DOCKETED

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CALIFORNIA ENERGY COMMISSION
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SACRAMENTO, CA 95814-5512
www.energy.ca.gov

DATE: April 8, 2015

TO: Interested Parties

FROM: Dale Rundquist, Compliance Project Manager

SUBJECT: Argus Cogeneration Expansion Project (86-AFC-1C)
Staff Analysis of Petition to Decommission

On November 25, 2014, the ACE Cogeneration Company, LP (ACC), the owner of the Argus Cogeneration Expansion (ACE) Project, filed a petition with the California Energy Commission (Energy Commission) requesting to decommission the ACE project. Staff prepared an analysis of this proposed decommissioning that can be reviewed on the Energy Commission website for this facility (see below).

The coal-fired circulating fluidized bed (CFB) 100-megawatt cogeneration project was certified by the Energy Commission as a demonstration project on January 6, 1988. The project demonstrated the CFB combustion system that produced electricity and steam from solid fuels under California's stringent air emission standards. The Energy Commission approved the conclusion of demonstration activities on June 8, 1994. The ACE project provided electricity to Southern California Edison (SCE) for sale, and steam to the Searles Valley Mineral (SVM) facility for use in its industrial processes. The plant consists of a single, coal-fired CFB boiler and a single steam turbine generator (STG). It was also equipped for supplementary natural gas firing for startup. The project is located on the northwest side of Searles Lake in Trona, San Bernardino County, California.

ACC's existing Power Purchase Agreement with SCE expires in November 2015. Under California's greenhouse gas emissions requirements, ACE would no longer be economically viable using coal as a fuel after the power purchase agreement expires. To reduce greenhouse gas emissions within the SCE service territory, ACC signed an agreement with SCE to terminate operation of the ACE project in December 2014. The plant ceased operations as of October 2, 2014, has been placed in an outage condition to secure the facility and minimize environmental hazards (ACE 2014a).

Section 20 of the Original Commission Decision for the ACE project requires ACC to prepare and submit a Decommissioning Plan to the Energy Commission for review and approval. California Energy Commission staff (staff) reviewed the petition and assessed the impacts of this proposal on environmental quality and on public health and safety. In the Staff Analysis, staff proposes new Air Quality Conditions of Certification **AQ-SC4, AQ-SC5,** and **AQ-SC6,** revised Cultural Resources Conditions of Certification **CUL-2** and **CUL-3**, new Hazardous Materials Conditions of Certification **HAZ-1, HAZ-2, HAZ-3,** and **HAZ-4**, new Hazardous Waste Condition of Certification **WASTE-11,** and new

Worker Safety Conditions of Certification **WORKER SAFETY-1**, **WORKER SAFETY-2**, and **WORKER SAFETY-3**. It is staff's opinion that, with the implementation of these new and revised conditions, in addition to the existing conditions, the ACE project would comply with all applicable laws, ordinances, regulations, and standards (LORS), and the proposed conditions of certification would not result in any significant, adverse, direct, indirect, or cumulative impacts to the environment (20 Cal. Code of Regs., § 1769). Energy Commission staff intends to recommend approval of the petition at the May 13, 2015 Business Meeting of the Energy Commission.

The Energy Commission's webpage for this facility, http://www.energy.ca.gov/sitingcases/argus/, has a link to the petition and the Staff Analysis on the right side of the webpage in the box labeled "Compliance Proceeding." Click on the "Documents for this Proceeding (Docket Log)" option. After the Business Meeting, the Energy Commission's Order regarding this petition will also be available from the same webpage.

This notice has been mailed to the Commission's list of interested parties and property owners adjacent to the facility site. It has also been e-mailed to the facility listserv. The listserv is an automated Energy Commission e-mail system by which information about this facility is e-mailed to parties who have subscribed. To subscribe, go to the Commission's webpage for this facility, cited above, scroll down the right side of the project webpage to the box labeled "Subscribe," and provide the requested contact information.

Any person may comment on the Staff Analysis. Those who wish to comment on the analysis are asked to submit their comments by 5:00 p.m., May 8, 2015. To use the Energy Commission's electronic commenting feature, go to the Energy Commission's webpage for this 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.

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

California Energy Commission
Dockets Unit, MS-4
Docket No. 86-AFC-1C
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 become publically accessible on the Energy Commission's webpage for the facility.

If you have questions about this notice, please contact Dale Rundquist, Compliance Project Manager, at (916) 651-2072, or by fax to (916) 654-3882, or via e-mail to dale.rundquist@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. 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.

Mail List 753
Argus Cogeneration Expansion Listserv

ARGUS COGENERATION EXPANSION PROJECT
(86-AFC-1C)
PETITION TO DECOMMISSION
Executive Summary
Dale Rundquist

INTRODUCTION

On November 25, 2014, the ACE Cogeneration Company, LP (ACC), the owner of the Argus Cogeneration Expansion (ACE) Project, filed a petition with the California Energy Commission (Energy Commission) requesting to decommission the ACE project. The coal-fired circulating fluidized bed (CFB) 100-megawatt cogeneration project was certified by the Energy Commission as a demonstration project on January 6, 1988. The project demonstrated the CFB combustion system that produced electricity and steam from solid fuels under California's stringent air emission standards. The Energy Commission approved the conclusion of demonstration activities on June 8, 1994. The ACE project provided electricity to Southern California Edison (SCE) for sale, and steam to the Searles Valley Mineral (SVM) facility for use in its industrial processes. The plant consists of a single, coal-fired CFB boiler and a single steam turbine generator (STG). The decommissioning proposed in the petition would result in the power plant and other facilities being demolished and removed and the license being terminated.

The purpose of the Energy Commission's review process is to assess any impacts the proposed decommissioning would have on environmental quality and on public health and safety. The process includes an evaluation of the consistency of the proposed changes with the Energy Commission's Final Decision and an assessment of whether the project, as modified, would remain in compliance with applicable laws, ordinances, regulations, and standards (20 Cal. Code Regs., § 1769).

Energy Commission staff (staff) has completed its review of all materials received. The Staff Analysis below is staff's assessment of the project owner's proposal to decommission the ACE project.

PROJECT LOCATION AND DESCRIPTION

ACE is a 100-megawatt (MW) coal-fired circulating fluidized bed (CFB) cogeneration project, located on the northwest side of Searles Lake in Trona, San Bernardino County, California. The project was certified by the Energy Commission on January 8, 1988, and began commercial operation in January, 1991.

DESCRIPTION OF PROPOSED DECOMMISSIONING

Upon the cessation of plant operations at the ACE project on October 2, 2014, the plant was placed in a long-term outage condition to secure the facility and minimize environmental hazards. Prior to the outage, all remaining coal and limestone stored on-site was consumed.

During the outage:

- all of the remaining ash will be disposed of in the plant's ash land fill, and the land fill will be closed except for a small portion to be used for later disposal of the refractory lining;
- all fluids including ammonia for the air emission control system will be drained, returned or disposed of;
- the plant will be de-energized; and
- the appropriate plant interconnections to off-site services will be isolated.

Decommissioning of ACE involves selling easily removed tools and equipment of no interest to the new buyer of the site, Sabco, Inc (Sabco), dismantling/demolishing the power plant and any other facilities not retained by Sabco, recycling components and materials to the extent possible, hauling off and disposing of the remaining waste, remediating portions of the site if necessary, and cleaning-up the site. The demolition and site clean-up activities will take approximately six months. Following the decommissioning, any equipment and facilities shared with SVM and not to be used by Sabco, such as the coal unloading facility and storage barn, will be turned over to SVM according to separate agreements. The ACE site including the administration building, water tanks, cooling tower, petroleum coke handling and storage facility, and ash landfill will be transferred to Sabco for future industrial use.

NECESSITY FOR THE PROPOSED DECOMMISSIONING

The existing power purchase agreement with SCE expires in November 2015. Because SCE was not interested in negotiating a new power purchase agreement for the coal-fired facility, the project owners looked extensively at several alternatives for replacing the ACE project with a solar thermal, natural gas-fired, or hybrid natural gas/solar thermal combined heat and power (CHP) project. The solar thermal and hybrid facilities were rejected because there was insufficient contiguous usable land to accommodate the solar portion of the project on the ACE site. ACC was able to successfully negotiate a Power Purchase Agreement (PPA) and a Large Generator Interconnection Agreement (LGIA) with SCE for a new natural gas-fired CHP plant. ACC and SVM, however, were unable to reach an agreement on steam sales; hence a CHP project was no longer possible. Since the PPA is contingent on the ACE project operating as a combined heat and power project, and steam sales were necessary to make the project economically viable, the only available alternative is decommissioning and removing the ACE power generation facility.

STAFF'S ASSESSMENT OF THE PROPOSED PROJECT CHANGES

The technical area sections contained in this Staff Analysis include staff-recommended changes to the existing conditions of certification. Staff believes the changes would be consistent with the laws, ordinances, regulations and standards (LORS) identified in the Energy Commission's Decision. Staff's conclusions in each technical area are summarized in **Executive Summary Table 1**, below.

Energy Commission technical staff reviewed the petition for potential environmental effects and consistency with applicable LORS. Staff has determined that the technical or environmental areas of Efficiency, Facility Design, Land Use, Reliability and Visual Resources, are not affected by the proposed changes, and no revisions or new conditions of certification are needed to ensure the project remains in compliance with all applicable LORS for these areas.

Biological Resources notes that the project site is an existing developed industrial site and decommissioning would occur on site with no new disturbance to any natural habitats (saltbush scrub and creosote bush scrub). The biological surveys performed by ACE in 2012 and 2013 on the plant site and surrounding area concluded that no habitats or protected species were present on or immediately adjacent to the ACE site. If the option to implode the boiler, baghouse, and conveyor structures is used, the noise level at 5 feet from the source would be 120-135 dB for a short duration (less than 8 seconds). Energy Commission noise staff estimated the noise level at the fence line to be 80.7dBA. Searles Lake, located 1.5 miles east, is the nearest habitat that provides suitable habitat for migratory birds, where Searles Valley Minerals has implemented a bird deterrence program using air cannons. The staff estimated noise level at Searles Lake to be 71dBA. Although the noise from the implosion would be above the 60 dBA noise threshold recommended by wildlife agencies for impacts to birds, noise associated with demolition and site clean-up, including implosion of the boiler which would occur for a short duration, is not expected to have a significant impact on biological resources that may be found in the vicinity of the site. Based on staff's review of the Decommissioning Plan, and staff from both California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS), staff concludes that there would be no impacts to biological resources from activities associated with decommissioning of the ACE Project and no additional conditions of certification would be required. The decommissioning of the ACE Project would be in compliance with all LORS (analysis attached).

Geological and Paleontological Resources found that the ACE site and its surroundings are currently heavily disturbed and have been used for industrial purposes including power generation, mineral extraction, coal storage, and ash landfills for over 35 years. Demolition activities will be confined to the ACE site and since there will not be any excavation during demolition and minimal movement of soil, demolition will not have any effect on and geological, mineralogical or paleontological resources. Similarly, since there will not be any construction associated with the demolition, the project will not be susceptible to geologic hazards in addition to those described in the Commission Decision. Analysis of the Petition for Decommissioning shows that the planned activities will comply with all applicable laws, ordinances, regulations and standards (LORS) and will not result in any adverse environmental impacts.

Noise and Vibration staff concludes that with implementation of the existing Noise conditions of certification adopted in the Commission Decision, the noise impacts are expected to be less than significant and the project would comply with the applicable noise LORS (analysis attached).

Public Health staff found that there is no possibility that the decommissioning may have a significant effect on the environment. The decommissioning 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.

Socioeconomics staff found that the proposed decommissioning would not have significant adverse socioeconomic impacts, or require the inclusion of new socioeconomics conditions of certification. No socioeconomic conditions of certification were included in the January1988 Energy Commission Decision, and there are no applicable federal, state, or local LORS related to socioeconomic resources and the decommissioning of the ACE project.

Soil and Water staff determined decommissioning of ACE would not have any significant impact to soil or water resources, and would be in compliance with all other applicable conditions of certification and LORS. No other new permits would be required. No other new conditions of certification would be required and no change to existing conditions of certification is required (analysis attached).

Traffic and Transportation staff determined that the decommissioning activities would be anticipated to generate a maximum of seventy (70) total vehicle trips per day. These 70 maximum total daily trips would not change the level of service (LOS) for any roadway intersection used by project-related traffic during decommissioning activities based on maximum daily traffic volumes for specific roadway levels of service. The additional trips generated by construction workers and trucks during an approximately 6-month period would be temporary in nature and would not adversely impact the existing traffic conditions in the project area. The proposed decommissioning of the ACE project would have no significant effect on traffic and transportation. The proposed decommissioning activities would continue to conform to all federal, state, and local laws, ordinances, regulations and standards.

Transmission Line Safety and Nuisance staff found that there is no possibility that the decommissioning may have a significant effect on the environment. The decommissioning 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.

Transmission System Engineering staff found that there is no possibility that the decommissioning may have a significant effect on the environment. The decommissioning 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.

Staff determined, however, that the technical and/or environmental areas of Air Quality, Cultural Resources, Hazardous Materials Management, Worker Safety and Fire Protection, and Waste Management would be affected by the proposed project decommissioning and has proposed new Conditions of Certification **AQ-SC4**, **AQ-SC5**, **AQ-SC6, HAZ-1, HAZ-2, HAZ-3, HAZ-4, WASTE-11, WORKER SAFETY-1, WORKER SAFETY-2,** and **WORKER SAFETY-3.** Staff also proposed revisions to existing conditions of certification **CUL-2** and **CUL-3**. These new and revised conditions of certification will assure compliance with LORS and reduce potential environmental

impacts to a less than significant level. The proposed new and revised conditions of certification are provided in the Air Quality, Cultural Resources, Hazardous Materials Management, Worker Safety and Fire Protection, and Waste Management Staff Analyses sections below.

Executive Summary Table 1
Summary of Impacts for Each Technical Area

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

***There is no possibility that the proposed modifications may have a significant effect on the environment, and the modifications will 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 (20 Cal. Code Regs., § 1769 (a)(2)).

ENVIRONMENTAL JUSTICE

Environmental justice communities are commonly identified as those where residents are predominantly minorities or low-income; where residents have been excluded from the environmental policy setting or decision-making process; where they are subject to a disproportionate impact from one or more environmental hazards; and where residents experience disparate implementation of environmental regulations,

requirements, practices, and activities in their communities. Environmental justice efforts attempt to address the inequities of environmental protection in these communities.

An environmental justice analysis is composed of three parts:

1. identification of areas potentially affected by various emissions or impacts from a proposed project;

2. a determination of whether there is a significant population of minority persons or persons below the poverty level living in an area potentially affected by the proposed project; and

3. a determination of whether there may be a significant adverse impact on a population of minority persons or persons below the poverty level caused by the proposed project alone, or in combination with other existing and/or planned projects in the area.

CALIFORNIA RESOURCES AGENCY

California law defines environmental justice as "the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code §65040.12; Pub. Resources Code, §72000). All departments, boards, commissions, conservancies and special programs of the Resources Agency must consider environmental justice in their decision-making process if their actions have an impact on the environment, environmental laws, or policies. Such actions that require environmental justice consideration may include:

- adopting regulations;
- enforcing environmental laws or regulations;
- making discretionary decisions or taking actions that affect the environment;
- providing funding for activities affecting the environment; and
- interacting with the public on environmental issues.

DEMOGRAPHIC SCREENING ANALYSIS

As part of its CEQA analysis for the Petition to Decommission the Argus Cogeneration Expansion project (ACE) Decision, Energy Commission staff used demographic screening to determine whether a low-income and/or minority population exists within the potentially affected area of the ACE project site[1]. The demographic screening is based on information contained in two documents: Environmental Justice: Guidance Under the National Environmental Policy Act (CEQ, December, 1997) and Guidance for Incorporating Environmental Justice Concerns in EPA's Compliance Analyses (U.S. EPA, April, 1998), which provides staff with information on outreach and public involvement. The Council on Environmental Quality document defines minority

[1] Demographic screening data is presented in the end of this section.

individuals as members of the following groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

Based on the 2010 Census data presented in **Executive Summary Figure 1**, the total population within the six-mile radius of the project site was 1,836 persons with a minority population of 503 persons, or 27.39 percent of the total population. As the minority population is less than fifty percent, this population does not constitute an environmental justice population as defined by Environmental Justice: Guidance Under the National Environmental Policy Act, and would not trigger further scrutiny for purposes of an environmental justice analysis.

Staff's demographic screening also identifies the presence of below-poverty-level populations within a six-mile radius of the proposed project site. Because poverty data is sample data and not a 100 percent count of the population, a certain level of variability is associated with these estimates. Smaller sample sizes tend to be more variable and thus, less reliable than larger sample sizes. As the six-mile radius around the ACE project site has a small population and is in a sparsely populated part of San Bernardino County, staff determined that the only reliable census data for poverty for this project site was at the county level. Approximately 18.7 percent or 375,280 people in San Bernardino County live below the federal poverty level.

Based on staff's screening analysis, shown in Tables 1 and 2 below, no environmental justice population lives within the six-mile project radius.

PROJECT DEMOGRAPHIC SCREENING DATA

Table 1
Minority Populations within the Project Area

	Six-Mile Radius of Project Site	Trona	Searles Valley	Lone Pine CCD*	Searles Valley CCD	Inyo County	San Bernardino County
Total	1,836	18	1,739	2,613	2,174	18,546	2,035,210
Not Hispanic or Latino: White alone	1,333	18	1,257	1,535	1,597	12,296	677,598
Minority	503	0	482	1,078	577	6,250	1,357,612
Percent Minority	27.39	0.0	27.72	41.26	26.54	33.70	**66.71**

Notes: Bold text- minority population is greater than 50 percent, * CCD- Census County Division.
Source: US Census Bureau 2010

Table 2
Poverty Data within the Project Area

Area	Total			Income in the past 12 months below poverty level			Percent below poverty level		
	Estimate*	MOE[1]	CV [2] (%)	Estimate	MOE	CV (%)	Estimate	MOE	CV (%)
County Used to Determine Poverty Status- San Bernardino County	2,010,188	±2,675	0.08	375,280	±9,341	1.51	18.70	±0.5	1.63
Comparison Geographies									
Inyo County	18,026	±146	0.49	2,309	±286	7.53	12.80	±1.6	7.6
California	36,913,404	±3,433	0.01	5,855,417	±40,552	0.42	15.90	±0.1	0.38

Notes: * Population for whom poverty status is determined; [1] margin of error; [2] coefficient of variation.
Source: US Census Bureau 2012.

STAFF RECOMMENDATIONS AND CONCLUSIONS

Staff concludes that the following required findings, mandated by Title 20, California Code of Regulations, section 1769 (a)(3), can be made, and staff recommends approval of the petition by the Energy Commission:

- The proposed decommissioning would not change the findings in the Energy Commission's Decision pursuant to Title 20, California Code of Regulations, section 1755;
- There would be no new or additional unmitigated, significant environmental impacts associated with the proposed decommissioning;
- The facility would remain in compliance with all applicable laws, ordinances, regulations, and standards;
- Decommissioning of the heavily disturbed ACE site and its surroundings will remove some industrial uses including power generation, mineral extraction, coal storage, and ash landfills (and accompanying emission and environmental impacts) related to coal-fired power generation;
- The proposed decommissioning would be beneficial to the public because analysis of the decommissioning proposal shows that the planned activities will not result in any adverse environmental impacts; and
- The proposed decommissioning is justified because there has been a substantial change in circumstances since the Energy Commission certification, in that under California's greenhouse gas emissions requirements, the project will no longer be economically viable using coal as a fuel.

REFERENCES

ACE 2014 - ACE Cogeneration Company. ACE Project Decommissioning Plan 86-AFC-1C. Submitted to the California Energy Commission. TN 203376. November 25, 2014.

CEC 1988. Kerr McGee Chemical Corporation's Argus Cogeneration Expansion Project, Commission Decision, Docket Number 86-AFC-1, Publication No. P800-88-001 (January 15, 1988).

CEQ 1997 – Council on Environmental Quality. *Environmental Justice: Guidance Under the National Environmental Policy Act. December 10,* 1997, <http://www.epa.gov/compliance/ej/resources/policy/ej_guidance_nepa_ceq1297.pdf>.

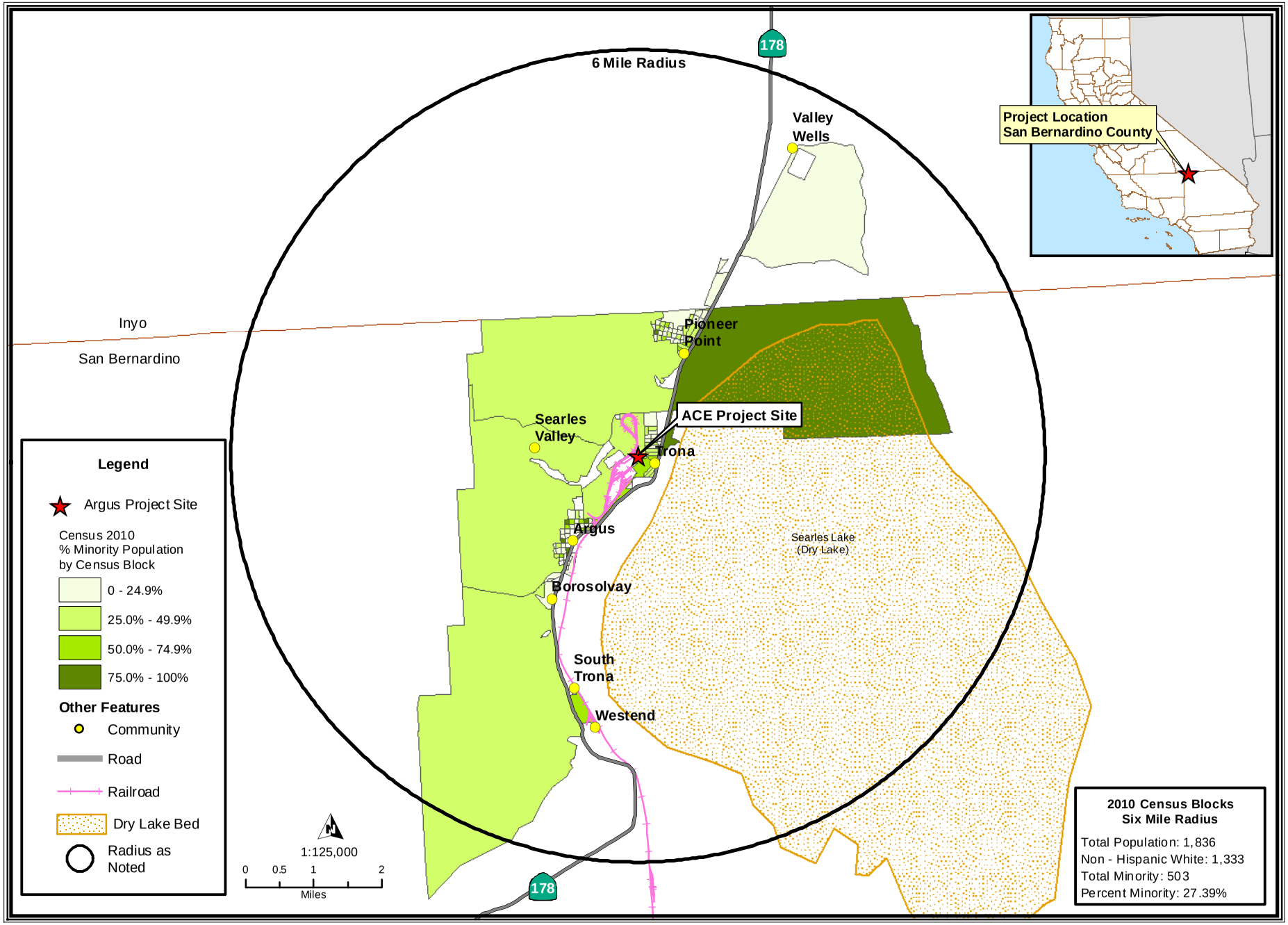
US Census Bureau 2010 – United States Census Bureau. P2: Hispanic or Latino, and Not Hispanic or Latino by Race, Universe: Total population, 2010 Census Redistricting Data (Public Law 94-171) Summary File. <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

US Census Bureau 2013 – US Census S1701 Poverty Status in the Past 12 Months 2009-2013 American Community Survey 5-Year Estimates, <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

US EPA 1998 – United States Environmental Protection Agency, *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses*. April 1998. <http://www.epa.gov/compliance/ej/resources/policy/ej_guidance_nepa_epa0498.pdf>.

EXECUTIVE SUMMARY - FIGURE 1

Argus Cogeneration Expansion (ACE) Decommissioning - Census 2010 Minority Population by Census Block - Six Mile Radius



CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: Multinet, Census 2010 - PL94-171, Open Street Map

EXECUTIVE SUMMARY

ARGUS COGENERATION EXPANSION PROJECT (86-AFC-1C)
PETITION TO DECOMMISSION
Air Quality Staff Analysis
Joseph Hughes

SUMMARY OF CONCLUSIONS

Staff concludes that with the implementation of the mitigation measures described in the Argus Cogeneration Expansion (ACE) Project Decommissioning Plan that the proposed demolition of the ACE project would comply with all applicable federal, state, and Mojave Desert Air Quality Management District (MDAQMD) laws, ordinances, regulations and standards (LORS). The ACE Project Decommissioning Plan implements control measures for short-term demolition impacts. The demolition approaches and mitigation measures outlined in the plan are expected to greatly reduce or eliminate the potential for significant adverse air quality and greenhouse gas impacts during demolition of the ACE project.

INTRODUCTION

The ACE project is an existing coal-fired circulating fluidized bed power plant located on the northwest side of Searles Lake in Trona, San Bernardino County, California. Until recently, it supplied steam to Searles Valley Minerals (SVM) and electricity to Southern California Edison (SCE). The project was permitted by the Energy Commission on January 8, 1988 and began commercial operation in January 1991. The ACE project is currently owned and operated by the ACE Cogeneration Company, LP (ACC), a partnership ultimately composed of ArcLight Capital Partners, DCO Energy, and Northern Star Generation.

ACC's existing Power Purchase Agreement with SCE will expire in November 2015. Under California's greenhouse gas emissions requirements, the project will no longer be economically viable using coal as a fuel once the power purchase agreement expires. To reduce greenhouse gas emissions within the SCE service territory, ACC signed an agreement with SCE to terminate operation of the ACE project in December 2014. The plant ceased operations as of October 2, 2014, and has been placed in an outage condition.

ACC is requesting approval of the ACE Project Decommissioning Plan. Upon approval of the activities described in the Decommissioning Plan, portions of the power plant and other facilities would be demolished and removed and the license terminated; Energy Commission jurisdiction would cease. Some pieces of equipment and structures would be left intact for use by the future owner, Sabco Inc., but their use would not require Energy Commission jurisdiction.

ANALYSIS

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Staff concludes that with the implementation of the mitigation measures described in the ACE Project Decommissioning Plan, the proposed demolition of the ACE project would comply with all applicable federal, state, and MDAQMD LORS.

ACC, as part of its Decommissioning Plan, stated that portable equipment would be supplied and registered through the California Air Resources Board's (ARB) Portable Equipment Registration Program (PERP) by the demolition contractor to ensure compliance with state and federal requirements. ACC would also submit a Dust Control Plan to the MDAQMD for approval, and use appropriate dust suppression mitigation methods to minimize fugitive dust emissions to ensure compliance with MDAQMD fugitive dust rules (Rule 403 and Rule 403.1).

PROJECT DESCRIPTION

Decommissioning involves demolition and dismantling the power generation facility, recycling components and materials to the extent possible, hauling off and disposing of the remaining waste, remediating portions of the site if necessary, and cleaning-up the site. All equipment and industrial facilities purchased by the new owner or shared with SVM would be retained. At the conclusion of decommissioning, the facility would no longer be a viable power plant and Energy Commission jurisdiction would cease.

The power plant and any associated facilities not transferred to Sabco would be dismantled or demolished and removed. Specifically, the boiler and supporting steel structure would be either imploded or mechanically dismembered and removed, and the turbine building, the enclosed steam turbine generator, and other related equipment would be dismantled and removed.

The administration building, switchyard, cooling towers, water tanks, and on-site truck unloading and storage facilities would be retained for use by Sabco. The ash landfill would be closed and covered in accordance with its permit from the Lahontan Regional Water Quality Control Board and the site would be turned over to Sabco. The rail transport system, coal unloading facilities, and coal barn have already been transferred to SVM. The water treatment system would be retained for use by Sabco. The limestone quarry (not permitted by the Energy Commission) has been sold.

Demolition, removal, and site cleanup is expected to last approximately six months. The maximum demolition workforce is expected to be no more than 30 workers. There would be an estimated 400 total truck trips to and from the site during the six-month demolition and removal period. The equipment expected to be used for the demolition and removal activities consists of a bobcat, three excavators, track loader, man lift, and generator. The equipment is anticipated to operate 10 hours per day, five days per week.

SETTING

The existing ACE project is located on the northwest side of Searles Lake in Trona, San Bernardino County, within the MDAQMD. The portion of the MDAQMD boundary, where the project is located, is currently designated nonattainment for state and federal ozone and PM10 standards, and attainment for all other state and federal standards (ARB 2014).

The site is currently occupied by the ACE project, which until October 2, 2014 was an operational coal-fired circulating fluidized bed power plant with on-site stationary sources of emissions, in addition to off-site emissions generated from employee trips and material deliveries.

ASSESSMENT OF IMPACTS

CRITERIA POLLUTANT AND GREENHOUSE GAS EMISSIONS

Criteria pollutant and greenhouse gas emissions would be generated both onsite and offsite as a result of demolition of the ACE project. Onsite emissions would occur from onsite equipment exhaust, onsite motor vehicle exhaust, and onsite fugitive dust generated from vehicles and equipment travel. Offsite emissions would occur from offsite vehicle exhaust and offsite vehicle fugitive dust emissions.

It is expected that there would be less criteria pollutant and greenhouse gas emissions associated with facility closure than emissions that were generated during facility construction, because less onsite equipment would be required during demolition activities, the equipment would have improved emissions controls compared to the 1980s vintage equipment used during construction, and the activities would be completed in a shorter amount of time. In addition, less onsite fugitive dust emissions would occur because there is no need for major earth moving or grading activities.

In its ACE Project Decommissioning Plan, ACC includes Appendix C, Air Quality and Greenhouse Gas Emission Calculations that provides a summary of demolition emission estimates and compares them to past actual operating emissions (operating year 2013). Staff has reviewed the emissions data and agrees that both onsite and offsite criteria pollutant and greenhouse gas emissions would be lower during facility decommissioning and demolition than routine operations over a six month period (demolition is expected to last 6 months) (ACC 2014, Appendix C). However, decommissioning emissions would mostly occur at or near ground level while operating emissions were released from a tall stack and these pollutants rose further into the atmosphere due to their buoyancy and vertical velocity and these impacts generally occurred after the plume had traveled downwind. The highest construction/demolition impacts are expected to be generally located near the project's fence line and would generally decrease rapidly with distance. The closest residence is located approximately 2,000 feet east of the facility. Finally, the estimated offsite vehicle trips associated with demolition (i.e., worker commute and debris removal) would be substantially less than offsite trips associated with routine operations (i.e., employee

and delivery trips). Therefore, offsite criteria pollutant and greenhouse gas emissions are also expected to be lower during demolition than routine operation.

The demolition plan does not provide information on the potential short-term air quality impacts at the nearest residence, nor do the emission estimates include assumptions for implosion of the boiler, stack and supporting steel structure. The turbine building, the enclosed steam turbine generator, and other related equipment would be dismantled and removed, while the boiler, the stack and supporting steel structure would be either imploded or dismantled, and then removed. If imploded, there is a potential for fugitive dust emissions to be generated during the implosion process. ACC has committed to performing the implosion within a single day so these emissions would be short-term in nature. ACC has proposed additional mitigation measures, described below, to ensure that demolition of the ACE project does not result in significant air quality or greenhouse gas impacts.

PROPOSED MITIGATION

ACC would ensure that all portable equipment is registered through the California Air Resources Board's (ARB's) Portable Equipment Registration Program (PERP) by the demolition contractor. ACC would also submit a Dust Control Plan to the MDAQMD for approval, and use appropriate dust suppression mitigation methods to minimize fugitive dust emissions as part of compliance with MDAQMD fugitive dust rules (Rule 403 and Rule 403.1).

PERP

Owners or Operators of portable engines and certain other types of equipment can register their units under the ARB PERP in order to operate their equipment throughout California without having to obtain individual permits from local air districts. The PERP is designed to ensure that portable equipment meets certification tier levels and respective emission standards.

Fugitive Dust Plan

MDAQMD Rule 403 – Fugitive Dust limits fugitive PM emissions from transport, construction, handling, and storage activities. ACC has committed to using appropriate dust suppression mitigation to limit fugitive PM emissions as part of compliance with this rule.

MDAQMD Rule 403.1 – Fugitive Dust Control for the Searles Valley Planning Area (SVPA) ensures that the National Ambient Air Quality Standard (NAAQS) for PM10 will not be exceeded due to anthropogenic sources within the San Bernardino County portion of the SVPA and implements the control measures contained in the Searles Valley PM10 State Implementation Plan (SIP) (MDAQMD 1995). The rule requires preparation and prior approval of a District-approved Dust Control Plan for construction/ demolition sources. ACC would be required, per proposed Condition of Certification AQ-SC6, to submit the dust control plan for prior approval at least 30 days prior to commencing decommissioning activities and implementing the control measures outlined in the SIP during project demolition.

ENVIRONMENTAL JUSTICE

Ambient air quality standards are designed to protect people who are most susceptible to respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. The ambient air quality standards are also set to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.

Although socioeconomic staff has not identified an environmental justice (EJ) population in the vicinity of the project, the ACE Project Decommissioning Plan implements control measures for short-term demolition impacts that are expected to greatly reduce or eliminate the potential for significant adverse air quality impacts relative to these standards regardless of whether or not a minority population or low-income population exists within the potential affected area of the proposed site.

CONCLUSIONS AND RECOMMENDATIONS

Staff recommends approval of the ACE Project Decommissioning Plan. With the implementation of **AQ-SC4**, **AQ-SC5**, and **AQ-SC6**, the project would continue to comply with applicable air quality and greenhouse gas laws, ordinances, regulations, and standards. The short-term, unavoidable fugitive dust impacts due to demolition would be less than significant with the implementation of the mitigation measures established in the Fugitive Dust Control Plan and by the project's compliance with MDAQMD Rule 403 and Rule 403.1 (**AQ-SC6**). Additionally, using portable equipment that meets the certification tier levels and respective emission standards as required by ARB's Portable Equipment Registration Program (PERP) would mitigate emissions from equipment exhausts (**AQ-SC4**). The proposed decommissioning and demolition activities would not adversely affect any environmental justice populations.

CONDITIONS OF CERTIFICATION

The project owner has proposed, and staff is recommending approval of, three conditions of certification (**AQ-SC4**, **AQ-SC5**, and **AQ-SC6**), in addition to the existing conditions, to ensure that the ACE project complies with all applicable LORS and to implement mitigation measures to reduce potential impacts during decommissioning and demolition of the project. At the conclusion of decommissioning and demolition activities, the facility would no longer be a viable power plant and Energy Commission jurisdiction would cease.

AQ-SC4 The project owner shall ensure that all applicable portable equipment used by the demolition contractor shall be registered through the ARB Portable Equipment Registration Program (PERP).

Verification: The project owner will maintain on site records of equipment that is brought on-site. The project owner will furnish these records to the CPM upon request.

AQ-SC5: The project owner shall ensure that equipment used during decommissioning is maintained in proper operating condition to avoid visible emissions darker than Ringlemann #1 for periods greater than 3 minutes in any hour.

Verification: The project owner or their contractor shall maintain records of equipment maintenance activities. These records shall be maintained on-site and furnished to the CPM upon request.

AQ-SC6: The project owner shall ensure a decommissioning Dust Control Plan is prepared and submitted to the MDAQMD for information and to the CPM for approval.

Verification: The project owner or their contractor shall submit the Dust Control Plan to the MDAQMD for information and the CPM for approval, at least 30 days prior to the commencement of demolition activities.

REFERENCES

ACC 2014 – ACE Cogeneration Company, LP. ACE Project Decommissioning Plan (86-AFC-1C). November 25, 2014.

ARB 2014 – California Air Resources Board. Air Quality Standards and Area Designations. http://www.arb.ca.gov/desig/desig.htm, accessed December 2014.

MDAQMD 1995 – Mojave Desert Air Quality Management District. Searles Valley PM10 Plan. June 28, 1995. http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=44

MDAQMD 2014 – Mojave Desert Air Quality Management District. Rule Book, accessed December 8, 2014. http://www.mdaqmd.ca.gov/index.aspx?page=142

ARGUS COGENERATION EXPANSION PROJECT (86-AFC-1C)
PETITION TO DECOMMISSION
Biological Resources Staff Analysis
Andrea Martine

INTRODUCTION

ACE Cogeneration Company, LP (ACC) has submitted a plan to the Energy Commission for decommissioning of the Argus Cogeneration Expansion (ACE) project, ACE Project Decommissioning Plan (ACE 2014). Upon approval of the activities described in the decommissioning plan, the power plant and most facilities will be demolished and removed, the license terminated, and several gas and steam line connections will be capped. The petition and subsequent informal data responses describe the removal of structures to grade and indicate that the concrete slabs will remain. Only above-ground facilities will be removed and there will not be any ground disturbance associated with the activities, other than potential remediation of soils.

Figure 4-1 of the decommissioning plan shows those facilities that will remain for use by new owners. By reviewing Table 4.2-1 of the decommissioning plan, staff has concluded that the following structures would be removed: boiler, steam turbine, condenser, pumps and motors, above-ground diesel storage tank, control system cabinets, piping and supports and other miscellaneous elements. The circulating water pipeline to the turbine would be cut and capped. The gas line service from PG&E would be isolated and the underground pipelines left in place. Other facilities would be left in place for new owners. The coal transfer and storage facilities have been transferred to Searles Valley Minerals (SVM) for their continued use. SVM operations are not part of the plan for decommissioning.

The ACE plant ceased operations in October, 2014 and all on-site materials were removed and/or placed into repositories and capped off.

ANALYSIS

LAWS, ORDINANCES, REGULATIONS AND STANDARDS

Staff has not identified any changes to laws, ordinances, regulations and standards (LORS) affecting biological resources since the project was licensed.

Project Site and the Immediate Surrounding Area

Suitable habitat for nesting birds occurs in natural habitat (1000 feet) near the ACE plant site. The migratory bird treaty act prohibits “take” of migratory birds. Elevated noise levels over 60 dBA are known to affect the nesting success of migratory birds. Noise levels at the plant site during decommissioning would be elevated but would be less than 60 dBA at the nearest nesting habitat. The only possible noise concern that could affect nesting birds during the breeding season (February through August) is the implosion of the boiler, baghouse, and conveyor structures. If this option is used, the noise level at 5 feet from the source would be 120-135 dB for a short duration (less than

8 seconds). Energy Commission Noise staff estimated the noise level at the nearest nesting habitat (approximately 1,000 feet) for migratory birds to be 89 dBA. Although the noise from the implosion would be above the 60 dBA noise threshold recommended by wildlife agencies for impacts to nesting birds, noise associated with the implosion of the boiler, baghouse, and conveyor structures would occur for a short duration (less than 8 seconds). Therefore, this noise would not be a significant impact on biological resources nesting in nearby habitat.

CONCLUSIONS

Based on a review of the Decommissioning Plan, in consultation with Energy Commission Noise staff and representatives of the California Department of Fish and Wildlife and United States Fish and Wildlife Service, staff concludes that decommissioning of the ACE project would have a less than significant impact on biological resources. The decommissioning of the ACE project would be in compliance with all applicable laws, ordinances, regulations, and standards related to biological resources.

PROPOSED CONDITIONS OF CERTIFICATION

Decommissioning of the ACE Project would not require any deletion of or addition to any of the existing biological resources conditions of certification in the1988 Final Commission Decision.

REFERENCES

ACE 2014—ACE Project Decommissioning Plan. Submitted to the California Energy Commission. ACE Cogeneration Company. 86-AFC-1C. TN 203376. November 25, 2014.

CEC 1988. Kerr McGee Chemical Corporation's Argus Cogeneration Expansion Project, Commission Decision, Docket Number 86-AFC-1, Publication No. P800-88-001 (January 15, 1988).

ARGUS COGENERATION EXPANSION PROJECT (86-AFC-1C)
PETITION TO DECOMMISSION
Cultural Resources Staff Analysis
Melissa Mourkas and Matthew Braun

INTRODUCTION

ACE Cogeneration Company, LP (ACC) has submitted a plan to the California Energy Commission (Energy Commission) for decommissioning of the Argus Cogeneration Expansion (ACE) power plant, ACE Project Decommissioning Plan (ACE 2014). Upon approval of the activities described in the decommissioning plan, the power plant and most facilities will be demolished and removed, the license terminated, and several gas and steam line connections will be capped. The petition and subsequent informal data responses describe the removal of structures to grade and indicate that the concrete slabs will remain. ACC proposes that only above-ground facilities will be removed and there will not be any ground disturbance associated with the activities, other than potential remediation of soils.

Figure 4-1 of the plan shows those facilities that will remain for use by new owners. From reviewing Table 4.2-1, staff has concluded that the following structures would be removed: boiler, steam turbine, condenser, pumps and motors, above-ground diesel storage tank, control system cabinets, piping and supports and other miscellaneous elements. The circulating water pipeline to the turbine would be cut and capped. The gas line service from PG&E would be isolated and the underground pipelines left in place. Other facilities would be left in place for new owners. The coal transfer and storage facilities have been transferred to Searles Valley Minerals (SVM) for their continued use. Searles Valley Minerals operations are not part of the plan for decommissioning.

The ACE plant ceased operations in October, 2014 and all on-site materials were consumed and/or placed into repositories and capped off.

ANALYSIS

LAWS, ORDINANCES, REGULATIONS AND STANDARDS

San Bernardino County's General Plan (SBCGP 2007) addresses protection of cultural resources in Section V-Conservation Element, Goal CO 3: *The County will preserve and promote its historic and prehistoric cultural heritage*. The County also maintains a Cultural Resources Overlay area in the vicinity of Phelan, Pinion Hills and Oak Hills. Trona is located outside of the overlay zone. The General Plan calls for mitigation of impacts to cultural resources to follow the standards in the California Environmental Quality Act (CEQA) Guidelines, Appendix K. Staff believes that may be a typo or an out-of-date reference and should refer to Appendix G and/or section 15126.4 of the CEQA Guidelines. Consultation with Native American tribes is also specified in the General Plan under certain circumstances (SBCGP 2007: V-18 to V-22). The decommissioning,

as conditioned, will conform to County of San Bernardino General Plan Policies and Goals as they relate to cultural resources.

Staff has not identified any other changes to laws, ordinances, regulations and standards (LORS) affecting cultural resources since the project was licensed.

2012 Literature/Records Search and Site Visit

The project owner provided staff with the results of a records search completed in 2012 for another potential project on the ACE site. That project did not go forward. The project owner also provided staff with a copy of the Environmental Site Assessment (AECOM 2012) from the previously planned project. The records search extended to a one-mile boundary around the project site as well as a quarter mile to each side of a linear corridor extending south to a substation interconnection point at Westend. Some pertinent records were missing, such as those pertaining directly to the ACE property (Raven 1985, Norwood 1985, Underwood 1986 and McKenna, Hatheway 1989). On March 3, 2015, staff received a copy of the McKenna Hatheway report directly from Roger Hatheway. Staff determined that enough information has been provided to complete an analysis of the proposed decommissioning.

Cultural resources staff visited the ACE plant site in 2012 and received a complete tour of the power plant facility. There was no access to the adjacent SVM site. Staff observed the existing facility's components and, to a limited degree, the surrounding landscape.

Archaeological and Ethnographic Resources in the One-Mile Radius

There was one previously recorded isolated archaeological artifact and four prehistoric archaeological sites in the project area, and an additional four prehistoric archaeological sites within a one-mile radius of the ACE project site. These resources consist primarily of lithics and fire-affected rock, likely the remains of small temporary camps. Hatheway and McKenna (1989:38) suggested that the close proximity of the resources could indicate that the small sites are part of a larger site outside of the proximity of the ACE project area. None of these resources were determined eligible for the California Register of Historical Resources and thus were not considered historic resources for the purposes of CEQA. However, during the licensing proceeding, Native American groups identified at least three of these resources (CA-SBR-3846, CA-SBR-3847, and CA-SBR-3848) as ethnographic in nature (CEC 1988: 49-50).

Staff contacted the Native American Heritage Commission (NAHC) on February 4, 2015 and received a response on February 23, 2015 (Sanchez 2015) that there were no resources in the Sacred Lands File, but advised staff to contact Native American groups affiliated with the project area. Staff contacted the group identified by the NAHC by letter, phone, and email but did not receive a response.

The ACE Project Decommissioning Plan as described by the project owner could have a significant impact to archaeological and ethnographic resources if ground-disturbance associated with decommissioning activities occurs near sites CA-SBR-3846, CA-SBR-3847, and CA-SBR-3848. Native American tribes identified these sites as ethnographic resources during the original proceedings, and monitoring for cultural resources was

required during site preparation construction activities in the vicinity of these sites (Condition of Certification **CUL-2** in the 1988 Final Decision). Thus, this area is sensitive to Native Americans and, in the event any ground-disturbance occurs associated with decommissioning of the ACE project, cultural resources monitoring will be required. Staff has proposed changes to Conditions of Certification **CUL-2** and **CUL-3** to apply these conditions to ground-disturbing decommissioning activities.

Built Environment Resources in the One-Mile Radius

California Landmarks and Points of Historical Interest

There are two listed built environment resources within one mile of the ACE project site. In the town of Trona, the Old Guest House Museum is a listed Point of Historical Interest, #122. It is categorized by the California Office of Historic Preservation as 7L: having been designated prior to 1998, it needs to be reevaluated using current standards. It is described as a one-story building of modified Spanish Colonial ("Panama") architectural style. The Panama style emerged locally and features an open veranda with a wide over-hanging roof (Boyer 1995). The Searles Valley Historical Society owns and maintains the building as a museum highlighting vignettes of Searles Valley history in each of its twelve rooms (SVHS 2015).

The Searles Lake Borax Discovery, California State Historical Landmark # 774, is also listed on the National Register of Historic Places (NRHP). The location of the borax discovery is marked with a landmark plaque. It was placed adjacent to Searles Lake in 1962, marking the 100th anniversary of John Searles' discovery of borax. The plaque can be found at a roadside rest area off Trona Road at Center Street in Trona (OHP-2015).

Other Built Environment Resources

The Trona Railway was instrumental in providing the various mineral companies with fuel for producing steam as well as hauling away mining products such as borax, potash, lime, and soda ash. The short line railroad, completed in 1914, connected American Trona Corporation with the Southern Pacific Railroad at Searles Station 30 miles to the south. An historical evaluation completed in 1996 concluded that "despite the important role the Trona Railway once played in the development of the Searles Lake chemical mining industry…the site has been determined not to be eligible for listing in the National Register of Historic Places due to loss of historical integrity through the later replacement of almost all original physical features of railroad operations, such as tracks, ties and the roadbed itself" (Love and Tang 1996). While this evaluation recorded only a four mile segment of the railroad, it seems to have extrapolated the conclusions regarding the existing conditions of that segment to the entire railroad. Staff is unaware of any other studies specific to the Trona Railway.

An abandoned segment of the old Trona Highway was recorded near Argus. The segment dates to the 1920s and would have been replaced by the modern alignment in the 1930s to 1940s. It was not found to be eligible for listing on the NRHP (Love 1996). It is differentiated from other types of paving as it is a "desert mix", a paving material made from a cold process rather than a hot process such as asphalt.

The ACE project, completed in 1991, is now twenty-four years old, not of historic age nor listed or eligible for listing on any historical register. For the purpose of review under CEQA Guidelines section 15064.5[2], staff does not consider the project's structures or design to be eligible under any of the four Criteria for listing on the California Register of Historic Resources. Additionally, staff considered the potential for impacts to the identified historic built environment resources (above) within one mile of the decommissioning project. Staff concludes that the ACE Project Decommissioning Plan as described by the project owner would not have any significant impacts to historic built environment resources as long as the decommissioning activities are undertaken as described in the plan.

CONCLUSIONS

Implementation of the conditions of certification from the 1988 Final Decision, as modified by staff, would ensure the proposed demolition of the ACE Project complies with applicable LORS and would not have a significant effect on the environment.

PROPOSED CONDITIONS OF CERTIFICATION

The conditions of certification included below are those from the January 1988, licensed ACE Project, and are the ones noted by the project owner in their November 25, 2014 Decommissioning Plan. Modifications proposed by staff are shown in ~~strikethrough~~ for deletions and **bold underline** for additions.

CUL-2 ~~KMCC~~ **The project owner** shall designate a qualified cultural resources specialist to be on site to monitor site preparation construction **and ground-disturbing decommissioning** activities in the vicinity of archaeological sites SBr-3846, **3847** and 3848 and to be on-call during site preparation and construction activities in other project areas.

Verification: ~~KMCC~~ **The project owner** shall provide **CPM** with the name and telephone number of their cultural resources specialist at least 30 days prior to the start of any ground disturbance or construction activities.

CUL-3 If paleontological or cultural resources are discovered during construction **or ground-disturbing decommissioning activities**, work in the immediate area of the resource shall be halted and the designated paleontologist or cultural resources specialist, as appropriate, shall be consulted to evaluate the significance of the resources. Within one working day ~~KMCC~~ **The project owner** shall notify the **CPM** of any resource discovery and associated work stoppage. The designated paleontologist/cultural resources specialist and representatives of ~~KMCC~~ **The project owner** and the **CPM** shall confer within one working day of the notification to discuss possible mitigation measures. Pending resolution of this matter, construction activity in the resource area shall remain stopped.

[2] CEQA Guidelines section 15064.5: Determining the Significance of Impacts on Historical and Unique Archeological Resources.

Verification: ~~KMCC~~ **The project owner** shall notify the **CPM** within one working day of the resource discovery and the work stoppage. ~~KMCC~~ **The project owner** shall include a report on any such work stoppage or find in the Periodic Compliance Reports.

REFERENCES

ACE2014—ACE Project Decommissioning Plan. Submitted to the California Energy Commission. ACE Cogeneration Company. 86-AFC-1C. TN 203376. November 25, 2014.

ACE2015—ACE Project Decommissioning Plan. Data Responses Submitted to the California Energy Commission. ACE Cogeneration Company. 86-AFC-1C. January 15, 2015.

AECOM 2012—AECOM Phase I Environmental Site Assessment of ACE Cogeneration Facilities Trona and Panamint Valley, California. Prepared for Constellation Generation Group. March 2012.

Boyer 1995—Frederick E. Boyer. Guest House Museum, San Bernardino County. Application for California Point of Historical Interest. Searles Valley Historical Society, Trona, CA. March 27, 1995.

Hatheway McKenna 1989—Roger Hatheway and Jeannette McKenna. An Archaeological, Historical and Architectural Study of the Argus Cogeneration Expansion (ACE) Ash Disposal Alternatives. Prepared for Tom Dodson & Associates. Mission Viejo, California. June 28, 1989.

Love 1996—Bruce Love. Primary Record Evaluation of Trona Highway for the Trona – Westend Transportation and Utilities Right-of-Way Project. November 7, 1996.

Love and Tang 1996—Bruce Love and B. Tom Tang. Primary Record Evaluation of Trona Railway for the Trona –Westend Transportation and Utilities Right-of-Way Project. November 7, 1996.

OHP 2015—California Office of Historic Preservation. Website listing of landmarks in San Bernardino County.http://ohp.parks.ca.gov/?page_id=21476. Accessed February 17, 2015.

Sanchez 2015—Katy Sanchez. Native American Heritage Commission Response to California Energy Commission re: Argus Cogeneration Expansion Project, San Bernardino County. February 23, 2015.

SBCGP 2007—County of San Bernardino 2007 General Plan. URS Corporation. Santa Ana, CA. Adopted March 13, 2007.

SVHS 2015—Searles Valley Historical Society. Website brochure. http://www1.iwvisp.com/svhs/BrochurePg.html. Accessed February 17, 2015.

ARGUS COGENERATION EXPANSION PROJECT (86-AFC-1C)
PETITION TO DECOMMISSION
Hazardous Materials Management Staff Analysis
Brett Fooks, PE

SUMMARY OF CONCLUSIONS

The ACE Cogeneration Company (ACC) has submitted a Decommissioning Plan to shut down the Argus Cogeneration Expansion (ACE) project and demolish portions of the equipment and structures. Staff has reviewed the Decommissioning Plan and determines that the decommissioning of the facility would not present a significant risk to onsite or offsite receptors. The original analysis of this project included both the Hazardous Materials Management and Worker Safety in one section, called Public-Worker Safety, with all the associated conditions of certification. Since the analysis no longer follows the format of the original analysis, staff recommends the implementation of the project's existing conditions from the original analysis and the four new Conditions of Certification, which would be **HAZ-1** through **HAZ-4**. Staff finds that the project decommissioning would incorporate sufficient measures and comply with applicable laws, ordinances, regulations and standards (LORS) to ensure that the decommissioning of the ACE project would not result in any unmitigated significant adverse impacts.

LAWS, ORDINANCES, REGULATIONS AND STANDARDS (LORS) COMPLIANCE

Hazardous Material Management Table 1 outlines the state and local laws and policies apply to the protection of public health and hazardous materials management for the ACE Decommissioning. Staff's analysis examines the project's compliance with these requirements.

Hazardous Materials Management Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Applicable LORS	Description
State	
Hazardous Material Business Plan, Cal HSC Sections 25500 to 25541	Requires the submittal of a chemical inventory and planning and reporting for management of hazardous materials.
California HSC Sections 25270 through 25270.13	Requires the preparation of a Spill Prevention, Control, and Countermeasures (SPCC) Plan if 10,000 gallons or more of petroleum is stored on-site. The above regulations would also require the immediate reporting of a spill or release of 42 gallons or more to the California Office of Emergency Services and the Certified Unified Program Authority (CUPA).

Applicable LORS	Description
CCR 19, Division 1, Chapter 10 and §§ 3301.1 California Fire Code	Possession, handling, storage, and use of explosives and explosive materials.
Local	
San Bernardino County Code of Ordinance, Title 2, Division 3	Fire protection and explosives and hazardous materials ordinances.
San Bernardino County Code of Ordinance, Title 4, Division 5	The San Bernardino County explosives regulations including the issuance of permits.

ANALYSIS

HAZARDOUS MATERIALS

Staff reviewed the ACE decommissioning plan and found that the majority of the hazardous materials used during operation, such as anhydrous ammonia, have been removed since the plant ceased operation in early October 2014 (ACE 2014a). There are two exceptions to this which are above ground storage tanks that contain sodium hydroxide, 50% solution and sulfuric acid. The chemicals would be retained on site as part of the demineralized water treatment system for future use by the new owners, Sabco, Inc. The mineral oil found in the onsite transformer would remain until the transformer is sold.

During the demolition of the ACE project there are several hazardous materials that would be used in the decommissioning which would include gasoline, diesel fuel, oil, lubricants, welding gases and small quantities of solvents. The diesel fuel would be supplied from the existing 500 gallon above ground storage tank which would be removed once decommissioning is complete. No extremely hazardous or regulated hazardous materials would be used on site specifically for demolition (see Table 5.4-3 from the ACE Decommissioning Plan for a list of chemicals proposed to be used during demolition of the ACE site) and none of these materials pose significant potential for off-site impacts as a result of the quantities on site, their relative low toxicity, their physical state, and/or their environmental mobility. Any impact of spills or other releases of these materials would be limited to the site because of the small quantities involved, and/or the temporary containment berms used by contractors. Petroleum hydrocarbon-based motor fuels, mineral oil, lube oil, and diesel fuels all have low volatility and represent limited off-site hazards even in larger quantities.

The proposed ACE decommissioning would be limited to using, storing, and transporting those listed in the revised Hazardous Materials Business Plan (HMBP) as per Staff's proposed Condition of Certification **HAZ-1**. For the hazardous materials that would remain on site for the new owner, the current project owner would need to continue to maintain security for the site and ensure that the ownership of the materials are transferred per the San Bernardino County Fire Department (SBCFD Certified

Unified Program Authority (CUPA) requirements during the closeout of the HMBP. Pursuant to these requirements, Staff would propose Conditions of Certification **HAZ-2** and **HAZ-3**. Staff concurs with the petitioner that the Risk Management Plan and Spill Prevention Control and Countermeasure Plan can be retired after completion of the decommissioning of the ACE site.

EXPLOSIVES

The ACE site would require the use of explosives to remove the onsite boiler. According to the petitioner, a licensed demolition contractor would be used to transport, install and detonate the explosives. Before any demolition work with explosives could begin, a permit would have to be obtained from the San Bernardino Sheriff's Department. The permit process ensures that the petitioner follows the proper procedures as laid out by the San Bernardino County Code of Ordinances Title 4, Division 5. Staff proposes Condition of Certification **HAZ-4** to ensure that the explosives permit is acquired before the start of the onsite boiler demolition. With the explosives permit in place, impacts to the surrounding area and offsite public receptors would be reduced to less than significant. In addition, a Demolition Explosives Safety Plan, per **WORKER SAFETY-1** would be developed to assist with the management and use of explosives and would cover safe transport, inventory control, proper handling and removal protocols that are in accordance with LORS.

CONCLUSIONS AND RECOMMENDATIONS

Staff has reviewed the decommissioning plan for the ACE project and concluded that the potential impacts from the decommissioning would be fully mitigated by continued compliance with the original project conditions of certification combined with implementation of Staff's proposed new Conditions of Certification **HAZ-1** through **HAZ-4** which are in **bold and underlined** below. **HAZ-1** would require that the project owner submit a revised HMBP with all of the hazardous materials used during demolition. **HAZ-2** would require that the project owner maintain existing security for the hazard materials left on site. **HAZ-3** would require the project owner to complete the close out procedures outlined by the SBFCD CUPA. **HAZ-4** would require that a copy of the Explosives Permit be provided to the CPM before any explosives are brought on site for demolition activities.

PROPOSED MODIFICATIONS TO CONDITIONS OF CERTIFICATION

HAZ-1 The project owner shall provide a revised Hazardous Materials Business Plan (HMBP) for the hazardous materials that would be used during demolition, to the San Bernardino County Fire Department and the CPM for review. After receiving comments from the San Bernardino County Fire Department and the CPM, the project owner shall include in the final documents all recommendations that ensure LORS compliance. Copies of the revised final HMBP shall then be provided to the San Bernardino County Fire Department for information and to the CPM for approval.

Verification: At least thirty (30) days prior to starting demolition of the site, the project owner shall provide a copy of the revised final Hazardous Materials

Business Plan. The project owner shall also provide a letter to the CPM stating that the plan was submitted to the San Bernardino County Fire Department for review.

HAZ-2 During the closeout of the Hazardous Materials Business Plan, the project owner shall maintain the existing security plan for the hazardous materials that remain on site until the transfer of ownership is complete.

Verification: The project owner shall provide a letter to the CPM stating that the existing security standards will be maintained for the hazardous materials that remain on site until transfer of ownership is completed.

HAZ-3 Upon completion of the Hazardous Materials Business Plan closeout, the project owner shall follow all of the closeout procedures outlined by the SBCFD's CUPA.

Verification: The project owner shall provide a letter to the CPM stating the requirements that the SBCFD CUPA imposed for the remaining hazardous materials left on site to complete the close out of the existing Hazardous Materials Business Plan and that those requirements have been met.

HAZ-4 The project owner shall provide a copy of the Explosives Permit to the San Bernardino County Fire Department and the CPM for review. The project owner shall also coordinate with the SBCFD the dates of demolition activities with explosives so that the proper fire protection is provided on site.

Verification: At least thirty (30) days prior to allowing explosives on the site, the project owner shall provide a copy of the Explosives Permit obtained from the San Bernardino County Sherriff's Department to the San Bernardino County Fire Department and CPM for review. At least (14) days prior to starting demolition activities with explosives, the project owner shall also submit a letter to the CPM showing the coordination with the SBCFD for the dates required for fire protection services.

REFERENCES

ACE 2014a – Argus Cogeneration Expansion Project (TN #203376) Petition for Decommissioning, dated November 25, 2014. Submitted to CEC/Docket Unit on November 25, 2014.

ARGUS COGENERATION EXPANSION PROJECT (86-AFC-1C)
PETITION TO DECOMMISSION
Noise Staff Analysis
Shahab Khoshmashrab

INTRODUCTION

ACE Cogeneration Company, LP (ACC) is requesting approval of the Argus Cogeneration Expansion (ACE) Project Decommissioning Plan. Upon approval of the activities described in the Decommissioning Plan, portions of the power plant would be demolished and removed. This analysis addresses the noise effects that would result from these demolition and removal activities.

ANALYSIS

Demolition noise would be generated by the use of equipment and vehicles, typically for dismantling, and for the transport of demolition material to and from the demolition site. Demolition noise levels are a function of the number and type of equipment used and the timing and duration of their noise-generating activities. The boiler and several other structures will undergo controlled implosion. These activities will be short in duration (less than 10 seconds) and allow the project owner to safely sort and remove from the site the structure materials. It is likely that local residents will notice the implosions, but the activities will not result in violation of noise ordinances.

Ambient noise measurements were taken in September 2013, to identify the average daytime ambient noise level from the operation of the project at the nearest noise-sensitive receptor. During this time, a daytime noise measurement was taken at the property line of the nearest residence; about 2,000 feet east of the ACE project (ACE 2014, p. 5-58). The measurement recorded a daytime hourly average noise level of 58.3 dBA L_{eq}. A worst-case hourly average noise level of 90 dBA L_{eq} at 50 feet, from the demolition work that includes structure implosion, would attenuate to approximately 58 dBA L_{eq} at 2,000 feet, which is approximately the recorded ambient noise level of the project operation (58.3 dBA L_{eq}) at this nearest residence. So, ambient noise levels during demolition would be similar to those during project operation at the nearest residence. Therefore, there would not be a substantial temporary increase in ambient noise levels. Also, demolition work would occur during the daytime hours in compliance with the County of San Bernardino Development Code and the Noise conditions of certification adopted in the 1988 Energy Commission Decision (Commission Decision) (CEC 1988, pp. 52-55). Thus, demolition would not create a significant noise impact and would comply with the applicable noise laws, ordinances, regulations, and standards (LORS).

CONCLUSIONS

Staff concludes that with implementation of the existing Noise conditions of certification adopted in the Commission Decision, the noise impacts are expected to be less than

significant and the project would comply with the applicable noise LORS. Staff proposes no changes to the existing Noise conditions of certification.

REFERENCES

ACE 2014—ACE Project Decommissioning Plan. Submitted to the California Energy Commission. ACE Cogeneration Company. 86-AFC-1C. TN 203376. November 25, 2014.

CEC 1988. Kerr McGee Chemical Corporation's Argus Cogeneration Expansion Project, Commission Decision, Docket Number 86-AFC-1, Publication No. P800-88-001 (January 15, 1988).

THE ARGUS COGENERATION EXPANSION PROJECT (86-AFC-1C)
PETITION TO DECOMMISSION

Soil and Water Resources
Christopher Dennis, PG, CHg

INTRODUCTION

ACE Cogeneration Company, LP (ACC) has submitted a petition for decommissioning the Argus Cogeneration Expansion (ACE) project. The ACE project is an existing coal-fired circulating fluidized bed power plant located on the northwest side of Searles Lake in Trona, San Bernardino County, California. Until recently, it supplied steam to Searles Valley Minerals (SVM)[3] and electricity to Southern California Edison (SCE). The project was permitted by the California Energy Commission (Energy Commission) on January 8, 1988 (CEC, 1988) and began commercial operation in January 1991 (ACE 2014a).

AMENDMENT DESCRIPTION AND BACKGROUND

ACC's existing Power Purchase Agreement with SCE expires in November 2015. Under California's greenhouse gas emissions requirements, the ACE would no longer be economically viable using coal as a fuel after the power purchase agreement expires. To reduce greenhouse gas emissions within the SCE service territory, ACC signed an agreement with SCE to terminate operation of the ACE project in December 2014. The plant ceased operations as of October 2, 2014, has been placed in an outage condition to secure the facility and minimize environmental hazards (ACE 2014a).

Prior to the outage, all remaining coal and limestone stored on-site has been consumed. During the outage all of the remaining ash is being disposed of in the plant's ash landfill and the landfill is being closed except for a portion of Cell 5, which would be used for disposal of the refractory lining. Ammonia for the air emission control system has been or would be disposed at an off-site location. The appropriate plant interconnections would be isolated from offsite services (ACE 2014a).

On November 24, 2014, ACC reached an agreement to transfer the ground lease for the ACE site and sell some of the equipment and structures, as well as the property occupied by the ash landfill, to Sabco Inc. (Sabco), a California corporation operating as a general contractor. While ACC intends to sell the landfill site, lease, and related facilities, ACC would continue to hold the Energy Commission license and be responsible for compliance with the Energy Commission's conditions of certification until decommissioning is completed and ACC surrenders the license to the Energy Commission. ACC would be responsible for implementing the decommissioning plan and complying with any conditions required by the Energy Commission until decommissioning is completed and the license is surrendered. Based on the intended future use of the site, Sabco would be responsible for obtaining all required land use and environmental permits from the appropriate local or state agencies (ACE 2014a).

[3] In 2008, Nirma Limited acquired Searles Valley Minerals, Inc.

The final contractual transfer would not occur until the Energy Commission approves the final closure.

ANALYSIS

The environmental impact aspects of the proposed amendment have been evaluated in accordance with the California Environmental Quality Act (CEQA) and current laws, ordinances, regulations, and standards (LORS). The power plant and other facilities would be demolished and removed and the license terminated when the Decommissioning Plan is approved by the California Energy Commission (ACE 2014). Decommissioning of ACE involves selling easily removed tools and equipment of no interest to Sabco, dismantling/demolishing the power plant and any other facilities not retained by Sabco, recycling components and materials to the extent possible, hauling off and disposing of the remaining waste, remediating portions of the site, if necessary, and cleaning-up the site. The demolition and site clean-up activities would take approximately six months. Following decommissioning, any equipment and facilities shared with SVM and not to be used by Sabco, such as the coal unloading facility and storage barn, would be turned over to SVM according to separate agreements.

Sabco would retain the following facilities (ACE 2014; ACE 2015):

- Administration and support buildings, water storage tanks, potable and industrial water supply pipelines, septic system, cooling tower, oil/water separator, industrial and sanitary wastewater connection to the SVM all-other-liquor (AOL) pipeline, petroleum coke silo storage and unloading facilities, ACE switchyard, perimeter fence and guard shack, truck scale, ash silos and blower, and the ash landfill and property occupied by the ash landfill.

Retention of these facilities would have no significant impact to soil and water resources or require any change to the conditions of certification related to soil and water resources. The new property owner would be responsible for ensuring that any future operations of these facilities would not result in any impacts and were conducted in accordance with local LORS.

WATER SUPPLY

ACE is supplied potable water from the SVM imported potable supply pipeline. This potable water supply pipeline would remain in place for Sabco's use (ACE, 2014). The industrial water supply is provided by SVM. The water supply is a by-product of the mineral extraction process from the Searles Lakebed deposits. The industrial water supply pipeline would also remain in place for use by Sabco.

WATER QUALITY

Water quality could be affected by improper storm water controls and unauthorized releases of chemicals to the groundwater during removal of structures that may disturb adjacent grade. Mitigation of potential impacts from uncontrolled storm water runoff is discussed below. Unauthorized releases could have occurred from the ash landfill, the 12,000 gallon AST, and equipment on the power block. Existing LORS would ensure

that the AST is closed in accordance with regulations protective of water quality. The existing Waste Discharge Requirements (WDRs)issued by the **Lahontan Regional Water Quality Control Board (**RWQCB) (Board Order 6-00-92) would also ensure that the ash landfill is closed in accordance with regulations protective of water quality.

STORM WATER

The 1988 Commission Decision required ACC to monitor the existing flood channel and levee system at least once a year and after every major storm to assure that the system is not damaged and functions properly. These perimeter drainage channels were designed intercept and collect project site runoff and convey the runoff to the existing flood control system. These storm water systems would be left onsite and, therefore, at the time of ownership transfer, ensure that the potential for erosion and offsite flooding were mitigated. During a site visit on January 29, 2015, staff observed that the perimeter drainage control system appeared to be in good working order. No change to or new condition of certification would be required for the perimeter drainage channel system.

Storm water received on the power block is processed through the oil/water separator. Decanted water from the oil/water separator flows through a pipeline to the SVM AOL[4] industrial wastewater disposal pipeline. The annual average flows from the ACE to the SVM AOL discharge line were approximately 0.53 million gallons per day (mgd) of industrial wastewater and approximately 0.0058 mgd of domestic wastewater. The combined ACE effluent contained an annual average of approximately 25,000 mg/L of total dissolved solids (TDS) and pH values between 8.5 and 9.3 (RWQCB, 2001). The AOL pipeline conveys the wastewater for final disposal as surface discharge or underground injection at Searles Lake authorized pursuant to approvals obtained by SVM.

The Commission Decision also required ACC to develop and submit a grading and wind and water erosion control plan for the ACE site and all land disturbed by supporting facilities. Among the mitigation measures were required to be a part of this plan were:

- Provide drainage away from all foundations and artificial slopes to collection ditches;
- Provide surface areas designated in the erosion control plan with 3 to 4 inches of crushed rock (3/4-inch maximum size);
- Maintain cut and fill slopes during operations;
- Minimize disturbance of vegetated areas;
- Use a truck-mounted spray water system for dust control during construction;

[4] Lake brine and brackish groundwater is used throughout the SVM processes for cooling, scrubber systems, and equipment washing. Approximately 10 to 15 million gallons per day of partially depleted brine, also called end liquor, and another 1.5 to 5.1 million gallons per day of mixed (mostly brackish) water are discharged to Searles Lake through an open unlined channel into the effluent disposal (dredge) pond. The wastewater is then discharged to a percolation pond and re-injected into Searles Lake. SVM identifies this mixed wastewater as all-other-liquors (AOL) (RWQCB, 2005a).

- Provide temporary berms around construction areas and permanent erosion controls (e.g., culverts, ditches, swales); and
- Minimize soil-related impacts by implementing the measures specified in the above-identified grading and erosion control plan.

No new conditions of certification or changes to current conditions of certification would be required provided ACC implements and maintains these mitigation measures during decommissioning of the power plant.

WASTEWATER

The ACE wastewater consisted primarily of cooling tower blowdown water plus other industrial and domestic wastewaters. This wastewater was disposed of through a pipeline that connected and combined with the SVM AOL industrial wastewater discharge pipeline discussed above (RWQCB, 2001). The industrial wastewater connection to the SVM AOL pipeline and the sanitary septic system would remain in place and their connection to the AOL pipeline would also remain in place (ACE, 2014; ACE, 2015).

The industrial wastewater (non-cooling tower blowdown) consisted of supply water treatment wastewater, boiler blowdown water, and plant wash down water. The cooling tower blowdown wastewater contained minor concentrations of biocidal and scale or corrosion inhibitors and has already been disposed. Cooling tower blowdown, boiler, and all other cleaning wastewater was discharged in accordance with RWQCB Order 6-01-16 or disposed of at an approved off-site disposal facility.

Waste oil intercepted by the oil/water separator was pumped from the separator and disposed of offsite by an approved method. Non-chemical drains in areas subject to plant washdown and/or incidental spillage of oils were plumbed to the oil/water separator.

Due to the substantial change in operations, a revised Report of Waste Discharge (RWD) may be required for RWQCB Order 6-01-16. The owner will consult with the RWQCB to determine if and when this would be required. Also due to the substantial change in operations, RWQCB Order 6-01-16 would require an update of the Preliminary Closure and Post-Closure Maintenance Plan (CPCMP).

ASH LANDFILLS

The ash landfill would be closed according to the requirements of the RWQCB's WDRs, Order No. 6-00-92 (RWQCB, 2005a and RWQCB, 2005b). Order 6-00-92 requires the following:

- Update of the CPCMP when there is a substantial change in operations. The updating of the CPCMP may be prepared by or under the supervision of the owner or operator of the waste disposal site. Submittal of a final CPCMP least 180 days prior to beginning any partial or final closure activities or at least 120 days prior to discontinuing the use of the site for waste treatment, storage or disposal, whichever is greater. The final CPCMP shall be prepared by or under

the supervision of either a Civil Engineer or a Certified Engineering Geologist registered in the State of California.

- The Discharger must provide documentation that financial assurance has been developed for closure and subsequent maintenance of the project site. Evidence shall include the total amount of money available in the fund developed by the Discharger. In addition, the Discharger shall either provide evidence that the amount of financial assurance is still adequate or increase the amount of financial assurance by the appropriate amount. An increase may be necessary due to inflation, a change in regulatory requirements, and a change in the approved closure plan, or other unforeseen events.

ACE will continue to comply with the requirements of this permit after closure of the facility under Energy Commission jurisdiction. The RWQCB will ensure appropriate closure of the ash landfill. However, given the proposed change in operations, the RWQCB may require the owner to submit a revised RWD.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS COMPLIANCE

Staff has reviewed applicable LORS and the 1988 Commission Decision conditions of certification. The proposed decommissioning would be in compliance with all soil and water conditions of certification and all LORS.

The RWQCB Order 6-01-16 waste discharge requirements (WDRs) for the industrial and sanitary wastewater connection to the SVM AOL pipeline may require submittal of a revised RWD to the RWQCB.

Closure of the ash landfill would be completed once demolition of the facility has been completed (ACE, 2014). Submittal of a revised RWD to the RWQCB may be required. Closure would be conducted in compliance with the WDR issued under Order No. 6-00-92 by the RWQCB or as revised by the RWQCB.

CONCLUSIONS

Decommissioning of ACE would not have any significant impact to soil or water resources, and would be in compliance with all other applicable conditions of certification and LORS. No other new permits would be required. No other new conditions of certification would be required and no change to existing conditions of certification is required.

REFERENCES

ACE 2014. ACE Project Decommissioning Plan, November 25, 2014, California Energy Commission Docket No. 86-AFC-1C, Publication No. TN203376 (November 25, 2014).

ACE 2015. ACE Project Decommissioning Plan (86-AFC-1C), January 29, 2015 Site Visit - Questions And Responses, January 29, 2015, California Energy Commission Docket No. 86-AFC-1C (February 12, 2015).

CEC 1988. Kerr McGee Chemical Corporation's Argus Cogeneration Expansion Project, Commission Decision, Docket Number 86-AFC-1, Publication No. P800-88-001 (January 15, 1988).

RWQCB 2001. California Regional Water Quality Control Board, Lahontan Region, Board Order No. 6-01-16, WDID No. 6B368907001, Revised Waste Discharge Requirements for Ace Cogeneration Company; IMC Chemical, Inc., Ace Power Plant Industrial Wastewater Discharge (April 11, 2001).

RWQCB 2005a. California Regional Water Quality Control Board, Lahontan Region, Board Order No. R6V-2005-0024, WDID No. 6B368905004, Revised Waste Discharge Requirements for Searles Valley Minerals, U.S. Department Of The Interior - Bureau Of Land Management Searles Dry Lake Operations - Argus Plant (September 14, 2005).

RWQCB 2005b. California Regional Water Quality Control Board, Lahontan Region, Board Order No. 6-00-92, WDID No. 6B368907002 Amendment to Report of Waste Discharge, ACE Ash, Board Order No. 6-00-92, ACE Cogeneration Company, Trona, San Bernardino County (July 25, 2005).

ARGUS COGENERATION EXPANSION PROJECT (86-AFC-1C)
PETITION TO DECOMMISSION
Waste Management Staff Analysis
Ellie Townsend-Hough

INTRODUCTION

ACE Cogeneration Company, LP (ACC) submitted a petition for decommissioning the Argus Cogeneration Expansion (ACE) project. The ACE project is a non-operating coal-fired circulating fluidized bed power plant located on the northwest side of Searles Lake in Trona, San Bernardino County, California. Until recently, it supplied steam to Searles Valley Minerals (SVM) and electricity to Southern California Edison (SCE). The project was permitted by the California Energy Commission (Energy Commission) on January 8, 1988 and began commercial operation in January 1991. The ACE project is currently owned and operated by the ACE Cogeneration Company, LP (ACC), a partnership ultimately composed of ArcLight Capital Partners, DCO Energy, and Northern Star Generation (ACE, 2014a).

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS COMPLIANCE

Staff has reviewed the laws, ordinances, regulations, and standards (LORS) identified in the Energy Commission's Final Decision (Commission Decision) for ACE (CEC, 1988). Since publication of the Commission Decision, there has been a change in the applicable LORS in relation to Waste Management. Effective January 1, 2011, the California Green Building Standards Code (CALGreen) required all newly constructed buildings including low-rise residential and most non-residential commercial projects to develop a waste management plan and divert a minimum of 50 percent of the construction waste. This code also applies to demolition of existing structures occurring after January 1, 2011.

All new construction and demolition projects are required to submit a Construction Waste Management Plan to the County of San Bernardino, Department of Public Works, and the Construction Waste Plan includes a reporting requirement that information pertaining to commercial and industrial demolition waste be reported to the San Bernardino County Department of Public Works, Solid Waste Management Division (SWMD) for their review. The waste management plan consists of two parts which are incorporated into the Conditions of Approval (COA's) issued by SWMD. Part I requires projects to estimate the amount of tonnage to be disposed and diverted during construction. Part II requires projects to show what tonnage was actually diverted and disposed of. Disposal/diversion receipts or certifications are required as a part of that summary.

The petitioner is required to recycle and/or dispose of hazardous and non-hazardous wastes at facilities licensed or otherwise approved to accept the wastes. Because hazardous wastes would be produced during project demolition, the proposed modified project would be required to obtain, or maintain the existing, hazardous waste generator

identification number from U.S. Environmental Protection Agency (EPA). The proposed modified project would also be required to properly store, package, and label all hazardous waste; use only approved transporters; prepare hazardous waste manifests; keep detailed records; and appropriately train employees in accordance with state and federal hazardous waste management requirements.

AMENDMENT DESCRIPTION AND BACKGROUND

ACC is requesting approval of their Petition to the Energy Commission to Decommission the ACE project (ACE, 2014a).

ACC's existing Power Purchase Agreement with SCE expires in November 2015. Under California's greenhouse gas emissions requirements, the ACE will no longer be economically viable using coal as a fuel once the power purchase agreement expires. To reduce greenhouse gas emissions within the SCE service territory, ACC signed an agreement with SCE to terminate operation of the ACE project in December 2014. The plant ceased operations as of October 2, 2014, and has been placed in an outage condition to secure the facility and minimize environmental hazards. Prior to the outage, all remaining coal and limestone stored on-site was consumed. During the outage all of the remaining ash is being disposed of in the plant's ash land fill and the land fill is being closed except for a small portion to be used for later disposal of the refractory lining; draining and either returning or disposing all fluids including ammonia for the air emission control system; de-energizing the plant; and isolating the appropriate plant interconnections to off-site services (ACE, 2014a).

On November 24, 2014, ACC reached an agreement to transfer the ground lease for the ACE site and sell some of the equipment and structures, as well as the property occupied by the ash landfill, to Sabco Inc. (Sabco), a California corporation operating as a general contractor. While ACC intends to sell the landfill site, lease, and related facilities, ACC will continue to hold the Energy Commission license and be responsible for compliance with the Energy Commission's conditions of certification until decommissioning is completed and ACC surrenders the license to the Energy Commission. ACC will be responsible for implementing the decommissioning plan and complying with any conditions required by the CEC until decommissioning is completed and the license is surrendered. Based on the intended future use of the site, Sabco will obtain all required land use and environmental permits from the appropriate local or state agencies (ACE, 2014a). The final contractual transfer will not occur until the Energy Commission approves the final closure.

ANALYSIS

The technical scope of this analysis encompasses solid wastes existing onsite and those to be generated during facility demolition. Management and discharge of wastewater is addressed in the **Soil and Water Resources** section of this document. Additional information related to waste management is also being covered in the **Worker Safety** and **Hazardous Materials Management** sections of this document.

The Energy Commission staff's objectives in conducting this waste management analysis are to ensure that:

- The management of project wastes would be in compliance with all applicable laws, ordinances, regulations, and standards (LORS).
- The disposal of project wastes would not result in significant adverse impacts to existing waste disposal facilities.
- Upon project completion, the site is managed in such a way that project wastes and waste constituents would not pose a significant risk to humans or the environment.

The ACE power plant is located on an 89.6-acre parcel in Trona, California. The coal handling area, limestone unloading area, power block, offices, maintenance shops, support and utilities areas and water tanks are in the south and southwest portion of the site. The cooling tower, spare equipment, and lay-down area are north of the power block. Northwest of the cooling tower are large water tanks. Located to the southeast immediately adjacent to the plant is occupied by SVM's Argus mineral processing facility. ACE ash disposal is located northwest of the site on 65 acres of land. West of the power plant is SCE's existing McGen electrical switchyard.

The environmental impact aspects of the proposed amendment have been evaluated in accordance with the CEQA and current LORS. The power plant and other facilities would be demolished and removed and the license terminated when the Decommissioning Plan is approved by the California Energy Commission. Decommissioning of ACE involves selling easily removed tools and equipment of no interest to Sabco dismantling/demolishing the power plant and any other facilities not retained by Sabco recycling components and materials to the extent possible, hauling off and disposing of the remaining waste, remediating portions of the site if necessary, and cleaning-up the site. The demolition and site clean-up activities will take approximately six months. Following decommissioning, any equipment and facilities shared with SVM and not to be used by Sabco, such as the coal unloading facility and storage barn, will be turned over to SVM according to separate agreements.

DEMOLITION

ACC would demolish and remove the power plant and all other facilities not purchased by Sabco or jointly owned by SVM. The material generated from the demolition would be disposed of in a non-hazardous or hazardous landfill, and recyclable material will be recycled to the greatest extent possible. Hazardous or contaminated areas on the ACE site would be cleaned up. All remaining coal and limestone on site has been removed. All remaining ash was disposed in the landfill.

Wastes generated during demolition, include sanitary wastes, scrap wood, concrete, steel, glass, plastic, paper, oily rags and empty containers. Sanitary wastes would be collected in portable, self-contained chemical toilets and pumped periodically for disposal at an appropriate facility. Please see the **Soil and Water Resources** section of this document for more information on the management of project wastewater. Waste that cannot be recycled would be disposed of in a Class III landfill.

ACC would be required to submit to the SWMD a Construction Waste Management Plan. The petitioner would be required to recycle in accordance with Title 24, CCR, Part 11 2010 Green Building Standards Code (CALGreen) to divert waste from landfills. Staff proposes to add Condition of Certification **WASTE-11** to ensure compliance with the County requirement and State law.

Any hazardous waste generated during decommissioning would likely include asbestos debris, heavy metal dust, used oils, universal wastes, solvents, and empty hazardous waste material containers. Universal wastes are hazardous wastes that contain mercury, lead, cadmium, copper, and other substances hazardous to human and environmental health. Examples of universal wastes are batteries, fluorescent tubes, and some electronic devices. The hazardous waste would be disposed in a Class I landfill. A hazardous waste generator number is required to dispose of waste in a Class I landfill. The project owner maintains an existing EPA identification number and Hazardous Waste Generator permit from the San Bernardino County Fire Department.

IMPACT ON EXISTING WASTE FACILITIES

The amended ACE facility would generate nonhazardous solid waste that would add to the total waste generated in San Bernardino County, California. The proposed project would generate 6,000 tons of solid waste (13,333 cubic yards[5]) of solid waste during demolition (ACE 2014a page 5-24). Nonhazardous waste would be disposed in a California Class III landfill.

Total solid waste disposal in San Bernardino County in 2013, was 1,471,710 tons6. The remaining capacity for the combined five San Bernardino County landfills listed in the Decommissioning Plan is approximately 15.8 million cubic yards (ACE 2014a Table 5.5-4). The total amount of non-hazardous waste expected to be generated from project demolition, would contribute less than one percent of the available landfill capacity. Staff concludes that disposal of the solid wastes generated by ACE demolition could occur without significantly impacting the capacity or remaining life of any of these five facilities.

Waste recycling would be employed wherever practical. Sufficient capacity is available at several treatment and disposal facilities to handle the volumes of waste that would be generated by the project.

The Clean Harbors Buttonwillow Class I Landfill located in Buttonwillow California has approximately 12.8 million cubic yards of remaining capacity. Hazardous waste, such as solvents, used oil, and hazardous material containers generated during decommissioning that can be recycled would be returned to vendors. Staff has completed site visits at the facility, and reviewed Table 5.5-3 of the Petition, and believes that hazardous waste is negligible and that there is sufficient capacity at the Buttonwillow landfill to dispose of hazardous waste.

[5] The volume estimates (cubic yards) for solid/non-hazardous waste are staff generated numbers based on a conversion factor of approximately 906 pounds per cubic yard (0.45 tons per cubic yard) for construction waste primarily steel http://www.calrecycle.ca.gov/lgcentral/library/dsg/apndxi.html.

[6] http://www.calrecycle.ca.gov/SWFacilities/Landfills/Tonnages/.

ASH LANDFILLS

The ACE ash disposal site consists of five ash landfill cells. The ash disposal sites consist of all bottom ash from the circulating fluidized bed (CFB), and unsold fly ash. The ash is combined with water resulting in chemical stabilization and solidification of the fly ash and bottom ash mixture. ACE had samples of the ash analyzed by a certified laboratory and determined that the ash is considered non-hazardous by the Lahontan Regional Water Quality Control Board (ACE 2014a). Cells 1, 2, and 4 have been closed. Cell 3 is filled and capped but not stabilized, this would occur when Cell 5 is closed. The final portion of Cell 5 would be filled with inert refractory/boiler material following demolition.

The ash landfill would be closed in accordance with RWQCB's Waste Discharge Requirements, Order No. 6-00-92 (RWQCB, 2001). Order 6-00-92 requires the following (RWQCB, 2005):

- Update of the Preliminary Closure and Post-Closure Maintenance Plan (CPCMP) when there is a substantial change in operations.
- Submittal of a final CPCMP least 180 days prior to beginning any partial or final closure activities or at least 120 days prior to discontinuing the use of the site for waste treatment, storage or disposal, whichever is greater. The final CPCMP shall be prepared by or under the supervision of either a Civil Engineer or a Certified Engineering Geologist registered in the State of California.
- The Discharger shall provide documentation that financial assurance has been developed and secured for closure and subsequent maintenance of the project site. Evidence shall include the total amount of money available in the fund developed by the Discharger. In addition, the Discharger shall either provide evidence that the amount of financial assurance is still adequate or increase the amount of financial assurance by the appropriate amount. An increase may be necessary due to inflation, a change in regulatory requirements, a change in the approved closure plan, or other unforeseen events.

CONCLUSIONS

The proposed ACE closure and demolition would not have a significant effect on the environment or require any change to existing conditions of certification related to waste management. However, staff recommends adding proposed Condition of Certification **WASTE-11** to include recent changes in State regulatory requirements for recycling of construction and demolition debris to ensure no impacts to existing landfills.

Staff concludes that management of the waste generated during demolition, and decommissioning of ACE would not result in any significant adverse impacts, and would comply with applicable LORS, if the waste management practices and mitigation measures proposed in the Commission Decision and staff's proposed conditions of certification are implemented.

PROPOSED CONDITION OF CERTIFICATION

Demolition of ACE would generate both nonhazardous and hazardous wastes. To facilitate proper management of project demolition wastes, staff proposes Condition of Certification **WASTE-11** requiring the project owner to develop a Construction Waste Management Plan. All non-hazardous wastes would be recycled to the extent possible in accordance with Title 24, CCR, Part 11 2010 Green Building Standards Code (CALGreen) to divert waste from landfills. **WASTE-11** is shown in **bold and underlined.**

WASTE-11 The project owner shall prepare a Construction Waste Management Plan for demolition wastes generated during decommissioning of the facility and shall submit the plan to the San Bernardino County Department of Public Works, Solid Waste Management Division (SWMD) and CPM for review. The plan shall contain, at a minimum, the following:

- **a description of all demolition waste streams, including projections of frequency, amounts generated, and hazard classifications; and**
- **management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans.**

During demolition, the project owner shall require contracted waste and/or refuse haulers to document each waste load transferred from the demolition site to a disposal site and/or recycling center. The contractor shall specifically identify permitted solid waste facilities or recycling centers. The project owner shall also provide copies of documentation demonstrating the demolition wastes have been disposed of in accordance with the Construction Waste Management Plan.

Verification: The project owner shall submit the Construction Waste Management Plan to the SWMD and the CPM for approval no less than 30 days prior to the initiation of demolition activities at the site. The project owner shall identify permitted solid waste facilities or recycling centers that receive plant waste and maintain copies of weigh tickets and manifests showing the type and volume of waste disposed and submit documentation to SWMD and the CPM demonstrating the demolition wastes have been disposed of in accordance with the Construction Waste Management Plan.

REFERENCES

AECOM 2012. AECOM. Phase I Environmental Site Assessment of ACE Cogeneration Facilities Trona and Panamint Valley, California, March 2012.

ACE 2014a. ACE Project Decommissioning Plan, November 25, 2014, California Energy Commission Docket No. 86-AFC-1C, Publication No. TN203376 (November 25, 2014).

CEC 1988. Kerr McGee Chemical Corporation's Argus Cogeneration Expansion Project, Commission Decision, Docket Number 86-AFC-1, Publication No. P800-88-001 (January 15, 1988).

RWQCB 2001. California Regional Water Quality Control Board, Lahontan Region, Board Order No. 6-01-16, WDID No. 6B368907001, Revised Waste Discharge Requirements for Ace Cogeneration Company; IMC Chemical, Inc., Ace Power Plant Industrial Wastewater Discharge (April 11, 2001).

RWQCB 2005. California Regional Water Quality Control Board, Lahontan Region, Board Order No. 6-00-92, WDID No. 6B368907002 Amendment to Report of Waste Discharge, ACE Ash, Board Order No. 6-00-92, ACE Cogeneration Company, Trona,, San Bernardino County (July 25, 2005).

ARGUS COGENERATION EXPANSION PROJECT (86-AFC-1C)
PETITION TO DECOMMISSION
Worker Safety Staff Analysis
Brett Fooks, PE

SUMMARY OF CONCLUSIONS

The ACE Cogeneration Company (ACC) has submitted a Decommissioning Plan to shut down the Argus Cogeneration Expansion (ACE) project and remove some project components. Staff has reviewed the Decommissioning Plan and determines that the decommissioning of ACE would not result in any significant adverse worker safety or fire protection impacts. Staff recommends the implementation of the existing worker safety and fire protection conditions combined with the three new Conditions of Certification proposed by staff to ensure the protection of worker safety and health. Staff concludes that the project decommissioning would incorporate sufficient measures to ensure adequate levels of industrial safety, comply with applicable laws, ordinances, regulations and standards (LORS) and that the proposed decommissioning would not have significant impacts on local fire protection services.

LAWS, ORDINANCES, REGULATIONS AND STANDARDS (LORS) COMPLIANCE

The original analysis conducted did not cover the decommissioning of the ACE plant and surrounding ancillary buildings. The following LORS are applicable to the demolition activities of the ACE plant.

Applicable LORS	Description
Federal	
Title 29 U.S. Code (USC) section 651 et seq (Occupational Safety and Health Act of 1970)	This act mandates safety requirements in the workplace with the purpose of "[assuring] so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources" (29 USC §651).
Title 29 Code of Federal Regulation (CFR) sections 1910.1 to 1910.1500 (Occupational Safety and Health Administration Safety and Health Regulations)	These sections define the procedures for promulgating regulations and conducting inspections to implement and enforce safety and health procedures to protect workers, particularly in the industrial sector.
29 CFR sections 1952.170 to 1952.175	These sections provide federal approval of California's plan for enforcement of its own Safety and Health requirements, in lieu of most of the federal requirements found in 29 CFR sections 1910.1 to 1910.1500.
State	
Title 8 California Code of Regulations (Cal Code Regs.) all applicable sections (Cal/OSHA regulations)	These sections require that all employers follow these regulations as they pertain to the work involved. This includes regulations pertaining to safety matters during construction, commissioning, and operations of power plants, as well as safety around electrical components, fire safety, and hazardous materials use, storage, and handling.
California Building Standards	This section incorporates the current edition of the International

Applicable LORS	Description
Code, 2013 edition. 24 Cal Code Regs. section 3, et seq.	Building Code.
Local (or locally enforced)	
San Bernardino County Code of Ordinances, Title 2, Division 3	The County of San Bernardino Ordinances that covers Fire Protection, Explosives and Hazardous Materials.

ANALYSIS

WORKER SAFETY

Industrial environments are potentially dangerous during the demolition of facilities. Workers involved in the proposed demolition of the ACE power plant would be exposed to loud noises, moving equipment, trenches, and confined space ingress and egress problems. The workers may experience falls, trips, burns, lacerations, and numerous other injuries. They have the potential to be exposed to falling equipment, materials or structures, chemical spills, hazardous waste, fires, explosions, and electrical sparks and electrocution. It is important for ACE to have well-defined policies and procedures, training, and hazard recognition and control during the demolition of facilities to minimize such hazards and protect workers. If the facility demolition complies with all LORS and conditions of certification, workers would be adequately protected from health and safety hazards.

Staff's proposed Condition of Certification would require a Safety and Health Program to be prepared by the project owner to minimize worker hazards during demolition. Staff uses the phrase "Safety and Health Program" to refer to the measures that would be taken to ensure compliance with the applicable LORS during the demolition phase of the project.

Demolition Safety and Health Program

Workers at the ACE project would be exposed to hazards typical of demolition of a coal-fired power plant. During demolition one set of worker safety policies and procedures would be followed.

Construction Safety Orders (applicable to demolition) are published at Title 8 California Code of Regulations sections 1502, et seq. These requirements are promulgated by Cal/OSHA and would be applicable to the demolition phase of the project. The Demolition Safety and Health Program would include the following:

- Demolition Injury and Illness Prevention Program (8 Cal Code Regs. §1509)
- Demolition Fire Prevention Plan (8 Cal Code Regs. §1920)
- Personal Protective Equipment Program (8 Cal Code Regs. §§1514-1522)
- Demolition and Emergency Action Program and Plan
- Demolition Fire Prevention Plan (8 Cal Code Regs 3221)

Additional programs under General Industry Safety Orders (8 Cal Code Regs. §§3200 to 6184), Electrical Safety Orders (8 Cal Code Regs. §§2299 to 2974) and Unfired Pressure Vessel Safety Orders (8 Cal Code Regs. §§450 to 544) would be established and implemented and would address many important worker safety and health issues. It is not Staff's intent to list them all but some of the newer and revised Cal-OSHA regulations address such matters as excavation and trenching, employee exposure monitoring, hearing conservation, ergonomics, heat and cold stress monitoring and control, confined space entry, and Lock Out/Tag Out of dangerous operations and electrical circuits. Prior to the start of demolition, detailed programs and plans would be provided to the Energy Commission Compliance Project Manager (CPM) and to the San Bernardino County Fire Department (SBCFD) pursuant to proposed Condition of Certification **WORKER SAFETY-1**.

Additional Mitigation Measures

Protecting construction workers from injury and disease is among the greatest challenges in occupational safety and health. The following facts are reported by the National Institute for Occupational Safety and Health (NIOSH):

- More than 7 million persons work in the construction industry, representing 6 percent of the labor force. Approximately 1.5 million of these workers are self-employed.
- Of approximately 600,000 construction companies, 90 percent employ fewer than 20 workers. Few have formal safety and health programs.
- From 1980 to 1993, an average of 1,079 construction workers were killed on the job each year—more fatal injuries than in any other industry.
- Falls caused 3,859 construction worker fatalities (25.6 percent) between 1980 and 1993.
- Construction injuries account for 15 percent of workers' compensation costs.
- Assuring safety and health in construction is complex, involving short-term work sites, changing hazards, and multiple operations and crews working in close proximity.
- In 1990, Congress directed NIOSH to undertake research and training to reduce diseases and injuries among construction workers in the United States. Under this mandate, NIOSH funds both intramural and extramural research projects.

The hazards associated with the construction industry are thus well documented. These hazards increase in complexity in the multi-employer worksites typical of large, complex, industrial-type projects such as power plants. In order to reduce and/or eliminate these hazards, it has become standard industry practice to hire a Construction/Demolition Safety Supervisor to ensure a safe and healthful environment for all personnel. That this standard practice has reduced and/or eliminated hazards has been evident in the audits staff recently conducted of power plants under construction. The federal Occupational Safety and Health Administration (OSHA) has also entered into strategic alliances with several professional and trade organizations to promote and recognize safety professionals trained as Construction Safety Supervisors, Construction Health and

Safety Officers, and other professional designations. The goal of these partnerships is to encourage construction subcontractors in four areas:

- to improve their safety and health performance;
- to assist them in striving for the elimination of the four hazards (falls, electrical, caught in/between and struck-by hazards), which account for the majority of fatalities and injuries in this industry and have been the focus of targeted OSHA inspections;
- to prevent serious accidents in the construction industry through implementation of enhanced safety and health programs and increased employee training; and
- to recognize those subcontractors with exemplary safety and health programs.

To date, there are no OSHA or Cal/OSHA requirements that an employer hire or provide for a Construction/Demolition Safety Officer. OSHA and Cal/OSHA regulations do, however, require that safety be provided by an employer and the term *Competent Person* is used in many OSHA and Cal/OSHA standards, documents, and directives. A Competent Person is usually defined by OSHA as an individual who, by way of training and/or experience, is knowledgeable of standards, is capable of identifying workplace hazards relating to the specific operations, is designated by the employer, and has authority to take appropriate action. Proposed Condition of Certification **WORKER SAFETY-2** requires the project owner to designate and provide for a power plant site Construction/Demolition Safety Supervisor which serves as the Competent Person during demolition activities as required by OSHA and Cal/OSHA.

FIRE PROTECTION

During demolition of the ACE power plant, there is the potential for both small fires and major structural fires. Electrical sparks, combustion of fuel oil, natural gas or flammable liquids, explosions, and over-heated equipment may cause small fires. Major structural fires may develop from uncontrolled fires or be caused by large explosions of natural gas or other flammable gasses or liquids. Compliance with all LORS would reduce the risk associated with such hazards to insignificant levels.

During the demolition of the site, fire protection would be provided by the onsite fire protection systems for as long as buildings remained occupied. The permanent facility fire suppression system would remain in service as long as possible (ACE 2014a). After the removal of the permanent fire suppression system the project would rely on fire extinguishers and other portable firefighting equipment made available onsite. These fire extinguishers would be maintained for the full decommissioning duration, in accordance with Cal/OSHA requirements pertinent to the shutdown of an industrial facility. In the event of a major fire, the SBCFD would be relied upon for a sustained response.

Staff reviewed the information provided in the ACE Decommissioning Plan regarding available fire protection services and equipment (ACE 2014a) to determine if the project would adequately protect workers and if it would affect the fire protection services in the area(ACE 2014a). Staff concludes that the information in the ACE Decommissioning

Plan indicates that the project intends to meet the fire protection and suppression requirements of all applicable LORS.

Emergency Medical Services Response

Staff conducted a statewide survey in 2005 to determine the frequency of Emergency Medical Services (EMS) response and off-site fire-fighter response for power plants in California. The purpose of the analysis was to determine what impact, if any, power plants may have on local emergency services. Staff concluded that incidents at power plants that require fire or EMS response are infrequent and represent an insignificant impact on the local fire departments, except for rare instances where a rural fire department has mostly volunteer fire-fighting staff. However, staff has determined that the potential for both work-related and non-work-related heart attacks exists at power plants. In fact, staff's research on the frequency of EMS response to power plants shows that many of the responses for cardiac emergencies involved non-work-related incidences, including those involving visitors. The need for prompt response within a few minutes is well documented in the medical literature.

Staff believes that the quickest medical intervention can only be achieved with the use of an on-site automatic external defibrillator (AED); the response from an off-site provider would take longer regardless of the provider location. This fact is also well documented and serves as the basis for many private and public locations (e.g., airports, factories, government buildings) maintaining on-site cardiac defibrillation devices. Therefore, staff concludes that, with the advent of modern cost-effective cardiac defibrillation devices, it is proper in a power plant environment to maintain such a device on site in order to treat cardiac arrhythmias resulting from industrial accidents or other non-work related causes. To address this vital emergency medical need, the Energy Commission requires that an AED be present on all Energy Commission licensed power plant during construction and operations. Therefore, staff proposes Condition of Certification **WORKER SAFETY-3** which would require that a certain number of AEDs be on the site during demolition.

CONCLUSIONS AND RECOMMENDATIONS

Staff has reviewed the decommissioning plan for the ACE project and concluded that potential impacts from the decommissioning would be fully mitigated by continued compliance with the original project conditions of certification combined with implementation of staff's proposed new Conditions of Certification **WORKER SAFETY-1**, **WORKER SAFETY-2**, and **WORKER SAFETY-3** which are in **bold and underlined** below. **WORKER SAFETY-1** would require the preparation and implementation of a Construction/Demolition Safety and Health Program designed to minimize worker hazards and to ensure compliance with the applicable LORS during the demolition of the project. **WORKER SAFETY-2** would address the need to have a Construction/Demolition Safety Supervisor on the site at all times during the demolition. Proposed **WORKER SAFETY-3** would require that AEDs be placed on the site during demolition.

PROPOSED NEW CONDITIONS OF CERTIFICATION

WORKER SAFETY-1 The project owner shall submit to the Compliance Project Manager (CPM) a copy of the project Construction/Demolition Safety and Health Program containing the following:

1. **a Construction/Demolition Personal Protective Equipment Program;**
2. **a Construction/Demolition Exposure Monitoring Program;**
3. **a Construction/Demolition Injury and Illness Prevention Program;**
4. **a Construction/Demolition Emergency Action Plan;**
5. **a Construction/Demolition Fire Prevention Plan; and**
6. **a Construction/Demolition Explosives Safety Plan**

The Personal Protective Equipment Program, the Exposure Monitoring Program, and the Injury and Illness Prevention Program shall be submitted to the CPM for review and approval concerning compliance of the program with all applicable safety orders. The Construction/ Demolition Emergency Action Plan, the Construction/Demolition Fire Prevention Plan, and the Construction/Demolition Explosives Plan shall be submitted to the Fire Department for review and comment prior to submittal to the CPM for approval.

Verification: At least thirty (30) days prior to the start of demolition, the project owner shall submit to the CPM for review and approval a copy of the project Demolition Safety and Health Program. The project owner shall provide a copy of a letter to the CPM from the Fire Department stating the fire department's comments on the Demolition Fire Prevention Plan and Emergency Action Plan.

WORKER SAFETY-2 The project owner shall provide a site Construction/Demolition Safety Supervisor who, by way of training and/or experience, are knowledgeable of tank demolition, power plant deconstruction activities, and relevant laws, ordinances, regulations, and standards; are capable of identifying workplace hazards relating to the demolition and/or construction activities; and has authority to take appropriate action to assure compliance and mitigate hazards. The Construction/Demolition Safety Supervisor shall:

1. **have overall authority for coordination and implementation of all occupational safety and health practices, policies, and programs;**
2. **assure that the safety program for the project complies with Cal/OSHA and federal regulations related to power plant projects;**
3. **assure that all demolition workers and supervisors receive adequate safety training;**
4. **complete accident and safety-related incident investigations and emergency response reports for injuries and inform the CPM of safety-related incidents; and**
5. **assure that all the plans identified in Conditions of Certification WORKER SAFETY-1 are implemented.**

Verification: **At least thirty (30) days prior to the start of demolition, the project owner shall submit to the CPM the name and contact information for the Construction/Demolition Safety Supervisor. The contact information of any replacement DSS shall be submitted to the CPM within one business day. The Construction/Demolition Safety Supervisor shall submit a monthly safety inspection report to the CPM to include a:**

1. **record of all employees trained for that month (all records shall be kept on site for the duration of the project);**
2. **summary report of safety management actions and safety-related incidents that occurred during the month;**
3. **report of any continuing or unresolved situations and incidents that may pose danger to life or health; and**
4. **report of accidents and injuries that occurred during the month.**

WORKER SAFETY-3 The project owner shall ensure that a portable automatic external defibrillator (AED) is located on site during demolition and removal of the ACE power plant and shall implement a program to ensure that workers are properly trained in its use and that the equipment is properly maintained and functioning at all times. During demolition, the following persons shall be trained in its use and shall be on site whenever the workers that they supervise are on site: the Construction/Demolition Project Manager or delegate, the Construction/ Demolition Safety Supervisor or delegate, and all shift foremen.

Verification: **At least thirty (30) days prior to the start of demolition, the project owner shall submit to the CPM a letter stating that a portable automatic external defibrillator (AED) will exist on site and a copy of the training and maintenance program for review and approval.**

REFERENCES

ACE 2014a – Argus Cogeneration Expansion Project (TN #203376) Petition for Decommissioning, dated November 25, 2014. Submitted to CEC/Docket Unit on November 25, 2014.