than 100 µg/m³?

This refers to the modeled concentration calculated in B.1 and includes the background PM₁₀ level of 20 µg/m³. If yes, go to B.6. If no, go to B.3.

B.3 – District directs the City to commence environmental impact analysis, design and permitting.

The APCO will direct the City in writing to choose the BACM it wishes to implement in the area identified in B.1.

The City will develop a scope of work for the identified potential source areas, including: (1) a summary of the sites pertinent conditions, features, and location, (2) appropriate control alternatives and approach, including a conceptual layout of dust control and integration into the TDCA (roads, water supply, drainage, and power), (3) standard and site-specific permitting considerations, (4) anticipated environmental documentation considerations and approach, and (5) an approximate timetable for implementation beginning at an undefined start date that might coincide with a future SCR determination . City shall complete these steps within 180 days of the date of the written direction from the APCO. Go to B.4.

B.4 – District deploys reference and/or non-reference method Special Purpose PM₁₀ monitor(s) to confirm model (if not already deployed).

The District will deploy reference and/or non-reference method Special Purpose PM₁₀ monitor(s) on the lake bed upwind and downwind of the identified emissive area, if there are no existing monitors at locations that can be used in Section B.5 to refine the model predictions. Monitors will be sited between 250 and 5000 meters outside of any GPS'd or observed source area boundaries. These PM₁₀ monitoring sites may be removed after the model confirmation procedure described in B.5. Shoreline and near-shore PM₁₀ monitors that are sited to confirm the model may be used for NAAQS compliance, if an exceedance is monitored. Go to B.5.

B.5 – Is the refined model prediction greater than 150 µg/m³?

For each event measured under Section B.4 that results in a 24-hour monitored concentration of greater than 100 µg/m³, the event-specific K-factor (defined in the Dust ID Protocol) will be used to model the concentration at the shoreline receptors. If the event-specific K-factor was derived for the same year and season as the original event modeled in B.1, the Section B.1 event will be remodeled using the new K-factor. If either that remodeled concentration for the Section B.1 event, or the new modeled concentration for the on-lake monitored event, is greater than 150 µg/m³ at a shoreline receptor, go to B.7. If not, go to B.6.

The District will make a determination if any currently modeled event within the same season and K-factor area using the appropriate K-factors as determined by this procedure causes a shoreline receptor to exceed 150 µg/m³. If yes, go to B.7.

B.6 – No action required.

No action is required of the City at this time. Data collected during this period can be used in conjunction with data collected at a later time to define emissive areas on the lake bed according to this protocol and to develop K-factors for emissive areas.

B.7 – District directs the City to implement dust controls.

Source areas in B.1 and B.5 that cause or contribute to an exceedance may be new source areas or existing source areas with less than the required level of control (MDCE not high enough to prevent exceedances).

The APCO will determine, in writing, that conditions specified in Sections B.1 or B.5 were met for the specified area. Within 30 days of that determination by the APCO, the City will be notified of that determination in writing. If possible, the City will have the choice of increasing

the control efficiencies on existing dust control areas and/or controlling other contributing sources that will result in lowering the modeled impact below the 150 µg/m³ exceedance threshold. If the APCO identifies the need for additional controls, the APCO shall issue a written SCR determination to the City.

If the City does not agree with the APCO's determination, the City may, within 60 days of the APCO's determination, submit to the District an alternative analysis of the data used by the APCO to make the determination. If the City submits an alternative analysis, the APCO shall consider the City's analysis and may withdraw, modify or confirm the SCR determination. If the APCO takes action to withdraw or modify the SCR determination, he shall do so within 60 days of the City's submittal of the alternative analysis.

If the APCO issues a modified SCR determination or confirms the initial SCR determination and the City does not agree with the APCO's final action, the City may initiate the Dispute Resolution Process pursuant to Paragraph 32 of the 2006 Settlement Agreement between the District and the City (Attachment A to Board Order 080128-01). The APCO may modify the SCR determination based on the Dispute Resolution Process.

In the event the Parties are unable to resolve disagreements over the APCO's SCR determinations through the Dispute Resolution Process, the City may appeal the APCO's SCR determinations to the California Air Resources Board (CARB) under the provisions of Health and Safety Code Section 42316 (Section 42316). The CARB will act within 90 days on the City's appeal.

The City shall prepare and submit for the APCO's consideration and written approval, which approval shall not be unreasonably withheld, a Remedial Action Plan as described in Paragraph 6, above, to address the exceedance(s). The City shall submit the Remedial Action Plan within 60 days of the date the SCR determination becomes final.

Go to B.8.

B.8 – City implements BACM.

DCMs for new areas will be operational within the times set forth in the DCM Operation Schedule incorporated as Attachment B, Exhibit 3. The City is solely responsible for all environmental impact analyses required by the California Environmental Quality Act and for all required permits and leases.

For source areas that arrive at B.7 from B.5, all time periods in the above referenced implementation schedule in B.8 shall apply but be reduced by the time period elapsed since the date of the written direction from the APCO described in Section B.3, or one year, whichever is less.

Attachment B Enclosures

Map 1: Owens Lake Dust ID Monitoring Map

Table 1: From-the-lake and Non-lake Wind Directions for PM₁₀ Monitor Sites

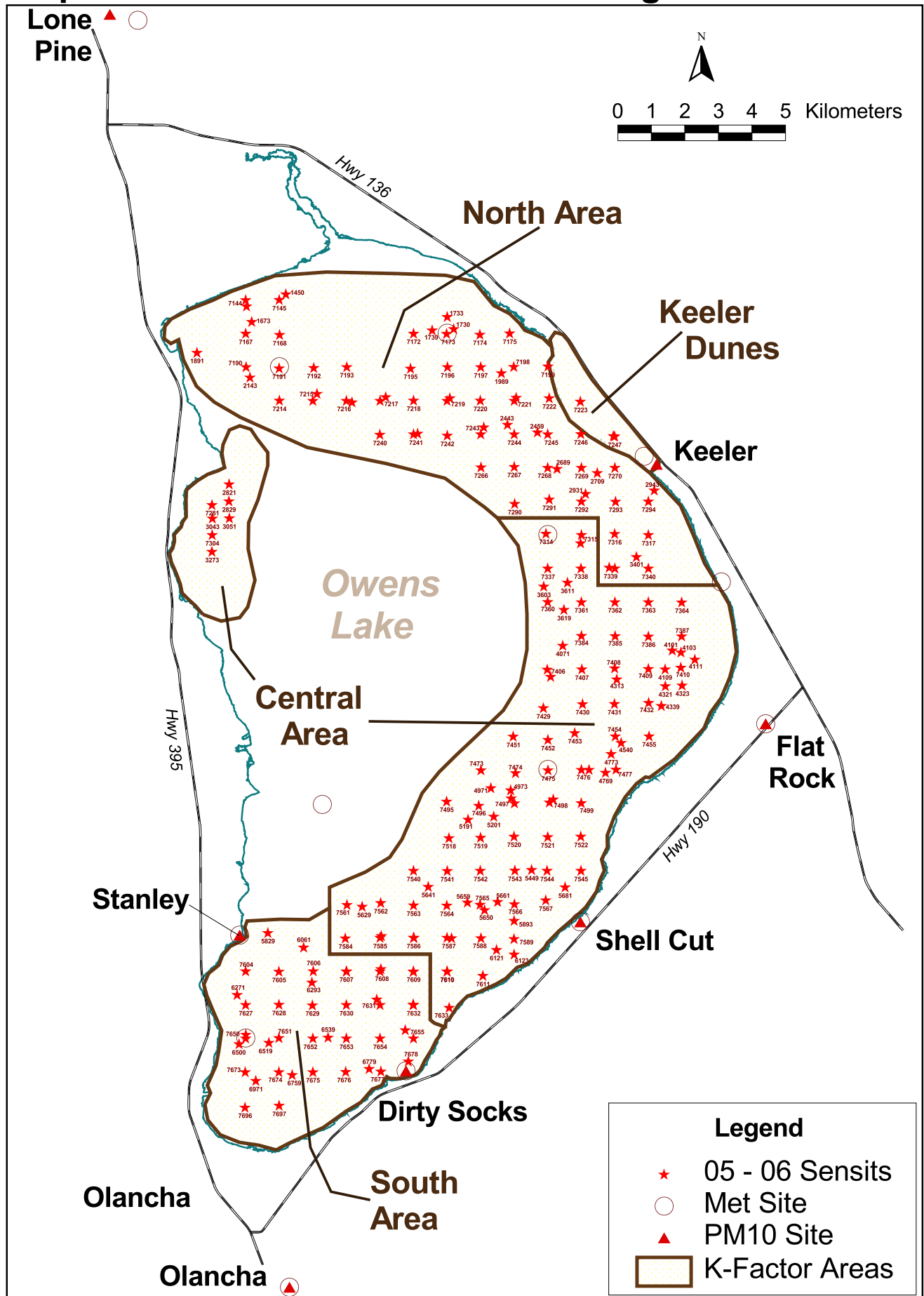
Table 2: Default Spatial and Temporal K-factors for the Dust ID Model

Exhibit 1: Schedule of Contingency Measures

Exhibit 2: Moat & Row Transition Schedule

Exhibit 3: DCM Operation Schedule

Map 1 - Owens Lake Dust ID monitoring network



Attachment B - Table 1**From-the-Lake and Non-Lake Wind Directions for PM₁₀ Monitor Sites**

PM ₁₀	From-the-Lake	Non-lake	
<u>Monitor Site</u>	<u>Wind Dir. (Deg.)</u>	<u>Wind Dir. (Deg.)</u>	<u>Met Tower</u>
Lone Pine	126≤WD≤176	WD<126 or WD>176	Lone Pine
Keeler	147≤WD≤290	WD<147 or WD>290	Keeler
Flat Rock	224≤WD≤345	WD<224 or WD>345	Flat Rock
Shell Cut	WD≥227 or WD≤33	33<WD<227	Shell Cut
Dirty Socks	WD≥234 or WD≤50	50<WD<234	Dirty Socks
Olancha	WD≥333 or WD≤39	39<WD<333	Olancha
Bill Stanley	WD≥349 or WD≤230	WD<349 or WD>230	Bill Stanley
New Sites	TBD	TBD	TBD

TBD – From-the-lake and non-lake wind directions will be determined for new sites by the APCO when sites are selected.

Attachment B - Table 2**Default Spatial and Temporal K-factors for the Dust ID Model**

<u>AREA</u>	K-factor	
	<u>Jan.– Apr. & Dec.</u>	<u>May–Nov. (These are the default cutpoints.)</u>
Keeler Dunes	7.4 x 10 ⁻⁵	6.0 x 10 ⁻⁵
North Area	3.9 x 10 ⁻⁵	1.5 x 10 ⁻⁵
Central Area	12.0 x 10 ⁻⁵	6.9 x 10 ⁻⁵
South Area	4.0 x 10 ⁻⁵	1.9 x 10 ⁻⁵

Attachment B - Exhibit 1: Schedule of Contingency Measures

From 2006 Settlement Agreement

EXHIBIT 10 -- SCHEDULE OF CONTINGENCY MEASURES

Issue	Resolution	Duration	Units
Moat and Row			
Eroded row	Install armoring to prevent further erosion	2	mo/mile
	Install sand fences to prevent further erosion	1	mo/mile
	Reconstruct row in place or adjacent	2	mo/mile
Filled moat	Re-excavate new moat outboard of filled moat, expand existing row onto filled moat	2	mo/mile
Filled sand fence	Clean out or flank with new sand fences	2	mo/mile
Collapsed sand fence	Repair or flank with new sand fences	1	mo/mile
Spacing too large	Pull in intervening sand fence	1	mo/mile
	Add intervening moat and row	3	mo/mile
	Enhance with vegetation and/or wetness	12 to 36	months
	Soil roughening	1 to 3	months/sq mi
	Conversion to reduced BACM/BACM	See Exhibit 11	
Managed Vegetation			
Emissions from bare areas	Enhance/restore vegetation	36	months
	Stabilize by other means (e.g., moisture, sand fences)	1 to 6	months/sq mi
Emissions from vegetated areas	Determine and establish necessary cover	36	months
	Stabilize by other means (e.g., moisture, sand fences)	1 to 6	months/sq mi
Gravel Patches			
Infilling pore spaces	Supplement gravel depth	4	months/sq mi
	Stabilize by other means (e.g., vegetation, wetness, sand fences)	6 to 36	months
Shallow Flood			
Emissions from dry areas (insufficient uniformity of wetting)	Wet dry areas. May require land leveling and/or additional laterals.	12	months
Generally too dry	Increase water application rate relative to ET	1	month
Other features			
Gravel source	Open new or re-open existing quarry	4	months
Emissions from roads, berms, etc.	Increase watering frequency	1	month
	Stabilize by other means (e.g., gravel, stabilizing agents)	1 to 4	months/sq mi

From 2006 Settlement Agreement

EXHIBIT 11 -- MOAT AND ROW TRANSITION SCHEDULE

Activity	Duration (years)
Shallow flood transition from moat & row	1.9
Managed vegetation transition from moat & row	5.9
Gravel cover transition from moat & row	1.8
<i>Mutually agreeable exceptions:</i>	<i>Increase over and above durations listed above (years)</i>
1. Mainline capacity increase	2.1
2. New aqueduct turnout	1.4
3. New power feed	1.0

Attachment B - Exhibit 3

From 2006 Settlement Agreement

EXHIBIT 12 -- DCM OPERATION SCHEDULE

Activity	Duration (years)
New area shallow flood DCM ^a	2.9
New area managed vegetation DCM ^a	6.1
New area gravel cover DCM ^a	2.2
<i>Mutually agreeable exceptions:</i>	<i>Increase over and above durations listed above (years)</i>
1. Mainline capacity increase	2.1
2. New aqueduct turnout	1.4
3. New power feed	1.0
4. Expanded CEQA triggered	1.4
^a Assumes that total new area <2 square miles per year	

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