CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

RESOLUTION NO. R6V-2010-0049
WDID NO. 6B199511001

CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS

FOR

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS LANCASTER SUB-BASIN FULL-SCALE AQUIFER STORAGE AND RECOVERY PROJECT

Los Angeles County

Whereas the California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Discharger

   The County of Los Angeles Department of Public Works submitted a Report of Waste Discharge (RWD) for the Lancaster Sub-Basin Full-Scale Aquifer Storage and Recovery (ASR) Project (Project) on August 20, 2009. The County submitted a supplement to the RWD on March 22, 2010. For the purpose of this Water Board Conditional Waiver of Waste Discharge Requirements (Waiver), the County of Los Angeles Department of Public Works is referred to as the "Discharger."

2. Aquifer Storage and Recovery ASR Project

   The Antelope Valley/East Kern Water Agency (AVEK) has an entitlement of 141,400 acre - feet per year of State Water Project (SWP) water. The Discharger is proposing storage and recovery of treated SWP water in the Lancaster groundwater sub-basin as a feasible mechanism for providing a long-term water supply for municipal and domestic use in the Antelope Valley. AVEK supplies treated SWP water to the Discharger. The purpose of the ASR Project is to implement full-scale water storage in the local aquifer for later recovery and use.

3. ASR Pilot Project

   The Discharger previously conducted an ASR Pilot Project to determine if aquifer storage of SWP water and later recovery was a viable option for further evaluation. The ASR Pilot Project consisted of the injection of 118 acre - feet of SWP water over a two-week period in January 1994. The Discharger's findings of the ASR Pilot Project were as follows.

a. The aquifer in the ASR Pilot Project area consists of an upper and lower aquifer, which are separated by a blue clay aquitard. Most of the existing production wells are located in the upper aquifer. The upper aquifer is suitable for storage and recovery. The lower aquifer is unsuitable for this use due to low transmissivity and marginal water quality.

b. The initial concentration of total dissolved solids (TDS) in the receiving groundwaters measured at the injection well was 140 milligrams per litter (mg/L). The TDS concentration of the injected SWP water (252 mg/L) is suitable for municipal and domestic supply (below 1000 mg/L) and agricultural supply below (450 mg/L). The ASR Pilot Project resulted in a localized increase in the TDS concentration in groundwater at the injection well. The ASR Pilot Project caused an increase in TDS concentration in the upper aquifer in the vicinity of the injection well, a localized degradation of the groundwater in the upper aquifer. Based on sampling conducted in November 1994, the increased TDS concentrations in the ASR Pilot Project area had been generally abated by dispersion and removal of stored SWP water from the aquifer for municipal use.

4. ASR Demonstration Project

The Discharger also conducted a larger scale ASR Demonstration Project to determine aquifer properties and to evaluate the effects of injecting AVEK treated SWP water on the basin groundwater chemistry. In the ASR Demonstration Project, the Discharger injected 3,326 acre - feet in four injection cycles over a period from April 8, 1996 to June 11, 1999. The production, fate and transport of disinfection by-products, total trihalomethanes (TTHM) and Haloacetic acids (five) (HAA5), were studied and evaluated. Following AVEK treatment of SWP water, TTHM were present in the injected treated SWP water and in groundwater around the injection wells following each injection cycle. After the third extraction cycle, TTHM groundwater concentrations were at or below 55 µg/L in the extracted water, which is under the maximum contaminant level (MCL) of 80 µg/L. HAA5 were present at or below the MCL of 40 µg/L in the extracted water. The ASR Demonstration Project ended November 17, 1999 and based on the results the Discharger determined that implementation of a full-scale ASR Project is a technically, economically, and institutionally feasible way to increase the Lancaster region's available water supply.

5. ASR Project Permitted under the Previous Waiver (R6V-2004-0043)

The previous waiver (R6V-2004-0043 expired October 13, 2009) authorized a full-scale ASR Project with a maximum annual injection of 6,843 acre - feet of treated SWP water into the Lancaster Sub-Basin. The Discharger injected SWP water through eight authorized injection points. These injection points are within or adjacent to Sec 26, 27, 34, and 35, T7N, R12W, SBB&M. The ASR Project

injection cycles were from October 28, 2005 to May 3, 2006, and from October 24, 2006 to March 9, 2007. The injection volume of treated SWP water was 1,600 acre - feet during the first cycle and 1,500 acre - feet during the second cycle, for a total injection of 3,100 acre - feet. The previous waiver contained two types of numerical groundwater constituent limits. These were 1) injection cycle running average concentration limits in groundwater and 2) the maximum concentration limits in groundwater.

Between the end of the second injection cycle in March 2007 and June 30, 2009, the Discharger extracted 24,800 acre - feet of groundwater for beneficial use. TTHM have substantially declined with only two wells containing TTHM slightly above the detection level when sampled after the end of the extraction cycle.

6. Proposed ASR Project

The Discharger proposes to continue to inject SWP water through groundwater wells directly into the aquifer. The groundwater wells are used for both groundwater injection and groundwater extraction. The Discharger proposes an increase in the annual injection cycle from five months to seven months. The proposed total injection volume over the injection cycle will remain at 6,843 acre - feet of SWP water. The ASR Project injects and recovers water from the upper aquifer of the groundwaters of the Lancaster Sub-Basin.

7. AVEK Treatment of SWP Water

AVEK treats SWP water using coagulation, flocculation, sedimentation, filtration, ozone injection, and chlorine disinfection. AVEK treats SWP water for domestic purposes in compliance with standards imposed by the California Department of Public Health (CDPH) for domestic supply. AVEK has evaluated but not implemented alternative disinfection treatment methods, such treatment by ozone followed by use of chloramine or granulated activated carbon. If the supply water treatment methods or processes are proposed to be changed, the conditions of this Waiver require that the Discharger must submit the proposal to the Water Board for review prior to implementation.

8. Injection Location

The Discharger distributes AVEK water through an existing water supply line. The Discharger proposes to inject at existing and new well locations within its service area. The Discharger has identified an area bounded on the west by 10th Street West, on the east by 35th Street East, on the south by Avenue P within the City of Palmdale, and on the north by Avenue H8 where injection wells will be operated. Based on a hydraulic conductivity of approximately 4 ft/day, the injected water would travel a maximum of about 1500 feet away from the injection wells over the seven month injection cycle. Subsequently, the banked

water will be recovered by groundwater extraction at the well. The extracted water will be further treated if necessary and used for municipal, domestic, and industrial supply in accordance with existing water supply requirements.

9. ASR Project Area

The U.S. Geological Survey (USGS) completed a hydrologic model for the ASR Project. According to the model, the area affected by the injection covers an area of up to a two-mile radius around the injection well sites because some sites include more than one injection well. The localized affected area of each injection well is about ¼ mile radius.

The general area of the ASR Project shown on Attachment "A". In addition, Attachment "B" shows injection and monitoring wells. Both attachments are made a part of this Waiver. The existing and proposed injection and extraction wells are located in the Cities of Lancaster and Palmdale, Los Angeles County.

A Monitoring and Reporting Program (Attachment "D") made a part of this Waiver requires groundwater monitoring to confirm that the magnitude and extent of degradation from injection water, and to confirm that the condition of degradation is abated through the extraction of the stored SWP water.

10. Constituents of Concern (COC)

Pursuant to definitions contained in Section 13050 of the California Water Code, salts (inorganic salinity constituents), HAA5, TDS, and TTHM dissolved in the SWP water are considered waste. These constituents are considered waste because: (1) the receiving waters do not contain TTHM, (2) the concentration of other constituents in the receiving waters are generally less than the concentration of COC within the SWP water, 3) these constituents are waste by-products associated with the treatment of aqueduct water for disinfection and (4) the injection of any residual COC is considered a "disposal".

11. Authorized Injection Sites

The injection well locations described above as shown on Attachment "B" are the only authorized discharge points for SWP water. The groundwaters of the Lancaster Sub-Basin at the area of the injection wells shown in Attachment "B" are the receiving waters for the ASR Project.

12. Geology and Hydrology

The sediments beneath the ASR Project area consist of interbedded gravel, sand, silt, and clay. The site is underlain by an upper and lower aquifer. Depth to groundwater in the upper aquifer is approximately 280 feet below ground

surface (bgs). A 180-foot thick blue clay layer separates the upper and lower aquifers. The location of the blue clay layer ranges from 500 to 700 feet bgs at the ASR Project. The deeper aquifer is under confining pressure and has an upward vertical gradient augmented by overdraft from the upper aquifer. The lower aquifer has lower hydraulic conductivity and transmissivity, and is not suitable for storage.

13. Land Uses

The land uses at and surrounding the ASR Project consist of the following:

a. mixed residential, commercial, and industrial use in the Cities of Lancaster and Palmdale;
b. Air Force Plant #42; and
c. open desert land.

14. Basin Plan

On March 31, 1995, the Water Board adopted a Water Quality Control Plan for the Lahontan Region (Basin Plan). This Waiver implements the Basin Plan.

15. Receiving Waters

The receiving waters are the groundwaters of the Antelope Valley Groundwater Basin (Department of Water Resources Hydrologic Unit No. 6-44).

16. Beneficial Uses

The present and probable beneficial uses of the groundwaters of Antelope Valley Groundwater Basin as set forth and defined in the Basin Plan are:

a. municipal and domestic supply;
b. agricultural supply;
c. industrial service supply; and
d. freshwater replenishment.

17. Degradation Analysis

The ASR Project will result in a temporary degradation of water quality. In accordance with State Water Resources Control Board Resolution No. 68-16 (Resolution 68-16) and the Basin Plan, the Discharger has submitted a Degradation Analysis for the ASR Project as part of the Report of Waste Discharge. The Water Board has considered the following as part of the Degradation Analysis:

a. The condition of degradation will be hydraulically contained near the injection well.

b. The treated SWP water meets State standards for municipal, domestic, and agricultural supply before it is injected. Based on monitoring and hydraulic controls, there is evidence that the injected water will not adversely impact beneficial uses of the groundwaters.

c. Some localized areas of the Antelope Valley Groundwater Basin are in overdraft, and expected growth in the Lancaster area may result in further overdraft of these areas. The ASR Project is a feasible method of providing water to the people of Antelope Valley and countering overdraft in some areas of the Antelope Valley Groundwater Basin.

d. Treatment of the SWP water to lower concentrations of TDS, HAA5, and TTHM is technically feasible. However, additional costs associated with the treatment is not be reasonable based on the incremental improvement in groundwater quality and considering that the condition of degradation is temporary until the stored water is extracted from the aquifer.

e. Groundwater monitoring will be conducted during the ASR Project to verify that the area of groundwater degradation is controlled, contained and removed.

f. The ASR Project includes a Contingency Plan which must be implemented if: (1) the condition of degradation is not abated at the end of the ASR Project or (2) the depth and lateral extent of degraded groundwater threatens to spread beyond ½ mile from the injection well.

g. The degradation will be abated when SWP water is extracted to provide water supply. After each injection and extraction cycle, groundwater volumes in excess of the injected volume of SWP water will be extracted thereby reducing TTHM, HAA5, and TDS levels in the recharge zone.

The Resolution 68-16 factors for maintaining high quality of water are the following:

1) The change will not unreasonably affect present and anticipated beneficial use of water,
2) The Discharge must not cause a pollution or nuisance, and
3) The Discharger will implement best practical treatment or control of the discharge to assure the highest water quality consistent with the maximum benefit to the State.

In consideration of the above factors, the Water Board finds that the temporary degradation that will occur during the term of the ASR Project is consistent with the maximum benefit to the people of the State, by reducing the current condition of aquifer overdraft while retaining the present and anticipated beneficial uses of the groundwater, and meeting the Basin Plan goal of maintaining groundwater quality at background conditions following each injection/extraction cycle. The Discharge of treated SWP at level below MCLs will not result in a pollution condition. The extraction of groundwater following injection will result in best practicable treatment or control because it abates the degradation formed in the recharge zone of each injection well following injection to ensure maintenance of the highest water quality consistent with the maximum benefit to people of the State. Conditions such as injection limits, monitoring, and periodic review are necessary and appropriate to ensure the ASR Project is conducted to protect groundwater beneficial uses.

18. Discharge Limits

Discharge limits for the disinfection by-products are required to ensure that water quality meets Basin Plan requirements and to protect the groundwater as a source of drinking water consistent with State Water Resources Control Board Resolution 88-63. A condition of this Waiver is that the Discharger work with the water supplier to periodically review additional technology that becomes available to reasonably reduce COCs which are by-products of disinfection with chlorine in the injection water. Additionally, prior to the injection of supplied water from other sources or that which has been treated with other technology, the Discharger must file a revised RWD.

A *maximum* discharge (injection) limit of 72 µg/L for TTHM (90% of the MCL) is reasonable to allow for injected water quality variation while protecting aquifer water quality. In the 2004 waiver, the Water Board specified an injection cycle *running average* concentration in groundwater as a long-term injection average concentration. In this Waiver, the Water Board is changing the injection cycle *running average* limitation to a *average monthly* limitation in order to provide a more effective compliance measure and to provide compliance evaluation on a monthly basis. The method for development of the average monthly limits is the State Water Board's Policy for Implementation of Toxic Standard for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Policy) provides a statistical method for setting effluent limitations. Although this Policy is not applicable to groundwater injection under the ASR Project, the Policy does provide a valid statistical method for setting *average monthly* effluent limitations based on maintaining a long-term average concentration.

Using this Policy, the derived average monthly limitations are a function of the long-term average (LTA) and a multiplier using a log normal distribution at the upper 95th percentile occurrence probability. The multiplier is a function of coefficient of variation, and the number of samples per month. Because the injection cycle running average concentration is the average concentration over several months, it is considered equivalent to the long-term average groundwater concentration for setting an average monthly concentration limit. The default values for coefficient of variation is 0.6 and for the number of samples per month is four. Using the table in the Policy (Table 2), the multiplier is 1.55.

Therefore, the proposed *average monthly* discharge limitation for TTHM is the following:

TTHM: 40 µg/L (LTA) × 1.55 (multiplier) = 62 µg/L (avg monthly limit)

Likewise, the proposed *average monthly* discharge limitations for other constituents with a monthly running average limitation under the previous waiver are the following:

HAA5: 25 µg/L (LTA) × 1.55 (multiplier) = 39 µg/L (avg monthly limit)
TOCs: 4.0 mg/L (LTA) × 1.55 (multiplier) = 6.2 mg/L (avg monthly limit)

The *average monthly* limitations are equivalent to the long-term average limitations set in the previous waiver. The Water Board considers these *average monthly* limits to be as protective as the previous waiver, and provide a more effective compliance measure.

19. California Environmental Quality Act

The County of Los Angeles, the California Environmental Quality Act (CEQA) lead agency for the Project, determined that an Environmental Impact Report was needed for the Project. The County of Los Angeles, on August 12, 2003, certified a final Environmental Impact Report (EIR) for the Project. The EIR did not identify any permanent or substantial unmitigated adverse changes in the environment of the Project. Temporary local groundwater quality degradation is anticipated in the form of increased salts, HAA5, TDS and TTHM above background concentrations in the Project area. The degradation is expected to be maintained below the CDPH respective MCL, be confined within the Project area, and exist temporary for the duration of the Project. Removal of any detectable TTHM degradation remaining within the Project area at the end of the Project will be addressed by the Discharger by additional extraction of groundwater. Although the Project incorporates mitigation measures, the County concluded that the Project will introduce TTHM to the groundwater within the Principal Aquifer of the Lancaster Sub-Basin during the injection cycle of the Project which is a significant, unavoidable, adverse impact.

The County incorporated into the Project all feasible mitigation measures with respect to the significant, unavoidable, adverse impact identified above. The Water Board, in this Waiver, imposes the mitigation measures and monitoring as described above. Although these mitigation measures may lessen the impact, they would not reduce the potential impact to a level that is less than significant as a result of injecting SWP water into the Principal Aquifer of the Lancaster Sub-Basin. In addition to dechlorinating prior to injection, the County of Los Angeles evaluated other alternatives including further treating the water to completely remove disinfection by-products prior to injection. The County did not select this alternative because it would significantly increase consumer service rates and the project would not meet objectives. Based on the County's evaluation of alternatives, the County determined that none of the alternatives are feasible because the alternatives do not meet the basic Project requirements and objectives. The Water Board staff has reviewed this information and agrees with the County's conclusions.

California Code of Regulations, title 14, section 15096, subdivision (g)(2) states: "When an EIR has been prepared for a project, the Responsible Agency shall not approve the project as proposed if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment." California Code of Regulations, title 14, section 15096, subdivision (h) states: "The Responsible Agency shall make the findings required by Section 15091 for each significant effect of the project and shall make the findings in Section 15093 if necessary."

The Water Board's approval of this Project may result in the following potentially significant impact pursuant to California Code of Regulations, title 14, section 15091, subdivision (a), which is reduced to less than significant with mitigation.

Significant Impact No. 1. - The land discharge of water from the development, testing, and disinfection of wells could degrade surface or groundwater quality during construction phase of the Project.

Pursuant to California Code of Regulations, title 14, section 15091 subdivision (a), "changes or alterations have been incorporated into the project to lessen the impact to insignificant environmental as identified in the final EIR" that apply to this impact include:

Mitigation No. 1 - All discharges from development, testing and disinfection of wells will be conveyed, by either piped or open channel storm channel flow, to confined, bermed areas for dissipation by evaporation and percolation. No discharge will occur to surface waters. Prior to discharge for evaporation or percolation, the water will be held in tanks for sedimentation and for disinfection. Water will be held until the analytical results confirm a reduction of chlorine

residual concentration to 0.5 mg/L or less. The process of development, testing and disinfection may last about a week for each well being constructed. The Discharger has permit coverage under the Water Board's General Permit for well development. With implementation of the mitigation measures, impacts are expected to be less than significant.

The Water Board's approval of this Project will result in the following potentially significant and unavoidable impact pursuant to California Code of Regulations, title 14, section 15091, subdivision (a), even with the implementation of all feasible mitigation:

Significant Impact No. 2 - The ASR Project would introduce THMM to the groundwater within the Principal (Upper) Aquifer of the Lancaster subbasin through the injection of SWP water.

Pursuant to California Code of Regulations, title 14, section 15093, subdivision (a)(1), "changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR" that apply to this impact include:

Mitigation No. 2a - The Project must meet the State Water Resources Control Board's Non-Degradation Policy (Resolution 68-16). This project is shown to meet this policy in Finding 17.

Mitigation No. 2b - The Discharger must monitor injection rates, the volume of injected SWP water, and groundwater levels during the lifetime of the Project. Water flow monitoring must include taking continuous measurements of the rate and amounts of injection and extraction through flow meters, which will be located at each Project well. The Discharger must also monitor groundwater levels. Monitoring data will be used to further delineate the aquifer, to determine need for additional monitoring wells and adjust injection and/or pumping rates to ensure that impacts are contained within the Project area. This Waiver imposes monitoring to verify compliance.

Mitigation No. 2c - The Discharger will utilize the simulation model developed during the ASR Demonstration Project to estimate aquifer characteristics, calculate directions and quantities of groundwater flow, provide scaled groundwater contour maps and data from each well, and to analyze resulting effects on water levels. The Discharger must implement water quality monitoring throughout the life of the proposed Project, for both source water being injected and the water being extracted. The Discharger must prepare a Sampling and Analysis Plan (SAP) by the attached Monitoring and Reporting Program. Background groundwater quality must be developed for each monitoring point prior to initiation of the Project. Analysis must be performed on treated SWP water that is being injected to establish injection water quality data for recharged

water. The Discharger must meet numerical limits for injection of water. Groundwater monitoring at appropriate locations must confirm that the injected water is within the predicted hydraulic containment zone of each injection well. The Discharger must maintain TTHM levels in stored water below the MCL, thus not negatively affecting the Discharger's or any other purveyor's ability to pump and serve groundwater from the regional aquifer for beneficial uses as described in Water Quality Control Plan for the Lahontan Region. The Discharger shall continuously review and implement best practicable treatment or control methods and achieve the reduction of free chlorine and/or organic compounds. This Waiver imposes this requirement.

As a Responsible Agency, the Water Board pursuant to the California Code of Regulations, title 14, section 15093, subdivision (a)(3), considered these potentially unavoidable adverse environmental effects. The adverse effects are acceptable because of the economic, legal, social, technological or other benefits of the Project. These benefits include:

a. The proposed Project would enhance the reliability of water supply in the Antelope Valley and would help support current demand and future growth in the area.

b. The proposed Project would avoid or reduce overdraft of the basin.

c. The proposed Project would halt the decline of groundwater levels, and thereby reduce energy consumption required for pumping lifts.

d. The proposed Project would reduce potential subsidence problems.

e. The "No Project" alternative would perpetuate the depletion of local groundwater resources resulting in the detrimental environmental effects and potential curtailment of service to the Discharger's water supply customers. Negative impacts of the "No Project" alternative outweigh the adverse effects of the proposed Project.

f. The Spreading Ground Alternative requires periodic removal of soil layers to maintain adequate percolation rates. Potential noise, air quality, and traffic impacts would be associated with this periodic maintenance.

The Water Board finds that the economic, technological, social, and other benefits of the Project outweigh the significant and unavoidable adverse impacts of the Project and is therefore "acceptable", pursuant to California Code of Regulations, title 14, section 15093, and consistent with the Discharger's statement of overriding considerations (L.A. County, July 2003)

In the Discharger's report of waste discharge, August 13, 2009, the Discharger proposed a Project change resulting in additional well locations that will be used to inject SWP water. The additional wells are 4-05, 4-17, 4-62, 4-70, 4-71, 4-73, 4-74, 4-76, 4-77, 4-80, 4-81, 4-82, 4-83, 4-84, 4-87, and 34-7.

Well drilling impacts – Three wells, 4-05, 4-17, and 4-62, were constructed prior to the issuance of the previous waiver. The Discharger certified a final EIR on July 31, 2003 evaluating the impacts of drilling wells 4-73, 4-74, 4-80, and 4-81. The Discharger prepared a CEQA mitigated negative declaration for drilling new Wells 4-70 and 4-71 at a new location. The Discharger filed a Notice of Determination for these wells on July 8, 2009. The Discharger drilled the remaining additional wells, 4-76, 4-77, 4-82, 4-83, 4-84, 4-87, and 34-7 under CEQA exemptions because they were existing or replacing wells at already existing locations. These additional wells replaced existing wells 4-6, 4-9, 4-16, 4-34, and 34-6, respectively.

Injection THMM impacts – Under California Code of Regulations, title 14, section 15162, a subsequent EIR or negative declaration shall be prepared if substantial changes are proposed in the Project that will require major revision of the previous environmental document due to the involvement of new significant effects or the identification of new feasible mitigation measures. Under the California Code of Regulations, title 14, section 15163, a supplemental EIR or negative declaration shall be prepared when the above conditions are met but only minor additions or changes to the EIR or negative declaration are necessary. Under the California Code of Regulations, title 14, section 15164 an addendum to the previous environmental document is appropriate if no new impacts are identified and only minor changes are proposed in the Project that do not require a subsequent EIR or negative declaration. As lead agency, the County of Los Angeles has prepared an addendum to the EIR evaluating the impacts from implementing the Project at the new well locations. The Water Board, as a responsible agency, reviewed the addendum and finds that no new impacts were identified in the addendum and the changes to the Project do not change the conclusions or mitigations described in the previous EIR. Therefore, the Water Board finds that the EIR and Addendum adequately evaluate the Project and that the EIR mitigation measures described above are appropriate for mitigating impacts from the proposed Project.

20. Intent to Issue Waiver

The Water Board has notified the Discharger and all known interested agencies and persons of its intent to issue a Conditional Waiver for the ASR Project.

21. Public Meeting

The Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

THEREFORE BE IT RESOLVED:

1. Pursuant to the California Water Code, Section 13269 (a), Waste Discharge Requirements are Conditionally Waived for the ASR Project, in consideration of the technical, economic and social factors described above.

2. This Waiver expires on **October 11, 2015** unless terminated at an earlier date. The Water Board may renew this Waiver if appropriate at that time or earlier.

3. The following conditions apply.

   a. Neither the injection of treated SWP water into the groundwaters of the Antelope Valley Groundwater Basin nor groundwaters within the recharge zone of the injected water, shall contain in excess of the following:

Constituent	Units	Average Monthly Limitation	Maximum Daily Limitation
TTHM	µg/L	62	72
HAA5	µg/L	39	54
Bromate	µg/L	(none)	9.0
Chlorite	mg/L	(none)	0.90
TOC	mg/L	6.2	none

   b. The treated SWP water injected into the groundwaters of the Antelope Valley Groundwater Basin must not contain TDS in excess of 350 mg/L.

   c. The injection of SWP water must not cause a condition of pollution as defined in Section 13050 of the California Water Code or threatened pollution in the groundwaters of the Antelope Valley Groundwater Basin at any location or depth.

   d. The injection of SWP water must not cause a nuisance as defined in Section 13050 of the California Water Code.

   e. The injection of SWP water as a result of the ASR Project, except to the authorized disposal/injection sites, shown in Attachment "B," is prohibited.

f. The ASR Project must not cause a degradation of the groundwaters of the Lancaster Sub-basin outside the localized well area. Degradation must be measured as detailed in the Monitoring and Reporting Program (Attachment D).

g. The condition of groundwater degradation caused by the Discharger must be fully cleaned up and abated at the end of the ASR Project.

h. The Contingency Plan describing the actions which will be taken to abate a condition of groundwater degradation and contain a plume of groundwater degradation outside the recharge zone must be implemented if any of the following conditions occur.

   i. The condition of degradation threatens to spread outside the influence of the injection/extraction wells (measured as no more than ½ mile from the injection well) as shown on Attachment "B" of this Waiver; OR
   ii. The condition of degradation is not abated at the end of the ASR Project; OR
   iii. The concentration of constituents in the treated SWP injection water or commingled groundwater threatens to exceed limits stated in this Waiver.

i. The Discharger must comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment "C", which is made part of this Waiver. Standard Provisions 12 and 15 do not apply for the purposes of this Waiver.

j. Pursuant to the California Water Code, Section 13267(b), the Discharger must comply with the Monitoring and Reporting Program attached (Attachment D).

k. The Discharger must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of the Monitoring Program.

l. This Waiver only authorizes the ASR Project described in the submitted RWD. Any proposed modifications, such as change in water supply or water treatment must be submitted for review prior to implementation.

m. By **May 1, 2015**, a report must be submitted to the Water Board evaluating how the Discharger has complied with this Waiver and results of the ASR Project to date. If the ASR Project is proposed to continue, a complete revised Report of Waste Discharge must be submitted. The revised RWD must evaluate any new technologies that would improve the ASR Project.

n. In the event Discharger decides to terminate future injection, the Discharger must submit an ASR Project Completion Report within **six months after the last injection day**. The Report must contain the following:

i. Tabular, graphical and scaled maps displaying data collected during the ASR Project;
ii. Findings and conclusions regarding the data; and
iii. Certification that the condition of groundwater degradation has been abated or a description of actions which are being taken to abate the condition of degradation.

4. Board Resolution No. R6V-2004-0043 is hereby rescinded.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Waiver adopted by the California Regional Water Quality Control Board, Lahontan Region, on October 14, 2010.

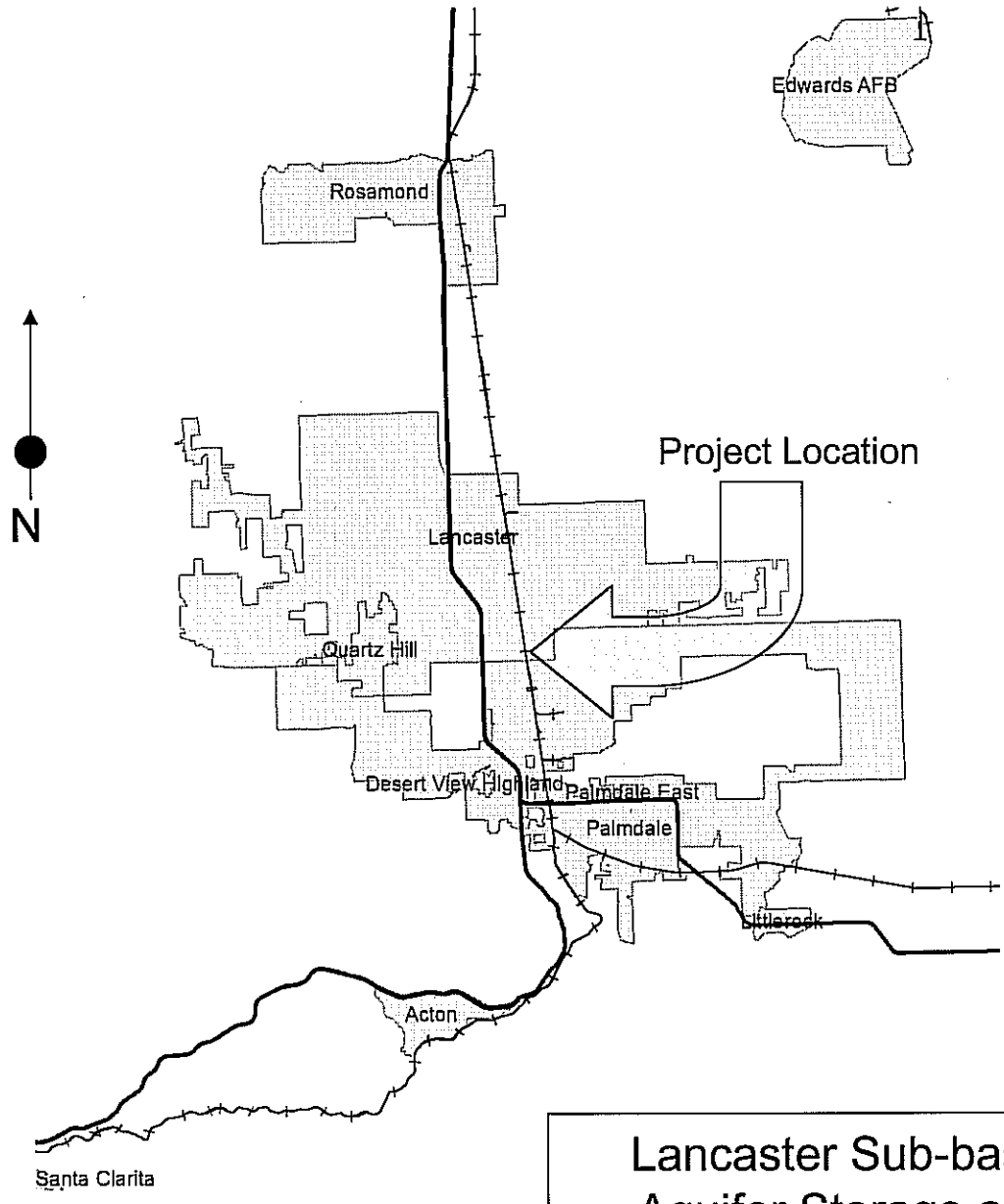
Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments:

A. Location Map
B. Injection Wells and Monitoring Wells in the ASR Project Area
C. Standard Provisions for Waste Discharge Requirements
D. Monitoring and Reporting Program

Attachment A

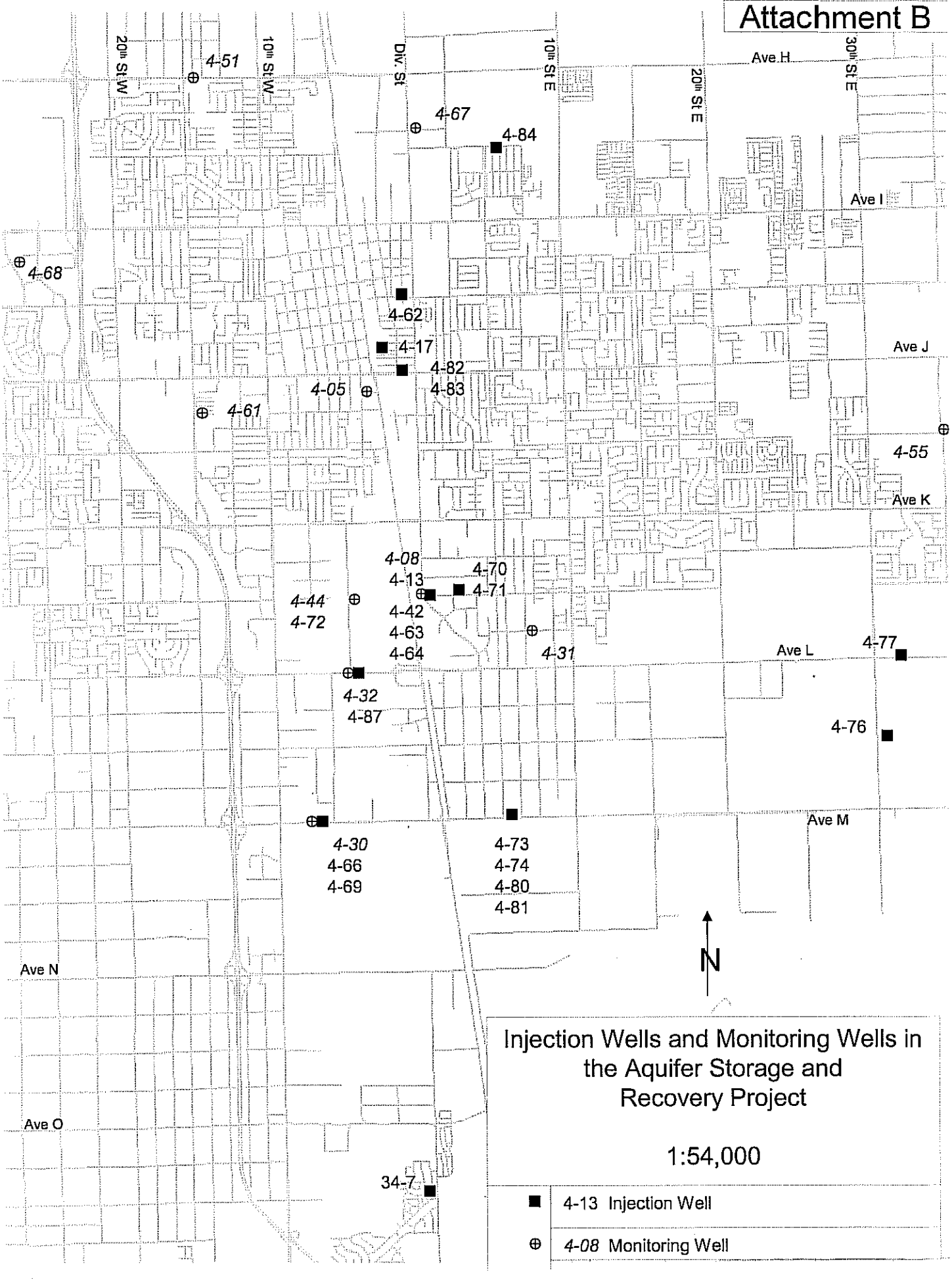


Lancaster Sub-basin Aquifer Storage and Recovery Project

General Project Location

Scale: 1:384,000

Attachment B



Injection Wells and Monitoring Wells in the Aquifer Storage and Recovery Project

1:54,000

■ 4-13 Injection Well

⊕ *4-08* Monitoring Well

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation.

f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM NO. R6V-2010-0049
WDID NO. 6B199511001

FOR

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LANCASTER SUB-BASIN FULL-SCALE AQUIFER STORAGE
AND RECOVERY PROJECT

Los Angeles County

I. MONITORING

A. Well construction properties

The Discharger must maintain well construction properties listed in Table 1 for each well of the Lancaster Sub-Basin Full-Scale Aquifer Storage and Recovery Project (Project). This includes wells used for injection and monitoring wells. The Discharger's monitoring production wells are used for monitoring under the Discharger's project.

Table 1. Well Construction Properties

Property	Determination	Units	Precision
Project well Id	recorded	[a]	[a]
State well Id No.	recorded	[a]	[a]
Purpose[1]	designated	[a]	[a]
Public Land Survey location	recorded	[a]	to nearest 1/16 section, SBB&M
Latitude	measured	D m s	nearest 0.1 s
Longitude	measured	D m s	nearest 0.1 s
North American Datum	recorded	(text)	[a]
Completion date	recorded	dd mm yy	[a]
Well top elevation	measured	Ft	0.01 ft
Well depth	measured	Ft	1 ft
Upper screened interval	measured	Ft	1 ft
Lower screened interval	measured	Ft	1 ft
Hydraulic conductivity	calculated	Ft/day	0.01 ft/day

[a] Not applicable
[1] Enter Injection, Extraction, and/or Monitoring, as the well is used.

B. Flow and volume

1. Injection

The Discharger must record in a permanent log book the information listed in Table 2 for each Project injection well.

Table 2. Injection well flow and volume monitoring

Item	Determination	Frequency	Units
Average daily injection flow	Recorded	daily	gpm
Maximum daily injection flow	Recorded	daily	gpm
Injected volume	Recorded	daily	Mgal
Average monthly injection flow	Calculated	monthly	gpm
Injected volume	Calculated	monthly	Mgal
Injected volume	Calculated	monthly	acre-ft[a]
Injected volume	Calculated	each year[1]	acre-ft
Operational problems and maintenance activities[2]	Recorded	daily	[3]

2. Extraction

Discharger must record in a permanent log book the information listed in Table 3 for each Project extraction well.

Table 3. Extraction well flow and volume monitoring

Item	Determination	Frequency	Units
Average daily extraction flow	Recorded	daily	gpm
Maximum daily extraction flow	Recorded	daily	gpm
Extracted volume	Recorded	daily	Mgal
Average monthly extraction flow	calculated	monthly	gpm
Extracted volume	calculated	monthly	Mgal
Extracted volume	calculated	monthly	acre-ft[a]
Extracted volume	calculated	each year[1]	acre-ft
Operational problems and maintenance activities[2]	recorded	daily	[3]

[a]The multiplication factor for Mgal to acre-ft is 3.06864.
[1]The year is from October 1 to September 30 of the next year.
[2]Include calibration of any flow measuring devices.
[3]Not applicable

C. Sampling

1. Field parameters

When sampling any Project extraction or monitoring well, the Discharger must measure and record well field parameters that are specified in Table 4.

Table 4. Well field parameters

Field parameter	Units	Precision
Date and time	dd mm yr hh:mm	nearest mm
Static water depth	ft bgs	1 ft
Electrical conductivity	µS/cm	50 µS/cm
pH	pH units	0.1 pH unit
Temperature	°F	0.5 °F
Dissolved oxygen	mg/L	0.5 mg/L
Turbidity	NTU	1 NTU

2. Baseline groundwater sampling

Before using a new Project injection or extraction well, the Discharger must collect a grab sample of groundwater from that well and determine the magnitude of constituents listed in Table 5. Note: Some constituents in this Monitoring and Reporting Program (MRP) are abbreviated. The abbreviations are the following: TTHM = total trihalomethanes, HAA5 = haloacetic acids, TOC = total organic carbon, TDS = total dissolved solids, and NDMA = N-nitrosodimethylamine.

Table 5. Baseline sample constituents

Constituent	Units
TTHM	µg/L
Bromodichloromethane	µg/L
Bromoform	µg/L
Chloroform	µg/L
Dibromochloromethane	µg/L
HAA5	µg/L
Monochloroacetic Acid	µg/L
Dichloroacetic Acid	µg/L
Trichloroacetic Acid	µg/L
Monobromoacetic Acid	µg/L
Dibromoacetic Acid	µg/L
Bromate - BrO_3	µg/L
Chlorite - OCl_2	µg/L
TOC	mg/L
TDS	mg/L

3. Injection well sampling

The Discharger must collect grab samples at the well head of each Project injection well and determine the magnitude of constituents listed in Table 6.

Table 6. Injection well sample constituents

Constituent	Frequency	Units
TTHM	weekly	µg/L
Bromodichloromethane		µg/L
Bromoform		µg/L
Chloroform		µg/L
Dibromochloromethane		µg/L
HAA5	monthly	µg/L
Monochloroacetic Acid		µg/L
Dichloroacetic Acid		µg/L
Trichloroacetic Acid		µg/L
Monobromoacetic Acid		µg/L
Dibromoacetic Acid		µg/L
Bromate – BrO_3	monthly	µg/L
Chlorite – Ocl_2	monthly	µg/L
TOC	monthly	mg/L
TDS	monthly	mg/L

4. Extraction well sampling

The Discharger must collect grab groundwater samples at each Project extraction well and determine the magnitude of constituents listed in Table 7. The Discharger must collect samples at the required frequency regardless if the extraction wells are used or not used for extraction.

Table 7. Extraction well sample constituents

Constituent	Frequency	Units
TTHM	monthly	µg/L
Bromodichloromethane		µg/L
Bromoform		µg/L
Chloroform		µg/L
Dibromochloromethane		µg/L
HAA5	monthly	µg/L
Monochloroacetic Acid		µg/L
Dichloroacetic Acid		µg/L
Trichloroacetic Acid		µg/L
Monobromoacetic Acid		µg/L
Dibromoacetic Acid		µg/L

Bromate - BrO_3	monthly	µg/L
Chlorite - $OC1_2$	monthly	µg/L
TOC	monthly	mg/L
TDS	monthly	mg/L

5. Monitoring Wells

   a. Monitoring wells within ¼ mile radius of any injection well are considered "near" monitoring wells.

      i. The Discharger must sample a minimum of four "near" monitoring wells throughout the Project area.

      ii. The Discharger must collect grab groundwater samples at each Project "near" monitoring well and determine the magnitude of the constituents listed in Table 8.

Table 8. Monitoring well sampled constituents for wells closer than ¼ to any injection well.

Constituent	Frequency	Units
TTHM	monthly	µg/L
Bromodichloromethane		µg/L
Bromoform		µg/L
Chloroform		µg/L
Dibromochloromethane		µg/L
HAA5	monthly	µg/L
Monochloroacetic Acid		µg/L
Dichloroacetic Acid		µg/L
Trichloroacetic Acid		µg/L
Monobromoacetic Acid		µg/L
Dibromoacetic Acid		µg/L
Bromate - BrO_3	monthly	µg/L
Chlorite - OCl_2	monthly	µg/L
TOC	monthly	mg/L
TDS	monthly	mg/L

   b. Monitoring wells between ¼ mile and ¾ mile radius of any injection well are considered "far" monitoring wells.

      i. The Discharger must sample a minimum of three "far" monitoring wells throughout the Project area.

ii. The Discharger must collect grab samples of the groundwater at each "far" monitoring well and determine the magnitude of the constituents listed in Table 9.

Table 9. Monitoring Well sampled constituents for wells farther than ¼ mile of all injection wells.

Constituent	Frequency[a]	Units
TTHM	2/yr	µg/L
Bromodichloromethane		µg/L
Bromoform		µg/L
Chloroform		µg/L
Dibromochloromethane		µg/L
HAA5	2/yr	µg/L
Monochloroacetic Acid		µg/L
Dichloroacetic Acid		µg/L
Trichloroacetic Acid		µg/L
Monobromoacetic Acid		µg/L
Dibromoacetic Acid		µg/L
Bromate - BrO_3	2/yr	µg/L
Chlorite - OCl_2	2/yr	µg/L
TOC	2/yr	mg/L
TDS	2/yr	mg/L

[a]Samples must be collected in May and October. These dates coincide with the end and beginning of the injection cycle, respectively.

6. Reporting limits

The reporting limits for determining the magnitude of the constituents from Project well sampling are listed in Table 10.

Table 10. Reporting limits

Constituent	Reporting limits
TTHM	--
Bromodichloromethane	0.5 µg/L
Bromoform	0.5 µg/L
Chloroform	0.5 µg/L
Dibromochloromethane	0.5 µg/L
HAA5	--
Monochloroacetic Acid	2.0 µg/L
Dichloroacetic Acid	1.0 µg/L
Trichloroacetic Acid	1.0 µg/L
Monobromoacetic Acid	1.0 µg/L
Dibromoacetic Acid	1.0 µg/L
Bromate - BrO_3	5 µg/L

Chlorite - OCl_2	20 µg/L
TOC	0.5 mg/L
TDS	25 mg/L

D. Calculations

1. At the end of the injection cycle of each year, the Discharger must calculate the inverted cone of injection at each well used for injection during the injection cycle. The height of the injected water must be calculated at appropriate horizontal distance intervals to establish the occurrence of the inverted cone of injection.

2. On September 30 of each year, the Discharger must calculate the cone of depression for each well used for extraction during the extraction cycle. The depth of extracted water must be calculated at appropriate horizontal distance intervals to establish the occurrence of the zone of depression.

E. Sampling and Analysis Plan

The Discharger must maintain a Sampling and Analysis Plan (SAP). Consistent with the General Provisions for Monitoring and Reporting (Attachment B), the SAP must identify sample preparation, sample collection, sample labeling, sample field measurement, and sample storage, and sample transport to an approved laboratory. Sample preparation includes the appropriate sample size and sample preservatives for each sample bottle. The SAP must also identify well purging procedures, and procedures for determining maximum sampling holding time. The SAP must include chain-of-custody procedures. The purpose of the plan is to insure that specific individuals responsible for sample collection will perform sampling with established procedures. The most recent version of the SAP must be distributed to Discharger personnel who are responsible for sampling under this Monitoring and Reporting Program (MRP).

II. REPORTING

A. Report content and submission dates

1. Violation Reports

Within 15 days of occurrence, the Discharger must submit a violation report when any constituent in the injected groundwater exceeds more than 20% of any injection limitation within a month. The report must contain the information described in General Provisions II.B.4

2. New Wells

A minimum of 60 days prior to implementation of injection or extraction of a new project well, the Discharger must submit a report with the information specified in I.C.2. The technical report must include proposed methods for data analysis in consideration of the existing data population for each injection or extraction well.

3. Semi-Annual Report

Beginning on July 15, 2011, and continuing thereafter on January 15 and July 15, the Discharger must submit a semi-annual report. The report due July 15 is called the injection cycle semi-annual report, and the report due January 15 is called the extraction cycle report.

a. All semi-annual reports must contain the following:

i. Well construction properties, Table 1.

ii. Tabular data

The Discharger must arrange reported data in tabular format. The report must contain running graphs and trend analyses. The Discharger must summarize the data to clearly illustrate whether the Project is operating in compliance with the waiver. The tabular data must include the following:

(a) Monthly average injection rate (gpm), monthly injected volume, and annual injection volume for each injection well and totaled over all injection wells.

(b) Monthly average extraction rate (gpm) and monthly extracted volume (Mgal acre-ft) for each extraction well and totaled over all extraction wells.

(c) The average monthly and maximum daily concentrations for each well for the constituents listed in Table 11, and formatted as shown in the Table 11. For any determination of ND, the Discharger must report the value of the laboratory's method detection limit, and precede the value with a less than (<) symbol.

Table 11. Reported tabular data

Constituent	Units	Average Monthly	Daily Maximum
TTHM	µg/L		
HAA5	µg/L		
Bromate - BrO_3	µg/L		
Chlorite - OCl_2	µg/L		
TOC	mg/L		
TDS	mg/L		

(d) The tabular reports must contain the determined TTHM and HAA5 values. The laboratory must calculate the TTHM and HAA5 values from individual TTHM and HAA5 constituents.

iii. Graphs and Trends

(a) The Discharger must include running graphs and trend analyses of the constituents specified in Table 11.

(b) The Discharger must show in a graphical representation the groundwater contours in the Project area at the end of each extraction cycle and on September 30 of each year.

(c) The Discharger must show the estimated recharge area at each injection location, and provide the basis and calculation of the estimation.

iv. Operation and maintenance

The Discharger must provide a brief summary of any operational problems and maintenance activities that may affect groundwater occurrence, movement, and quality. This summary must present the following:

(a) Major maintenance conducted on the Project wells, including any equipment used for the wells.

(b) Major operational problems at Project wells, including any equipment used for the wells.

(c) The calibration of any flow measuring devices.

v. Records

The Discharger may place records in an appendix to the required report. The records must contain the following:

(a) Field parameter data sheets; and

(b) Laboratory analysis data sheets reports. These reports must show the date and time of sampling, analysis date, determined values, and the method detection limit. The laboratory data sheets must include the individual constituents of TTHM and HAA5, and must include values for total TTHM and HAA5.

b. Extraction Cycle Semi-Annual Report

The Extraction Cycle Semi-annual Repot must include a Progress Report. The Progress Report must describe how the Discharger has complied with this Waiver including an analysis of water quality and elevation monitoring data collected to verify compliance with this Waiver. Included in the report, must be a time series comparison of predicted water elevation and quality changes over time versus observed changes for each well and for each COC. This report must be signed by a California registered Civil Engineer or Geologist and must reference this Waiver. The report must describe what methods have been evaluated and will be implemented to reduce the COC including but not limited to salts, TDS, TTHM and HAA5.

3. Cumulative Project Report

On November 15, 2015, the Discharger must submit a cumulative Project report. The cumulative report must report monitoring over a period that begins with background water quality sampling before the 1st project injection cycle, which occurred in November 2005, and ends on October 13, 2015. The cumulative report must contain the tabular data as specified for the annual report under requirement II.A.2.

4. Sampling and Analysis Plan

The updated SAP must be submitted by November 15, 2010. The SAP must be reviewed at least annually and updated upon occurrence of a change. The SAP must submit a revised SAP upon the occurrence of SAP changes.

5. Injection Termination Reporting

a. Within 30 days of the Discharger's decision, the Discharger must notify the Water Board in writing upon the Discharger's decision to terminate

injection. In this report, the Discharger must report the planned injection termination date.

b. Within 30 days of injection termination, the Discharger must notify the Water Board of the actual injection termination date.

c. No later than 6 months, following the month of injection termination, the Discharger must submit the cumulative project report with the information specified in II.A.3.

B. General Provisions

1. The Discharger must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of this MRP (Attachment A).

2. The Discharger must use the multiplier of 3.06864 acre-ft/Mgal when converting volume values from Mgal to acre-ft.

3. When the Discharger collects two or more samples in a month, the Discharger must calculate an average value and peak value for the analyzed constituents. This requirement applies when the Discharger collects samples at a more frequency interval than specified in this MRP.

4. The Discharger must attach to any monitoring report provided to the Lahontan Water Board a certified cover letter containing the information in Attachment B. The information contained in the certified cover letter must clearly identify any violations of this MRP or the Waiver of Waste Discharge Requirements for the Project, discuss corrective actions taken or planned, and propose a time schedule for completing identified corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation. The Discharger must notify the Lahontan Water Board by letter when compliance with requirement has been achieved.

5. The monitoring and reporting required by this program becomes effective on the 1st day of the month following the MRP's signature date. The monitoring and reporting prescribed in MRP No. R6V-2004-0043 applies to all data collected on or before the 1st day of the month following the MRP's signature date.

6. In addition to the general provisions of Attachment A, General Provisions for Monitoring and Reporting, provision 2.a, the Discharger must keep originals of all sampling and analytical results specified in provision 2.a for the duration of the Project, including the Project authorized under previous waiver resolution R6V-2004-0043, and three (3) years thereafter.

7. Except as covered under a specific requirement of the MRP, the Discharger must furnish to the Lahontan Water Board within a reasonable time, any information which the Lahontan Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this MRP or to determine compliance with the MRP. Upon request, the Discharger must also furnish to the Lahontan Water Board copies of records required to be kept by this MRP (California Water Code, section 13267).

8. The Discharger must continue to monitor extraction wells and monitoring wells specified in this MRP for a period of 13 months following the month of the injection termination date.

Ordered by: Harold J. Singer Dated: Oct 14, 2010
HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: A. General Provisions For Monitoring And Reporting
B. Certified Cover Letter

S:\BO 2010\ Aquifer Storage Recovery\ASR\R6V-2010-0049LancasterASR MRP.doc

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

a. All analyses shall be performed in accordance with the current edition(s) of the following documents:

i. Standard Methods for the Examination of Water and Wastewater

ii. Methods for Chemical Analysis of Water and Wastes, EPA

b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.

c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.

d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.

e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.

f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.

g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.

b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.

d. Monitoring reports shall be signed by:

i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;

ii. In the case of a partnership, by a general partner;

iii. In the case of a sole proprietorship, by the proprietor; or

iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

e. Monitoring reports are to include the following:

i. Name and telephone number of individual who can answer questions about the report.

ii. The Monitoring and Reporting Program Number.

iii. WDID Number.

f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation under Section 13268 of the Water Code.

Date _____

ATTACHMENT B

California Regional Water Quality Control Board
Lahontan Region
14440 Civic Drive, Suite 200
Victorville, CA 92392

Facility Name: _____

_____

Address: _____

_____

_____

_____

Contact Person: _____

Job Title: _____

Phone: _____

Email: _____

WDR/NPDES Order Number: _____

WDID Number: _____

Type of Report (circle one): **Monthly Quarterly Semi-Annual Annual Other**

Month(s) (circle applicable month(s)*: **JAN FEB MAR APR MAY JUN**

JUL AUG SEP OCT NOV DEC

***annual Reports** (circle the first month of the reporting period)

Year: _____

Violation(s)? (Please check one): _____**NO** _____ **YES***

***If YES is marked complete a-g (Attach Additional information as necessary)**

a) Brief Description of Violation: _____

_____

_____

_____

_____

b) Section(s) of WDRs/NPDES Permit Violated: _____

_____

_____

_____

c) Reported Value(s) or Volume: _____

d) WDRs/NPDES Limit/Condition: _____

e) Date(s) and Duration of Violation(s): _____

f) Explanation of Cause(s): _____

g) Corrective Action(s)
(Specify actions taken and a schedule for actions to be taken) _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please contact _____at the number provided above.

Sincerely,

Signature:_____

Name: _____

Title: _____