STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for

ENERGY RECOVERY AERATOR PROJECT
LICENSE AMENDMENT FOR FEDERAL ENERGY REGULATORY COMMISSION
PROJECT NO. 8377

Sources: Kern River at Lake Isabella tributary to Buena Vista Lake thence the Tulare Lake Basin

County: Kern County

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

Project Description

1. Isabella Partners (Applicant) operates the Isabella Hydroelectric Project powerhouse located on the downstream toe of the main dam at Lake Isabella, as shown on Attachment A. Applicant's existing hydroelectric turbines cannot effectively generate power when flows are below 100 cubic feet per second (cfs) and Applicant seeks to use bypass flows to optimize power production.

2. Applicant's Energy Recovery Aerator Project will consist of the construction of a new powerhouse about 100 feet east of the existing powerhouse. The new powerhouse will be a 25 by 35 by 18 feet reinforced concrete building that houses a third hydroelectric unit capable of generating 850 kilowatts of electrical power using a crossflow aerator/turbine unit (crossflow unit), as shown on Attachments B-1, B-2, and B-3.

3. Thirty feet of 30-inch diameter pipe will connect an existing buried small bypass conduit (SBC) with the crossflow unit. The rate of diversion of water for the project will range from 25 to 100 cfs.

4. Discharge water from the crossflow unit will be released to the bypass channel via a tailrace having a rectangular opening of 10 feet wide by 4 feet high. The bypass channel merges into the existing hydroelectric plant afterbay, which flows to the Kern River.

5. Construction is proposed during the summer months when there is limited precipitation. The project will not interfere with the flow releases from the dam to the Kern River. Downstream flow releases will continue during construction via the existing powerhouse and the larger plant bypass conduit when it is necessary to stop flows through the SBC for installation of the crossflow unit.

Project History

6. The United States Government is the owner of the Lake Isabella Dam and the U.S. Army Corp of Engineers (ACOE) has responsibility for maintenance of the dam and maintaining bypass flows from Lake Isabella. ACOE water releases from the dam address priority downstream entitlements as determined by the Kern River Watermaster.

7. The Isabella Hydroelectric Project was approved for power generation under Federal Energy Regulatory Commission (FERC) Project No. 8377 on May 31, 1988 and will expire on April 30, 2038. FERC approved the transfer of Project No. 8377 from Central Hydroelectric Corporation to Applicant in March 1991. Applicant applied to FERC for a Non-capacity Amendment of Project No. 8377 on August 12, 2008.

8. The Isabella Hydroelectric Project directly diverts its water within the dam outlet works (Attachment B-1). The diversion of 1,300 cfs of water was authorized under Water Right Permit 20047 (Application 28382), issued by the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) on April 16, 1987. Water Right Permit 21134 (Application 31185) was issued by the Division on August 18, 2002 for an additional 332 cfs for the maximum operating capacity of two Francis turbines. The total rate of diversion under Permits 20047 and 21134 is 1,632 cfs.

9. Applicant filed an application for a Water Quality Certification pursuant to section 401 of the Clean Water Act with the State Water Board on September 11, 2008.

Construction Activities

10. There is no vegetation at the project site that will require removal.

11. Construction equipment will consist of an excavator, front end loader, vibratory compactors, dump trucks, gradall, and concrete trucks. Gravel, riprap and concrete will be provided from commercial vendors.

12. Construction activities will consist of an excavation for the SBC and the new powerhouse foundation, and the trenching for the pipeline. Excavated material will be stored at the fenced substation switchyard (staging area), which is located more than 100 feet from the stream channel. Excavated material will be reused as backfill.

13. The SBC will be encased in concrete and will require jack hammering to provide access to the pipeline. Construction of the reinforced concrete building requires that concrete be poured onsite. Grout will be used to cap the backfill material.

14. Clean riprap will be placed over disturbed areas along the western bank of the bypass channel.

Construction Best Management Practices (BMPs)

15. Applicant will have drip pans, spill kits, absorbents and containment materials available in the staging area for the storage of fuel, petroleum products, chemicals, and heavy equipment.

16. Applicant has prepared a spill prevention and control plan for the existing operation that includes provisions for handling petroleum products and hazardous material.

17. Applicant will employ filter barriers as sediment control measures within the perimeter of the construction site. Applicant will stabilize any disturbed areas from erosion by seeding, mulching, and placement of an erosion blanket or riprap after completion of the project.

Regulatory Authority

18. The Federal Clean Water Act (33 U.S.C. §§ 1251-1387) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) Section 101 of the Clean Water Act (33 U.S.C. § 1251) requires federal agencies to "co-operate with the State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources."

19. Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires every applicant for a federal license or permit which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will be in compliance with specified provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Section 401 of the Clean Water Act directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the Clean Water Act and with any other appropriate requirement of state law. Section 401 further provides that certification conditions shall become conditions of any federal license or permit for the project. The State Water Board is the state agency responsible for such certification in California. (Wat. Code § 13160.) The State Water Board has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

20. The California Regional Water Quality Control Boards have adopted, and the State Water Board has approved, water quality control plans (basin plans) for each watershed basin in the State. The basin plans designate the beneficial uses of waters within each watershed basin and water quality objectives designed to protect those uses. Section 303 of the Clean Water Act requires the states to develop and adopt water quality standards. (33 U.S.C. § 1313.) The beneficial uses together with the water quality objectives that are contained in the basin plans constitute State water quality standards under section 303.

21. The Central Valley Regional Water Quality Control Board (Central Valley Region) has adopted, and the State Water Board and the U.S. Environmental Protection Agency have approved, the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan). The Basin Plan designates the beneficial uses of waters to be protected along with the water quality objectives necessary to protect those uses.

22. The Basin Plan identifies the beneficial uses for the Kern River from Lake Isabella to the Kern River No. 1 powerhouse operated by Southern California Edison Company as hydropower generation; contact and non-contact recreation; warm and cold freshwater habitat; wildlife habitat; and rare, threatened or endangered species habitat. The beneficial uses downstream of the Kern River No. 1 Powerhouse are identified in the Basin Plan as municipal and agricultural supply; industrial service and process supply; hydropower generation; contact and non-contact recreation; warm freshwater habitat; wildlife habitat; rare, threatened or endangered species habitat; and groundwater recharge. Protection of the instream beneficial uses identified in the Basin Plan requires maintenance of adequate instream flows as well as effluent limitations and other limitations for discharges of pollutants from point and non-point sources to the Kern River and its tributaries.

23. The State Water Board has reviewed and considered the plans and project description provided by Applicant for the project. Further, the State Water Board has considered the Central Valley Region Tulare Lake Basin Plan, the existing water quality conditions and project-related controllable factors.

24. After reviewing and considering all of the pertinent information available for this project, the State Water Board has determined that there will be no significant effect on the environment from the project, and that it meets the criteria for a Class 1, Class 3, Class 4, and Class 28 categorical exemption under CEQA for the new construction of a small structure with minor alteration to the land, and as a small hydroelectric project at an existing hydroelectric generating facility. (Pub. Resources Code, § 21083; Cal. Code Regs., tit. 14, § 15301, § 15303, § 15304 and § 15328.) The State Water Board has prepared a notice for the Class 1, Class 3, Class 4, and Class 28 categorical exemptions and will file a Notice of Exemption within five days from the issuance of this certification.

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE ENERGY RECOVERY AERATOR PROJECT, LICENSE AMENDMENT ON FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 8377 will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of State law, if Applicant complies with the following terms and conditions during the project activities certified herein.

Construction Conditions

1. All BMPs described in the application for water quality certification and supplemental information are hereby incorporated by reference and are conditions of approval of this certification. Notwithstanding any more specific conditions in this certification, Applicant shall comply with all measures described in the application for water quality certification and its supplements.

2. All equipment using gas, oil, hydraulic fluid or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Equipment refueling shall only take place in a designated and contained area. Stationary equipment (motors, pumps, generator, etc.) located adjacent to the waterway shall be positioned over drip pans. Spill and containment equipment (oil spill booms, sorbent pads, etc.) shall be maintained onsite at all site locations where such equipment is used.

3. Containment equipment consisting of plastic sheets or equivalent materials with a perimeter berm shall be used for storage of materials and chemicals, if not appropriately housed within existing facility structures.

4. Construction material, debris, spoils, soil, silt, sand, bark, slash, sawdust, rubbish, steel, or other organic or earthen material from any construction activity shall be prevented from entering surface waters.

5. Excavated sediment, debris, trash, and rocks shall be stored in the staging area, which shall be surrounded with fiber rolls and/or silt fencing. Erosion control blankets must be available on site for precipitation events.

6. BMPs for erosion, sediment and turbidity control shall be implemented and be in place at commencement of, during and after any ground clearing activities or any other project activities that could result in erosion or sediment discharges to surface waters.

7. Sediment control measures (silt fencing, fiber rolls, etc.) shall be installed and maintained along the western bank of the bypass channel during construction activities.

8. All imported riprap, rocks, and gravels used for construction shall be pre-washed.

9. Fresh or unset cement, concrete, gunite, or grout is prohibited from contacting or entering surface waters.

10. Cleaning of concrete trucks or grout mixers shall be performed at a designated concrete washout area within the staging site. Washout water shall be held in temporary pit or bermed area of sufficient volume to completely contain all liquid and waste concrete or grout generated during washout procedures. Hardened concrete or grout shall be disposed at an authorized landfill.

11. All construction debris and trash shall be contained and regularly removed from the project site to the staging area during construction activities.

12. Upon completion, all project-generated debris, building materials, excess material, waste, and trash shall be removed from all the project sites for disposal at an authorized landfill or other disposal site.

Notification Conditions

13. A copy of this certification shall be provided to the contractor and all subcontractors conducting the work, and copies shall remain in their possession at the project site. Applicant shall be responsible for work conducted by its contractor or subcontractors.

14. The State Water Board Deputy Director for Water Rights (Deputy Director for Water Rights) and the Assistant Executive Officer for the Central Valley Region, Fresno Office shall be notified one week prior to the commencement of ground disturbing activities, and upon request, a construction schedule shall be provided to agency staff in order for staff to be present onsite, to answer any public inquiries during construction, and to document compliance with this certification.

15. If at any time an unauthorized discharge to surface waters occurs, or any water quality problem arises, the associated project activities shall cease immediately until adequate BMPs are implemented. The Deputy Director for Water Rights and the Assistant Executive Officer for the Central Valley Region, Fresno Office shall be notified within 24 hours after the unauthorized discharge or water quality problem arises.

16. Applicant must submit any change to the project, including project operations that would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the Executive Director of the State Water Board for review and written approval. If the State Water Board is not notified of a significant change to the project, it will be considered a violation of this certification.

General Conditions

17. Notwithstanding any more specific conditions in this certification, the project shall be operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter Cologne Water Quality Control Act or section 303 of the Clean Water Act. Applicant shall take all reasonable measures to protect the beneficial uses of water of the Kern River.

18. This certification is contingent on compliance with all applicable requirements of the Water Quality Control Plan for the Tulare Lake Basin, except as may be modified by the specific conditions of the certification.

19. This certification does not authorize any act which results in the "take" of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (California Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C., §§ 1531 to 1544). If a "take" will result from any act authorized under this certification or water rights held by the Applicant, Applicant shall obtain authorization for the take prior to any construction or operation of the project. Applicant shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this certification.

20. This certification is not intended and shall not be construed to apply to issuance of any FERC license or FERC license amendment other than the FERC license amendment specifically identified in the Applicant's application for certification.

21. The authorization to operate the Project pursuant to this certification is conditioned upon payment of all applicable fees for review and processing of the application for water quality certification and administering the State's water quality certification program, including but not limited to: timely payment of any annual fees or similar charges that may be imposed by future statutes or regulations for the State's reasonable costs of a program to monitor and oversee compliance with conditions of water quality certification.

22. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

23. In response to any violation of the conditions of this certification, the State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

24. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under any State or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.

25. This certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and California Code of Regulations, title 23, division 3, chapter 28, article 6 (commencing with §3867).

26. The State Water Board may add to or modify the conditions of this certification, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

27. The State Water Board reserves authority to modify or revoke this certification if monitoring results indicate that the project would violate water quality objectives or impair the beneficial uses of the Kern River.

28. The State Water Board may add to or modify the conditions of this certification as appropriate to coordinate the operations of this project and other water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water.

29. The State Water Board shall provide notice and an opportunity for hearing in exercising its authority under conditions 26, 27, and 28 above.

Dorothy Rice
Executive Director

8-25-09
Date

Attachments

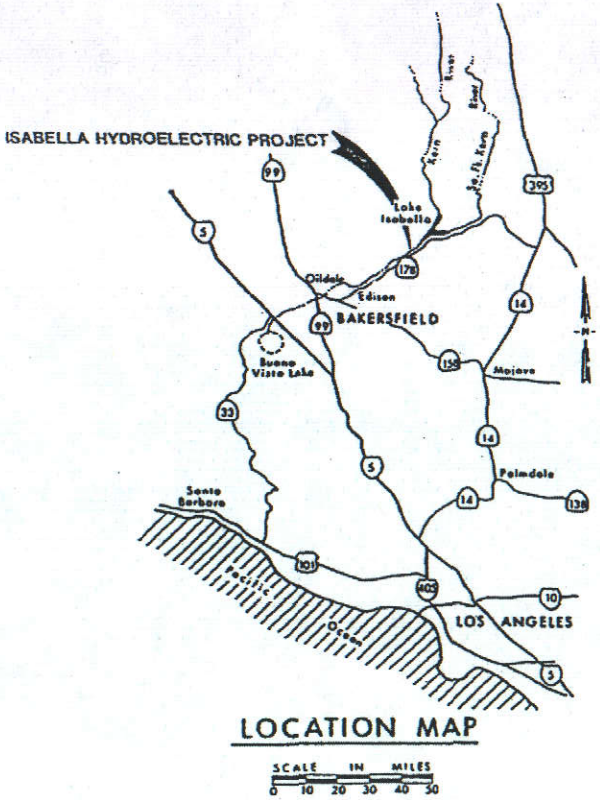


Exhibit G-1 Location Map

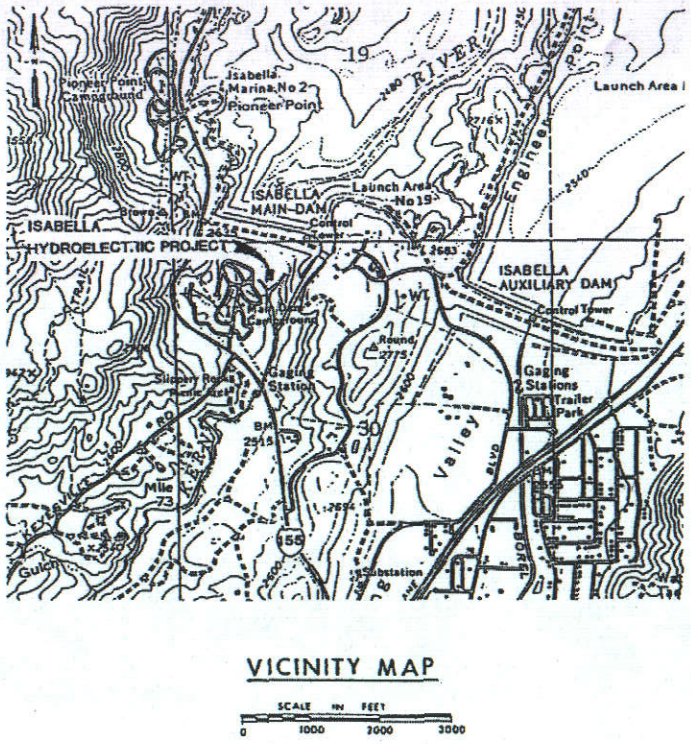
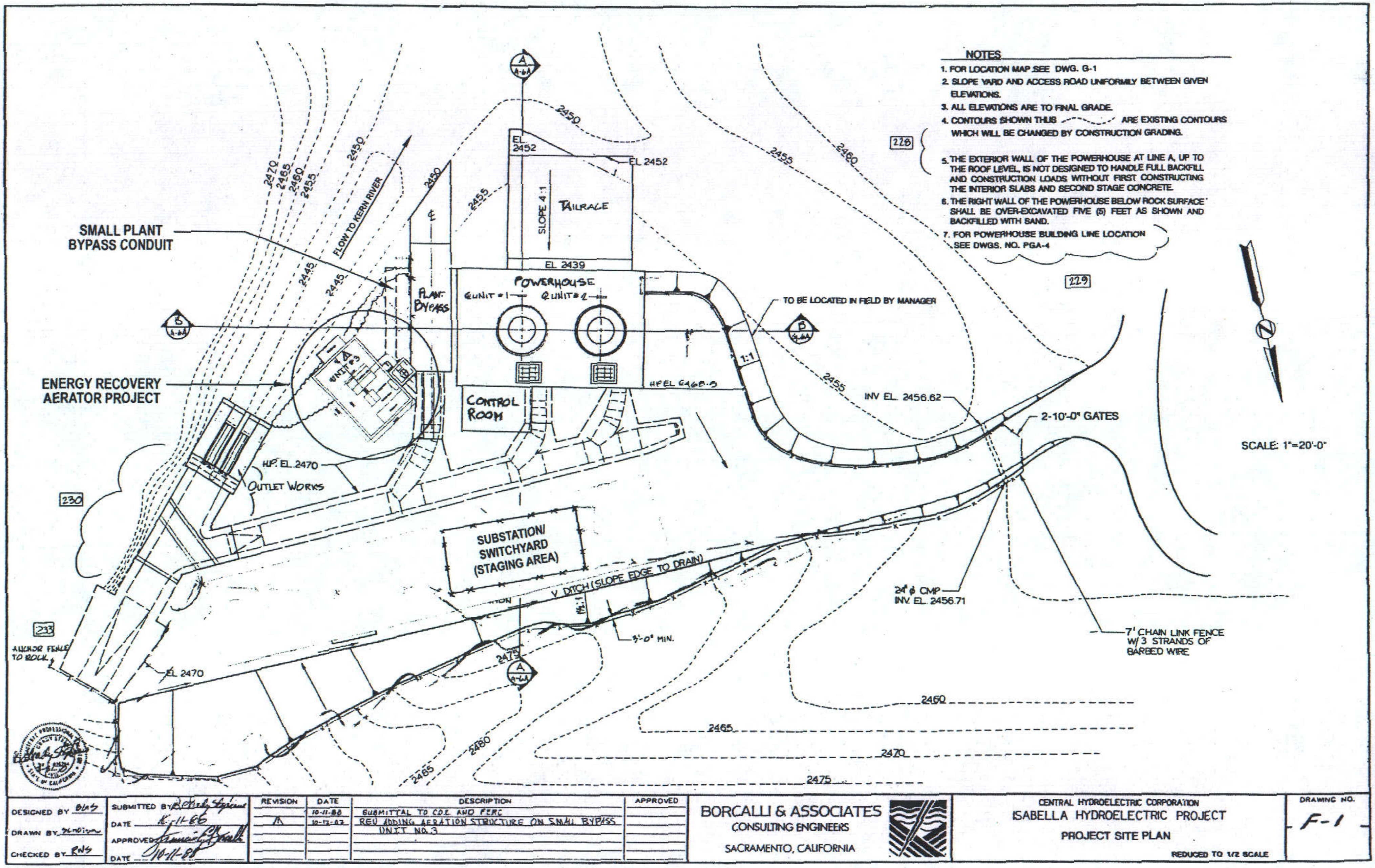


Exhibit G-2 Vicinity Map

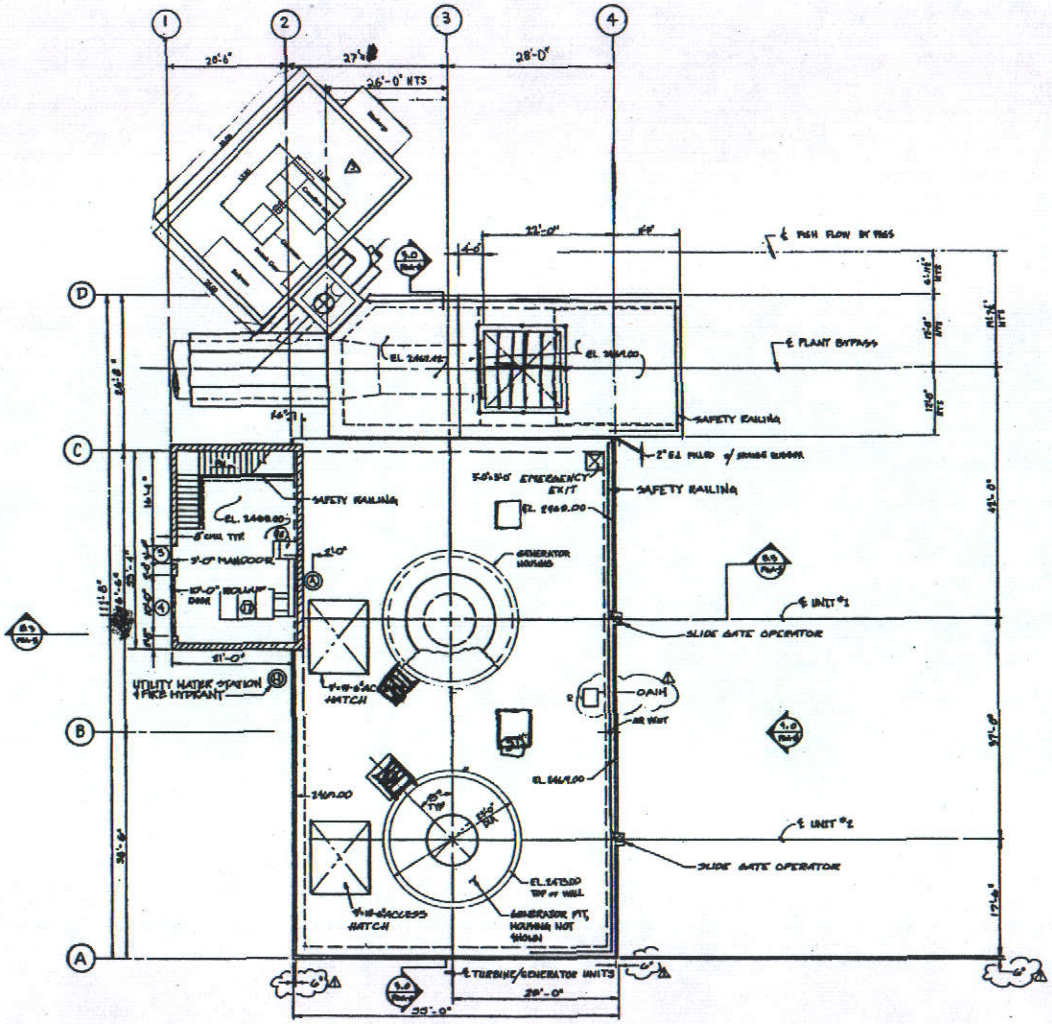
ATTACHMENT A

Source: Application for a section 401 Water Quality Certification received on April 9, 2007, Exhibit G-1 - Location Map, page 19 and Exhibit G-2 - Vicinity Map, page 20 in the application.



Source: Application for a section 401 Water Quality Certification refiled on September 11, 2008, Drawing F-1
Isabella Hydroelectric Project, Project Site Plan, prepared by Borcalli & Associates, revised October 17, 2007

ATTACHMENT B-1



NOTES

1. PREFABRICATED METAL STAIRS & PLATFORMS

   STAIR DATA
   8 RISERS @ 7 5/16"
   8 TREADS @ 10 1/2"
   36" TREAD WIDTH

2. WALKWAY WIDTH SHALL BE 42"

3. SEE DWG. MM-6 FOR DOOR SCHEDULE

4. SEE DWGS. NO. MM-4 & MM-5 FOR MISC. METAL DETAILS

SCALE: 3/32" = 1'-0"

DESIGNED BY BSS	SUBMITTED BY [signature]	REVISION	DATE	DESCRIPTION	APPROVED
DRAWN BY GAR	DATE 10-11-88	1	10-11-88	SUBMITTAL TO COE AND FERC	FFB
CHECKED BY GAR	APPROVED [signature]	2	2-6-90	NOTE 6" OFFSET, OAIH	
	DATE 10/14/88	3	10-12-07	ENLARGE BYPASS OPENING; REV ADDING AERATION STRUCTURE ON SMALL BYPASS UNIT NO. 3	

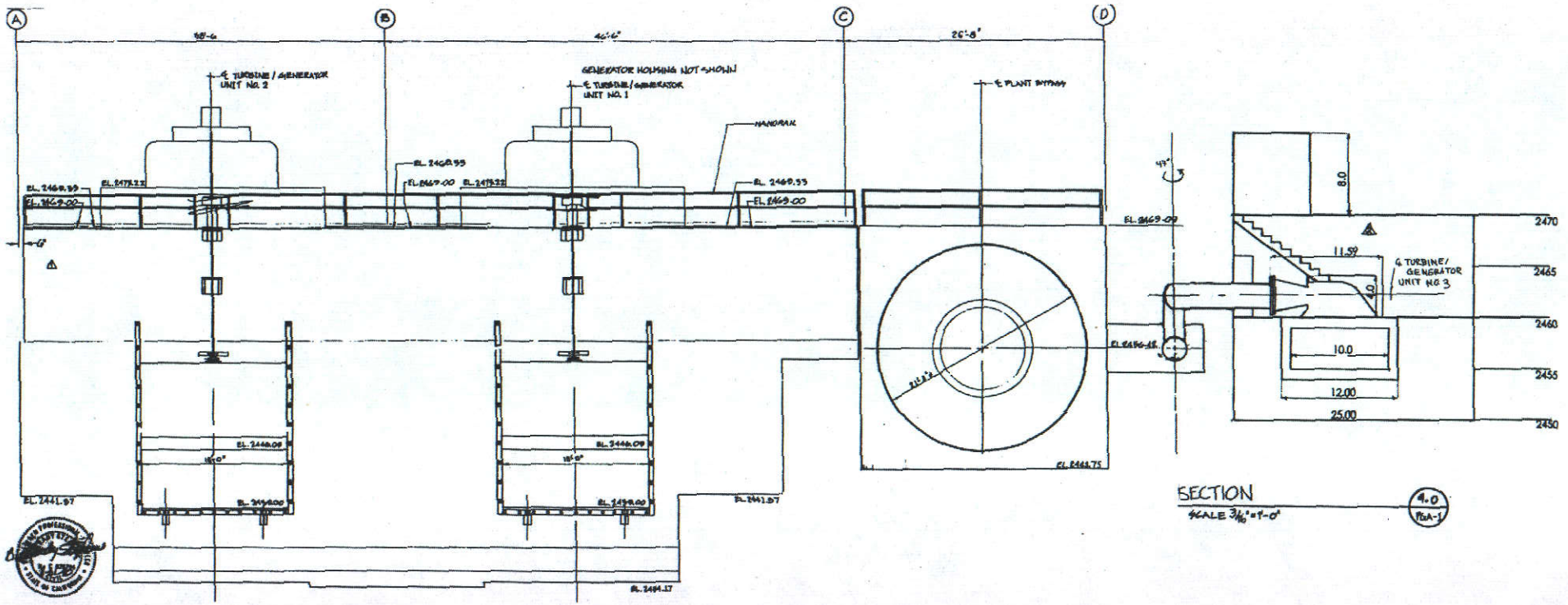
BORCALLI & ASSOCIATES
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

CENTRAL HYDROELECTRIC CORPORATION
ISABELLA HYDROELECTRIC PROJECT
POWERHOUSE GENERAL ARRANGEMENT
FLOOR EL. 2469.00 REDUCED TO 1/2 SCALE

DRAWING NO. F-9

Source: Application for a section 401 Water Quality Certification refiled on September 11, 2008, Drawing F-1, Isabella Hydroelectric Project, Project Site Plan, prepared by Borcalli & Associates, revised October 17, 2007

ATTACHMENT B-2



DESIGNED BY BAS	SUBMITTED BY	REVISION	DATE	DESCRIPTION	APPROVED	BORCALLI & ASSOCIATES	CENTRAL HYDROELECTRIC CORPORATION
DRAWN BY SCHOTAL	DATE 10-11-08		10-11-88	SUBMITTAL TO COE AND FERC		CONSULTING ENGINEERS	ISABELLA HYDROELECTRIC PROJECT
CHECKED BY	APPROVED	1	2-6-90	REV ALONG LINE (A)	FEB	SACRAMENTO, CALIFORNIA	POWERHOUSE GENERAL ARRANGEMENT
	DATE 10-11-88	2	10-12-93	REV ADDING AERATION STRUCTURE ON SMALL BYPASS UNIT NO.3			SECTION 4.0
							REDUCED TO 1/2 SCALE

DRAWING NO. F-11

Source: Application for a section 401 Water Quality Certification refiled on September 11, 2008, Drawing F-1, Isabella Hydroelectric Project, Project Site Plan, prepared by Borcalli & Associates, revised October 17, 2007

ATTACHMENT B-3