

# GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT



## HEARING BOARD MEETING INFORMATION

### Meeting Date & Time

Tuesday, January 31, 2012, 10:30 a.m.

### Meeting Location

LADWP Conference Room  
300 Mandich Street  
Bishop, California

### District Hearing Board

Brad Mettam, Inyo County, Chair  
Robert Michener, Inyo County, Vice Chair  
Peter Pumphrey, Mono County  
Patrick Fenton, Mono County  
Vacant, Alpine County

Theodore D. Schade, Air Pollution Control Officer  
157 Short Street, Bishop, California 93514  
(760) 872-8211 E-mail: [tschade@gbuapcd.org](mailto:tschade@gbuapcd.org)



## GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

157 Short Street, Bishop, California 93514-3537  
760-872-8211 Fax: 760-872-6109

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### PUBLIC NOTICE

#### **BEFORE THE HEARING BOARD OF THE GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT**

To consider the granting of a Regular Variance to LADWP, Case No. GB11-04

Pursuant to California Health & Safety Code § 40826(d) the public is hereby notified that a hearing will be held before the Great Basin Unified Air Pollution Control District Hearing Board to consider a petition in the matter of a Regular Variance requested by the City of Los Angeles, Department of Water and Power (LADWP). The hearing will be held at the LADWP conference room, 300 Mandich Street, Bishop, California, Tuesday, January 31, 2012 at 10:30 am. LADWP is requesting that the Hearing Board grant variance relief in anticipation of a violation of mandated dust controls required under Board Order 080128-01 due to severe damage to the water delivery system for the shallow flood dust control measure that was caused by a broken pipe fitting. LADWP anticipates that shallow flood areas T35 and T36 located south of Lone Pine, CA may become non-compliant before repairs are completed. These shallow flood areas cover 2.70 square miles and are a portion of the 40 square miles of dust controls currently in operation at Owens Lake. It is anticipated that it could take several months to complete repairs.

Interested persons wishing to attend the hearing should notify the Hearing Board Clerk, Tori DeHaven, at (760) 872-8211 or via email at [tdehaven@gbuapcd.org](mailto:tdehaven@gbuapcd.org), no later than January 24, 2012, to be notified of any schedule changes for the hearing.



# GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

157 Short Street, Bishop, California 93514-3537  
760-872-8211 Fax: 760-872-6109

## AGENDA

### MEETING OF THE HEARING BOARD

**JANUARY 31, 2012**

**LADWP Conference Room  
300 Mandich Street  
Bishop, California 93514**

**Assistance for those with disabilities:** If you have a disability and need accommodation to participate in the meeting, please call Tori DeHaven, Board Clerk, at (760) 872-8211 for assistance so the necessary arrangements can be made.

1. Call meeting to order
2. Public comment on matters not on the agenda (No-action item)

Public Hearing Procedures for each public hearing below. The Chairman will open the public hearing and then:

Swearing in of witnesses by Hearing Board Clerk.

Statement and presentation by District staff.

Statement and presentation by Petitioner.

Questions from the Hearing Board.

Call for testimony from those persons wishing to speak in support.

Call for testimony from those persons wishing to speak in opposition.

Call for general testimony.

Rebuttal to previous testimony by Petitioner.

Close the public hearing, terminate public testimony.

The Hearing Board will deliberate and arrive at a Findings and Order decision.

3. **PUBLIC HEARING:** Consideration of the granting of a Regular Variance to the City of Los Angeles, Department of Water and Power to allow for repairs to control areas T35/T36 on Owens Lake. (Docket No. GB11-04)

4. Adjournment

(All Meetings Are Electronically Recorded – All public records relating to an agenda item on this agenda are available for public inspection at the time the record is distributed to all, or a majority of all, members of the Board. Such records shall be available at the District office located at 157 Short Street, Bishop, California.)

**PETITION FOR VARIANCE  
BEFORE THE HEARING BOARD OF THE  
GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT**

PETITIONER: THE CITY OF LOS ANGELES DEPARTMENT OF WATER & POWER

FACILITY ADDRESS: 111 Sulfate Road

CITY, STATE, ZIP: Keeler, CA 93530

1. TYPE OF VARIANCE REQUESTED

REGULAR       SHORT       INTERIM

2. CONTACT:

Name: Bruce Moore

Title: Supervisor, Air Quality, Environmental Services

Address: 111 N. Hope St., Room 1050, Los Angeles, CA 90012

Phone number of authorized person: (213) 367-3772

E-Mail: Bruce.Moore@ladwp.com

Fax: (213) 367-4710

3. Business and processes conducted at this facility.

Approximately 40 square miles of the Owens Lake bed has been divided into cells the majority of which are flooded regularly to form shallow ponds. This



flooding is done for dust control purposes. Continued operation is not likely to create an immediate threat or hazard to public health or safety.

4. Equipment and/or activity(s) that is the subject of this petition.

- Turnout Facility at Area T35-T36
- 30" HDPE lateral pipeline
- Dewatering activities to access the damaged pipe lines and infrastructure
- Excavation efforts to repair/rebuild damaged piping and turnout facility

5. Brief description of the activity or equipment, and its importance to the operation of business:

See the attached Breakdown Report. Areas T35-T36 comprises 2.7 square miles of area that are flooded by water and are affected by the damage at the T35-T36 turnout facility. LADWP is required to maintain surface wetting of these areas pursuant to Board Order 080128-01.

6. Regular maintenance/inspection schedule:

Water System personnel routinely patrol this area and they are trained to look for, and immediately report, any damage and leakage they observe to water supply pipelines.

7. LADWP is seeking variance relief in anticipation of a violation of the State mandated dust control measure requirements in Board Order 080128-01 section 15(A)(ii).

At the time of the submittal of this petition, areas T35-T36 are in compliance with Board Order 080128-01. Areas T35-T36, however, are likely to become non-compliant prior to the completion of required repairs because the damage to the turnout facility prevents water from being transported to these areas for shallow flooding.

On December 6, 2011 at 2:00 PM a pipeline breakage occurred at the T35-T36 turnout facility. The area surrounding the turnout structure was flooded with

water . This constituted a breakdown condition pursuant to District Rule 403. Based on initial findings, it is suspected that the damage may have been caused by a premature failure of a cold-fused bond on an end cap fitting of a pressurized 30-inch HDPE pipe at the T36 turnout structure. The irrigation system is compromised at this time due to the breakdown and shallow flood compliance objectives may be affected.

8. Equipment or activities specifically subject to this request currently under variance coverage:  
None.
9. Equipment or activities at T35-T36 currently (or within the last six months) under variance coverage:  
None.
10. Notice(s) of Violation or Notice(s) to Comply concerning T35-T36 within the past year:  
None.
11. Complaints received from the public regarding the operation of T35-T36 within the last six months:  
None.
12. Explanation of why it is beyond your reasonable control to comply with Board Order 080128-01:  
The pipeline breakage caused severe damage to the turnout facility. The area around the damaged pipeline is submerged under water. Water is being pumped out from the area at the damaged pipeline to access the breakage. Repair work will follow to repair/replace a section of the damaged pipeline and to rebuild the turnout facility and related infrastructures. The shallow flooding of

areas T35-T36 cannot be resumed until the repairing and rebuilding of the irrigation system is completed. There is no other way to transport water to areas T35-T36 without the turnout facility.

13. When and how did you first become aware that you would not be in compliance with the rule(s) and/or permit condition(s)?

LADWP first became aware on December 6, 2011, but areas T35-T36 were (and remain as of today's date) flooded and in compliance with Board Order 080128-01.

An initial breakdown report was submitted to Great Basin Unified Air Pollution Control District on December 6, 2011 as soon as LADWP had information about the damaged supply pipeline and turnout facility. A detailed breakdown report was submitted on December 16, 2011 (see attachment).

14. Is curtailing operations in lieu of variance an option that may reduce the emissions?

Compliance with Board Order 080128-01 requirements is achieved by irrigating the area with water drawn from Los Angeles Aqueduct (i.e "shallow flooding"). However, the areas T35-T36 cannot be flooded until the repairs are done to the damaged supply pipeline and turnout structure. There would be no benefit from closing the aqueduct because this would not result in water flowing to the T35-T36 areas. LADWP, as a public utility, performs an essential public service, to wit, providing water to approximately 4 million people in the City of Los Angeles, and closing of the Aqueduct would interfere with LADWP performing this essential public service and would not result in a reduction of PM10 emissions.

15. Actions taken since that time to achieve compliance:

LADWP maintenance personnel have begun to pump out water to clear the area surrounding the leakage in order to better assess the extent of the damage. A repair plan will be prepared once the site is safe enough to inspect and assess

the extent of damage. Presently, this is not possible due to hazardous conditions, which will require some extensive demolition work and clean-up to make the site safe for access.

16. How do you plan to monitor or quantify emission levels from the equipment or activity(s) during the variance period, and to make such records available to the District?

LADWP operators regularly perform visual inspections of the dust control facilities to do qualitative assessments of their performance and also analyze the satellite images to track performance. As far as actually being emissive (dry doesn't necessarily mean emissive) it will be qualitative observations by staff on the lake.

17. Explain how you plan to reduce (mitigate) excess emissions during the variance period to the maximum extent feasible, or why reductions are not feasible.

Maintain wetting in the areas that are not affected by the damage at Area T35-T36. This will help compliance but not necessarily meet the wetting requirements. There is no other method to transport water to the T35-T36 areas while the turnout is being repaired, and the only other two approved BACM (managed vegetation and gravel) cannot be implemented during this time period.

18. Compliance Efforts:

LADWP maintenance personnel will begin the repair work as soon as the extent and cause of damage is determined.

19. Corrective Actions:

The Water System is currently assessing the extent of the damage. When that is complete they will prepare a plan and schedule for making the necessary repairs.

20. State the date by which you expect to achieve final compliance:  
The date is unknown, at this time. LADWP will keep the GBUAPCD informed about the progress made in assessing the damage and making the necessary repairs. It is anticipated that the repairs may take several months due to the significant nature of the damage and the need to obtain parts that are not readily available.
21. List the names of any District personnel with whom facility representatives have had contact concerning this variance petition or any related Notice of Violation or Notice to Comply.  
Ted Schade, Executive Officer  
Duane Ono, Deputy Executive Officer  
Ms. Grace Holder, Playa Geologist

The undersigned, under penalty of perjury, states that the above petition, including attachments and the items therein set forth, is true and correct.

Executed on 12/20/11, at Los Angeles, California

Bruce M Moore

Signature

Air Quality Manager Title

Bruce M Moore

Print Name

1066370.1

## **DETAILED BREAKDOWN REPORT SUMMARY**

### **Coincident with Initial Breakdown Report of 12/6/2011**

**Submitted To:** Air Pollution Control Officer, Mr. Theodore Schade  
Great Basin Unified Air Pollution Control District (GBUAPCD)

**Submitted By:** David Neal  
LADWP : Owens Lake Operations (760) 873-0435

**Date:** 12/16/11

**Subject:** T36 Turnout Facility Breach 12/6/2011  
Owens Lake, Owens Lake Dust Mitigation Project  
For Dust Control Areas: Generally at T35 – T36, inclusive

#### **1.0 Breakdown Notice**

A 30-inch HDPE (high density polyethylene) sub main pipe break in the early afternoon hours of December 6, 2011 at the Owens Lake LADWP facilities partially undermined a large concrete slab and caused flooding, loss of zonal irrigation controls, and associative damage (Exhibit A: Photos). This flooding damage began at the T36 turnout station which houses a critical mechanical control station handling local zonal irrigation for 1,540 acres of Owens lakebed. This T36 Turnout Station on Owens Lake was originally installed in calendar year 2002 as a part of the Phase 1 North construction project. Then the station was completely rebuilt in calendar year 2005 as part of the Phase 5 construction project.

The resulting damage to the concrete slab and associated mechanical piping, controls, and equipment has the potential to affect dust control compliance in not only zonal areas of T36 but in a smaller zone which includes 160 acres at T35. Damage to the facilities may necessitate an extended outage.

LADWP Owens Lake Operations crews were alerted to and timely responded to the incident. Their work includes shutting off and isolating flow to the area using valves and dewatering the site. A work plan is currently being prepared to handle the capital repairs during the extended outage. Lake wide operations are being coordinated to minimize system impacts.

An initial breakdown report was submitted by fax to Great Basin UAPCD on Tuesday, December 6, 2011, by Owens Lake Operations.

## **2.0 Preliminary Cause of Breakdown**

The cause of this sudden breakdown is still under investigation and a definitive statement of cause is not issued at this time. However, based on initial findings, it is suspected that the resulting damage may have been assisted by a premature failure of a cold fused bond on an 'endcap' fitting of a pressurized 30-inch HDPE pipe at the T36 turnout structure. If this is correct, this in turn promulgated additional secondary failures of the soil mass under the concrete slab. The suspected HDPE pipe 'endcap' was buried approximately 7.5 feet adjacent to the slab and under electrical conduits making it difficult for any visual or preliminary leak detection shortly after the incident.

## **3.0 Current Repair Status of Breakdown**

*The scope of the breakdown repairs are currently being assessed due to the magnitude and complexity of equipment, materials, controls, and substructures. Maintenance crews worked overtime to isolate the area using valves. Crews moved to quickly de-water the site once it was safe to do so. Crews are using power shovel equipment to remove debris and expose pipes.*

*The current status of the breakdown is that planned assessments, investigations, and site stabilization for repairs are on-going. Repairs and capital work at the T36 turnout are preliminarily scheduled to continue through January, 2012. This repair time is an initial estimate only that is subject to revision pending a detailed scope and potential discovery of additional equipment failures or unknown latent or collateral damage from an on-going assessment within the zonal systems.*

## **4.0 Repair & Work Plan Method**

LADWP field crews are working overtime to initiate repairs. The initial work plan consisted of dewatering the sub main and site, closing isolation valves, and providing minor power shovel excavation to expose the 30-inch pipe and stabilize the site for worker safety.

The preliminary planned repair method consists of the following:

- Preliminary review and inspection of damage
- Additional inspection and collection of evidence for investigation
- Remove and haul debris
- Double blocking of mainline pipe at LORPS and T23 to drain mainline as required for worker safety purposes
- Repair of 30-inch pipe sub-main
- Back fill and compaction
- System test and Start-up

This work plan will be performed Owens Lake operations crews assisted by outsourced LADWP electrical workers.

### **5.0 Corrective Measures to Prevent a Recurrence**

- Assess the failure and perform a forensic analysis to determine if design, materials, or construction quality were causation factors and apply lessons learned to avoid a similar failure in the future.
- The 30-inch HDPE pipe end that is suspected of failure is being redesigned. This redesign will extend the current end cap location further away from the slab. The pipe end design will include a pressure relief valve and/or air vacuum breaker to relieve pressure in the pipeline.

### **6.0 Estimate of Emissions caused by the Breakdown**

All dust control areas between T35 and T36 are vulnerable for dust control compliance if a prolonged mainline or localized zonal area shutdown persists during an extended outage period. Shallow flood areas T35 and T36 are the most specifically vulnerable areas

Therefore, all areas of increased vulnerability for compliance created by this breakdown are shallow flood dust control areas between T35 and T36. A comparative satellite visual image wetness analysis based on a recent satellite flyover conducted on November 8, 2011, suggest all of these areas currently have a high wetness percentage and appear to be compliant to date with the District's applicable orders. There is currently no direct evidence that dust emissions increased beyond what would normally have occurred during the breakdown period and the zones in question to date.

A variance request for an extended outage period will be forthcoming by LADWP as a result of this unforeseen breakdown. --D.N.

**EXHIBIT A : SUMMARY OF PHOTO EXHIBITS**



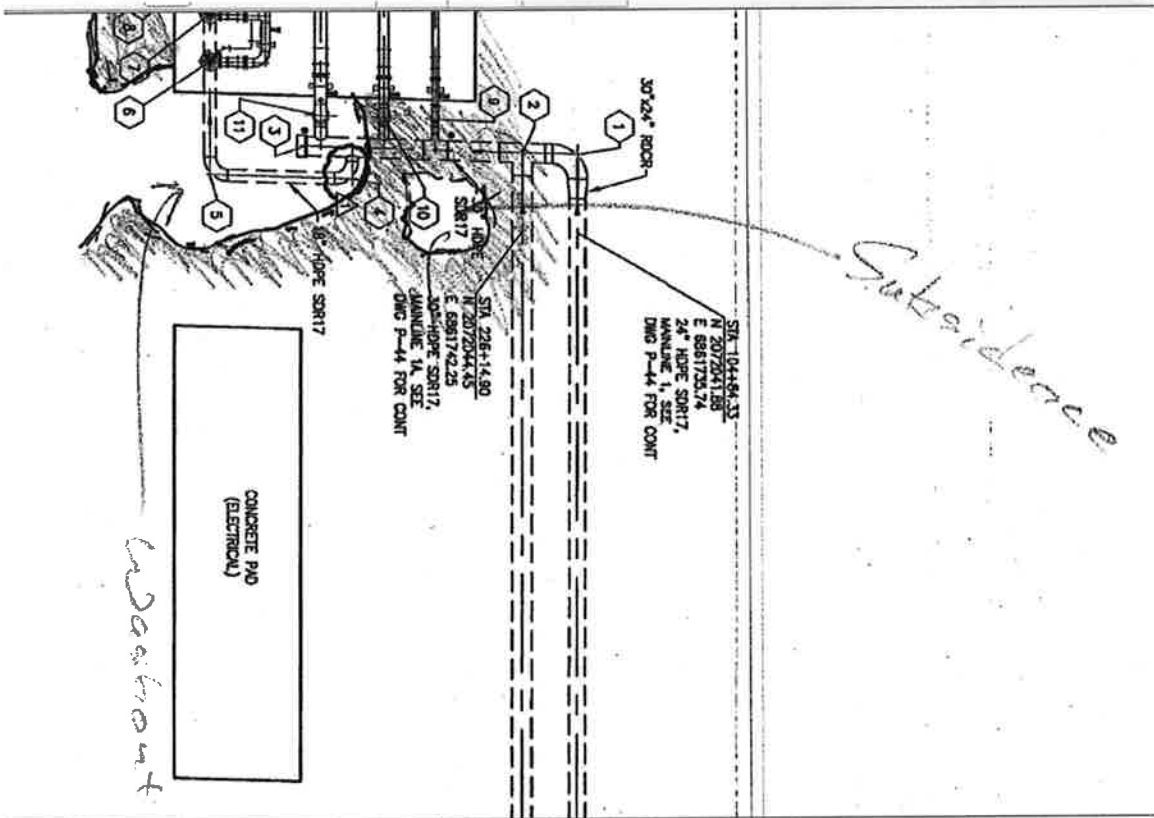
Photo 1: View of Damage Looking South



Photo 2: View of Damage Looking South after dry down and excavation.



Photo 3: View of the damaged 30 inch pipe without end cap with water removed looking West.



Drawing 4: Plan view of the damage with hand sketch delineating washout and subsidence.

1 **BEFORE THE HEARING BOARD**  
2 **OF THE**  
3 **GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT**

4  
5  
6 **VARIANCE REQUEST**

7  
8 Petitioner: City of Los Angeles  
9 Department of Water & Power  
10 111 North Hope Street, Room 1050  
11 Los Angeles, California 90012

12 Request Received: December 20, 2011

13 Facility Location: 111 Sulfate Road, Keeler, CA 93530  
14

Docket Number: GB11-04

15  
16  
17 **SUMMARY REPORT AND**  
18 **STAFF RECOMMENDATION FOR**  
19 **REGULAR VARIANCE PETITION**  
20 **FOR AREAS T35 and T36**

Hearing Date: January 31, 2012

21  
22  
23 **BACKGROUND**

24 The City of Los Angeles Department of Water and Power (Petitioner) submitted a variance  
25 petition on December 20, 2011 to the Hearing Board requesting consideration of a variance to relieve  
the Petitioner temporarily from the obligation to comply with District Board Order #080128-01 (Board  
Order) paragraph 1 (District Exhibit 1). The Petitioner requested a variance for shallow flood dust  
control areas T35 and T36 at Owens Lake, California. As described in the variance petition, a pipeline

1 broke on December 5, 2011<sup>1</sup> at the T36 turnout facility forcing a shutdown of water delivery operations.  
2 The pipeline break may have been caused by the failure of an end cap fusion joint at the T36 turnout  
3 facility. The irrigation system is compromised at this time due to the breakdown and shallow flood  
4 compliance may be affected. To shut off water from the mainline to the T36 facility a pipeline valve  
5 was closed that also shut off water to the T35 shallow flood area. The T35 and T36 shallow flood areas  
6 cover 2.7 square miles of the 39.5 square miles of dust control areas at Owens Lake. It's anticipated that  
7 repairs may not be completed until the end of March 2012. Based on a satellite compliance check on  
8 January 12, 2012, the T35 and T36 areas are currently in compliance with the 75% wet or saturated cover  
9 requirement of Board Order #080128-01. However, unless more water can be added to these areas from  
10 the main pipeline the areas may become non-compliant before repairs are completed.

11 A detailed breakdown report was included with the Petitioner's variance application. Exhibit A  
12 of the breakdown report shows photos of the damage to the piping and turnout structure. As required by  
13 District Rule 403, the Petitioner submitted an initial breakdown report to the District on December 5,  
14 2011 (District Exhibit 2). A follow-up breakdown report was submitted to the District on December 16,  
15 2011 (attached to variance petition). District staff met with the Petitioner on January 17, 2012 to get a  
16 better understanding of the T36 turnout facility, damages from the breakdown and plans for repair.

17 The location of the T36 turnout facility is shown on the map in District Exhibit 3. This map also  
18 shows the boundaries of the T35 and T36 shallow flood areas. Although water from the main pipeline  
19 cannot be applied to the area because of the damage at the turnout facility, the Petitioner can circulate  
20 water from the lower ponds in T36 to some up-gradient areas to help keep areas wet, but maybe not to  
21 the extent that they can maintain compliance until the turnout is repaired. The Petitioner is redesigning  
22  
23

24  
25 <sup>1</sup> The Petitioner's variance request and their breakdown reports mislabeled the breakdown date as December 6, 2011. The correct date of the breakdown was December 5, 2011. The fax submittal time stamp and the breakdown time on the initial breakdown report and indicate the breakdown occurred on December 5, 2011 at 2 PM. (District Exhibit 2)

1 the end of the 30-inch HDPE pipe end that broke. The new design will include a pressure relief valve  
2 and/or air vacuum breaker to relieve pressure in the pipeline and they will extend the pipe end away  
3 from the slab to reduce the amount of damage to the turnout facility if a future break occurs near the end  
4 cap. Petitioner anticipates that the facility will be repaired around the end of March 2012. Since other  
5 turnout structures on the lake bed have similar designs the Petitioner plans to schedule retrofits for other  
6 turnout facilities to help prevent recurrence of breakdowns caused by broken end caps.

7 The District staff recommends that if the variance is granted for areas T35 and T36, the  
8 Petitioner should;

- 9 a. continue to operate dust control measures on the remainder of the dust control areas of  
10 the lake bed as required in Board Order #080128-01, except as provided for under the  
11 variance issued for areas T29 and T30 (Hearing Board Order GB11-03),
- 12 b. work as expeditiously as practicable to complete the repairs and re-establish shallow  
13 flood operations in the T35 and T36 areas by or before March 31, 2012, and
- 14 c. submit a Breakdown Prevention Plan to the District Staff and the Hearing Board by May  
15 1, 2012 that addresses plans to prevent similar damage to the turnout facilities and a  
16 schedule to retrofit other turnout facilities to prevent pipeline breaks.  
17

18 District staff should provide comments on the Breakdown Prevention Plan by June 1, 2012.

19 At the hearing, the Petitioner will provide more information on their investigation of the pipeline  
20 break, their anticipated schedule to complete repairs and their plans to prevent pipeline breaks.

21 Public notice has been given for this variance hearing pursuant to California Health & Safety  
22 Code (CH&SC) § 40826. The Petitioner should be able to have the T35-T36 turnout facility repaired by  
23 March 31, 2012 and should be able to submit a Breakdown Prevention Plan for the turnout facilities by  
24 May 1, 2012.  
25

1  
2 **FINDINGS**

3 The failure of the end cap and resulting damage to the T35-T36 turnout facility constitute a breakdown  
4 condition and can be considered good cause for the issuance of a variance. The request for a variance  
5 satisfies the findings under CH&SC §§ 42352 and 42353 for granting a variance as required by District  
6 Rule 617:

- 7  
8 1. That the petitioner for a variance is, or will be in violation of CH&SC § 41701, or of any rule,  
9 regulation, or order of the district.

10 Currently, the Petitioner is in compliance with District Board Order #080128-01, which requires  
11 DWP to control dust from the areas covered by T35 and TT36 and to maintain at least 75% standing  
12 water or saturated soil on shallow flood dust control areas, however, District staff believes that if  
13 water cannot be applied to these areas that the area may become non-compliant.

- 14  
15  
16 2. That due to conditions beyond the reasonable control of the petitioner, requiring compliance would  
17 result in either (A) an arbitrary or unreasonable taking of property, or (B) the practical closing and  
18 elimination of a lawful business.

19 Due to conditions beyond the reasonable control of the petitioner, requiring compliance would result  
20 in the arbitrary taking of property and/or a closing of the business. The dust control requirements are  
21 associated with the continual operation of the Los Angeles Aqueduct, which caused the drying up of  
22 Owens Lake and the resulting dust problem. There is no practical method to achieve compliance  
23 with the District Order sooner than by repairing the water supply line, including closing of the Los  
24 Angeles Aqueduct.  
25

- 1  
2 3. That the closing or taking would be without a corresponding benefit in reducing air contaminants.

3 There would be no corresponding benefit to the closing or taking of the aqueduct. Closing the  
4 aqueduct would not achieve compliance any sooner than by repairing the leaks in the water supply  
5 line, so there would be no air quality benefit.

- 6  
7 4. That the applicant for the variance has given consideration to curtailing operation of the source in  
8 lieu of obtaining a variance.

9 Applicant has considered curtailing operations. As previously stated, closing the aqueduct would  
10 not achieve compliance any sooner than by repairing the water supply system, so there would be no  
11 air quality benefit.

- 12  
13  
14 5. During the period the variance is in effect, that the applicant will reduce excess emissions to the  
15 maximum extent feasible.

16 Petitioner will a) continue to operate dust control measures on the remainder of the dust control areas  
17 of the lake bed as required in Board Order #080128-01, b) work as expeditiously as practicable to  
18 complete the repairs and re-establish shallow flood operations in the T35 and T36 areas by or before  
19 March 31, 2012, and c) continue to re-circulate water in the T36 area to help maintain surface  
20 wetness to the extent practicable.

- 21  
22 6. During the period the variance is in effect, that the applicant will monitor or otherwise quantify  
23 emission levels from the source, if requested to do so by the district, and report these emission levels  
24 to the district pursuant to a schedule established by the district.  
25

1 The District has an extensive air and emissions monitoring program at Owens Lake and will  
2 continue to operate the program and quantify dust emissions from the lake bed, including areas  
3 subject to this variance request.  
4

- 5 7. No variance shall be granted if the operation, under the variance, will result in a violation of CH&SC  
6 § 41700 [nuisance].

7 Much of the area subject to the variance is expected to still have significant water at the surface  
8 during the variance period thus providing partial dust control in areas where the wetness coverage  
9 drops below 75%. Partial controls during the requested variance should provide sufficient dust  
10 controls to prevent dust emissions that could trigger nuisance complaints.  
11

12  
13  
14 **STAFF RECOMMENDATION**

15  
16 District staff agrees that the damage to the T35-T36 turnout facility constitutes an unforeseeable  
17 breakdown condition and may be eligible for a variance under California Health and Safety Code  
18 (CH&SC) §§ 42352 and 42353. District staff recommends the following actions by the Hearing Board:

- 19 1. Make the findings required by CH&SC §§ 42352 and 42353 to issue a variance as recommended  
20 in the staff report (adopt by reference Findings 1 through 7 in the staff report).  
21 2. Issue a regular variance to the Petitioner for Board Order #080128-01, paragraph 1 (Requirement  
22 for controls), specifically for control areas T35 and T36 with the following conditions, Petitioner  
23 shall;  
24  
25

- 1 a. continue to operate dust control measures on the remainder of the dust control areas of  
2 the lake bed as required in Board Order #080128-01, except as provided for under the  
3 variance issued for areas T29 and T30 (Hearing Board Order GB11-03),  
4 b. work as expeditiously as practicable to complete the repairs and re-establish shallow  
5 flood operations in the T35 and T36 areas by or before March 31, 2012, and  
6 c. submit a Breakdown Prevention Plan to the District Staff and the Hearing Board by May  
7 1, 2012 that addresses plans to prevent similar damage to the turnout facilities and a  
8 schedule to retrofit other turnout facilities to prevent pipeline breaks.

9  
10 3. Issue a regular variance for the period from January 31, 2012 through June 1, 2012.  
11

12  
13 Prepared by:

*Duane Ono*  
14 Duane Ono  
15 Deputy Air Pollution Control Officer

*January 24, 2012*  
Date

16  
17 LIST OF DISTRICT EXHIBITS

18 DISTRICT EXHIBIT 1 – District Board Order #080128-01

19 DISTRICT EXHIBIT 2 – Breakdown Report T36 Turnout Facility, December 5, 2011

20 DISTRICT EXHIBIT 3 – Location Map Showing T35-T36 Shallow Flood Areas  
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LADWP VARIANCE HEARING

DOCKET NUMBER: GB11-04

DISTRICT EXHIBIT 1

DISTRICT BOARD ORDER #080128-01

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## 8.2 THE BOARD ORDER

The following order of the Governing Board of the Great Basin Unified Air Pollution Control District is incorporated into this 2008 State Implementation Plan and constitutes an integral part thereof:

### **BOARD ORDER # 080128-01 REQUIRING THE CITY OF LOS ANGELES TO UNDERTAKE MEASURES TO CONTROL PM<sub>10</sub> EMISSIONS FROM THE DRIED BED OF OWENS LAKE**

With regard to the control of PM<sub>10</sub> emissions from the bed of Owens Lake, the Governing Board of the Great Basin Unified Air Pollution Control District (District) orders the City of Los Angeles (City) as follows:

#### **PREAMBLE**

- A. WHEREAS, the 1998 Owens Valley PM<sub>10</sub> Planning Area Demonstration of Attainment State Implementation Plan (1998 SIP), dated November 16, 1998 and the 2003 Revision to the Owens Valley PM<sub>10</sub> Planning Area Demonstration of Attainment State Implementation Plan (2003 SIP), dated November 13, 2003, require the City to implement a series of measures and actions to reduce particulate emissions from the Owens Lake bed such that the Owens Valley Planning Area (OVPA) will attain and maintain the federal 24-hour National Ambient Air Quality Standards (NAAQS) for particulate matter (PM<sub>10</sub>) by the statutory deadlines;
- B. WHEREAS, the District is required by law to maintain its discretion to protect the environment, public health and safety, and this Order is intended to fulfill those duties without improperly constraining that lawful exercise of discretion;
- C. WHEREAS, based on additional information collected subsequent to the information used to adopt the 1998 SIP and 2003 SIP, the District has determined that additional measures and actions will be required to continue to reduce particulate emissions in the OVPA such that the OVPA will attain and maintain the federal 24-hour NAAQS for PM<sub>10</sub> by the statutory deadlines;
- D. WHEREAS, in 2006 a dispute arose between the District and the City regarding the District's requirements for the City to control dust from additional areas at Owens Lake beyond those areas identified in the 2003 SIP;
- E. WHEREAS, on December 4, 2006 a Settlement Agreement was approved by both the District and the City. Under the provisions of this agreement, the City agreed to implement additional dust control measures by April 1, 2010 and the District agreed to revise the 2003 SIP before March 1, 2008 to incorporate the provisions of the Settlement Agreement;
- F. WHEREAS, on March 23, 2007, the U.S. Environmental Protection Agency (USEPA) published a finding that the Owens Valley Planning Area did not attain the 24-hour NAAQS for particulate matter of 10 microns or less (PM<sub>10</sub>) by December 31, 2006 as mandated by the U.S Clean Air Act Amendments of 1990;

- G. WHEREAS, as a result of the USEPA finding, the 2003 SIP must be revised to include a control strategy that will provide for attainment in the Owens Valley Planning Area as soon as practicable and that said revised SIP must be submitted to the USEPA by December 31, 2007;
- H. WHEREAS, in consideration of the District's continuing duties under federal and state law, including but not limited to the Clean Air Act, to control particulate emissions from the Owens Lake bed without interruption, the District intends, if this Order is stayed or disapproved, that Board Order #031113-01 (adopted on November 13, 2003) shall continue to be in effect, so that at all times there will be continuous control of these emissions;
- I. WHEREAS, the District thereby intends that if this Order is stayed due to a legal challenge, including but not limited to a challenge to this Order under California Health and Safety Code Section 42316, to the State Implementation Plan, or to the Environmental Impact Report for this SIP, or if this Order is disapproved by the California Air Resources Board (CARB), the District will revert to enforce the terms of Board Order #031113-01 which shall continue to be in effect and shall remain in full force for the duration of any stay or, in the case of disapproval, unless and until another Order is issued by this Board; and
- J. WHEREAS, to prevent the deterioration of air quality due to dismantling or "backsliding" on control measures that have already been implemented before any such stay or disapproval, the District intends that the City shall continue to operate and maintain all control measures already implemented at the time of any such stay or disapproval without interruption, unless and until a further Order of the District allows for such interruption, if the City has not appealed the control measures under Section 42316 within 30 days of the effective date of this Order, and if those control measures were not invalidated as a result of that appeal;
- K. WHEREAS, it is the District's intention that this 2008 revised SIP is consistent with the 2006 Settlement Agreement between the District and the City and that it is the District's intention to independently meet all its commitments and obligations under said Settlement Agreement.

**THEREFORE, IT IS HEREBY ORDERED AS FOLLOWS:**

**ORDER**

**IMPLEMENTATION OF OWENS LAKE BED PM<sub>10</sub> CONTROL MEASURES**

1. Existing PM<sub>10</sub> controls – From the date of adoption of this order, the City shall continue to operate and maintain the existing Best Available Control Measures (BACM) for PM<sub>10</sub>, as described in Paragraph 8 hereof, on 29.8 square miles of the Owens Lake bed within the 2003 Dust Control Area (DCA) delineated in Exhibit 1.

2. Additional Shallow Flood supplemental PM<sub>10</sub> controls – By April 1, 2010 the City shall implement a minimum of 9.2 square miles of additional Shallow Flooding BACM PM<sub>10</sub> controls within the 12.7 square-mile area known as the 2006 Supplemental Dust Control Area (SDCA) delineated in Exhibit 1. The areas within the SDCA designated for Shallow Flooding only are delineated in Exhibit 1. Shallow Flooding BACM is described in Paragraphs 8, 9 and 15 hereof.
3. Other additional supplemental PM<sub>10</sub> controls – On a maximum of 3.5 square miles within the 2006 SDCA delineated in Exhibit 1, the City shall implement BACM for PM<sub>10</sub>, as described in Paragraphs 8, 9 and 15 through 17 hereof, or the City may implement the alternative non-BACM PM<sub>10</sub> control measure known as “Moat & Row,” as described in Paragraph 18. If BACM are installed, the controls shall be operational by April 1, 2010. If Moat & Row is installed, it shall be operational by October 1, 2009.
4. Channel Area PM<sub>10</sub> controls – A 0.5 square-mile area of natural drainage channels on the south area of the Owens Lake bed is known as the “Channel Area” and is delineated in Exhibit 1. The City shall control PM<sub>10</sub> emissions from the Channel Area by implementing and operating BACM, modified-BACM or alternative non-BACM controls approved by the District’s Air Pollution Control Officer (APCO), that take into account the resource issues in the Channel Area, by April 1, 2010. Portions of the Channel Area that are determined by the APCO to be naturally non-emissive (for example, adequately vegetated areas) will not require controls. If BACM are implemented in the Channel Area, they shall be as described in paragraphs 8, 9 and 15 through 17 hereof. If the City seeks to implement modified-BACM or alternative non-BACM, the City will apply such modifications as are permissible to resource agencies in this channel, with the primary objective of controlling dust, and provide the District with a monitoring plan aimed at identifying source areas that could cause or contribute to shoreline violations. Should such areas be identified after facilities are fully operational (including vegetative development), the District and the City will work with resource agencies to develop site-specific and implementable dust control approaches. Regardless of the approach selected for Channel Area dust control, the City shall prepare and submit to the District a detailed plan demonstrating the need and effectiveness of the control measures and their projected impacts to the environment, and obtain the prior approval of the District and any other applicable regulatory agencies with jurisdiction over the Channel Area for use of the modified-BACM. The City shall be responsible for any additional environmental analyses that may be required and for all required permits.
5. Total PM<sub>10</sub> control area – The 29.8 square-mile 2003 Dust Control Area (DCA), the 12.7 square-mile 2006 Supplemental Dust Control Area (SDCA) and the 0.5 square-mile Channel Area together comprise the 43.0 square-mile area known as the 2008 Total Dust Control Area (TDCA). These PM<sub>10</sub> control areas are delineated in Exhibit 1.
6. Minor adjustments to PM<sub>10</sub> control area boundaries – Upon written request by the City to the District and written approval by the District’s APCO, minor adjustments may be made to the interior and exterior boundaries of the 2006 SDCA, for example to avoid impacts to existing resources or features, or for constructability reasons, which approval shall not be unreasonably withheld. In the event of such modification, the boundaries of the 2008 TDCA shall also be modified to reflect the modified 2006 SDCA boundaries.

7. Study Areas – The District has identified four additional “Study Areas” on the Owens Lake bed totaling up to 1.85 square miles that may require some level of control in order to attain the PM<sub>10</sub> NAAQS. The four Study Areas are delineated in Exhibit 1. The District will study emissions from the Study Areas occurring between July 1, 2006 and April 1, 2010 to determine whether they will cause or contribute to PM<sub>10</sub> NAAQS exceedances such that controls will be required. The District will use the data collected during this period to make a determination after May 1, 2010 as to the need for additional controls, as set forth in Paragraph 10, below. However, if the City is not in compliance with Paragraphs 1 and 3 of this Order, the determination as to the need for additional controls in the Study Areas may be made prior to May 1, 2010.

#### PM<sub>10</sub> CONTROL MEASURES

8. The City shall implement BACM PM<sub>10</sub> control measures as set forth in this Order, described below in Paragraphs 15 through 17. The City may implement the alternative non-BACM PM<sub>10</sub> control measure as set forth in this Order, described below in Paragraph 18. To complete implementation of a specified control measure by a date as required by this Order means that the control measure shall be constructed, installed, operated and maintained without interruption, so as to comply with the performance standards for the specified control measure not later than 5:00 p.m. on the required date.
9. All PM<sub>10</sub> control measures within the 2006 SDCA shall be designed, constructed, installed, operated and maintained by the City to achieve the initial target minimum dust control efficiencies (MDCEs) shown on the MDCE Map, attached as Exhibit 2. MDCEs are the actual dust control measure control efficiencies required to meet the PM<sub>10</sub> NAAQS, based on data collected during the four-year period between July 2002 and June 2006. Prior to April 1, 2010, upon request of the City and written approval of the APCO, which approval shall not be unreasonably withheld, the initial target MDCEs may be modified if the modified target MDCEs meet the criteria set forth in the MDCE Selection Process Spreadsheet, as set forth in the 2006 Settlement Agreement between the District and the City. This Settlement Agreement is attached as Attachment A.

#### CONTINGENCY MEASURES – SUPPLEMENTAL CONTROL DETERMINATIONS

10. At least once per calendar year after May 1, 2010, the District’s APCO will make a written determination as to whether any areas, in addition to those described in Exhibit 1, require air pollution control measures in order to attain or maintain compliance with the NAAQS for PM<sub>10</sub>. The APCO’s determination will also contain an analysis of the minimum dust control efficiency provided by the PM<sub>10</sub> controls in the 2008 TDCA to determine if a higher level of control efficiency is required in order to attain or maintain compliance with the NAAQS for PM<sub>10</sub>. In making these determinations, the APCO shall employ the methods described in Paragraph 11 of this Order. If the City is not in compliance with Paragraphs 1 and 3 of this Order, the determination as to the need for additional controls may be made prior to May 1, 2010.
  - A. If the APCO determines under this Paragraph that additional areas require air pollution control measures or that existing PM<sub>10</sub> control measures require a higher level of control efficiency, the APCO shall issue a written determination to the City informing them that the provisions of Paragraph 11 of this Order require the City to implement, install,

operate and maintain PM<sub>10</sub> BACM on additional areas of the Owens Lake bed or that the control efficiency on existing PM<sub>10</sub> controls must be increased. The determination will identify those areas of the lake bed that will require PM<sub>10</sub> BACM and the control efficiency necessary to attain the PM<sub>10</sub> NAAQS. The City shall secure all permits and leases necessary to implement BACM and conduct any additional analysis, if any, required to comply with the California Environmental Quality Act and any other applicable laws.

- B. The APCO's annual determinations will use data collected after April 1, 2010, except as provided in Paragraph 7, above, for the four Study Areas. The annual determinations for the Study Areas will use data collected after July 1, 2006.
- C. In the event the City appeals the supplemental control determination under Health & Safety Code Section 42316, and pending a decision of the CARB, the City is not required to comply with any measure imposed by the supplemental control determination. The District relies upon action by the CARB to issue its decision on the City's appeal within 90 days. If CARB does not affirm the District supplemental control determination, or otherwise require the City to immediately undertake alternative supplemental control measures within 90 days in such circumstances where automatic control measures are required under Sections 172(c)(1) or 182(c)(9) of the federal Clean Air Act, 42 U.S.C. Sections 7502(c)(9) and 7511a(c)(9), the District relies upon the CARB to take these federal requirements into account in its determination of the City's appeal and to issue such interim orders as necessary to implement automatic supplemental control measures so that this Order complies with the Clean Air Act and can be approved by the U.S. Environmental Protection Agency as a proper State Implementation Plan. The foregoing is not intended to provide the CARB with any authority other than its authority under state law.
- D. Paragraph 11 fixes the period of time within which the implementation of the additional control measures must be completed. Upon implementation, the City shall continuously operate and maintain, without interruption, the control measures to comply with performance standards set forth for such measures in the control measure descriptions contained in this Order.

#### CRITERIA FOR DETERMINING THE NEED FOR ADDITIONAL PM<sub>10</sub> CONTROLS

- 11. The criteria, methods and procedures for the APCO's determination of the need for additional PM<sub>10</sub> controls described in Paragraph 10 shall be those described in detail in the "2008 Owens Valley Planning Area Supplemental Control Requirements Determination Procedure" document incorporated as Attachment B along with its referenced "2008 Owens Lake Dust Source Identification Program Protocol" incorporated as Attachment C.

#### NEW BACM, ADJUSTMENTS TO EXISTING BACM, AND BACM TRANSITIONS

- 12. Upon written request by the City, the APCO may approve new BACM, a modification or adjustment to the existing BACMs described in Paragraphs 15, 16 and 17 of this Order, and/or the transition from one BACM to another provided that, at all times, the performance standards of one or the other BACM are continuously met during the transition to assure that the transition shall not prevent the OVPA from attaining or maintaining the NAAQS for

PM<sub>10</sub>. The City's request shall contain a detailed description of the proposed alternative and a demonstration that the request satisfied all requirements of law and this Order. The APCO shall have full discretion to consider any such application for a change in BACM, and to accept, reject or condition its approval of such application. Non-compliance with any such condition shall be enforceable as noncompliance with a District Order. Without limiting the District's discretion as provided herein, the procedures for transitions of implemented control measures or adjustments to BACM shall be those described in Attachment D, "2008 Procedure for Modifying Best Available Control Measures (BACM) for the Owens Valley Planning Area."

ALTERNATIVE METHODS FOR IMPLEMENTING CONTINGENCY MEASURES AND SUPPLEMENTAL CONTROLS

13. Notwithstanding any other provision of this Order, the District shall maintain its authority under Health and Safety Code Section 42316 to order the City to implement additional controls, to control additional emissive areas and/or to undertake additional reasonable measures necessary to mitigate the air pollution caused in the District by the City's water-gathering activities in order to prevent the OVPA from failing to attain or maintain the NAAQS for PM<sub>10</sub>, if circumstances arise that are not specifically addressed in Paragraphs 10 or 12 of this Order.

RELATIONSHIP TO BOARD ORDER 031113-01

14. The District hereby stays the force and effect of Board Order 031113-01 for all times that this Order is in full force and effect. In the event this Order, or any provision of this Order, is stayed due to a legal challenge, including but not limited to a challenge to this Order under Health & Safety Code Section 42316, or any other law, to the State Implementation Plan, or to the Environmental Impact Report for this Revised SIP, or in the event the Order is disapproved by the CARB, the following shall apply:

- A. If the stay or disapproval causes Paragraph 1 through 5 of this Order to cease its operative force and effect, Board Order #031113-01 shall immediately be in effect and shall remain in full force for the duration of any stay or, in the case of disapproval, until another Order is issued by this Board. In addition, the City shall continue to operate and maintain without interruption all control measures already implemented in any area if those control measures were not appealed under Health & Safety Code Section 42316 within 30 days of the date of this Order, and if those measures were not invalidated as a result of that appeal.
- B. If the stay or disapproval causes Paragraph 10 and/or 11 of this Order to cease its operative force and effect, but does not affect Paragraphs 1 through 5 of this Order, the City shall continue to operate and maintain all control measures already implemented without interruption.
- C. If the stay or disapproval does not affect Paragraphs 1 through 7, 10 or 11 of this Order, those Paragraphs and any other terms of this Order that are not stayed or disapproved shall be in effect, and shall remain in full force for the duration of any stay. In all cases, the City shall continue to operate and maintain, without interruption, all control measures already implemented.

- D. If a stay of this Order is imposed, then lifted so that this Order is in effect, the City shall, immediately, meet all requirements and deadlines set by this Order as if no stay had been imposed. The City shall not remove or decrease any control measures without the express written permission of the APCO, and the provisions of Board Order 031113-01 shall again be stayed. If the stay of this Order is only partially lifted such that any portion of this Order remains stayed, Board Order 031113-01 shall remain in effect as provided under Paragraphs 14.A., 14.B. and 14.C, above.

### PM<sub>10</sub> CONTROL MEASURES

#### 15. BACM Shallow Flooding

The “Shallow Flooding” PM<sub>10</sub> control measure will apply water to the surface of those areas of the lake bed where Shallow Flooding is used as a PM<sub>10</sub> control measure. Water shall be applied in amounts and by means sufficient to achieve the following performance standards:

A. For Shallow Flooding areas within the 29.8 square-mile 2003 DCA:

- i. Until April 1, 2010: At least 75 percent of each square mile of the designated areas shall continuously consist of standing water or surface-saturated soil, substantially evenly distributed for the period commencing on October 1 of each year, and ending on June 30 of the next year. If a contiguous Shallow Flood dust control area is less than one square mile, 75 percent of the entire contiguous area shall consist of substantially evenly distributed standing water or surface-saturated soil.
- ii. After April 1, 2010:
  - a. At least 75 percent of each square mile of the designated areas shall continuously consist of standing water or surface-saturated soil, substantially evenly distributed for the period commencing on October 16 of each year, and ending on May 15 of the next year. If a contiguous Shallow Flood dust control area is less than one square mile, 75 percent of the entire contiguous area shall consist of substantially evenly distributed standing water or surface-saturated soil.
  - b. Beginning May 16 and through May 31 of every year, Shallow Flooding areal wetness cover may be reduced to a minimum of 70 percent.
  - c. Beginning June 1 and through June 15 of every year, Shallow Flooding areal wetness cover may be reduced to a minimum of 65 percent.
  - d. Beginning June 16 and through June 30 of every year, Shallow Flooding areal wetness cover may be reduced to a minimum of 60 percent.
  - e. If for any Shallow Flooding area, the percent of areal wetness cover in the periods specified in Paragraphs 15.A.ii,b, c, and d, above, is below the minimum percentages specified for each shallow flood area based on the air quality model for the analysis period from July 2002 through June 2006, and there were no monitored or modeled exceedances of the federal standard at the historic shoreline, that area will be deemed to be in compliance, if the City demonstrates in writing and the APCO reasonably determines in writing that maximum water delivery mainline flows were maintained throughout the applicable period.

- B. For Shallow Flooding areas within the 12.7 square-mile 2006 SDCA:
- i. The percentage of each area that must have substantially evenly distributed standing water or surface-saturated soil shall be based on the Shallow Flood Control Efficiency Curve (SFCE Curve) attached as Exhibit 3 to achieve the control efficiency levels in the MDCE Map (Exhibit 2).
  - ii. For Shallow Flooding areas with control efficiencies of 99 percent or more:
    - a. Beginning May 16 and through May 31 of every year, Shallow Flooding areal wetness cover may be reduced to a minimum of 70 percent.
    - b. Beginning June 1 and through June 15 of every year, Shallow Flooding areal wetness cover may be reduced to a minimum of 65 percent.
    - c. Beginning June 16 and through June 30 of every year, Shallow Flooding areal wetness cover may be reduced to a minimum of 60 percent.
    - d. If for any Shallow Flooding area, the percent of areal wetness cover in the periods specified in Paragraph 15.B.ii.a,b, and c, above, is below the minimum percentages specified for each shallow flood area based on the air quality model for the analysis period from July 2002 through June 2006, and there were no monitored or modeled exceedances of the federal standard at the historic shoreline, that area will be deemed to be in compliance if the City demonstrates in writing and the APCO reasonably determines in writing that maximum water delivery mainline flows were maintained throughout the applicable period.
- C. Beginning on April 1, 2010, if modeled or monitoring data shows an exceedance or exceedances of the PM<sub>10</sub> NAAQS at the historic shoreline as a result of excessive dry areas within Shallow Flooding control areas during the dust control periods for each year between October 1 and June 30 of the next year, the provisions of Paragraph 10 shall apply.
- D. From July 1 through September 30 of each year, the City is not required by the 2008 SIP to apply water to Shallow Flooding areas for dust control purposes, but is required to maintain minimum areal wetness cover as required by applicable environmental documents, permits, leases and approvals.
- E. Aerial photography, satellite imagery or other methods approved at the sole discretion of the APCO shall be used to confirm wetness coverage.
- F. The following portions of the areas designated for control with Shallow Flooding are exempted from the requirement of dust control by means of a saturated surface:
- i. Raised berms, roadways and their shoulders necessary to access, operate and maintain the control measure which are otherwise controlled and maintained to render them substantially non-emissive and
  - ii. Raised pads containing vaults, pumping equipment or control equipment necessary for the operation of Shallow Flooding infrastructure which are otherwise controlled and maintained to render them substantially non-emissive.

- G. “Substantially non-emissive” shall be defined to mean that the surface is protected with gravel, durable pavement or other APCO-approved surface protections sufficient to meet the requirements of District Rules 400 and 401 (visible emissions and fugitive dust).
- H. Excess surface waters and shallow groundwaters above the annual average water table that existed before site construction that reach the lower boundary of the dust control areas will be contained, collected and recirculated for reapplication to dust control areas or otherwise lawfully discharged. The dust control measure areas shall have lateral boundary edge berms and/or drains as necessary to contain excess waters in the control areas and to isolate the dust control measure areas from each other and from areas not controlled. If drains are used, they shall be designed and constructed so that they may be regulated such that groundwater levels, surface water extent and wetlands in adjacent uncontrolled areas are not impacted. These requirements do not apply to Shallow Flood area T36-4, due to its adjacency to the Lower Owens River Project (LORP) and the City’s intention to integrate the design and operation of T36-4 into the LORP.
- I. The City shall remove all exotic pest plants, including salt cedar (*Tamarix ramosissima*), that invade any of the areas designated for control by Shallow Flooding.
- J. As necessary to protect human health, the City shall prevent, avoid and/or abate mosquito, other pest vector and biting nuisance insect breeding and swarming within and in the vicinity of the control areas, including within communities less than three miles from a PM<sub>10</sub> control area, by effective means that minimize adverse effects upon adjacent wildlife.

16. BACM Managed Vegetation

A. Existing Managed Vegetation areas

For areas controlled with the Managed Vegetation PM<sub>10</sub> control measure prior to January 1, 2007, the areas shall be operated and maintained in accordance with a Managed Vegetation Operation and Management Plan to be approved in writing by the APCO, which approval shall not be unreasonably withheld. The requirements of the Plan may be revised upon written request by the City and written approval of the APCO, which approval shall not be unreasonable withheld,. The City’s request shall contain a specific description of the modification requested and provide a demonstration regarding the effect of the modification on the environment and PM<sub>10</sub> control effectiveness.

B. New Managed Vegetation areas

In PM<sub>10</sub> control areas constructed after January 1, 2007 where Managed Vegetation is used as a PM<sub>10</sub> control measure, the following performance standard shall be achieved commencing on October 1 of each year, and ending on June 30 of the next year: substantially evenly distributed live or dead vegetation coverage of at least 50 percent on each acre designated for Managed Vegetation.

C. All Managed Vegetation areas

- i. The vegetation planted for dust control shall consist only of locally-adapted native species approved by the APCO or other species approved by both the APCO and the California State Lands Commission (CSLC). To date, the only approved locally-

adapted native species is saltgrass (*Distichlis spicata*). However, other appropriate species may be approved upon written request of the City and written approval of both the APCO and CSLC.

- ii. Vegetation coverage shall be measured by the point-frame method, by ground-truthed remote sensing or by other methods approved at the sole discretion of the APCO.
- iii. The following portions of the areas designated for control with Managed Vegetation are exempted from the requirements set forth in Paragraphs 16.A. and 16.B., above:
  - a. Portions consistently inundated with water, such as reservoirs, ponds and canals,
  - b. Roadways and equipment pads necessary to access, operate and maintain the control measure which are otherwise controlled and maintained to render them substantially non-emissive, and
  - c. Portions used as floodwater diversion channels or desiltation/retention basins.
- iv. “Substantially non-emissive” shall be defined to mean that the surface is protected with gravel, durable pavement or other APCO-approved surface protections sufficient to meet the requirements of District Rules 400 and 401 (visible emissions and fugitive dust).
- v. Excess surface waters and shallow groundwaters above the root zone depths that reach the lower boundary of the dust control areas shall be collected and recirculated for reapplication to dust control areas or otherwise lawfully discharged. The dust control measure areas shall have lateral boundary edge berms and/or drains as necessary to contain excess waters in the control areas and to isolate the dust control measure areas from each other and from areas not controlled. Drains shall be designed and constructed so that they may be regulated such that groundwater levels, surface water extent and wetlands in adjacent uncontrolled areas are not impacted.
- vi. To protect the Managed Vegetation control measure from flood damage and alluvial deposition, the City shall incorporate stormwater and siltation control facilities into and around Managed Vegetation areas adequate to maintain the dust mitigation function of Managed Vegetation. The Managed Vegetation protection facilities shall be designed to dissipate flood waters and capture the alluvial material carried by flood waters, so as to avoid greater than normal water flows and deposition of alluvial material into the Owens Lake brine pool.
- vii. The City shall remove all exotic pest plants, including salt cedar (*Tamarix* spp.), that invade any of the areas designated for control by Managed Vegetation.
- viii. As necessary to protect human health, the City shall prevent, avoid and/or abate mosquito, other pest vector and biting nuisance insect breeding and swarming within and in the vicinity of the dust control areas, including within communities less than three miles from a PM<sub>10</sub> control area, by effective means that minimize adverse effects upon adjacent wildlife.

17. BACM Gravel Blanket

- A. In areas where Gravel Blanket is used as a PM<sub>10</sub> control measure, the City shall meet the following performance standard: one hundred percent of the control area shall be covered with a layer of gravel at least four inches thick. All gravel material placed must be screened to a size greater than one-half inch (½ inch) in diameter. Where it is necessary to support the gravel blanket, it shall be placed over a permanent permeable geotextile fabric. The gravel shall have resistance to leaching and erosion. It shall be no more toxic than the gravel from the Keeler fan site analyzed by the District in the Final Environmental Report prepared for the 1997 SIP. To minimize visual impacts, all gravel used shall be comparable in coloration to the existing lake bed soils.
- B. To protect the Gravel Blanket control measure from flooding, the City shall incorporate drains and channels into and around the control measure areas adequate to maintain the dust mitigation function of the Gravel Blanket, and outlet flood waters into the Owens Lake brine pool, Shallow Flooding areas, or reservoirs. The drains and channels shall be designed to incorporate features such as desiltation or retention basins that are adequate to capture the alluvial material carried by the flood waters and to avoid greater than normal deposition of this material into the Owens Lake brine pool.
- C. The gravel placement design and implementation shall adequately protect the graveled areas from the deposition of wind- and water-borne soil or infiltration of sediments from below. All graveled areas will be visually monitored to ensure that the Gravel Blanket is not filled with sand, dust or salt and that it has not been inundated or washed out from flooding. If any of these conditions are observed over areas larger than one acre, additional gravel will be transported to the playa and applied to the playa surface such that the original performance standard is maintained. The City shall apply best available control measures (BACM) and New Source Performance Standard (NSPS) emission limits to its gravel mining and transportation activities occurring within the District's geographic boundaries as required by the District in the City's District-issued Authority to Construct and Permit to Operate.

18. Alternative Non-BACM Moat & Row Control Measure

- A. The Moat & Row PM<sub>10</sub> control measure is not a currently-approved BACM. The preliminary form of Moat & Row is described in Exhibit 4 of the 2006 Settlement Agreement between the District and the City (Attachment A). The final form of the Moat & Row PM<sub>10</sub> control measure will be determined from the results of a demonstration project and testing to be conducted by the City on the lake bed. All Moat & Row controls will be designed, constructed and operated to achieve the MDCEs described in Paragraph 9.
- B. The PM<sub>10</sub> control effectiveness of Moat & Row may be enhanced by combining it with other dust control methods such as vegetation, water, gravel, or the addition of other features that enhance sand capture and sheltering or directly protect the lake bed surface from wind erosion. The effectiveness of the array can also be increased by adding additional moats and rows to the array.

- C. Final design for the Moat & Row control measure will be determined solely by the City after consultation with and written notification to the District. The City shall consider the following elements in its final design:
  - i. Test results demonstrating that the required MDCE for each Moat & Row area can be met,
  - ii. Completion of all required environmental documentation, approvals, permits and leases, and
  - iii. Inclusion of monitoring in the infrastructure design to continuously monitor compliance with the target MDCE for each area.
- D. Upon written request of the City, the APCO shall determine in writing if any given Moat & Row design constitutes BACM or MDCE-BACM in accordance with Attachment D, “2008 Procedure for Modifying Best Available Control Measures (BACM) for the Owens Valley Planning Area.”
- E. Areas of Moat & Row that do not function as designed or that cause or contribute to an exceedance of the federal 24-hour PM<sub>10</sub> NAAQS will be remediated as specifically provided in Attachment B, the “2008 Owens Valley Planning Area Supplemental Control Requirements Determination Procedure.”

#### PM<sub>10</sub> CONTROL MEASURE COMPLIANCE AND ENFORCEMENT

- 19. The District and City will work collaboratively to develop improved wetness and vegetative cover measurement techniques, control efficiency relationships, and compliance specifications for all PM<sub>10</sub> control measures. Final acceptance and implementation of all compliance measurement techniques and PM<sub>10</sub> control measure compliance specifications with regulatory impact will be at the sole discretion of the APCO.

#### STORMWATER MANAGEMENT

- 20. The City shall design, install, continually operate and maintain flood and siltation control facilities to protect the all PM<sub>10</sub> control measures installed on the lake bed at all times, and in a manner that groundwater levels, surface water extent, and wetlands in adjacent uncontrolled areas are not impacted by induced drainage. Flood and siltation control facilities shall be integrated into the design and operation of the PM<sub>10</sub> control measures. All flood and siltation control facilities and PM<sub>10</sub> control measures damaged by stormwater runoff or flooding shall be promptly repaired and restored to their designed level of protection and effectiveness. All flood and siltation control facilities shall be designed and operated in a manner to prevent any greater threat of alluvial material contamination to the existing trona mineral deposit lease area (State Lands Commission leases PRC 5464.1, PRC 3511 and PRC 2969.1) than would have occurred under natural conditions prior to the installation of PM<sub>10</sub> control measures.

SCHEDULE

21. The Control Measures shall be implemented on the areas set forth in Paragraphs 1 through 4 by the dates set forth in those Paragraphs. Supplemental Control Requirements shall be met on the schedule provided for in Attachment B.

PERFORMANCE MONITORING PLAN

22. The City, in consultation with the District, shall annually develop and provide to the District in writing a Performance Monitoring Plan (PMP) to aid in its operation of the Owens Lake dust mitigation program on the Owens Lake bed.

- A. The PMP shall describe the measurements and methods used to verify the performance of the constructed DCMs. The PMP shall also describe the measurements and methods used to maximize information on dust emissions from any areas of special interest.
- B. The City shall implement the PMP, and will use the results as a guide for making operational decisions about the type, location, timing, and level of dust control measures needed to prevent exceedances of the federal standard at the shoreline.
- C. The District may use information from the PMP to assist in determining the likely sources of dust emissions causing or contributing to exceedances (if any) of the federal standard at the shoreline.
- D. The PMP for each calendar year shall be submitted to the APCO by March 31 of the following calendar year.

ADDITIONAL REQUIREMENTS

23. The District Board orders the City of Los Angeles to satisfy the following requirements related to the implementation of the Shallow Flooding, Managed Vegetation, Gravel Blanket and Moat & Row control measures:

- A. The City's construction, operation and maintenance activities shall comply with all Mitigation Measures set forth in Final Environmental Impact Reports, EIR Addendums and Mitigated Negative Declarations associated with the areas on which dust controls are placed, and all subsequent environmental documents adopted by the District for implementation of the requirements of this SIP.
- B. The City shall comply with any and all applicable requirements of the Mitigation Monitoring and Reporting Programs adopted by the District and associated with the Final Environmental Impact Reports and Final Environmental Impact Report Addendums for this project, and with all subsequent environmental documents adopted by the District for implementation of the requirements of this SIP. All mitigation measures required in certified environmental documents associated with the implementation, operation and maintenance of PM<sub>10</sub> control measures required by this order are hereby incorporated as requirements of this order and may be enforced as such.

- C. The City shall apply best available control measures (BACM) to control air emissions from its construction/implementation activities occurring in the District's geographic boundaries.

**Exhibits**

Exhibit 1 Map and Coordinates of PM<sub>10</sub> Control Areas

Exhibit 2 Minimum Dust Control Efficiency Map

Exhibit 3 Shallow Flood Control Efficiency Curve

**Attachments**

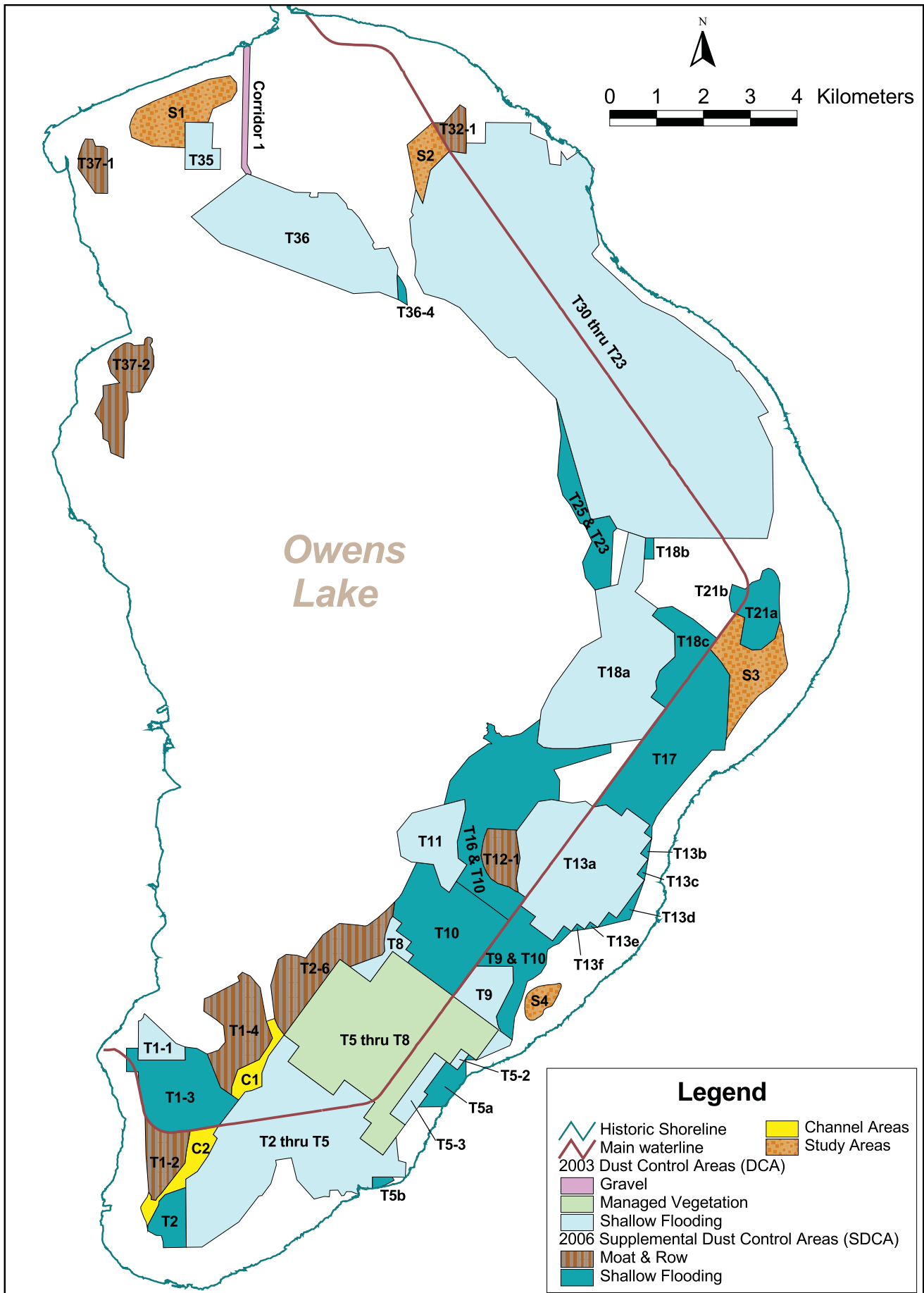
Attachment A 2006 Settlement Agreement between the Great Basin Unified Air Pollution Control District and the City of Los Angeles

Attachment B 2008 Owens Valley Planning Area Supplemental Control Requirements Determination Procedure

Attachment C 2008 Owens Lake Dust Source Identification Program Protocol

Attachment D 2008 Procedure for Modifying Best Available Control Measures (BACM) for the Owens Valley Planning Area

# Exhibit 1 - Map and coordinates of PM<sub>10</sub> control areas



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LADWP VARIANCE HEARING

DOCKET NUMBER: GB11-04

DISTRICT EXHIBIT 2

BREAKDOWN REPORT

T36 TURNOUT FACILITY

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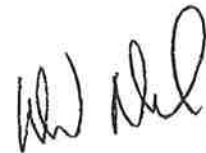
**FAX Coversheet**  
**LADWP – Water Operations Division**  
**Northern District - Owens Lake Operations & Maintenance**

**Office : (760)873-0435**  
**Fax : (760)873-2201**

**Date 12-5-2011**

**To: Ted Schade, Air Pollution Control Officer, Great Basin  
Unified APCD or Acting Air Pollution Control Officer  
Fax Number (760) 872 6109**

**From: David Neal, LADWP Owens Lake Operations  
Los Angeles Department of Water & Power  
5 Pages including coversheet**



**Subject: Breakdown Report T36 Turnout Facility**

### BREAKDOWN REPORT

Report Submittal Date: 12/6/2011 Time: 1400

**The City of Los Angeles Department of Water & Power is hereby providing notice in accordance with Great Basin Unified Air Pollution Control District Rule 403 of a breakdown of equipment related to air pollution controls at Owens Lake, CA:**

<b>INITIAL BREAKDOWN NOTICE FOR:</b>	
<input type="checkbox"/> Dust Control Area(s): <u>T36 &amp; T35</u>	
<input type="checkbox"/> Other (e.g. water truck for dust control): _____	
Date of breakdown: <u>12/5/2011</u>	Time of breakdown: <u>~ 2:00 PM</u>
Equipment Involved: <u>Turnout T36 Facility</u>	
Cause of Breakdown: <u>A leak occurred at the T36 turnout facility on Monday December 5, 2011 around 2:00pm. The cause of the leak is currently unknown. Crews are onsite and the breakdown is being investigated.</u>	
Expected Downtime: <u>To be determined</u>	
Operator Sending Notice: <u>David Neal</u>	
Operator's Phone No. <u>(760) 873-0435</u>	Fax No. <u>(760) 873-2201</u>
<b>FOLLOW-UP NOTICE - Date &amp; time equipment placed back in service.</b>	
Date (equipment back in service): _____	Time: _____
Operator Sending Follow-up Notice: _____	
Operator's Phone No. _____	Fax No. _____

**INSTRUCTIONS:**

In case of a breakdown of any air pollution control related equipment or infrastructure that may affect compliance with dust control requirements, the Operator must **FAX an initial breakdown notification to the Great Basin Unified Air Pollution Control District at (760) 872-6109** within an hour of detection, unless it can be demonstrated that a longer reporting period is necessary (not to exceed 24 hours). Use this form to send follow-up reports when the problem has been corrected, or to send additional information related to the breakdown.

Within one (1) week after the breakdown event, the facility operator must submit a written report to the Air Pollution Control Officer which includes: a determination of the cause of the breakdown, date of correction of the breakdown, corrective measures to prevent a recurrence, an estimate of the emissions caused by the breakdown condition, and pictures of the failed equipment, if available. Breakdown conditions shall not persist longer than twenty-four (24) hours, unless the facility is granted an emergency variance pursuant to District Rule 617 (Emergency Variance).

FAX this notice to: Great Basin Unified Air Pollution Control District  
12013X #: (760) 872-6109 VOICE #: (760) 872-8211 GB11-04

LADWP VARIANCE HEARING  
DOCKET NUMBER: GB11-04

DISTRICT EXHIBIT 3  
LOCATION MAP SHOWING  
T35-T36 SHALLOW FLOOD AREAS

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