



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

MAY 28 2013

Mr. Richard Doble
Pacific Gas and Electric Company
Mailing Code N11C
P.O. Box 770000
San Francisco, CA 94105

Dear Mr. Doble:

APPROVAL OF MEASURES FOR THE STANISLAUS POWER TUNNEL FISH SCREEN PROJECT; SPRING GAP – STANISLAUS HYDROELECTRIC PROJECT, FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2130, TUOLUMNE COUNTY

On September 15, 2008, the State Water Resources Control Board (State Water Board) issued a water quality certification (certification) for Pacific Gas and Electric Company's (PG&E) Spring Gap-Stanislaus Hydroelectric Project (Spring Gap Project). This certification was subsequently amended by the State Water Board on June 16, 2009, with issuance of Order WR 2009-0039. Completion of the Stanislaus Power Tunnel Fish Screen Project (Project) is a required component of the Spring Gap Project certification. Conditions 8, 12, 14, and 15 as well as Mitigation Measures 1, 2, and 4 contain specific requirements related to approval of the Project by the Deputy Director for Water Rights (Deputy Director). These conditions and mitigation measures are provided in Attachment 1.

On February 25, 2011, PG&E submitted design criteria and revised design plans for the Project to the Deputy Director for approval. In a letter dated April 6, 2011, the Deputy Director granted approval of these components which started a four-year time clock for completion of construction of the fish screen. Confirmation of adequate pool depth below the spillway to avoid injury to fish and submission of a plan for the testing of screen performance were identified in the letter as outstanding components requiring Deputy Director approval prior to Project construction.

Between July 8, 2012, and May 2, 2013, State Water Board staff received modified construction plans and other documents from PG&E. The modified construction plans include newly proposed permanent and supplemental bypass structures that were not included in the approved February 2011 submittal, and therefore require Deputy Director approval.

State Water Board staff consulted with California Department of Fish and Wildlife (CDFW) staff prior to issuance of the April 6, 2011, approval letter. CDFW staff was consulted again in April 2013, to determine if the fish screen design objectives identified in Condition 8 of the certification would be met with the newly proposed bypass structures. CDFW staff did not

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, Ca 95812-0100 | www.waterboards.ca.gov

MAY 28 2013

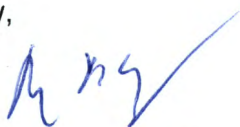
express concerns regarding the proposed bypass structures ability to meet the fish screen objectives. However, CDFW staff did have reservations about the unscreened operation of the supplemental bypass structure and stated that it should only be allowed to operate in very limited circumstances.

The final construction plans and mitigation measures submitted to the Deputy Director meet the requirements outlined in the Spring Gap Project certification. Deputy Director approval of the Project is hereby granted with the conditions outlined in Attachment 2.

If you have questions regarding this letter please contact Mr. Michael Maher at (916) 341-5408 or by email at mmaher@waterboards.ca.gov. Written correspondence should be directed to:

State Water Resources Control Board
Division of Water Rights
Water Quality Certification Program
Attention: Michael Maher
P.O. Box 2000
Sacramento, CA 95812-2000

Sincerely,



Barbara Evoy, Deputy Director
Division of Water Rights

Attachment 1: Specific Requirements from Spring Gap-Stanislaus Hydroelectric Project Water Quality Certification Related to Stanislaus Power Tunnel Fish Screen Project

Attachment 2: Conditions for Stanislaus Power Tunnel Fish Screen Project

cc: (w/enclosures)

Mr. Ross Jackson
Pacific Gas and Electric Company
2730 Gateway Oaks Drive, #220
Sacramento, CA 95833

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory
Commission
888 First Street, NE
Washington, D.C. 20426

Ms. Pamela Creedon, Executive Officer
Central Valley Regional Water Quality
Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Mr. Bob Hughes
California Department of Fish and Wildlife
1812 9th Street
Sacramento, CA 95811

SPECIFIC REQUIREMENTS FROM
 SPRING GAP-STANISLAUS HYDROELECTRIC PROJECT
 WATER QUALITY CERTIFICATION RELATED TO
 STANISLAUS POWER TUNNEL FISH SCREEN PROJECT;
 FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2130

Conditions 8, 12, 14, and 15 as well as Mitigation Measures 1, 2, and 4 contain specific requirements related to approval of the Stanislaus Power Tunnel Fish Screen Project by the Deputy Director for Water Rights (Deputy Director). These conditions and mitigation measures are provided below.

Condition 8

The Licensee shall, by the end of the first full calendar year after license issuance, prepare detailed plans for construction, operation, and testing to confirm compliance with the specified design criteria of a fish screen at the entrance to Stanislaus Power Tunnel. Upon completion, the Licensee shall submit the plans and drawings to the Deputy Director and provide 90 days for their review, comment and approval. The Licensee shall construct the fish screen approved by the Deputy Director within four years following approval of the plans and drawings.

The fish screen shall be designed using as guidelines the Environmental and Operational Objectives identified below:

Environmental Objectives

- *Reduce entrainment of all life-stages of trout from Middle Fork Stanislaus River into Stanislaus Power Tunnel to less than significant levels, and*
- *Provide for all life-stages of trout in the Middle Fork Stanislaus River to pass downstream of Sand Bar Diversion Dam.*

Operational Objectives

- *No reduction in reliability, or hydraulic or electrical capacity of Stanislaus Powerhouse;*
- *Fish screen design is consistent with providing minimum Daily Flows and minimum Supplemental Flows in Sand Bar Dam Reach downstream of Sand Bar Diversion Dam;*
- *Provide for automated cleaning of the fish screen to avoid clogging;*
- *In the event the fish screen becomes clogged, provide for continued flow in Stanislaus Power Tunnel to maintain the operational reliability of Stanislaus Powerhouse and avoid large, rapid fluctuations in streamflows below Sand Bar Diversion Dam;*
- *Provide for sediment entering the fish screen structure to pass through downstream of Sand Bar Diversion Dam;*
- *Allow flexibility to determine fish screen maintenance and outage schedule after obtaining operating experience;*
- *Allow removal or opening of the fish screen during periods of high levels of potentially screen-clogging debris; and*
- *Provide for opening of the fish screen to assure continued flow in Stanislaus Power Tunnel in the event the fish screen becomes clogged with debris.*

Design Criteria

- *Flow capacity = 530 cfs [cubic feet per second];*
- *Approach velocity = 0.33 to 0.4 feet per second (fps) at fish screen;*
- *Sweeping velocity = 2 fps or greater at fish screen; and*
- *Fish screen openings = 1.75 mm for slot width or 3/32 inch for round opening.*

SPECIFIC REQUIREMENTS FROM
SPRING GAP-STANISLAUS HYDROELECTRIC PROJECT
WATER QUALITY CERTIFICATION RELATED TO
STANISLAUS POWER TUNNEL FISH SCREEN PROJECT;
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2130

Condition 12

Prior to the beginning of construction of the Stanislaus Power Tunnel Fish Screen and the removal of the Stanislaus Afterbay Dam, Licensee shall obtain all necessary permits. Licensee shall submit final construction plans, including measures to protect water quality to the Deputy Director for review and approval prior to beginning work. The plans shall include a water quality monitoring program with monitoring locations upstream and downstream of the project site. The plans shall also include Best Management Practices, and measures that will be used to minimize water quality impacts during instream work.

Condition 14

Licensee shall prepare plans to minimize soil erosion and loss of topsoil for the review and approval of the Deputy Director prior to beginning construction of the Stanislaus Power Tunnel Fish Screen or removal of the Stanislaus Afterbay Dam. The plan shall include the requirement to prepare a Storm Water Pollution Prevention Plan to address specific site mitigation measures to prevent erosion and protect water quality. The plan shall include Best Management Practices with temporary surface drainage ditches, water bars, and filter barriers along the access road to mitigate any potential erosion from rain during construction as needed.

Condition 15

Material such as fuel (gasoline/diesel), hydraulic oil, and motor oil, will be used during construction of the Stanislaus Power Tunnel Fish Screen and removal of the Stanislaus Afterbay Dam. Material Safety Data Sheets for all substances used on the job site must be on file at the job headquarters in Angels Camp and at the job site as required by the Hazard Communication Law, General Industry Safety Orders, Sec. 5194.

Hazardous waste products such as grease cartridges and oil absorbents will be placed in proper containers and transported from the job site to an authorized Hazardous Waste Collection Site.

Trucks and equipment will be refueled as required from 110-gallon capacity diesel tanks carried in the back of pickup trucks. No fuel storage tanks will be placed on the site.

Equipment hydraulic oil will be changed out to biodegradable oil for the equipment operating within the stream channel. Oil collection booms will be strategically placed in the Stanislaus River to provide additional protection in the event of an equipment fluid release.

To reduce potentially hazardous conditions and minimize the impacts from the handling of potentially hazardous materials, PG&E will include the following in its construction contract documents:

a) The contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the

SPECIFIC REQUIREMENTS FROM
SPRING GAP-STANISLAUS HYDROELECTRIC PROJECT
WATER QUALITY CERTIFICATION RELATED TO
STANISLAUS POWER TUNNEL FISH SCREEN PROJECT;
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2130

contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the designated construction staging area, and regularly inspect all construction equipment for leaks.

b) The contractor(s) shall prepare a Health and Safety Plan. The plan shall include measures to be taken in the event of an accidental spill.

c) The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets.

Mitigation Measures 1, 2, and 4

Mitigation Measures 1, 2, and 4 restate Conditions 14, 15, and 12, respectively. However, Mitigation Measure 2 contains the following additional requirements:

PG&E shall submit a copy of the construction contract to the Deputy Director. PG&E shall identify an individual responsible for monitoring hazardous materials and compliance during construction. This individual shall be responsible for reporting spills to the Regional Water Quality Control Board and the Deputy Director.

CONDITIONS FOR STANISLAUS POWER TUNNEL FISH SCREEN PROJECT;
SPRING GAP-STANISLAUS HYDROELECTRIC PROJECT,
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2130

As stated in the associated letter, the Deputy Director for Water Rights (Deputy Director) approves the Stanislaus Power Tunnel Fish Screen Project (Project) with the following conditions outlined below.

1. Pacific Gas and Electric Company (PG&E) shall notify the Deputy Director as soon as reasonably feasible before any planned operation of the supplemental bypass, and submit a plan for operation of the supplemental bypass to the Deputy Director for review and approval. The Deputy Director may require modifications as part of approval. The plan shall detail the rationale for use of the supplemental bypass, proposed length of operation, and measures that will be implemented to protect existing fish species, water quality and beneficial uses. Documentation of any consultation with the appropriate fisheries resource agencies should be provided with the plan. Deputy Director approval is required prior to operation of the supplemental bypass except for emergencies as noted in Condition 2.
2. In the event of emergency use of the supplemental bypass the Deputy Director shall be notified as soon as reasonably feasible, and no later than 48-hours after initiating use of the supplemental bypass. Within 72-hours of emergency operation of the supplemental bypass PG&E shall provide an emergency operations plan to the Deputy Director for review and approval. The plan shall detail the rationale for emergency use of the supplemental bypass, proposed length of operation, and measures that will be implemented to protect existing fish species, water quality and beneficial uses. Documentation of consultation with the appropriate fisheries resource agencies should also be provided with the plan, including recommended measures to protect existing fish species (e.g., fish rescue operations). Documentation should also be provided regarding the steps that could have prevented the initial need for emergency use of the supplemental bypass and what changes PG&E will make to ensure the same event does not occur in the future.
3. In general, use of the supplemental bypass shall be limited to seven consecutive days. In special circumstances the supplemental bypass may be operated longer than seven consecutive days with approval from the Deputy Director.
4. PG&E is required to meet the minimum instream flow and ramping requirements outlined in the Spring Gap-Stanislaus Hydroelectric Project water quality certification throughout construction and operation of the Project, including operation of the permanent and supplemental bypass structures.
5. PG&E shall inspect the permanent and supplemental bypasses annually to ensure the bypass facilities are properly maintained and in good working order. The inspection shall include evaluation of the temporary instream release piping¹ for the supplemental bypass. PG&E shall prepare annual reports detailing the results of the inspection, including identification of any measures necessary to resolve deficiencies noted during the inspection. PG&E shall submit the first annual inspection report to the Deputy Director within two weeks of completion of the inspection. Subsequent annual inspection reports shall be submitted promptly when requested by the Deputy Director, or within two weeks of completion of an inspection if a deficiency is identified. PG&E shall fix any deficiencies within one month of

¹ The temporary instream release piping is designed to maintain minimum instream flow to the Middle Fork Stanislaus River when the supplemental bypass structure is in use. Per the design and associated submittals, the temporary instream release piping is a 48-inch corrugated galvanized steel pipe.

CONDITIONS FOR STANISLAUS POWER TUNNEL FISH SCREEN PROJECT;
 SPRING GAP-STANISLAUS HYDROELECTRIC PROJECT,
 FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2130

the inspection unless otherwise approved by the Deputy Director. If physical testing of the supplemental bypass structure is necessary, PG&E shall submit a plan as outlined in Condition 1.

6. PG&E must adhere to the best management practices (BMPs) and measures described in the Project plans to minimize water quality impacts.
7. Any and all incidents involving violations of BMPs or measures to minimize water quality impacts shall be reported to the Deputy Director as soon as reasonably possible, but no later than 72-hours following the incident.
8. Project activities shall not cause a violation of water quality standards.
9. Access to the Project site shall be granted to State Water Board or Regional Water Quality Control Board (Regional Board) staff within 24-hours of notice to PG&E.
10. Project activities shall not cause an increase in turbidity downstream of the Project area greater than those identified in the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan) except as provided for in this condition. Waters shall be free of changes in turbidity (due to Project activities) that cause nuisance or adversely affect beneficial uses. Except for in-water working periods discussed at the end of this condition, increases in turbidity shall not exceed background levels (natural turbidity measured in Nephelometric Turbidity Unit [NTUs] prior to the start of Project activities) by more than the thresholds identified below and as outlined in the Basin Plan:

Natural Turbidity	Maximum Increase
Less than 1 NTU	Total turbidity shall not exceed 2 NTU
1-5 NTUs	1 NTU
5-50 NTUs	Not to exceed 20% of natural turbidity
50-100 NTUs	10 NTUs
Greater than 100 NTUs	Not to exceed 10% of natural turbidity

Monitoring shall occur every hour during Project construction in the Middle Fork Stanislaus River. If monitoring shows that turbidity has exceeded the specified turbidity levels outlined in this condition, construction will cease and the violation will be reported immediately to the Deputy Director and the Central Valley Regional Board's Executive Officer (Executive Officer). Construction may not re-commence without the permission of the Deputy Director.

Standard turbidity limits may be eased during in-water working periods to allow a turbidity increase of up to 15 NTU over the background turbidity as measured in surface waters 300 feet downstream from the working area. For in-water working periods, turbidity shall not exceed 15 NTU over background turbidity for more than four consecutive hours or 24 hours total for the Project.

11. The pH as measured at the downstream monitoring location shall not be <6.5 or >8.5 as outlined in the Basin Plan. If monitoring shows that pH has exceeded the water quality objective, construction will cease and the violation will be reported immediately to the Deputy Director and the Executive Officer. Construction may not re-commence without the permission of the Deputy Director.

CONDITIONS FOR STANISLAUS POWER TUNNEL FISH SCREEN PROJECT;
SPRING GAP-STANISLAUS HYDROELECTRIC PROJECT,
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2130

12. The Deputy Director shall be notified of completion of Project construction within 10-days of the cessation of Project construction activities.
13. In addition to the conditions described above, PG&E shall comply with all conditions contained in the certification for the Spring Gap-Stanislaus Hydroelectric Project.