

## DOCKETED

<b>Docket Number:</b>	79-AFC-02C
<b>Project Title:</b>	NCPA/Shell Geothermal Project #2 (78-NOI-5) - Compliance
<b>TN #:</b>	206721
<b>Document Title:</b>	Notice of Determination for Staff Approved Project Modification for NCPA Plant 1 (formerly NCPA 2) and Plant 2 (formerly NCPA 3)
<b>Description:</b>	N/A
<b>Filer:</b>	Camile Remy-Obad
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	11/20/2015 4:03:48 PM
<b>Docketed Date:</b>	11/20/2015

**CALIFORNIA ENERGY COMMISSION**

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**NOTICE OF DETERMINATION  
PETITION TO AMEND  
Northern California Power Authority  
Plant 1 (79-AFC-2C) and Plant 2 (81-AFC-3C)**

On September 15, 2015, California Energy Commission staff (staff) docketed the Northern California Power Authority's (NCPA's) petition requesting to make minor improvements to Plant 1 (formerly NCPA 2) and Plant 2 (formerly NCPA 3). The Energy Commission certified Plant 1 and Plant 2 on March 12, 1980 and December 29, 1982, respectively. Each geothermal power facility is certified with a 110-megawatt (MW) capacity. Plant 1 began commercial operation on February 1, 1982, and Plant 2 began commercial operation on October 1, 1985. The facilities are located near the community of Anderson Springs, in Sonoma County, California.

**DESCRIPTION OF PROPOSED MODIFICATIONS**

NPCA is proposing to replace an existing 6,000-gallon hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) tank at Plant 1, and an existing 13,000-gallon H<sub>2</sub>O<sub>2</sub> tank at Plant 2, with similarly sized carbon steel tanks. The new tanks will be located within the existing secondary containment basins and will allow for the storage and application of liquid caustic soda instead of the dry caustic soda application process presently used for hydrogen sulfide (H<sub>2</sub>S) abatement. The new tank dimensions are similar to the existing tanks. Both new tanks will be nine feet in diameter, the Plant 1 tank will be 16 feet long and the Plant 2 tank will be 29 feet long. The new tanks will be connected to their abatement systems with above ground piping. No excavation is required for installation, and tank replacement construction is expected to last approximately four weeks, to be completed by the end of December 2015.

The Energy Commission's webpages for these facilities are, [http://www.energy.ca.gov/sitingcases/pre1999\\_page/index.php?xkm=ajdkha2385duhka\\_sd212dsasjd5598fhajkhs](http://www.energy.ca.gov/sitingcases/pre1999_page/index.php?xkm=ajdkha2385duhka_sd212dsasjd5598fhajkhs) and [http://www.energy.ca.gov/sitingcases/pre1999\\_page/index.php?xkm=ajdkha2385duhka\\_sd199dsasjd5598fhajkhs](http://www.energy.ca.gov/sitingcases/pre1999_page/index.php?xkm=ajdkha2385duhka_sd199dsasjd5598fhajkhs) and each has a link to the amendment petition on the right side of the webpage in the box labeled "Compliance Proceeding." Click on the "Documents for this Proceeding (Docket Log)" option.

**ENERGY COMMISSION STAFF REVIEW AND DETERMINATION**

Pursuant to section 1769(a)(2) of Title 20, California Code of Regulations, Commission approval of a petition to amend is not required "(w)here staff determines that there is no possibility that the modifications may have a significant effect on the environment, and if the modifications will not result in a change or deletion of a condition adopted by the commission in the final decision or make changes that would cause the project not to comply with any applicable laws, ordinances, regulations, or standards [LORS]...."

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Staff has determined for this petition that the proposed modifications meet the criteria for approval at the staff level because:

- The modifications will not have any significant effect on the environment;
- Existing conditions of certification are sufficient to cover the proposed modifications without changes to, or deletions of, any conditions of certification; and
- The projects as modified will maintain full compliance with applicable LORS.

Staff's conclusions for each technical or environmental area are summarized in the following table.

**SUMMARY OF STAFF RESPONSES TO PETITION**

TECHNICAL/ENVIRONMENTAL AREAS REVIEWED	STAFF RESPONSE			Revised Conditions of Certification Recommended
	Technical Area Not Affected	No Significant Environmental Impact or LORS Inconsistency*	Process As Amendment	
Air Quality		X	N/A	N/A
Biological Resources	X		N/A	N/A
Cultural Resources	X		N/A	N/A
Facility Design		X	N/A	N/A
Geological and Paleontological Resources	X		N/A	N/A
Hazardous Materials Management		X	N/A	N/A
Land Use		X	N/A	N/A
Noise & Vibration		X	N/A	N/A
Public Health		X	N/A	N/A
Socioeconomics		X	N/A	N/A
Soil & Water Resources	X		N/A	N/A
Traffic & Transportation		X	N/A	N/A
Transmission Line Safety & Nuisance	X		N/A	N/A
Transmission System Engineering	X		N/A	N/A
Visual Resources		X	N/A	N/A
Waste Management		X	N/A	N/A
Worker Safety & Fire Protection		X	N/A	N/A

\*No Commission approval is necessary where staff determines there is no possibility that the proposed modifications would have a significant effect on the environment, and the modifications would not result in a change in or deletion of a condition adopted by the Commission in the Final Decision, or make changes that would cause project noncompliance with any applicable laws, ordinances, regulations, or standards (Cal. Code Regs., tit. 20, § 1769 (a)(2)).

Energy Commission technical staff reviewed the petition for potential environmental effects and consistency with applicable LORS at each facility. Staff has determined that the technical or environmental areas of Biological Resources, Cultural Resources,

Geological and Paleontological Resources, Soil and Water Resources, Transmission Line Safety & Nuisance and Transmission System Engineering are not affected by the proposed changes.

For the technical areas of Air Quality, Facility Design, Hazardous Materials Management, Land Use, Noise and Vibration, Public Health, Socioeconomics, Traffic and Transportation, Visual Resources, Waste Management and Worker Safety & Fire Protection, staff has determined that NCPA Plant 1 and Plant 2 would continue to comply with applicable LORS and no changes to any conditions of certification are necessary to ensure that no significant impacts occur. Therefore staff is proposing to process the requests as Staff Approved Project Modifications. Staff notes the following for these technical areas:

- **Air Quality.** The Stretford H<sub>2</sub>S systems currently use dry caustic soda for pH adjustment, and NCPA would prefer to use the liquid caustic because it can be automatically metered for easier pH control. The proposed caustic solution is sodium hydroxide (NaOH) which is not considered a volatile organic compound (VOC) or hazardous air pollutant (HAP). In addition, there are no Air Quality Conditions of Certification that specifically require the use of H<sub>2</sub>O<sub>2</sub>. The Northern Sonoma County Air Pollution Control District (NSCAPCD) wrote a letter of approval for removing the H<sub>2</sub>O<sub>2</sub> tanks. The NSCAPCD confirmed there are no local or federal air permit requirements for the use of H<sub>2</sub>O<sub>2</sub> for H<sub>2</sub>S abatement and recommends tank removal. No changes to either NCPA facility's AQ COCs would be required for the tank replacements, and staff have not identified any significant air quality impacts from the proposal. Continued compliance with the established AQ COCs is expected.
- **Facility Design.** The replacements serve the dual purpose of 1) eliminating tanks currently not in use and 2) utilizing the replacement tanks for 25 percent caustic solution storage thus eliminating the manual handling of 50 pound bags of soda ash. Although the replacement tanks would be similar in volume and dimension of the original tanks and containment structures were seismically designed to meet the extant building standards when the NCPA facilities were originally constructed. A Chief Building Official will be retained to review the modification drawings and calculations, and to inspect the final installations to assure compliance with current building codes (2013 California Building Code Standards)
- **Hazardous Materials Management.** The original aluminum tanks would be replaced by new carbon steel tanks of similar dimension and volume. The new tanks would comply with the API 620: Design and Construction of Large Welded Low Pressure Storage Tanks design standard. The existing secondary containment would contain any spills of the sodium hydroxide to on site. The sodium hydroxide is also less of a fire danger since unlike hydrogen peroxide; it is not classified as an oxidizer. Department of Transportation regulations regarding the transport of hazardous materials would continue to apply to sodium hydroxide. The existing Hazardous Materials Business Plan would also be updated to reflect the change from hydrogen peroxide to sodium hydroxide. By adhering to the above standards

and regulatory framework, the petitioner's proposed use of sodium hydroxide would comply with the applicable hazardous materials management LORS.

- **Land Use.** The removal of the two existing tanks and installation of two replacement tanks will be within the licensed project boundaries. No lay down area would be necessary as the old tanks will have been removed allowing for the new tanks to be placed directly upon delivery. The proposed modifications would have no significant land use impacts and there are no Land Use COCs in either the March 1980 or December 1982 Energy Commission Decisions for NCPA Plant 1 or Plant 2 respectively.
- **Noise & Vibration.** Sonoma County Noise Ordinance requires construction to occur during the daytime hours. Therefore, construction work associated with installation of the storage tanks would occur during those hours. Also, construction would be temporary. Noise Conditions of Certification 16-1 and 16-2 include a noise survey requirement for construction and a construction complaint process. Thus, any noise generated during this activity would result in a less-than-significant impact with implementation of the existing **Noise & Vibration** conditions of certification adopted in the Energy Commission Decisions. Operational noise impacts would not be affected by this petition.
- **Public Health.** The Public Health impacts (i.e. diesel particulate matter emissions) during construction phase for the replacement tanks would be less than significant.
- **Socioeconomics.** The removal of the two existing tanks and installation of two replacement tanks will be completed by a qualified contractor under a public works contract. Although the amount of labor and number of construction workers will not be known until the contract is awarded, from a socioeconomics standpoint the proposed amendment would have insignificant workforce-related impacts on housing and community services. The proposed modifications would not affect NCPA Plant 2's **Socioeconomic Condition of Certification (COC) 3-5** which requires compliance with the terms of the final school impact mitigation agreement, and there are no Socioeconomic COCs for NCPA Plant 1.
- **Traffic and Transportation.** The proposed project modifications will occur within the originally proposed project footprints and will not result in any additional road disturbances or prolonged crossings of access roads. The modifications would result in approximately two construction truck trips. The addition of two construction truck trips and the small construction workforce for four weeks is minimal and would not impact the traffic level of service on nearby roadways. Traffic and Transportation system impacts would be less than significant.
- **Visual Resources.** Both NCPA Plant 1 and 2 are located in remote, wooded areas of northern Sonoma County. The facility sites are not visible from offsite locations because existing vegetation obscures the view. Therefore, the replacement tanks would not have the potential to substantially alter any views and the proposed modifications would not have any significant adverse visual impacts.

- **Waste Management.** Staff concludes that the proposed project modifications would not result in a change or deletion of a condition of certification adopted by the Energy Commission or make changes that would cause the NCPA projects not to comply with any applicable waste management LORS.
- **Worker Safety & Fire Protection.** The proposed replacement of the existing hydrogen peroxide tanks with new sodium hydroxide tanks would continue to comply with all applicable LORS and have no significant impact on the environment. Specifically, the construction activities required for the installation would have to comply with the following Cal/OSHA requirements:
  - Demolition and Construction Injury and Illness Preventions Program (Cal. Code Regs., tit. 8, §1509)
  - Demolition and Construction Fire Prevention Plan (Cal. Code Regs., tit. 8, §1920, §3221)
  - Personal Protective Equipment Program (Cal. Code Regs., tit. 8, §§1514-1522)

By adhering to the above programs and other Cal/OSHA regulations, the petitioner would comply with all worker safety and fire safety requirements.

The data presented in the **Environmental Justice Population Figure** shows the minority population in a six-mile radius of the NCPA Plant 1 and Plant 2 sites is less than 50 percent and therefore does not constitute an environmental justice population, as defined by the Council on Environmental Quality's *Environmental Justice: Guidance Under the National Environmental Policy Act*. The data presented in the **Environmental Justice Population Table** shows that approximately 12.0 percent of the population around the project sites lives below the federal poverty level, which is similar to the 11.9 percent population in Sonoma County, and less than the statewide poverty rate of 15.9 percent. Based on comparisons with other census geographies, staff concludes that the population below the poverty level within a six-mile radius of NCPA Plant 1 and Plant 2 would not constitute an environmental justice population. Because the population within a six-mile radius of the sites does not constitute an environmental justice population based on ethnicity or economic status, no further scrutiny for purposes of an environmental justice analysis is required.

**Environmental Justice Population Table-  
Poverty Data within the Project Area**

	Total Population <sup>1</sup>			Population Below Poverty Level			Percent Below Poverty Level		
	Estimate	MOE <sup>2</sup>	CV <sup>3</sup> (%)	Estimate	MOE	CV (%)	Estimate	MOE	CV (%)
Project Area Census County Divisions (CCDs) (Total)									
	24,824	±1,159	2.84	2,987	±766	15.59	12.03	±3.14	15.87
Cloverdate-Geyserville CCD, Sonoma County									
	13,883	±682	2.99	1,203	±473	23.90	8.70	±3.3	23.06
Cobb CCD, Lake County									
	3,882	±563	8.82	803	±411	31.11	20.70	±9.4	27.61
Middletown CCD, Lake County									
	7,059	±749	6.45	981	±441	27.33	13.90	±5.8	25.37
REFERENCE GEOGRAPHIES									
Lake County									
	63,375	±199	0.19	15,860	±1,529	5.86	25.00	±2.4	5.84
Sonoma County									
	480,328	±735	0.09	57,048	±2,772	2.95	11.90	±0.6	3.07
California									
	36,913,404	±3,433	0.01	5,855,417	±40,552	0.42	15.9	±0.1	0.38

**Notes:** <sup>1</sup> Population for whom poverty is determined. <sup>2</sup> Margin of Error. <sup>3</sup> Coefficient of Variation (method of evaluating the reliability of the estimates). US Census staff recommends caution when interpreting estimates with more than 15 percent CV. The project area data has a CV slightly greater than 15 percent. Staff considers this to be reasonable because to the next census geography would be the County. At such a large scale, the data would not be an accurate representation of poverty levels around the project site. **Source:** U.S. Census Bureau 2009-2013 5-Year American Community Survey Estimates.

This Notice of Determination has been mailed to the Energy Commission’s mail list of interested parties and property owners adjacent to the NCPA sites. It has also been e-mailed to the shared listservs for the facilities. The shared listservs are an automated Energy Commission e-mail system by which information about these facilities is e-mailed to parties who have subscribed. To subscribe, go to the Commission’s webpage for each facility, cited above, scroll down the right side of the project’s webpage to the box labeled “Subscribe,” and provide the requested contact information.

Any person may file an objection to staff’s determination within 14 days of the date of this Notice on the grounds that the project modification does not meet the criteria set forth in section 1769(a)(2). Absent any relevant objections, the amendment petition will be approved 14 days after this Notice is docketed. To use the Energy Commission’s electronic commenting feature to object to staff’s determination, go to the Energy Commission’s webpages for each facility, cited above, click on the “Submit e-Comment” link, and follow the instructions in the on-line form. Be sure to include the facility name in your comments. Once submitted, the Energy Commission Dockets Unit reviews and approves your comments, and you will receive an e-mail with a link to them.

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Written comments may also be mailed or hand-delivered to:

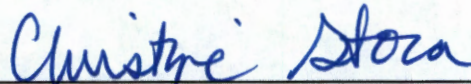
California Energy Commission  
Dockets Unit, MS-4  
Docket Nos. Docket Numbers 79-AFC-2C & 81-AFC-3C  
1516 Ninth Street  
Sacramento, CA 95814-5512

All comments and materials filed with and approved by the Dockets Unit will be added to the facility Docket Log and be publicly accessible on the Energy Commission's webpage for the facility.

If you have questions about this Notice, please contact Camille Remy Obad, Compliance Project Manager, at (916) 654-3940, or by fax to (916) 654-3882, or via e-mail at [Camille.Remy-Obad@energy.ca.gov](mailto:Camille.Remy-Obad@energy.ca.gov).

For information on participating in the Energy Commission's review of the petition, please call the Public Adviser at (800) 822-6228 (toll-free in California) or send your e-mail to [publicadviser@energy.ca.gov](mailto:publicadviser@energy.ca.gov). News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail to [mediaoffice@energy.ca.gov](mailto:mediaoffice@energy.ca.gov).

Date: November 20, 2015



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