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Before the Energy Resources Conservation and Development Commission of the State of California
1516 Ninth Street, Sacramento, CA 95814
1-800-822-6228 – www.energy.ca.gov

PETITION TO AMEND THE:

HIGH DESERT POWER PLANT

Docket No. 97-AFC-01C

COMMITTEE RECOMMENDED DECISION GRANTING PETITION TO DROUGHT-PROOF THE FACILITY

This Committee[1] Recommended Decision (Decision) recommends approval of the petition filed by High Desert Power Project, LLC (Petitioner) to drought-proof the High Desert Power Plant (HDPP)[2] filed on October 30, 2015.

The Committee also recommends adoption of new conditions of certification for Soil & Water only. These conditions create new standards for the sources and uses of water for HDPP cooling needs; make permanent the HDPP's use of percolation for banking State Water Project (SWP) water; and impose certain penalties for failing to meet or exceeding the use of recycled water. These new conditions of certification supersede all prior conditions of certification and represent all of the rights, obligations, and responsibilities of the Project Owner regarding operation of the HDPP.

I. HDPP Description and Setting

The HDPP is an operational, 830-megawatt (MW) water-cooled, natural-gas-fired, combined-cycle electric generating facility located on 25 acres of previously disturbed lands on the former George Air Force Base in the City of Victorville, San Bernardino County. The HDPP was certified by the Energy Commission on May 3, 2000 (2000 Decision), and began commercial operation in April 2003.[3] The HDPP and its related facilities, i.e., overhead transmission line, a 230kV switchyard, water pipelines, and gas pipelines, are located on several alluvial fans within the southern portion of the Mojave

[1] On January 13, 2016, the Energy Commission appointed a Committee consisting of Karen Douglas, Commissioner and Presiding Member, and Janea A. Scott, Commissioner and Associate Member, to conduct proceedings on the Petition.

[2] TN 206648.

[3] http://www.energy.ca.gov/sitingcases/highdesert/documents/2000-05-03_HD_DECISION.PDF (2000 Decision).

Desert, an area that receives low annual average precipitation and contains soils of limited water holding capacity, west of the Mojave River. Soils in the project area are generally deep, with low permeability and runoff. Surface soils are primarily sand with small amounts of clay and silt. All of the soils in the project area were found by the Commission to be susceptible to wind and water erosion potential.[4]

Vegetation communities predominantly consist of shrubby perennials and small annuals. Plants such as creosote bush and Joshua trees grow in this area and, along with riparian areas, can provide suitable habitat for a number of wildlife species.

The Mojave River is the major surface drainage within the project vicinity, flowing approximately one mile east of the HDPP.[5] This surface water is connected to the groundwater, with the Mojave River being fed by some of the groundwater; this area is known as the Mojave Basin.

The HDPP is located in the Alto Subarea, one of five subareas in the Mojave Basin.[6] At the time of the 2000 Decision, the Mojave Basin was severely overdrafted.[7] Replacement or recharge of the water within the Mojave Basin occurs from a variety of sources, including rainfall, irrigation, recycled water from waste water treatment plants operated by the Victor Valley Water Reclamation Authority (VVWRA), and the importation of California State Water Project (SWP) water.[8]

Near the HDPP, the Mojave River also supports a mesquite bosque that provides habitat to several state and federally listed species, as well as species of special concern. Any decrease in riparian flows to the Mojave River would likely result in impacts to available habitat and significantly affect protected species. Because of the interconnection between the Mojave River and the groundwater basin, any use of groundwater—including unintentional over pumping of banked SWP water—was recognized as having the potential to impact the riparian habitat and its dependent species near the HDPP.[9]

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[4] *Id.* at pp. 206, 230.

[5] *Id.* at pp. 136, 209.

[6] *Id.* at p. 209.

[7] *Id.* at pp. 209-211. Overdraft occurs when more water is pumped or used from the basin than is replaced. (*2000 Decision* at 210, 211-212.)

[8] *Id*. at pp. 211-212.

[9] TN 212656, pp. 2-4, 6-7.

II. Procedural History

2000 Decision

The owner of HDPP submitted the initial Application for Certification on June 30, 1997. The HDPP was certified by the Energy Commission on May 3, 2000. The 2000 Decision characterized the issue of water resources as the most highly contested area in the proceedings because the Mojave River Water Basin was in a state of severe overdraft and because of pending litigation regarding the allocation of water resources within the Mojave River Basin.[10].

In the 2000 Decision, the Energy Commission found that HDPP's proposed wet cooling technology would require 3300-4000 acre-feet of water annually and that a relatively small amount of potable water would also be required. The HDPP also includes a zero liquid discharge system to treat and recover water from waste disposal streams that are recycled and reused at the facility.

Evidence presented by Energy Commission Staff (Staff) and California Department of Fish and Wildlife (CDFW) established that, unless adequately mitigated, the project's pumping of stored water could cause a decline in river bank discharges and base flows, or in the water level of the Mojave River Alluvial Aquifer. This in turn would result in adverse effects upon riparian vegetation and, ultimately, species dependent upon this vegetation. To address this issue, Staff, applicant, and CDFW developed a modeling regimen to assess project impacts. These modeling results established that HDPP's water supply plan, as reflected in the Conditions of Certification, would not cause or contribute to the depletion of water resources in the area and would actually result in a slightly beneficial effect.[11]

In order to provide water for the plant, the 2000 Decision discussed the plan to use SWP water exclusively for both facility cooling purposes[12] and for providing water to a groundwater storage bank for HDPP. The groundwater storage bank would contain a balance of 1000 acre-feet (after accounting for dissipation).[13] To effectuate this plan, the following agencies and agreements were involved:

- Mojave Water Agency (MWA): The Watermaster appointed to control the allocation of groundwater and surface water in the Mojave River Water Basin, MWA also acts as the wholesaler of State Water Project water in the Mojave Basin. MWA does not

[10] *2000 Decision* at p. 208.

[11] *Id*. at 216.

[12] Most cooling water would be consumed in cooling towers and evaporated and process wastewater treated and reused. *2000 Decision* at p. 212.

[13] *Id*. at 211-212.

provide water directly to the HDPP, but does provide SWP water to the City of Victorville for service to HDPP.[14]

- City of Victorville Water District (VWD): Applied to MWA for SWP water on behalf of HDPP. The City delivers the water to the project for direct use or treatment via the pipeline between the HDPP and the Mojave River pipeline. HDPP has a Water Services Agreement with the City of Victorville.

  MWA and the VWD have a Water Storage Agreement that allows Victorville to store water in the Mojave Basin on behalf of HDPP. The term of this agreement expires on June 30, 2022, but may be extended. This Water Storage Agreement also contains the manner in which water stored by VWD will be calculated.[15] The City of Victorville is also a party to the Second Amended and Restated Agreement for Recycled Water Service with HDPP and VVWRA.[16]

- Victor Valley Water District/Victorville Water District (VWD):[17] The entity injecting SWP water in its well field for storage and delivers such to the HDPP through a series of seven wells constructed specifically for the HDPP, when sufficient SWP water is not available.[18] This SWP water would be supplied via a 2.5 mile long interconnection from the Mojave River Pipeline. VVWD would also provide potable water to HDPP.

  This arrangement is memorialized in the Aquifer Storage and Recovery Agreement (Aquifer Storage Agreement).[19]

- Victor Valley Water Reclamation Authority (VVWRA): Operates wastewater treatment plants in the vicinity of the HDPP. After treatment, the recycled/recycled water is available for beneficial use, including power plant cooling. VVWRA and HDPP are parties to the Recycled Water Service Agreement that provides treated wastewater to the HDPP.[20]

- City of Victorville: The City of Victorville obtains SWP water on behalf of the project. HDPP has a Water Services Agreement with the City of Victorville. The City of

[14] *Id.* at 213-215.

[15] TN 217996; TN 221316, Attachments 2 and 3.

[16] TN 221316.

[17] After the 2000 Decision, the Victor Valley Water District was merged with another local water district and is now known as the Victorville Water District (a subsidiary district of the city of Victorville). (TN 221316, Attachment 1, p. 1.) For simplicity, we will refer to this entity as the VWD, regardless of the time relevant to a given document or transaction.

[18] *2000 Decision* at 213-215.

[19] TN 221316.

[20] TN 221316, Attachment 1.

Victorville is also a party to the Second Amended and Restated Agreement for Recycled Water Service with HDPP and VVWRA.[21]

The 2000 Decision provided comprehensive requirements to mitigate the impacts of the HDPP to below a level of significance and to preclude use of project facilities from resulting in growth inducing impacts or from any adverse effects upon water resources.

Condition of Certification **SOIL&WATER-1** limited the HDPP to using only SWP water directly at the power plant or banked pursuant to other Conditions of Certification.[22]

Condition of Certification **SOIL&WATER-2** required the project owner to obtain a storage agreement with MWA and VWD to bank SWP water for future withdrawal.[23]

Condition of Certification **SOIL&WATER-4** created an injection schedule, requiring the HDPP to bank certain amounts of SWP water.[24]

Condition of Certification **SOIL&WATER-5** required Energy Commission staff (Staff) to calculate the amount of water available to the HDPP. This calculation was to be made using a model that accounted for loss of water as the evidence showed that water injected into the groundwater aquifer dissipated over time and distance. Thus, failure to properly account for injected water could adversely affect groundwater, the mesquite bosque, and its dependent species.[25]

The 2000 Decision concluded that, with the imposition of Conditions of Certification **SOIL&WATER-1**, **-2**, **-4**, and **-5**, the HDPP would fully mitigate any potential impacts to the Mojave Basin and identified species and would be consistent with all applicable laws, ordinances, regulations, and standards (LORS).[26]

Adjudication

The overdraft of the Mojave Basin led to litigation to determine the native natural water supply and individual water production rights of producers within it. The litigation resulted in an adjudication of individual water production rights within the Mojave Basin (the Judgment) that was affirmed by the California Supreme Court in August 2000.[27]The Judgment named the Mojave Water Agency (MWA) as Watermaster and is designed to ensure that proper water balances are maintained in each subarea through a combination of natural supply, imported water, water conservation, water reuse, and

[21] TN 221316, Att.1, Recital 2.

[22] *2000 Decision* at 232.

[23] *Id.* at 232-233.

[24] *Id.*

[25] *Id.* at 233-234.

[26] *Id.* at 138-139.

[27] *City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224, 99 Cal.Rptr.2d 294, 5 P.3d 853

transfers of production allowances between producers MWA's duties as Watermaster also include management of storage in the groundwater aquifer. The HDPP is not a party to the Judgment and is thus not a "producer."[28]

2006 Amendment

In July 2006, the Energy Commission approved a petition from HDPP to amend **SOIL&WATER-4** and extend the period of time to bank groundwater as a backup water supply.[29]

2008 Amendment

In July 2008, the Energy Commission approved modifications to the timing of annual source test requirements and to make administrative changes. These changes were focused on air quality and did not alter the conditions of certification related to soil and water resources.[30]

2009 Amendment

In 2009, the Energy Commission granted a petition removing the restriction that HDPP use only SWP water, authorizing HDPP to use recycled water to meet up to one-third (approximately 1,000 acre-feet per year (AFY)) of its cooling water needs, authorizing a new underground pipeline to interconnect HDPP to the City of Victorville's existing recycled water pipeline, and eliminating water banking milestones because of the lack of available SWP water and move to a goal of 100 percent recycled water. As part of this approval, the Energy Commission required the Petitioner to provide, by December 31, 2011, a study analyzing the feasibility of converting the HDPP to 100 percent recycled water use (Feasibility Study).[31]

2011 Amendment

In 2011, the Energy Commission extended the deadline for the feasibility study evaluating the use of 100 percent recycled water from December 2011 to November 2013.[32]

2014 Amendment

In April 2014, the Petitioner submitted an "Amendment Petition for Alternative Water Supplies to Address Drought-related Reliability Impacts" (2014 Amendment Petition) to modify the conditions of certification. The 2014 Amendment Petition requested the

[28] *City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224, 99 Cal.Rptr.2d 294, 5 P.3d 853.
[29] TN 37467.
[30] TN 47338.
[31] TN 54277.
[32] TN 62746.

ability to discharge backwash streams from the HDPP treatment system (used to treat banked water) to the City of Victorville industrial wastewater treatment plant in order to increase the supply and improve the water quality of the recycled water available to HDPP. The 2014 Amendment Petition also sought permanent authority for HDPP to use groundwater from the Mojave Basin under the provisions of the Judgment.[33]

On September 10, 2014, the Energy Commission ruled on the 2014 Amendment Petition (2014 Amendment)[34]. The Energy Commission modified Condition of Certification **SOIL&WATER-1**, requiring HDPP to use maximum quantities of recycled waste water of quality from the City of Victorville. When quantity or quality of recycled water is not sufficient, HSPP was authorized to supplement recycled water with SWP water or banked SWP water as long as the amount of water used did not exceed amount of water determined to be available for Condition of Certification **SOIL&WATER-5.** The 2014 Amendment did not permanently authorize HDPP to use adjudicated groundwater, but instead authorized the HDPP to use only a maximum of 2,000 AFY of such water in water years 2014/2015 (October 1 2014 -- September 30, 2015) and 2015/2016 (October 1, 2015 – September 30, 2016). Finally, HDPP was required to file a petition to amend by November 1, 2015, that would either implement reliable primary and backup water supplies consistent with state water policies or an alternate cooling system like dry cooling.[35]

<u>High Desert Power Project Recycled Water Feasibility Study Report</u>

The High Desert Power Project Recycled Water Feasibility Study required under the 2009 Amendment was provided to the Energy Commission on November 3, 2014.[36] In that study, HDPP argued that the Alto Subarea was not in a condition of “overdraft” and that the Judgment in the Mojave Water Basin adjudication had resulted in groundwater sustainability. HDPP also contended that the quantity and quality of recycled water made it infeasible to use it exclusively for cooling purposes.[37]

Staff provided its response to the Feasibility Study on October 9, 2015. Staff’s analysis contended that, in most cases, there is sufficient recycled water available to meet the cooling requirements of the HDPP and that use of recycled water from the VVWRA is preferred to using groundwater from the adjudicated Mojave Basin. Staff further stated

[33] TN 202211.
[34] TN 211790.
[35] TN 203108.
[36] TN 203306.
[37] TN 203306, 206454, 206468.

that HDPP's use of up to 1,600 acre-feet of groundwater from the Mojave Water Basin for emergency backup would be acceptable.[38]

III. Current Proceedings – 2015 Petition to Amend

As required by the 2014 Amendment, Petitioner filed a Petition to Amend on October 30, 2015. The Petition, as originally submitted, proposed amending Condition of Certification **SOIL&WATER-1** to add a "Loading Sequence" for cooling water. Under the Petition, recycled water would be the primary, but not exclusive, cooling water supply. Recycled water would be blended with SWP water, banked SWP water, or adjudicated groundwater from the Mojave Basin (blended in that order of preference) in order to ensure that the water supplied was of sufficient quality and quantity to allow the plant to operate. The Petitioner proposed a limit of 3,090 acre-feet of adjudicated groundwater in any given year on a five-year rolling average.[39]

On January 13, 2016, the Energy Commission appointed a Committee consisting of Karen Douglas, Commissioner and Presiding Member, and Janea A. Scott, Commissioner and Associate Member, to conduct proceedings on the Petition. The Committee conducted a series of public meetings with the parties to resolve the issues presented by the Petition.

Intervenor California Department of Fish and Wildlife (CDFW) contended that, despite the Judgment and actions of MWA as Watermaster, the Alto Subarea is still in a condition of groundwater "overdraft." CDFW asserted that the Petitioner's proposed use of over 3,090 AFY of recycled water could have a detrimental effect on groundwater recharge in the Alto Subarea. In 2003, CDFW had entered into an agreement with VVWRA to discharge at least 9,000 AFY of recycled water to the Mojave River to protect instream resources by maintaining the base flow at the mesquite bosque described above.[40] Thus, as recognized in the 2003 agreement between CDFW and VVWRA, any changes in recharge from diversion of recycled water could have impacts on the mesquite bosque as the habitat as it supports state and federally listed species and species of special concern. CDFW argued that SWP water should continue to make up the majority of water used for plant cooling purposes.[41]

In July 2016, the Committee recommended,[42] and the Energy Commission granted, interim relief (Interim Relief). The Interim Relief authorized HDPP to use groundwater from the Mojave Basin for cooling purposes. The Interim Relief also allowed HDPP to

[38] TN 206321, 210083.

[39] TN 206468, pp. 5-7, 32-34.

[40] TN 210503.

[41] TN 210565.

[42] TN 211790.

use percolation until September 30, 2018 as an alternative mechanism to store SWP water.[43]

After the filing of the 2015 Petition to Amend, and during the course of these proceedings, Petitioner altered its amendment request. Petitioner replaced its request to no longer rely on groundwater from the Mojave Basin as a regular cooling supply with a request that they be allowed to use only recycled water and banked SWP water for cooling needs. Groundwater from the Mojave Basin would only be used as an emergency backup supply. To increase the supply of banked SWP water, Petitioner also requests permission to make permanent the use of percolation as a means to store water in the groundwater aquifer.[44]

Stipulation and Agreement

On September 1, 2017, Staff, Petitioner, and CDFW (collectively, the parties) filed a "Comprehensive Stipulation and Agreement between Applicant High Desert Power Project, LLC, California Energy Commission Staff, and California Department of Fish and Wildlife on Proposed Amendments to Soil & Water Conditions of Certification for the High Desert Power Project" (Stipulation and Agreement).[45] The Stipulation and Agreement revised conditions of certification included:

- **SOIL&WATER-1:** HDPP would continue to use SWP water for project operation and sets minimum and maximum amounts for use of recycled water. In the event that the minimum amounts are not met or the maximum amounts are exceeded, Petitioner, Staff, and CDFW would meet and confer to determine the cause of the failure to meet the standards of the condition. If Petitioner, Staff, and CDFW agree that the failure to meet the standards was in the control of Petitioner, HDPP would pay monetary penalties to CDFW that would be used to mitigate the adverse biological impacts of the HDPP or to protect, conserve, restore, enhance, manage, and maintain fish, wildlife, native plants, or their habitats. If Petitioner, Staff, and CDFW cannot agree that the failure to meet the standards was in the control of Petitioner, then the matter would be resolved through the Energy Commission's enforcement provisions.[46]
- **SOIL&WATER-4:** Added the use of percolation as an acceptable method to bank SWP water. Requires HDPP obtain the necessary agreements from MWA, VWD, or

[43] TN 212052 (Commission Adoption Order- Commission Decision Granting Interim Relief).

[44] TN 220068, pp. 1-2.

[45] TN 221008. We treat the Stipulation and Agreement as the relief now requested by Petitioner, notwithstanding the original request contained in the 2015 Petition to Amend.

[46] *Id.* at pp. A-1 – A-2; see also, Fish & Game Code § 13014.

other entities to ensure the use of existing facilities for percolation and banking of SWP water.[47]

- **SOIL&WATER-5:** Banked water available for HDPP use would be calculated by MWA and not Energy Commission Staff.[48] The Stipulation and Agreement also proposes minor changes to other conditions of certification to make the new use of percolation consistent with existing language.
- **SOIL&WATER-3**, **-8**, **-9**, **-10**, **-11**, **-15**, **-16**, **-19**, and **-22:** Deleted as the matters contained in them have been satisfied.[49]

MWA filed comments and specific edits on the Stipulation and Agreement, requesting the removal of any specific references to mandatory obligations of the MWA or Watermaster as it was not a party to the HDPP proceedings. MWA said that existing agreements and contracts between MWA, Watermaster, VWD, and the Department of Water Resources[50] contained the appropriate standards to address the provision and storage of water.[51]

DISCUSSION

Standards of Review

The Energy Commission has exclusive jurisdiction to license the HDPP and has continuing jurisdiction over modifications to its operation. When a petition to amend is received, the Energy Commission conducts the analysis set forth in the Energy Commission's regulations, California Code of Regulations, title 20, section 1769 (Section 1769).

Depending on the complexity of the proposed change, an amendment may be analyzed by Staff and referred directly to the Energy Commission for a decision. Alternatively, the amendment may be referred to a committee of two Commissioners who take evidence and submit a recommendation to the Energy Commission. In this case, the matter was referred to a committee because of the need to modify the conditions of certification and because this proceeding is a continuation of the 2009 Amendment.

[47] *Id.* at pp. A-4 – A-5.

[48] *Id.* at pp. A-5 – A-6.

[49] *Id.*

[50] Please see the discussion below regarding the storage and supply agreements for the HDPP.

[51] TN 221113.

Executive Order B-29-15

In the Interim Relief, we discussed the application of Executive Order B-29-15 (Executive Order), issued on April 1, 2015, to this proceeding.[52]

Paragraph 25 of the Executive Order provides:

> The Energy Commission shall expedite the processing of all applications or petitions for amendments to power plant certifications issued by the Energy Commission for the purpose of securing alternate water supply necessary for continued power plant operation. Title 20, section 1769 of the California Code of Regulations is hereby waived for any such petition, and the Energy Commission is authorized to create and implement an alternative process to consider such petitions. This process may delegate amendment approval authority, as appropriate, to the Energy Commission Executive Director. The Energy Commission shall give timely notice to all relevant local, regional, and state agencies of any petition subject to this directive, and shall post on its website any such petition.

Paragraph 26 of the Executive Order states:

> Drought relief actions taken pursuant to these paragraphs that are started prior to May 31, 2016, but not completed, shall not be subject to Division 13 (commencing with section 21000) of the Public Resources Code for the time required to complete them.

Thus, the Executive Order authorizes the Energy Commission to create and implement an alternative process to consider these amendments and to expedite proceedings. While the Energy Commission did not create a policy of general application to drought-related amendment petitions, we did recognize the applicability of the Executive Order to the HDPP Petition and the need for an expedited process due to the lack of a reliable quantity and quality of water for cooling, inability of the Petitioner to use groundwater for cooling operations after September 2016 (as authorized by the 2014 Amendment), and the potential of HDPP to be called upon to serve the Los Angeles region if the Aliso Canyon Natural Gas storage facility is not available.[53]. As such, the Committee provided a Recommendation to the Energy Commission to provide Interim Relief allowing HDPP

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[52] https://www.gov.ca.gov/docs/4.1.15_Executive_Order.pdf. On November 13, 2015, Governor Brown issued Executive Order B-36-15 that extended the provisions of Executive Order B-29-15 until the drought state of emergency was terminated. Finally, Executive Order B-37-16 was issued on May 9, 2016, proclaiming that the orders and provisions of Executive Order B-29-15 to still be in full force and effect, except as modified, and gave additional direction to state agencies to transition temporary emergency water restrictions to permanent, long-term improvements in water use. https://www.gov.ca.gov/wp-content/uploads/2017/09/5.9.16_Attested_Drought_Order.pdf.

[53] TN 212052, pp. 7-8.

to use groundwater from the Mojave River Water Basin for cooling purposes and to use percolation as a method to bank SWP water.[54] This Recommendation was approved by the Energy Commission.[55]

As the Executive Order to expedite proceedings of power plants needing alternative water supplies was addressed for HDPP with the Interim Relief, the remaining issues presented by the Petition no longer fall within the scope of the Executive Order and we apply the review standards set forth in Section 1769. Thus, before approving the Petition, we must find that:

- The amended project will not have significant,[56] unmitigated, environmental effects or that specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the proceeding and that the benefits of the project outweigh the unavoidable significant environmental effects of the project;
- The amended project will remain in compliance with all applicable LORS or that the facility is required for the public convenience and necessity and that there are not more prudent and feasible means of achieving the public convenience and necessity;
- The change in the project will be beneficial to the public, Applicant, or Intervenors; and
- There has been a substantial change in circumstances since the 2000 approval justifying the change or that the change is based on information which was not known and could not have been known with the exercise of reasonable diligence prior to the 2000 approval.[57]

California Code of Regulations, Title 20, Section 1769 Standards

A. Project Benefits

As required by Section 1769, we consider whether changes to the HDPP will be beneficial to the public, Applicant, or Intervenors.

[54] TN 211790.

[55] TN 212052.

[56] The Commission's regulations use the term "significant adverse environmental effect." (See, e.g., Cal. Code Regs., tit. 20, §1755.) "Adverse" is redundant, however, in that by definition in the CEQA Guidelines an effect must be "adverse" in order to be "significant;" positive or beneficial effects cannot be significant. (Cal. Code Regs., tit. 14, § 15382.) Therefore, when we use the terms "significant effect" or "significant impact" in this document, the reader may assume that those effects and impacts are adverse.

[57] Cal. Code Regs, tit. 20, §§ 1769, subd. (a)(3); 1755, subd. (d).

As discussed more fully in the Interim Relief, the HDPP may be called upon to serve the Los Angeles region if the Aliso Canyon storage facility is not available.[58] Thus, by providing a reliable source of cooling water and therefore allowing the continued operation of the HDPP, granting the Petition will be beneficial to the public.

B. Change in Circumstances

Section 1769 requires that in order to approve the Petition, we must find that there has been a substantial change in the circumstances since the 2000 approval. Petitioner has put forth the following changes to support their requested relief.

- The Judgment was affirmed by the California Supreme Court in August 2000—three months after the 2000 Decision. The Judgment allowed MWA to monitor and steward the Mojave Basin.
- Delivery of SWP water has been curtailed since 2007 as a result of court decisions rendered to protect species in the Sacramento-San Joaquin Delta. Because of these restrictions, SWP water has not been available in the quantities originally anticipated by the 2000 Decision to allow the HDPP to both use and store sufficient water for a dependable supply in dry years.
- Finally, all of the interconnected water agencies discussed above have worked to provide a more robust and dependable water system of groundwater, SWP water, and recycled water that did not exist at the time of the 2000 Decision.[59]

In addition, as we identified in the Interim Relief, the HDPP has the potential to be called upon to serve the Los Angeles region if the Aliso Canyon Natural Gas storage facility is not available We find that these circumstances are substantially different than at the time of the 2000 Decision, thus authorizing us to grant the Petition.

Disputed Topics

A. Water Usage Limitation

In the Stipulation, the parties modified Condition of Certification **SOIL&WATER-1** to create a comprehensive method for the calculation of annual water needs for the HDPP. These amendments establish minimum and maximum amounts of recycled water that may be used for HDPP cooling purposes that are based on the actual operating data from the HDPP. These minimums and maximums provide balance between the interests of the parties: the desire of Staff for the HDPP to use 100% recycled water for cooling purposes, HDPP's assertion that recycled water is not always available in the quantities and qualities required for operation, and CDFW's concerns that use of 100%

[58] TN 212052, pp. 7-8.

[59] TN 206468, pp. 1-2, 8-12.

recycled water would adversely affect the health of the mesquite bosque through reduced deliveries of water to the Mojave River. In the event that the minimum is not met or the maximum exceeded, the Petitioner, Energy Commission Staff, and California Department of Fish and Wildlife, are to meet and confer to determine the cause for failing to miss the targets for water use. Finally, if during the meet and confer process, the parties agree that the reason for failing to meet water usage targets was in the control of the Petitioner, then certain monetary penalties would apply. The money generated from these penalties would be deposited into a special account created by CDFW to acquire water to support the mesquite bosque habitat area.

We find that the imposition and implementation of Condition of Certification **SOIL&WATER-1,** as set forth in Exhibit A to this Decision, ensures a proper balance of recycled water and banked water; maintains levels sufficient to support the bosque habitat and its dependent species; and provides a mitigation measure (the payment of penalties to acquire alternate water) in the event that operation of the HDPP may impact the bosque. Therefore, as concluded in the 2000 Decision, the HDPP will not cause a significant, unmitigated environmental effect.

We further find that the imposition and implementation of Condition of Certification **SOIL&WATER-1** ensures HDPP will comply with all applicable laws, ordinances, regulations, and standards (LORS). In the 2000 Decision, we considered the applicable LORS and found them to be satisfied. Since the 2000 Decision, a new, critical LORS has been established: the judgment in *City of Barstow, et. al. vs. City of Adelanto, et al.* (Judgment).[60] As set forth above, the Judgment is designed to ensure that proper water balances are maintained in each subarea of the Mojave Basin through a combination of natural supply, imported water, water conservation, water reuse, and transfers of production allowances between producers. MWA's duties as Watermaster also include management of storage in the groundwater aquifer.[61] As Watermaster, MWA has adopted a series of ordinances and regulations to operate and steward the Mojave River Basin. Water supplies for the HDPP, as set forth above, involve an interlocking series of agreements between the various producers, suppliers, and storage entities. These various agreements that create water service for the HDDP, both for supply and storage, incorporate the rules and ordinances of MWA into their terms.[62] Thus, all current and future LORS must be complied with in order for HDPP to continue to receive water or to store water for its future use.

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[60] 23 Cal.4th 1224 (2000).

[61] *2000 Decision.*

[62] For example, see the "Storage Agreement between MWA and VWD" states the agreement is being entered into pursuant to the Judgment and "the Rules and Regulations of the Mojave Basin Area Watermaster ("Rules") adopted June 30, 1994, and revised December 11, 1996, and as may be amended from time to time." (TN 221316, Attachment 2, p. 1.) *See also*, discussed below under "Percolation."

We therefore impose Condition of Certification **SOIL&WATER-1** (as set forth in Exhibit A to this Decision) as the new program for providing water for HDPP cooling processes.

Petitioner, Staff, and CDFW all agreed to the language of the stipulation and comments were received on this topic.

B. Percolation

In the Interim Relief, HDPP was authorized to use percolation as a method of banking water obtained from SWP. In the Stipulation, the ability to use percolation is made permanent.

HDPP has stated that SWP water must be "cleaned" by their treatment plant prior to injection to ensure that the groundwater remains free from contamination. To run the treatment plant, the HDPP must also be operating.[63] HDPP does not believe that percolation would require such "cleaning." HDPP does not contract directly with MWA for storage in the groundwater aquifer. Instead, HDPP contracts with the city of Victorville, which in turn has master agreements with MWA regarding groundwater recharge. Therefore, any change to the method of SWP water banking for HDPP is dependent on modifications to the agreements between MWA and VWD/city of Victorville and between HDPP and the city of Victorville.

We therefore impose Conditions of Certification **SOIL&WATER-2** and **SOIL&WATER-4** (as set forth in Exhibit A to this Decision) to allow Petitioner to use percolation as a method of banking water and to require that current storage agreements are maintained to allow for injection and percolation of SWP water.

C. Calculation of Banked Water

In the Stipulation's Conditions of Certification **SOIL&WATER-4** and **-5**, the Parties agreed to alter the method of accounting for SWP water banked and subsequently used. In the 2000 Decision, Staff is tasked with determining the amount of water available by using a model that accounted for dissipation over time and distance. Under the Stipulation, MWA would be tasked with calculating the amount of water available from the banking operations, whether through injection or percolation.

While Staff accepted the transfer of this obligation to MWA, MWA did not.[64]

Due to the comments submitted by MWA, we amended the stipulated language. Under the terms of the storage agreements, the city of Victorville/VWD is required to report the amount of water stored, based on information from HDPP. We thus require HDPP to

[63] TN 210301, p. 29.

[64] Transcript of 09/11/2017 Prehearing Conference, pp. 28-31 (Staff acceptance): TN 221113 (MWA comments on Stipulation).

provide any reports required under the various agreements to Staff and CDFW in order to track and account for banked water.

Similar to the allowance for percolation, the condition changes related to the accounting of banked water are dependent on modifications to other agreements including the storage agreement between MWA and VWD/city of Victorville. Calculation of the amount of water to be banked is subject to the following language in the storage agreement between the Watermaster and VWD:

> Watermaster (MWA) will annually determine and account for losses in stored water, and in so doing shall assume that stored water floats on top of the native ground water supplies. Accounting for all losses of water therefore assumes stored water would spill before native supplies in the event there are losses of water that would otherwise have replenished the Subarea. Stored water losses shall have an inverse priority to that specified in Paragraph G (i.e. Third Priority stored water is the first to spill).[65]

We therefore impose Conditions of Certification **SOIL&WATER-4** and **-5** as shown in Exhibit A to this Decision, which provides for a new method for calculating and reporting the available balance of banked water. With the inclusion of this language in the storage agreement, we find that, because the monitoring and calculation will ensure that the HDPP does not use more water than it has banked, the mesquite bosque and its dependent species will not be adversely impacted by operation of the HDPP. We further find that the inclusion of this requirement will ensure HDPP's compliance with LORS.

D. HDPP Lifespan and Required Evaluation of Water Resources

The 2000 Decision included Condition of Certification **SOIL&WATER-6(d)**:

> The project shall not operate for longer than thirty (30) years unless the Commission has approved an amendment to its license that specifically evaluates the water resources impacts of continued operation and imposes any mitigation necessary to ameliorate any identified impacts.

This condition was imposed to ensure that the HDPP was water neutral and did not further deplete water levels in the Mojave River Basin.[66]

As part of the proceedings on this Petition, the Committee asked the parties to brief whether Condition of Certification **SOIL&WATER-6(d)** was still needed.[67]

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[65] TN 217996, p. 2, F.

[66] 2000 Decision, p. 229.

[67] TN 220543.

Petitioner argued that Condition 6(d) was satisfied beginning in 2009 and would be satisfied if the Petition were granted in these proceedings.[68]

CDFW argued that Condition 6(d) had not been satisfied and should be retained, arguing that even the current proceedings have not specifically evaluated the water resources of HDPP using recycled water nor have mitigation measures been adopted.[69]

Staff reads Condition 6(d) as limiting operation of the HDPP to 30 years unless there has been an analysis of impacts to water resources from continued operations. Staff argued that none of the previous actions by the Energy Commission have satisfied the condition and the condition should be retained.[70]

We believe that, with the current proceedings, Condition 6(d) has been satisfied and is no longer needed. We reach this conclusion based on the entirety of the record of this Petition, particularly the 2014 Amendment and the filings by the Petitioner and Staff analyzing the ability of the HDPP to use recycled water as the sole source of cooling water. These proceedings have included numerous discussions of the impacts of different sources of water on the mesquite bosque. The attached conditions of certification, strike a long-term, workable solution to providing water to the HDPP—the precise outcome sought by Condition 6(d).

Conditions of Certification Update

We also take this opportunity to show that Conditions of Certification **SOIL&WATER-3**, **-8**, **-9**, **-10**, **-11**, **-15**, **-16**, **-19**, and **-22**, have been satisfied. These are also included in Appendix A by reference to their deletion in 2018. By deleting these outdated provisions, the conditions of certification relevant to the continued operation of the HDPP will be easy to follow.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

1. The High Desert Power Plant requires water for cooling in order to operate.
2. Granting the Petition for Modification to Drought-Proof the High Desert Power Project will be beneficial to the public by providing a generator that is not reliant on the Aliso Canyon Natural Gas storage facility.
3. Circumstances have changed since the 2000 approval of the High Desert Power Plant, necessitating changes to the conditions under which the power plant operates.
4. Condition of Certification 6(d) has been satisfied.

[68] TN 220912.
[69] TN 220913.
[70] TN 220914.

5. The matters contained in **Conditions of Certification SOIL&WATER-3**, **-8**, **-9**, **-10**, **-11**, **-15**, **-16**, **-19**, and **-22** have been satisfied.
6. Imposition and implementation of the Conditions of Certification contained in this Decision will ensure the High Desert Power Plant will not have any significant, unmitigated environmental effects.
7. Imposition and implementation of the Conditions of Certification contained in this Decision will ensure the High Desert Power Plant will be operated in conformity with all applicable laws, ordinances, regulations, and standards.
8. Imposition and implementation of the Conditions of Certification contained in the Commission Decision will ensure protection of environmental quality and assure reasonably safe and reliable operation of the facility.

Dated: March 20, 2018, at Sacramento, California

ORIGINAL SIGNED BY:

KAREN DOUGLAS
Commissioner and Presiding Member
High Desert Power Plant Amendments
Committee

ORIGINAL SIGNED BY:

JANEA A. SCOTT
Commissioner and Associate Member
High Desert Power Plant Amendments
Committee

EXHIBIT "A"
HIGH DESERT POWER PLANT
CONDITIONS OF CERTIFCATION FOR SOIL AND WATER RESOURCES[71]

SOIL&WATER-1 Water Supplies

A. Permissible Sources of Water and Reporting Requirements

1. For project operation (except for domestic purposes), Project Owner shall only use State Water Project (SWP) water obtained by the Project Owner consistent with the provisions of the Mojave Water Agency's (MWA) Ordinance 9 or appropriately treated recycled waste water. SWP water used may be either directly available SWP water or banked SWP water that has been either percolated or injected ("Banked SWP Water") that is available for extraction in accordance with **SOIL&WATER-6**.

2. At the Project Owner's discretion, dry cooling may be used instead, if an amendment to the Commission's decision allowing dry cooling is approved.

3. The Project Owner shall report, on or before the 15th of each month, the use of water from all sources for the prior month to the Energy Commission Compliance Project Manager (CPM) in acre-feet (AF). The monthly report shall include AF usage by source, as well as total. Specific recycled water events of unavailability or quality issues will also be included with daily detail.

4. The project's water supply facilities shall be appropriately sized and utilized to meet project needs. The project shall make maximum use of recycled waste water for power plant cooling given current equipment capabilities and permit conditions, subject to the restrictions set forth below.

B. Limitations on Water Usage

1. Project Owner shall use recycled waste water, to the extent it is available and its quality is sufficient to maintain cooling tower functions and reliable operation of the facility,

[71] These Conditions of Certification shall be the exclusive rights and obligations of the Project Owner.

provided that the use of recycled waste water:

a. Shall not exceed 2,500 acre-feet per year (AFY) in any calendar year (the "Maximum Annual Recycled Water Use");

b. Shall not exceed 2,000 AFY calculated on 3-year calendar year rolling average (the "Average Annual Recycled Water Use"); and

c. Shall meet a minimum of 20 percent of annual cooling water needs. Calculation of cooling water needs shall be done on an annual basis. The "Average Annual Recycled Water Blend Percentage" shall be calculated on a three-year rolling basis and shall exclude periods recycled water is not available or is not of sufficient quality.

2. The Maximum Annual Recycled Water Use, the Average Annual Recycled Water Use and Average Annual Recycled Water Blend Percentage shall be calculated annually and shall be based on the metered data reported pursuant to Paragraph A, above. The Project Owner shall exclude from the calculations (a) water used when recycled water is unavailable when the project requests recycled water; and (b) water used when recycled water of sufficient quality is unavailable. Sufficiency of water quality shall be determined based upon the water quality specification in the Project Owner's agreement with its retail water supplier at the time the recycled water was requested. Recycled Water unavailability shall be logged by the facility's operators and reported monthly to the CPM.

C. Meet and Confer

1. In the event Project Owner fails to use the minimum Average Annual Recycled Water Blend Percentage or exceeds either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use, the Project Owner, the CPM, and the California Department of Fish and Wildlife (CDFW) shall meet, as soon as practicable, to determine whether the failure to use the minimum Average Annual Recycled Water Blend Percentage or exceedance of use of either the Maximum Annual Recycled Water Use

or the Average Annual Recycled Water Use was the result of an extensive, unavoidable disruption of water supply due to a natural disaster, an emergency, or other unforeseen circumstance outside the exclusive control of the Project Owner and to determine how future water use will satisfy the terms of **SOIL&WATER-1**.

2. In the event that the Project Owner, CPM, and CDFW determine that the failure to use the minimum Average Annual Recycled Water Blend Percentage or exceedance of use of either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use was within the control of the Project Owner, the penalties set forth in subparagraph (D), below, shall apply.

3. In the event that the Project Owner, CPM, and CDFW cannot determine that the failure to use the minimum Average Annual Recycled Water Blend Percentage or exceedance of use of either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use was within the control of the Project Owner, the normal regulatory process to resolve the issue may be used, including, but not limited to, an enforcement action.

D. Penalties

In the event that the Project Owner, CPM, and CDFW determine that the failure to use the minimum Average Annual Recycled Water Blend Percentage or exceedance of use of either the Maximum Annual Recycled Water Use or the Average Annual Recycled Water Use was within the control of the Project Owner, Project Owner shall make a financial payment to CDFW by March 1 for the previous calendar year's water use for deposit in a High Desert Power Project Mitigation and Protection Expendable Funds Account to be established by CDFW pursuant to Fish and Game Code section 13014(b)(1)(E) as follows: (1) $500 per acre-feet (AF) of Recycled Water used in excess of 2,500 AFY in any calendar year; (2) $500 per AF of Recycled Water used in excess of 2,000 AFY calculated on a three year rolling average; or (3) $500 per AF for the difference in AF between 20 percent of total HDPP project industrial annual water use and total Recycled Water used in the calendar year The

amounts listed herein are in 2017 dollars and will be adjusted for inflation using the Consumer Price Index.

VERIFICATION: The Project Owner shall report all use of water and recycled water unavailability in acre feet to the CPM and CDFW on a monthly basis for each supply: Recycled Water, SWP Water, and Banked SWP Water. The monthly report shall contain a brief statement on the water quantity and water quality of the supplies available in the prior month.

SOIL&WATER-2 Storage Agreement between Mojave Water Agency and Victorville Water District

The Project Owner shall provide a copy of the storage agreement between the Mojave Basin Area Watermaster (Mojave Water Agency) and VWD prior to the initiation of any groundwater banking, and within fifteen (15) days of any amendment or renewal of the storage agreement.

VERIFICATION: The Project Owner shall submit to the CPM and CDFW a copy of the approved storage agreement from the Mojave Basin Area Watermaster within fifteen (15) days of receipt of the agreement.

In the event that the storage agreement from the Mojave Basin Watermaster expires or is otherwise not in effect, the Project Owner shall notify the CPM immediately. The Project Owner, CPM, and CDFW shall meet and confer promptly to determine what additional steps may be taken to determine how future water use will satisfy the terms of **SOIL&WATER-1**.

SOIL&WATER-3 [Deleted in 2018.]

SOIL&WATER-4. Banking Schedule.

A. The Project Owner may inject SWP water when it is available in excess of volumes needed to operate the project, up to a cumulative quantity of 13,000 acre-feet, subject to equipment capabilities and permit requirements. The amount of injected SWP water available to HDPP for extraction is equal to Injection minus Extraction minus Losses minus 1000 acre-feet, as defined in **SOIL&WATER-6**.

B. The Project Owner may bank SWP water in the Mojave Groundwater Basin through percolation using existing Mojave Water Agency (MWA) facilities, subject to the terms of any necessary agreement(s) with MWA, the Mojave Basin Area Watermaster, the City of Victorville or the Victorville Water District.

VERIFICATION: Estimates of SWP water to be injected shall be included in the monthly report required under **SOIL & WATER-1**. The Project Owner shall provide to

the CPM and to CDFW a copy of any agreement(s) with MWA, Mojave Basin Area Watermaster, City of Victorville, or the Victorville Water District, relating to the percolation and banking of SWP water. For other related items, see the verification to **SOIL & WATER-5** and **SOIL & WATER-12**.

SOIL&WATER-5 Calculation of Water Bank Balance

A. The amount of injected, banked groundwater available to the project shall be reported to the Mojave Basin Area Watermaster pursuant to existing and future storage agreements for HDPP between Watermaster and Victorville Water District (VWD).

B. When calculating the amount of injected, banked groundwater available to the project, MWA or the Mojave Basin Area Watermaster may subtract any amount of water that is produced by VWD from the project wells for purposes other than use by the project that exceeds the baseline, as defined in **SOIL&WATER-17**.

C. The amount of percolated, banked groundwater available to the project will be calculated by MWA or the Mojave Basin Area Watermaster in accordance with the storage agreement between Watermaster and VWD.

VERIFICATION: The Project Owner shall submit to the CPM and to CDFW in writing, on a quarterly basis, a monthly accounting of all groundwater pumped, all SWP water treated and injected, and all SWP banked through percolation by MWA in the preceding quarter. Within thirty (30) days of receipt of the approved annual storage agreement, pursuant to **SOIL&WATER-2**, the Project Owner shall submit to the CPM and to the CDFW an annual written estimate of the anticipated amount of SWP water that will be banked and the anticipated amount of groundwater that will be pumped in the coming year.

SOIL&WATER-6 Banked Water Available for Project Use

A. The amount of banked groundwater available to the project after the first twelve (12) months of commercial operation is: (1) the amount of SWP water percolated in accordance with **SOIL&WATER-4(b)**; and (2) the amount of SWP water injected in accordance with **SOIL&WATER-4(a)**, minus the amount of groundwater pumped by the Project Owner, minus the amount of dissipated groundwater, minus one thousand (1,000) acre feet, and minus any amount described in **SOIL&WATER-5(b)**.

B. During the three (3) years prior to project closure, the Project Owner may withdraw the balance of banked groundwater determined to be available to the project, except for one thousand (1,000) acre-feet, pursuant to **SOIL&WATER-5**. The Project Owner is not required to replace this final withdrawal of

groundwater. However, during the three (3) years prior to project closure, at no time may the balance of banked groundwater decline below one thousand (1,000) acre-feet. Furthermore, there must be a remaining balance of one thousand (1,000) acre-feet banked in the groundwater system at closure, as determined to be available to the project pursuant to **SOIL&WATER-5**. This balance of one thousand (1,000) acre-feet must remain in the groundwater system, and the Project Owner, by contract or other conveyance, may not transfer the rights to this balance.

C. [Deleted in 2018.]

D. [Deleted in 2018.]

E. [Deleted in 2018.]

VERIFICATION: The Project Owner shall use the same verification as for **SOIL&WATER-5;** however, in addition, any facility closure plan submitted during that last three (3) years of commercial operation shall address the disposition of any remaining water available to the project, as well as the disposition of the water treatment facility.

SOIL&WATER-7 Ownership and Control of Water Treatment Facilities

The Project Owner shall retain ownership and operational control of the water treatment facility.

VERIFICATION: Should the Project Owner choose to transfer ownership or operational control of the water treatment facility, it must apply for an amendment to the Energy Commission Decision, and include an evaluation of any environmental effects associated with the transfer of ownership or operational control to another entity.

SOIL&WATER-8 [Deleted in 2018.]

SOIL&WATER-9 [Deleted in 2018.]

SOIL&WATER-10 [Deleted in 2018.]

SOIL&WATER-11 Submission of Waste Discharge Requirement

The Project Owner shall submit an approved Waste Discharge Requirement prior to the start of any groundwater injection banking unless the Lahontan Regional Water Quality Control Board (RWQCB) decides to waive the need to issue a waste discharge requirement or waive the need for the Project Owner to file a Report of Waste Discharge.

VERIFICATION: If the RWQCB decides to waive the need to file a Report of Waste Discharge or the need for a waste discharge requirement, the Project Owner shall submit a copy of the letter from the RWQCB to the CPM. If a waste discharge

requirement is required by the RWQCB, the Project Owner shall provide a copy of the approved permit to the CPM.

SOIL&WATER-12 Water Treatment and Monitoring Plan

The Project Owner shall prepare and submit to the CPM and, if applicable, to the Lahontan RWQCB for review and approval, a water treatment and monitoring plan that specifies the type and characteristics of the treatment processes and identify any waste streams and their disposal methods. The plan shall provide water quality values for all constituents monitored under requirements specified under California Code of Regulations, Title 22 Drinking Water Requirements, from all production wells within two (2) miles of the injection wellfield for the last five (5) years.

The plan shall also provide SWP water quality sampling results obtained from the Department of Water Resources for water at Silverwood Lake, or other portions of the East Branch of the California Aqueduct in this area for the last five (5) years. Also identified in the plan will be the proposed treatment level for each constituent based upon a statistical analysis of the collected water information. The statistical approach used for water quality analysis shall be approved prior to report submittal by the CPM and, if applicable, the RWQCB. Treatment of SWP water prior to injection shall be to levels approaching background water quality levels of the receiving aquifer or shall meet drinking water standards, whichever is more protective. The plan will also identify contingency measures to be implemented in case of treatment plant upset.

The plan submitted for approval shall include the proposed monitoring and reporting requirements identified in the Report of Waste Discharge (Bookman-Edmonston 1998d) with any modifications required by the **RWQCB**.

VERIFICATION: Ninety (90) days prior to injection of SWP water within the Regional Aquifer, the Project Owner shall submit to the Lahontan RWQCB and the CPM a proposed statistical approach to analyzing water quality monitoring data and determining water treatment levels. The Project Owner shall submit the SWP water treatment and monitoring plan to the CPM and, if appropriate, to the Lahontan RWQCB for review and approval. The CPM's review shall be conducted in consultation with the MWA, the VWD, and the City of Victorville. The plan submitted for review and approval shall reflect any requirements imposed by the RWQCB through a Waste Discharge Requirement.

SOIL&WATER-13 Water Treatment and Monitoring Plan

The Project Owner shall implement the approved water treatment and monitoring plan. All injected SWP water shall be treated to meet local groundwater conditions as identified in Condition **SOIL&WATER-12**. Treatment levels may be revised by the CPM and, if applicable, by the RWQCB, based upon changes in local groundwater quality identified in the monitoring program not attributable to the groundwater banking program. Monitoring results shall be submitted annually to the CPM and, if applicable, to the RWQCB.

VERIFICATION: The Project Owner shall annually submit monitoring results as specified in the approved plan to the CPM. The Project Owner shall identify any proposed changes to SWP water treatment levels for review and approval by the CPM and, if appropriate, the Lahontan RWQCB. The Project Owner shall notify the RWQCB, the VWD, and the CPM of the injection of any inadequately treated SWP water into the aquifer due to an upset in the treatment process or for other reasons. Monitoring results shall be submitted to the CPM.

SOIL&WATER-14 Access Provided to Air Force

The Project Owner shall provide access to the United States Air Force for all efforts to characterize and remediate all soil and groundwater contamination at the power plant site.

VERIFICATION: The Project Owner shall submit, in writing, a copy within two (2) weeks of receipt of any request from the Air Force for site access to characterize or remediate contaminated soil and/or groundwater to the CPM.

SOIL&WATER-15 [Deleted in 2018.]

SOIL&WATER-16 [Deleted in 2018.]

SOIL&WATER-17 Aquifer Storage and Recovery Agreement

The Project Owner shall enter into an Aquifer Storage and Recovery Agreement with the Victor Valley Water District or its successor Victorville Water District (VWD). This agreement shall contain the following conditions:

1. It shall prohibit VWD from producing or allowing others to produce water from project wells, except that VWD may produce water from project wells: (a) for use by the HDPP project pursuant to **SOIL&WATER-1**; and (b) for purposes other than use by the HDPP project pursuant to **SOIL&WATER-1** provided that such production, in combination with production from the VWD wells

identified in "c" below does not exceed the amount identified as "the baseline", as defined in a below.

a. The contract shall define the baseline as the average aggregated annual production of the wells identified in "c" during the immediately preceding five (5) years. The contract shall state that any water produced by VWD pursuant to (ii) above shall be included in subsequent calculations of the baseline only if that production does not exceed the baseline for the calendar year in which the production occurs, as required by this Condition.

b. The contract shall require VWD to establish the first baseline using the five (5) calendar years preceding the operation of the project wells, and shall re-calculate the baseline on a calendar year basis by January 15 of each year.

c. The contract shall state that "wells identified in "c" means VWD wells that are located in a corridor two (2) to two and one half (2½) miles wide adjacent to and west of the river's western bank including all wells within the following land sections:

- Within Township 6 North, Range 4 West, sections 31, 32, 33, and 34.
- Within Township 5 North, Range 4 West, sections 4, 5, the east 1/2 of 8, 9, 10, 15, 16, the east 1/2 of 21, 22, 23, 25, 26, 27, the east 1/2 of 28, the east 1/2 of 33, 34, 35, and 36.

2) It shall state that the Project Owner shall provide to the CEC CPM and CDFW on a quarterly basis a monthly accounting of: 1) all water pumped from project wells that is supplied to the Project Owner; and 2) water pumped from project wells that is supplied to VWD.

3) It shall state that VWD shall provide to the CPM and CDFW a baseline calculation no later than January 15 of each year.

4) The contract may include terms that require VWD to compensate HDPP for any costs associated with subtractions from the amount of banked groundwater available to HDPP under the terms of **SOIL&WATER-5**.

VERIFICATION: The Project Owner shall provide to the CPM and CDFW a copy of a signed Aquifer Storage and Recovery Agreement with the terms described above prior to commencing construction of the project. Any amendments to this agreement shall be approved by the CPM thirty (30) days prior to the effective date of the amendment.

SOIL&WATER-18 Installation of Flow Meters

The Project Owner shall ensure that flow meters are installed on project wells such that the total amount of water injected and produced on a monthly basis can be determined. In addition, the Project Owner shall ensure that separate flow meters are installed on:

1) that portion of the water delivery system that is dedicated to providing water to the Project Owner; and

2) on that portion of the water delivery system that will be used to provide water to VWD pursuant to **SOIL&WATER-17**.

VERIFICATION: The Project Owner shall provide to the CPM and CDFW on a quarterly basis a monthly accounting of: 1) all groundwater injected into project wells; 2) water pumped from project wells that is supplied to the Project Owner; and 3) water pumped from project wells that is supplied to VWD.

SOIL&WATER-19 [Deleted in 2018.]

SOIL&WATER-20 The Project Owner shall provide the CPM two copies of the executed Recycled Water Purchase Agreement (agreement) with the Victorville Water District (VWD) and/or City of Victorville (City) for the long-term supply (20-25 years) and delivery of tertiary treated recycled water to the HDPP. The HDPP shall not connect to the City's recycled water pipeline without the final agreement in place. The Project Owner shall comply with the requirements of Title 22 and Title 17 of the California Code of Regulations and section 13523 of the California Water Code.

VERIFICATION: At least 30 days prior to the connection to the City's recycled water pipeline, the Project Owner shall submit two copies of the executed agreement for the long-term supply and delivery of tertiary treated recycled water to the HDPP. The agreement shall specify a maximum delivery rate of 4000 gpm and shall specify all terms and costs for the delivery of recycled water to the HDPP.

At least 30 days prior to connection to the City's recycled water pipeline, the Project Owner shall submit to the CPM a copy of the Engineering Report and Cross Connection inspection and approval report from the California Department of Public Health and all water reuse requirements issued by the Lahontan Regional Water Quality Control Board.

SOIL&WATER-21 Prior to the use of recycled water during the operation of the HDPP, the Project Owner shall install and maintain metering devices as part of the water supply and distribution system to monitor and record in gallons per day the volume of recycled water used by the HDPP. The metering devices shall be operational for the life of the project, and an annual summary of daily water use shall be submitted to the CPM in the annual compliance report.

VERIFICATION: At least 10 days prior to use of recycled water for HDPP operation, the Project Owner shall submit to the CPM evidence that metering devices have been installed and are operational on the recycled water line serving the project. The Project Owner shall provide a report on the servicing, testing, and calibration of the metering devices in the annual compliance report.

SOIL&WATER-22 [Deleted in 2018.]