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Annual Compliance Report

*As required by California Energy Commission:
City of Roseville, Roseville Electric Utility-Roseville Energy Park
(03-AFC-1)*

07/15/2022

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City of Roseville – Roseville Energy Park
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I. Compliance Matrix

a) Annual Compliance Reporting

Technical Area	Condition Number	Verification Action	Date Required
Air Quality	AQ-42	NOx and VOC Emissions	June-August
Air Quality	AQ-68	Cooling Tower Lab Analysis	June-August
Air Quality	AQ-SC12	Off-Road Equipment	June-August
Biological Resources	BIO-2	Designated Biologist	June-August
Biological Resources	BIO-4	WEAP Training	June-August
General Compliance Condition	COM-5	Compliance Matrix	June-August
General Compliance Condition	COM-7	Annual Compliance Report Submittal	June-August
General Compliance Condition	COM-13	On-Site Contingency Plan Review	June-August
Hazardous Materials Management	HAZ-1	Hazardous Materials at the Facility	June-August
Soil and Water Resources	Soil & Water-7	Water Use Summary	June-August
Soil and Water Resources	Soil & Water-8	Status Report on ZLD	June-August
Traffic and Transportation	TRANS-4	Permitting for Hazardous Material Transportation	June-August
Visual Resources	VIS-2	Cooling Tower Operation	June-August
Visual Resources	VIS-4	Surface Treatment Maintenance	June-August
Visual Resources	VIS-5	Landscape Screening	June-August
Waste Management	WASTE-5	Waste Management Plan	June-August

b) As Required Compliance Reporting

Technical Area	Condition Number	Verification Action	Date Required
Air Quality	AQ-22	NOx Emissions Records	As Requested
Air Quality	AQ-30	Annual Source Test Protocol for NOx	30 days Prior
Air Quality	AQ-30	Annual Source Test Results for NOx	Within 60 Days of Test
Air Quality	AQ-31	Gas Turbine Operating Log	As Requested
Air Quality	AQ-35	All Permit Records Maintained for 5 years	As Requested
Air Quality	AQ-44	Annual Performance Test Protocol	30 Days Prior
Air Quality	AQ-44	Annual Performance Test Results	Within 60 Days of Test
Air Quality	AQ-45	Cold Start NOx and CO Emissions Performance Test Protocol	Every 7 Years after Commissioning - Results within 60 Days of Test
Air Quality	AQ-45	Cold Start NOx and CO Emissions Performance Test Results	Every 7 Years after Commissioning - Protocol 30 Days Prior
Air Quality	AQ-46	Annual Performance Test Methods Protocol	30 Days Prior
Air Quality	AQ-46	Annual Performance Test Methods Results	Within 60 Days of Test
Air Quality	AQ-49	Annual Particulate Matter Performance Test Protocol	30 Days Prior
Air Quality	AQ-49	Annual Particulate Matter Performance Test Results	Within 60 Days of Test
Air Quality	AQ-50	Annual SOx Performance Test Protocol	30 Days Prior
Air Quality	AQ-50	Annual SOx Performance Test Results	Within 60 Days of Test
Air Quality	AQ-51	NH3 Slip Exceedance	Within 10 Days of Exceedance
Air Quality	AQ-51	Plan for Replacement or Reconditioning of Catalyst	30 Days Prior to Scheduled Date
Air Quality	AQ-53	NOx Excursions	Within 5 Working Days of Occurrence
Air Quality	AQ-66	No Hexavalent Chromium Compounds Added to Cooling Tower	Records Available as Requested
Air Quality	AQ-110	Portable Equipment	Site Available for Inspection

c) Quarterly Compliance Reporting

Technical Area	Condition Number	Verification Action	Date Required
Air Quality	AQ-15	Operational Status of SCR and Oxidation Catalyst	April 30, July 30, October 30, January 30
Air Quality	AQ-20	Sulfur Content of Natural Gas	April 30, July 30, October 30, January 30
Air Quality	AQ-21	Start-ups and Shut-down	April 30, July 30, October 30, January 30
Air Quality	AQ-32	Hourly, Daily, and Quarterly NOx and CO Emissions	April 30, July 30, October 30, January 30
Air Quality	AQ-33	Hourly, Daily, and Quarterly SOx Emissions	April 30, July 30, October 30, January 30
Air Quality	AQ-34	Invalid Data and CEMS Downtime	April 30, July 30, October 30, January 30
Air Quality	AQ-36	Upset Breakdown Reports	April 30, July 30, October 30, January 30
Air Quality	AQ-37	Notices of Non-Compliance	April 30, July 30, October 30, January 30
Air Quality	AQ-38	Upset Breakdown Corrections	April 30, July 30, October 30, January 30
Air Quality	AQ-39	CEMS Audits	April 30, July 30, October 30, January 30
Air Quality	AQ-40	CEMS QA Failures	April 30, July 30, October 30, January 30
Air Quality	AQ-41	Excess Emissions Reports	April 30, July 30, October 30, January 30
Air Quality	AQ-47	Emissions Nuisances	April 30, July 30, October 30, January 30
Air Quality	AQ-48	Opacity Violations	April 30, July 30, October 30, January 30
Air Quality	AQ-51	Hourly and 24 hour NH3 Slip Concentrations	April 30, July 30, October 30, January 30
Air Quality	AQ-55	NOx and CO Emissions During Start-ups and Shut-downs	April 30, July 30, October 30, January 30
Air Quality	AQ-57	LB/Hr Emissions Except During Start-ups and Shut-downs	April 30, July 30, October 30, January 30
Air Quality	AQ-59	Daily Emission Limits	April 30, July 30, October 30, January 30
Air Quality	AQ-60	Quarterly Emission Limits	April 30, July 30, October 30, January 30
Air Quality	AQ-63	Annual Emission Limits	April 30, July 30, October 30, January 30
Air Quality	AQ-69	Nuisance Complaints	April 30, July 30, October 30, January 30
Air Quality	AQ-70	Cooling Tower Emissions	April 30, July 30, October 30, January 30

II. Project Operating Status

The Roseville Energy Park (REP) operated throughout the majority of the 2021 calendar year per the design basis and successfully completed a Siemens A+ turbine upgrade to both combustion turbines.

III. Required Conditions

The required conditions are included in the Compliance Matrix within this Annual Report.

IV. Post-Certificate Changes

REP submitted a post certification petition with the California Energy Commission (CEC) on January 5, 2021.

The petition requested:

- The installation and operation of a Siemens A+ turbine upgrade to both combustion turbines
- Piezo-actuated valves for each burner to allow for a more stable combustion process and a more balanced combustion spread (Low Load Turndown)
- A control system upgrade to allow the existing turbine governor to automatically take corrective actions in case of combustion instability in the combustion chamber.

The PCAPCD issued Authorities to Construct/Temporary Permits to Operate on February 11, 2021. In March of 2021, the CEC approved Roseville's post certification petition. The modifications were successfully completed in 2021.

V. Submittal Deadline Resolutions

Pursuant to COM-7, REP will submit its annual report no later than July 30th. This date is 30+ days later than in past years but mutually agreed upon due to the State of California COVID-19 and possible staff shortages.

VI. New Filings

REP filed a post certification petition on January 5, 2021 (please see IV above).

VII. Projected Compliance Activities

In addition to the A+ Siemens upgrade completed in 2021, REP has planned and budgeted for the following compliance activities:

- Maintaining compliant operations of the facility through the purchase and use of required consumables
- Planning of prudent preventative maintenance tasks
- Compliance training of site personnel
- Performing required testing i.e. RATA and Source Testing
- Evaluating critical spares in stock and updating lists based on industry best management practices
- Planning and budgeting for timely compliance report submittals.

VIII. Compliance File Additions

Visual Condition of Certification (VIS-5) has been added to this Annual Report as the Blue Oaks / Phillip Road extensions have been completed. An RFP was drafted and sent to our City Attorney's Office for review. Simultaneously, or when we submit the landscaping plan to the City of Roseville Planning Department, we will also submit to the Compliance Project Manager (CPM) for review and approval. Commencement of the landscape installation will begin after the CPM approves the plan. We anticipate completion by FY24.

IX. Contingency Plan Evaluation

After reviewing the On-Site Contingency Plan, it has been determined that the measures outlined in the plan are sufficient for an unplanned facility closure. At this time, the state of the facility has not changed since the CEC's initial review of the plan.

X. Complaint, NOV, Official Warnings, and Citations List with Resolutions

No complaints, NOV's, Official warnings or citations for calendar year 2021.

XI. Appendix: Specific Conditions Operating Data

a) AQ-42 – Combustion Turbine #1

Tons 12 Month Rolling Summary

CT1

From: 01/01/2021 00:00 To: 12/31/2021 23:59 Facility Name: ROSEVILLE ENERGY
Generated: 06/09/2022 08:46 Location: Roseville, CA



* = Excess Emission

Date	Unit CT1 CO, Ton 1 Day(s)		Unit CT1 NOx, Ton 1 Day(s)		Unit CT1 PM10, Ton 1 Day(s)		Unit CT1 SO2, Ton 1 Day(s)		Unit CT1 VOC, Ton 1 Day(s)	
	Sum	Rolling Sum	Sum	Rolling Sum	Sum	Rolling Sum	Sum	Rolling Sum	Sum	Rolling Sum
Jan 2021	0.0375	0.9489	0.0714	3.2062	0.0127	0.6038	0.0064	0.3104	0.0212	1.0063
Feb 2021	0.0000	0.8771	0.0000	3.1294	0.0000	0.5904	0.0000	0.3037	0.0000	0.9839
Mar 2021	0.3199	1.0970	0.0999	3.2293	0.0120	0.6024	0.0063	0.3100	0.0202	1.0041
Apr 2021	0.1494	1.2464	0.3143	3.5436	0.0642	0.6666	0.0337	0.3437	0.1068	1.1109
May 2021	0.1699	1.3691	0.1456	3.6424	0.0247	0.6836	0.0129	0.3527	0.0411	1.1391
Jun 2021	0.3278	1.6360	0.7990	4.2228	0.1726	0.8148	0.0512	0.4225	0.2874	1.3573
Jul 2021	0.2684	1.7710	0.8004	4.5808	0.1725	0.9043	0.0916	0.4708	0.2879	1.5069
Aug 2021	0.2950	1.8558	0.8553	4.5281	0.1859	0.9174	0.0987	0.4808	0.3109	1.5301
Sep 2021	0.2515	1.9246	0.7605	4.4717	0.1639	0.9263	0.0885	0.4694	0.2730	1.5448
Oct 2021	0.1831	1.9281	0.5889	4.4438	0.1260	0.9351	0.0681	0.4977	0.2098	1.5593
Nov 2021	0.1914	2.1195	0.6306	5.0744	0.1380	1.0731	0.0763	0.5740	0.2295	1.7888
Dec 2021	0.2549	2.3488	0.7640	5.8299	0.1662	1.2387	0.0878	0.6615	0.2767	2.0645
Sum/Avg	2.3488		5.8299		1.2387		0.6615		2.0645	
Limit Value										

CT1_Tons_12MonthRollingSummary

1

b) AQ-42 – Combustion Turbine #2

Tons 12 Month Rolling Summary CT2

From: 01/01/2021 00:00 **To:** 12/31/2021 23:59 **Facility Name:** ROSEVILLE ENERGY
Generated: 06/09/2022 13:50 **Location:** Roseville, CA



* = Excess Emission

Date	Unit CT2 CO, Ton 1 Day(s)		Unit CT2 NOX, Ton 1 Day(s)		Unit CT2 PM10, Ton 1 Day(s)		Unit CT2 SO2, Ton 1 Day(s)		Unit CT2 VOC, Ton 1 Day(s)	
	Sum	Rolling Sum	Sum	Rolling Sum	Sum	Rolling Sum	Sum	Rolling Sum	Sum	Rolling Sum
Jan 2021	0.0000	1.3998	0.0000	4.2931	0.0000	0.8098	0.0000	0.4115	0.0000	1.3497
Feb 2021	0.1878	1.4782	0.0376	4.0530	0.0038	0.7632	0.0019	0.3680	0.0064	1.2721
Mar 2021	0.2091	1.6873	0.1431	4.1961	0.0186	0.7818	0.0095	0.3975	0.0313	1.3034
Apr 2021	0.4362	2.1235	0.4600	4.6561	0.0843	0.8661	0.0436	0.4411	0.1406	1.4440
May 2021	0.3644	2.4477	0.5175	5.0946	0.1014	0.9537	0.0528	0.4867	0.1694	1.5905
Jun 2021	0.5353	3.9571	0.5821	5.5585	0.1153	1.0463	0.0569	0.5315	0.1924	1.7450
Jul 2021	0.2898	3.1327	0.7524	5.8773	0.1593	1.1248	0.0814	0.5706	0.2653	1.8761
Aug 2021	0.3018	3.2187	0.9002	5.9020	0.1949	1.1547	0.0991	0.5845	0.3246	1.9254
Sep 2021	0.2702	3.2540	0.7304	5.7245	0.1566	1.1374	0.0813	0.5782	0.2612	1.8966
Oct 2021	0.3026	3.2444	0.8128	5.6761	0.1774	1.1517	0.0918	0.5882	0.2950	1.9196
Nov 2021	0.1939	3.1179	0.6608	5.6082	0.1499	1.1621	0.0783	0.5969	0.2501	1.9373
Dec 2021	0.3137	3.4648	0.8038	6.4007	0.1787	1.3402	0.0913	0.6879	0.2976	2.2339
Sum/Avg	3.4048		6.4007		1.3402		0.6879		2.2339	
Limit Value										

CT2_Tons_12MonthRollingSummary

1

c) AQ-68

ANALYTICAL REPORT



Global Technology
Customer Analytical Services Laboratory

0000667863
ROSEVILLE ENERGY PARK
5120 PHILLIP ROAD
ROSEVILLE CA
US 95747

Project: W-20210415-004
Date Authorized: 28-Apr-2021
Submitter: Gregory McGiffney J
Submitter ID: A800994
RD Program/LWR: 351182 WRC21-1065

SAMPLE INFORMATION

		System ID:	COOLING
		Sample Number:	843825
		Sample Date:	09-Apr-2021
		Sample Name:	Cooling Tower
		Sample Point:	Cooling Tower
Analyte	Units		
Alkalinity, Hydroxide (as CaCO ₃)	mg/L		< 0.1
Alkalinity, P as CaCO ₃	mg/L		< 0.1
Alkalinity, Total (as CaCO ₃)	mg/L		24.9
Aluminum, Total (as Al)	mg/L		0.2
Calcium, Total (as CaCO ₃)	mg/L		75.4
Chloride (as Cl)	mg/L		285.0
Conductivity	µS/cm		1861.0
Copper, Total (as Cu)	mg/L		< 0.05
Hardness - Calcium, Soluble (as CaCO ₃)	mg/L		74.4
Hardness - Magnesium, Soluble (as CaCO ₃)	mg/L		24.8
Hardness - Total, Soluble (as CaCO ₃)	mg/L		99.2
Hardness, Total (Acidified as CaCO ₃)	mg/L		101.2
Iron, Total (as Fe)	mg/L		0.12
Magnesium, Total (as CaCO ₃)	mg/L		25.8
Manganese, Total (as Mn)	mg/L		< 0.01
Metals Poured			Yes
Organic Phosphorus, Soluble (as PO ₄)	mg/L		0.7
Orthophosphate, Soluble (as PO ₄)	mg/L		7.2
Orthophosphate, Unfiltered (as PO ₄)	mg/L		7.8
pH			6.8
Polyphosphate, Soluble (as PO ₄)	mg/L		< 0.1
Silicon, Soluble (as SiO ₂)	mg/L		35.8
Sodium, Soluble (as Na)	mg/L		312.6
Sulfate (as SO ₄)	mg/L		275.0
Total Inorganic Phosphorus, Sol (as PO ₄)	mg/L		7.2
Total Phosphorus, Soluble (as PO ₄)	mg/L		7.9
Total suspended solids (TSS)	ppm		4
Turbidity	NTU		1
Zinc, Total (as Zn)	mg/L		0.1

Date Printed: 28-Apr-2021

d) AQ-SC12

REP currently does not own or utilize any off road material loading or handling equipment.

e) BIO-2

Kelly Fitzgerald-Holland

Senior Wildlife Biologist & Regulatory Specialist

Kelly Fitzgerald-Holland is a Certified Wildlife Biologist, senior wildlife biologist, and environmental compliance expert. She has nearly 20 years of experience in ecological research, program management, environmental regulation and compliance, and terrestrial ecosystem monitoring in the western U.S. She has served as senior wildlife biologist or task lead manager for a large number of projects that require endangered species permitting and biological analysis for CEQA/NEPA compliance. Ms. Holland specializes in evaluating impacts on threatened and endangered wildlife species and their habitats and coordinating with resource agency staff to ensure compliance with the Federal and State Endangered Species Acts, including completing Section 7 consultation. Prior to her position at GEI, she spent 4 years conducting ESA consultations as a USFWS biologist, reviewing projects to assess impacts on listed species, providing technical assistance to minimize impacts on listed species, and preparing biological opinions for projects that impacted federally listed species and designated critical habitat. While at USFWS, Ms. Holland garnered extensive knowledge of the federally threatened giant garter snake, assisting with conservation and recovery planning for this species through research consolidation, technical oversight, and coordination with species experts. In addition to having worked for USFWS, as well as the National Park Service and U.S. Forest Service, Ms. Holland has worked extensively with state and federal agencies to assist clients with compliance with CESA/ESA, Migratory Bird Treaty Act, and CEQA/NEPA.

PROJECT EXPERIENCE

Flood Management Projects

Natomas Levee Improvement Program, Sacramento Area Flood Control Agency, Sacramento and Sutter Counties, CA. Senior wildlife biologist who prepared the biological assessments and 2081(b) permit applications for the program's Landside Improvements Project, coordinated closely with client and agency staff throughout the consultation process, assisted with the environmental analyses in NEPA and CEQA documents, assisted with the development of a comprehensive habitat mitigation and monitoring plan for the project, and oversaw the development and implementation of the project's mitigation and monitoring plan and the long-term management plan. She continues to lead environmental compliance for this program.

Reclamation District 17, Reclamation District 17 Levee Repair Project, San Joaquin County, CA. Regulatory specialist for ESA compliance and senior wildlife biologist who prepared biological assessment that evaluated Reclamation District 17 (RD 17) plans for needed repairs to the eastside of the San Joaquin River levee. The repairs are designed to enable the levee system to withstand 100-year flood conditions and receive Federal Emergency Management Agency certification. Ms. Holland prepared the biological assessment to support ESA compliance and the development of the permitting and mitigation strategy.



EDUCATION

M.S., Environmental Science, Washington State University, Pullman
B.A., Environmental Studies, University of California, Santa Cruz

EXPERIENCE IN THE INDUSTRY
20 years

REGISTRATIONS AND LICENSES

Certified Wildlife Biologist, the Wildlife Society (2014)

PROFESSIONAL ASSOCIATIONS

The Wildlife Society
Conservation Affairs Committee Chair,
Western Section of The Wildlife Society

PRESENTATIONS

- *Wetlands and Endangered Species Act Training*. Beale Air Force, Yuba County, California. May 2014.
- *Endangered Species Act Section 7 Consultation and Incidental Take Permit Applications – Overview*. AECOM Employee Brown Bag Series, Sacramento, California. October 2014.
- *Restoring Habitats and Connective Corridors to Support Species Recovery in the Natomas Basin, Sacramento, CA*. The Western Section of the Wildlife Society, 2012 Annual Conference, Sacramento, CA, 2012.
- *Organizational Structure and Permitting Processes of the US Fish and Wildlife Service*. Association of Environmental Professionals Luncheon, Sacramento, CA, February 2009.
- *The Effects of Land Management Practices on Reptile Populations: How Grazing Regimes Impact Reptile Density, Diversity, Foraging Opportunities, and Thermoregulation Behaviors*. Physiological Ecology Meeting, White Mountain Research Station, Bishop, CA, 1997.



North Sacramento Streams, Sacramento River East Levee, Lower American River, and Related Flood Improvements Project, Sacramento Area Flood Control Agency, Sacramento and Sutter Counties, CA. Senior wildlife biologist and environmental compliance expert who prepared the CEQA / NEPA environmental analyses for terrestrial biological and lead the ESA compliance effort, which required preparing a Biological Assessment and supplementary material and coordinating with USFWS, NMFS, and USACE. This project, also known as SAFCA's Levee Accreditation Project, includes improvements to ensure that levees protecting Sacramento are adequate to meet State requirements. Levee improvements are needed along the most the rivers and streams in the Sacramento region; other issues, including high-hazard/unacceptable encroachments and vegetation affecting all levee segments to varying degrees, must be addressed to allow accreditation of these levee segments.

California Department of Water Resources, Central Valley Flood Management Planning Program, Summary and Analysis of Rodent Damage and Giant Garter Snake in the Sacramento River Flood Control Project, Multiple Counties, California. Senior wildlife biologist who prepared a technical memorandum (490 pages) that summarizes the background, discussions, and findings of the Rodent Damage Repair Subcommittee (RDRS) from July 2012 through May 2014. The RDRS is a group formed by the Interagency Flood Management Collaborative Program (IFMCP) that consists of a number of stakeholders involved with resolving conflict concerning the potential impacts on federally and state-listed species, specifically the giant garter snake, associated with conducting repairs necessary to maintain the integrity of the Sacramento River Flood Control Project in northern California. The purpose of this technical memorandum is to provide information that can be used to evaluate future flood maintenance activities in a forthcoming CEQA. This document organizes and synthesizes available research and data on flood control management and potential impacts to natural resources, specifically evaluates the impacts to species that result from controlling and repairing rodent damage to levees, and defines best management practices and conservation measures for rodent control and damage repair in levees while protecting and avoiding impacts to giant garter snake.

Sacramento River Flood Control System Evaluation, Phase III, Mid-Valley Project, Yolo County, California. Senior wildlife biologist who oversees coordination with wildlife agencies on environmental compliance for the Knights Landing Drainage District's Ridge Cut Slough portion of the project. The proposed project seeks to improve integrity of the Knights Landing Drainage District's east levee by reducing the potential for erosion and levee failure due to levee instability and seepage under or through the levee. Levee improvements would include reconstruction of a portion of the levee and construction of a landside spoil berm.

Central Valley Flood Protection Plan Conservation Strategy, California Department of Water Resources (DWR), FESSRO, Central Valley, CA. Senior wildlife biologist who supported DWR in the development of a conservation framework, conservation strategy, regional permitting effort, and supporting documents for the CVFPP. Developed a conservation framework and strategy that would take a comprehensive approach to ecological and environmental planning throughout the Central Valley and integrate it with flood management planning efforts.

Central Valley Flood Protection Plan PEIR, California Department of Water Resources (DWR), Northern and Central CA. Senior wildlife biologist who provided support and technical analysis for environmental planning and technical support services to prepare the CVFPP PEIR. The Plan and EIR provided the basis for State implementation of Central Valley flood protection, including the Delta, and incorporates CEQA compliance in overall flood protection planning enabling site-specific flood management actions to proceed incrementally. Assisted with the impact evaluation for terrestrial biological resources.

Rio Vista Rock Stockpile Project IS/MND and Permitting, California Department of Water Resources (DWR), Solano County, CA. Regulatory biologist who provided permitting support to the DWR, Division of Flood Management and Division of Engineering for the Rio Vista Rock Stockpile Project, which was established to enhance response to large-scale flood events in the Sacramento-San Joaquin Delta. Providing biological surveys, a wetland delineation, and mitigation plan preparation in support of an after-the-fact permit under Section 404 of the Clean Water Act for accidental fill of wetlands during rock stockpiling activities.

Feather River Levee Repair Project EIR/EIS, Permitting, and Monitoring, Three Rivers Levee

Improvement Authority, Yuba County, CA. Regulatory specialist who provided senior regulatory oversight for CWA and ESA compliance following issuance of the Section 7 biological opinion. Coordinated with the USFWS and TRLIA staff to develop a compensatory mitigation strategy, resolving complex jurisdictional issues and facilitating nationwide permit approvals for project design revisions. The project would address identified deficiencies in the levees, build a large setback levee, and make related improvements to the Yuba River levee. Key issues included flood control, endangered species, wetlands, fisheries, and conversion of agricultural land. Completed and EIR, and EIS (USACE), agency consultation, permitting, and monitoring services.

Water Projects

Monterey Amendment to the State Water Project Contracts and Associated Actions as Part of a Settlement Agreement Revised EIR (Kern Water Bank), California Department of Water Resources, Kern County, CA.

Senior wildlife biologist for work assisting DWR with the preparation of a court-ordered CEQA document under an extreme schedule. DWR prepared two previous EIRs (Monterey and Monterey Plus) to evaluate numerous SWP contracting issues, including the Kern Water Bank. After several court rulings, the most recent court decision required Kern Water Bank operations and maintenance to be further evaluated. The Revised EIR focused on groundwater bank operations, biological and agricultural impacts, land use changes, energy use, greenhouse gas emissions, and cumulative impacts with other groundwater banks. Ms. Holland worked closely with the Attorney General's Office and DWR's Legal, Division of Integrated Regional Water Management, and South Central Region Office staff to prepare the requisite environmental documents to meet court-ordered requirements for the complex and controversial CEQA documentation necessary for this project.

San Joaquin River Restoration Program, US Bureau of Reclamation, Fresno, Madera, and Merced Counties, CA.

Senior wildlife biologist who supported a joint program EIS/EIR, program biological assessment, and project-level biological assessment. The program EIS/EIR combined a program-level analysis of the Settlement, addressing future river channel modifications, installation of water management and fish protection facilities, replacement of affected infrastructure, and implementation of management actions to restore both riparian and aquatic habitats, along with project-specific analyses of the initial interim water releases and alternative conveyance routes. Assisted Reclamation with acquisition of a Section 404 permit authorization, including a Section 7 biological opinion.

Other Development Projects

California High Speed Rail Authority, California High Speed Train Project, Merced to Fresno Segment, Merced, Madera, and Fresno Counties, CA.

Senior regulatory/wildlife biologist who led the development of a comprehensive mitigation strategy for the project. The mitigation strategy addressed the mitigation requirements described in the project's state and federal permits. Development of the mitigation strategy included major field effort, such as habitat mapping, surveys for special-status species, wetland delineations, and the California Rapid Assessment Method (CRAM) for wetlands. Ms. Holland prepared a Mitigation Strategy and Implementation Plan and a permit-specific mitigation plan that identified mitigation opportunities for wetland species, including listed vernal pool crustaceans, California tiger salamander, and vernal pool/wetland plants.

Beale Air Force Base, ESA Compliance, Yuba County. Senior wildlife biologist who prepared biological assessments for a variety of projects proposed at Beale Air Force Base. The biological assessments analyzed the impacts of projects on wetland-associated species, including listed vernal pool crustaceans and California tiger salamander. The projects included stormwater or sewer system upgrades or bridge replacements, that were either covered under the Special Area Management Plan Programmatic Biological Opinion or adhered to the environmental protection measures described in that document.

Habitat Conservation Plans

Southern California Edison, Cross Valley Corridor Project Habitat Conservation Plan, San Joaquin Valley, CA. Senior biologist who lead development of an HCP to obtain ESA incidental take coverage for 12 species, including include vernal pool invertebrates and plants, California tiger salamander, burrowing owl, and San Joaquin kit fox, over a 10-year period. The Cross Valley Corridor project entails replacement and construction of new transmission lines in the San Joaquin Valley, and the future operation and maintenance of those facilities.

Waste Connections Inc., Avenal Landfill Expansion Project Habitat Conservation Plan, Kings County, California. Senior wildlife biologist who prepared the HCP, which would provide incidental take coverage for San Joaquin kit fox during expansion activities and future operations at the landfill **over a 15-year permit term**. The proposed landfill expansion would increase the landfill footprint and directly impact potentially suitable foraging and dispersal habitat for the kit fox. The HCP outlined measures and commitments to (1) help to maintain viable populations of kit fox within the HCP Planning Area over the 15-year permit term and (2) contribute to local and/or regional conservation of kit fox and its habitat to fully compensate for unavoidable impacts resulting from implementation of the project.

PUBLICATIONS

De Dijn, B.P.E., I.E. Molgo, M.A. Norconk, L.T. Gregory, B. O'Shea, C. Marty, M. Luger, M. Ringler, S. Crothers IV, B. Noonan, K. Fitzgerald, S. Mitro, A. Vreedzaam, and D. Satyawan. 2007. Biodiversity of the Brownsberg (Chapter 13). Pages 135–155 in Alonso, L.E. and J.H. Mol (eds.). 2007. A Rapid Biological Assessment of the Lely and Nassau Plateaus, Suriname (With Additional Information on the Brownsberg Plateau). RAP Bulletin of Biological Assessment 43. Conservation International, Arlington, Virginia.

Lim, B. K., M. D. Engstrom, H. H. Genoways, F. M. Catzeflis, K. A. Holland, S. L. Peters, M. Djosetro, S. Brandon, and S. Mitro. 2005. Results of the ALCOA Foundation—Suriname Expeditions. XI V. Mammals of Brownsberg Nature Park, Suriname. *Annals of Carnegie Museum* 74(4):225–274.

Holland, K. A. 2003. Utilizing Ecological Indicators to Assist in the Management of Brownsberg Nature Park, Suriname, South America. M.S. Thesis. Pullman, WA: Washington State University.

Holland, K. A. 1997. The University of the Wilderness: A Natural History of Education. B.A. Thesis. Santa Cruz, CA: University of California, Santa Cruz.

f) BIO-4

Worker Environmental Awareness Program (WEAP) Training is provided to employees of REP and contractors in the form of a video and by review of the program documentation. Training is acknowledged through a signature page. These records are retained at REP for at least 12 months following the termination of an individual's employment.

g) COM-13

After reviewing the On-Site Contingency Plan, it has been determined that the measures outlined in the plan are sufficient for an unplanned facility closure. At this time, the state of the facility has not changed since the CEC's initial review of the plan.

h) HAZ-1

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric			Chemical Location				CERS ID 10207330			
Facility Name Roseville Energy Park			Aqueous Ammonia Storage Area				Facility ID			
5120 Phillip Rd, Roseville 95747							Status Submitted on 3/22/2022 3:26 PM			
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
DOT: 8 - Corrosives (Liquids and Solids)	Ammonium Hydroxide	Gallons	9000	10000	5000			Ammonia	28 %	
		State	Storage Container		Pressure					
		CAS No	Liquid Aboveground Tank			Waste Code		Water	72 %	
		1336-21-6			Temperature	122				
		Type								
		Mixture	Days on Site: 365							

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric		Chemical Location				CERS ID		10207330		
Facility Name Roseville Energy Park		Closed Cooling Water System				Facility ID				
5120 Phillip Rd, Roseville 95747						Status		Submitted on 3/22/2022 3:26 PM		
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt.	EHS CAS No.
DOT: 3 - Flammable and Combustible Liquids	AntiFreeze	Gallons	800	400	300					
	CAS No. _____	State	Storage Container		Pressure					
	57-55-6	Liquid	Other		Ambient			Waste Code		
		Type			Temperature					
		Mixture	Days on Site: 365		Ambient					

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric			Chemical Location			CERS ID 10207330				
Facility Name Roseville Energy Park			Cooling Tower			Facility ID				
5120 Phillip Rd, Roseville 95747						Status Submitted on 3/22/2022 3:26 PM				
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Dispersant - Cooling water treatment	Gallons	300	275	300			Phosphonobutane Tricarboxylic Acid	10 %	37971-36-1
	<u>CAS No.</u>	State <u>Liquid</u>	Storage Container <u>Aboveground Tank</u>		Pressure <u>Ambient</u>	<u>Waste Code</u>		Acrylic copolymer	10 %	MIXTURE
		Type <u>Pure</u>	Days on Site: 365		Temperature <u>Ambient</u>					

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric		Chemical Location				CERS ID 10207330				
Facility Name Roseville Energy Park		Cooling Tower Chemical Enclosure				Facility ID				
5120 Phillip Rd, Roseville 95747						Status Submitted on 3/22/2022 3:26 PM				
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Corrosion Inhibitor	Gallons	800	400	400					
	CAS No. <u>64665-57-2</u>	State <u>Liquid</u>	Storage Container <u>Aboveground Tank</u>		Pressure <u>Ambient</u>	Waste Code <u></u>				
		Type <u>Mixture</u>	Days on Site: <u>365</u>		Temperature <u>Ambient</u>					
	Corrosion Inhibitor	Gallons	55	55	55			Sodium Hydroxide	1310-73-2	
	CAS No. <u>8780</u>	State <u>Liquid</u>	Storage Container <u>Other</u>		Pressure <u>Ambient</u>	Waste Code <u></u>		Sodium Molybdate	7631-95-0	
		Type <u>Mixture</u>	Days on Site: <u>365</u>		Temperature <u>Ambient</u>			Sodium Totylazole	64665-57-2	
								Sodium Metaborate	7775-19-1	
								Sodium Nitrite	7631-99-4	
	Sodium Hypochlorite >5% - 12.5%	Gallons	8000	8000	5000			SODIUM HYPOCHLORITE	12 %	7681-52-9
	CAS No. <u>7681-52-9</u>	State <u>Liquid</u>	Storage Container <u>Aboveground Tank</u>		Pressure <u>Ambient</u>	Waste Code <u></u>		WATER	88 %	7732-18-5
		Type <u>Mixture</u>	Days on Site: <u>365</u>		Temperature <u>Ambient</u>					
DOT: 8 - Corrosives (Liquids and Solids) Oxidizing, Class 1	Sulfuric Acid	Gallons	6000	6000	4000			Sulfuric Acid	93 %	7664-93-9
	CAS No. <u>7664-93-9</u>	State <u>Liquid</u>	Storage Container <u>Aboveground Tank</u>		Pressure <u>Ambient</u>	Waste Code <u></u>		Water	7 %	
		Type <u>Mixture</u>			Temperature <u>Ambient</u>					

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric			Chemical Location				CERS ID 10207330			
Facility Name Roseville Energy Park			Electrical/Mechanical Building				Facility ID			
5120 Phillip Rd, Roseville 95747							Status Submitted on 3/22/2022 3:26 PM			
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	CCCW Molybdate Treatment	Gallons	55	55	55		- Physical	Sodium hydroxide		✓ 1310-73-2
	Drewgard	State	Storage Container		Pressure	Waste Code	Corrosive To Metal	MOLYBDENUM COMPOUND		✓ Trade Secret
	CAS No.	Liquid	Plastic/Non-metalic Drum		Ambient		- Physical Hazard			
	315	Type			Temperature		Not Otherwise Classified			
		Pure			Ambient		- Health Skin			
							Corrosion			
							Irritation			
							- Health Serious			
							Eye Damage Eye			
							Irritation			
	Corrosion Inhibitor	Gallons	400	400	280			Cyclohexylamine	5 %	108-91-8
	CAS No.	State	Storage Container		Pressure	Waste Code		Monoethanolamine	20 %	141-43-5
		Liquid	Aboveground Tank		Ambient			Methoxypropylamine	20 %	5332-73-0
		Type			Temperature					
		Mixture								
	Nalco Elim-Ox Oxygen	Gallons	400	400	280			Carbohydrazid		497-18-7
	Scavenger	State	Storage Container		Pressure	Waste Code				
	CAS No.	Liquid	Aboveground Tank		Ambient					
		Type			Temperature					
		Mixture	Days on Site: 365		Ambient					
	Trisodium phosphate	Gallons	400	400	300			Trisodium Phosphate		7601-54-9
	CAS No.	State	Storage Container		Pressure	Waste Code		Sodium Hydroxide	5 %	1310-73-2
	7601-54-9	Liquid	Aboveground Tank		Ambient					
		Type			Temperature					
		Mixture	Days on Site: 365							

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric			Chemical Location				CERS ID 10207330			
Facility Name Roseville Energy Park			HRSG Area				Facility ID			
5120 Phillip Rd, Roseville 95747							Status Submitted on 3/22/2022 3:26 PM			
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Calibration Gases	Cu. Feet	20000	250	7500			Nitric Oxide	1 %	10102-43-9
		State	Storage Container		Pressure	Waste Code		Carbon Monoxide	1 %	630-08-0
		Gas	Cylinder		> Ambient			Oxygen	21 %	7782-44-7
		Type			Temperature			Carbon Dioxide	20 %	124-38-9
		Mixture			Ambient			Nitrogen		7727-37-9
DOT: 3 - Flammable and Combustible Liquids	Diesel Fuel No. 2	Gallons	1500	1500	1500					
		State	Storage Container		Pressure	Waste Code				
		Liquid	Aboveground Tank		Ambient					
		Type			Temperature					
		Pure	Days on Site: 365		Ambient					

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric		Chemical Location Plant				CERS ID 10207330				
Facility Name Roseville Energy Park						Facility ID				
5120 Phillip Rd, Roseville 95747						Status Submitted on 3/22/2022 3:26 PM				
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Nitrogen Gas	Cu. Feet	53	53	35.31		- Physical Gas			
	<u>CAS No.</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>	Under Pressure			
		<u>Gas</u>	<u>Other</u>							
		<u>Type</u>			<u>Temperature</u>					
			Days on Site: 365							

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric			Chemical Location				CERS ID 10207330			
Facility Name Roseville Energy Park			Power Plant				Facility ID			
5120 Phillip Rd, Roseville 95747							Status Submitted on 3/22/2022 3:26 PM			
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)		
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS CAS No.
	Fuel Gas Drains	Gallons	350	250	150	95		Natural Gas Condensate		68919-39-1
	CAS No. 68919-39-1	State Liquid	Storage Container Aboveground Tank		Pressure 213	Waste Code 213		Benzene	2 %	71-43-2
		Type Waste	Days on Site: 365		Temperature					
	Waste Oil	Gallons	110	55	30	1000				
	CAS No.	State Liquid	Storage Container Steel Drum		Pressure Ambient	Waste Code 221				
		Type Waste	Days on Site: 365		Temperature Ambient					

Hazardous Materials And Wastes Inventory Matrix Report									
CERS Business/Org. City of Roseville, Roseville Electric			Chemical Location				CERS ID 10207330		
Facility Name Roseville Energy Park			Recycled Water Tank Area				Facility ID		
5120 Phillip Rd, Roseville 95747							Status Submitted on 3/22/2022 3:26 PM		
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)	
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt
DOT: 3 - Flammable and Combustible Liquids	Diesel Fuel No. 2	Gallons	290	290	290				
		State	Storage Container		Pressure				
		CAS No. <u>68476-34-6</u>	Liquid Aboveground Tank		Ambient	<u>Waste Code</u>			
		Type <u>Pure</u>			Temperature				
			Days on Site: 365						

Hazardous Materials And Wastes Inventory Matrix Report									
CERS Business/Org. City of Roseville, Roseville Electric		Chemical Location				CERS ID 10207330			
Facility Name Roseville Energy Park		Steam Turbine Circuit Breaker				Facility ID			
5120 Phillip Rd, Roseville 95747						Status Submitted on 3/22/2022 3:26 PM			
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)	
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt. EHS CAS No.
	SF6	Cu. Feet	25.6	25.6	25.6				
	CAS No.	State	Storage Container		Pressure		Waste Code		
		Gas	Other		Ambient				
		Type			Temperature				
		Pure			Ambient				

Hazardous Materials And Wastes Inventory Matrix Report											
CERS Business/Org.		City of Roseville, Roseville Electric			Chemical Location			CERS ID			
Facility Name		Roseville Energy Park			Various			Facility ID			
		5120 Phillip Rd, Roseville 95747						Status			
								Submitted on 3/22/2022 3:26 PM			
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)			
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS	CAS No.
	Equipment Lubricating Oil	Gallons	15000	3170							
	CAS No	State	Storage Container		Pressure	Waste Code					
		Liquid	Other		Ambient						
		Type			Temperature						
		Mixture			Ambient						
	Hydraulic Oil	Gallons	250	150	150						
	CAS No	State	Storage Container		Pressure	Waste Code					
		Liquid	Other		Ambient						
		Type			Temperature						
		Mixture	Days on Site: 365		Ambient						
DOT: 2.1 - Flammable Gases	Liquefied Petroleum Gas (lpg)	Cu. Feet	1000	67.7	250			Propane	97 %	74-98-6	
	CAS No	State	Storage Container		Pressure	Waste Code		Propylene	97 %	115-07-1	
	74-98-6	Gas	Other		> Ambient			Butanes	3 %	106-97-8	
		Type			Temperature			Sulphur	1 %	7704-34-9	
		Mixture			Ambient						
	Transformer Insulating Oil	Gallons	29000	7000							
	CAS No	State	Storage Container		Pressure	Waste Code					
		Liquid	Other		Ambient						
		Type			Temperature						
		Mixture	Days on Site: 365		Ambient						

Hazardous Materials And Wastes Inventory Matrix Report											
CERS Business/Org. City of Roseville, Roseville Electric		Chemical Location ZLD Area				CERS ID 10207330					
Facility Name Roseville Energy Park						Facility ID					
5120 Phillip Rd, Roseville 95747						Status Submitted on 3/22/2022 3:26 PM					
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only)			
			Max. Daily	Largest Cont.	Avg. Daily			Component Name	% Wt	EHS	CAS No.
	AntiFoom	Gallons	1600	200	280			Parrafin Wax	1 %		8002-74-2
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>		Hydrotreated Light Distillate	20 %		64742-47-8
		<u>Liquid</u>	<u>Tote Bin</u>		<u>Ambient</u>			Strait Run Middle Distillate	60 %		64741-44-2
		<u>Type</u>			<u>Temperature</u>						
		<u>Mixture</u>	<u>Days on Site: 365</u>		<u>Ambient</u>						
	AntiFoom	Gallons	1600	400	280			Alkoxylated Alcohol	40 %		
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>		Water	60 %		
	FC2386	<u>Liquid</u>	<u>Tote Bin</u>		<u>Ambient</u>						
		<u>Type</u>			<u>Temperature</u>						
		<u>Mixture</u>	<u>Days on Site: 365</u>		<u>Ambient</u>						
	Anti-Scalant	Gallons	800	400	280						
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>					
		<u>Liquid</u>	<u>Tote Bin</u>		<u>Ambient</u>						
		<u>Type</u>			<u>Temperature</u>						
		<u>Mixture</u>	<u>Days on Site: 365</u>		<u>Ambient</u>						
	Coagulant	Gallons	800	400	280						
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>					
		<u>Liquid</u>	<u>Tote Bin</u>		<u>Ambient</u>						
		<u>Type</u>			<u>Temperature</u>						
		<u>Mixture</u>	<u>Days on Site: 365</u>		<u>Ambient</u>						
	Conntect 6000 Compressor Cleaner	Gallons	110	55	55						
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>					
		<u>Liquid</u>	<u>Plastic/Non-metalic Drum</u>		<u>Ambient</u>						
		<u>Type</u>			<u>Temperature</u>						
		<u>Mixture</u>	<u>Days on Site: 365</u>		<u>Ambient</u>						
	Soda Ash 100%	Pounds	3000	3000	2000						
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>					
	497-19-8	<u>Solid</u>	<u>Bag</u>		<u>Ambient</u>						
		<u>Type</u>			<u>Temperature</u>						
		<u>Pure</u>	<u>Days on Site: 365</u>		<u>Ambient</u>						
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	Sodium Bisulfite	Gallons	800	400	280			Sodium Bisulfite			7631-90-5
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>		Water			
	7631-90-5	<u>Liquid</u>	<u>Tote Bin</u>		<u>Ambient</u>						
		<u>Type</u>			<u>Temperature</u>						
		<u>Mixture</u>	<u>Days on Site: 365</u>		<u>Ambient</u>						
DOT: 8 - Corrosives (Liquids and Solids)	Sodium Hydroxide Solid	Gallons	3000	3000	2500			Sodium Hydroxide	50 %		1310-73-2
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressure</u>	<u>Waste Code</u>		Water	50 %		
	1310-73-2	<u>Liquid</u>	<u>Aboveground Tank</u>		<u>Ambient</u>			Sodium Chloride	1 %		7647-14-5
		<u>Type</u>			<u>Temperature</u>						
		<u>Mixture</u>	<u>Days on Site: 365</u>		<u>Ambient</u>						

Hazardous Materials And Wastes Inventory Matrix Report										
CERS Business/Org. City of Roseville, Roseville Electric			Chemical Location				CERS ID		10207330	
Facility Name Roseville Energy Park			ZLD Area				Facility ID			
5120 Phillip Rd, Roseville 95747							Status		Submitted on 3/22/2022 3:26 PM	
								Hazardous Components (For mixture only)		
DOT Code/Fire Haz. Class	Common Name	Unit	Quantities			Annual Waste Amount	Federal Hazard Categories	Component Name	% Wt	EHS CAS No.
			Max. Daily	Largest Cont.	Avg. Daily					
DOT: 8 - Corrosives (Liquids and Solids)	Sulfuric Acid	Gallons	6000	6000	4000			Sulfuric Acid	93 %	7664-93-9
			State	Storage Container	Pressure			Water	7 %	
Oxidizing, Class 1	CAS No. 7664-93-9	Liquid	Aboveground Tank			Waste Code				
			Type	Temperature						
	Mixture	Days on Site: 365								

i) SOIL & WATER-7

	RECYCLE GALLONS	POTABLE GALLONS
JANUARY	2,811,920	900
FEBRUARY	3,749,975	1,100
MARCH	285,007	1,200
APRIL	40,395	600
MAY	1,445,981	600
JUNE	5,804,868	3,900
JULY	9,618,427	4,500
AUGUST	23,563,575	6,100
SEPTEMBER	24,278,711	5,200
OCTOBER	19,596,666	1,000
NOVEMBER	9,655,081	1,300
DECEMBER	258,077	900

MONTHLY	RECYCLE	POTABLE
MINIMUM	40,395	600
MAXIMUM	24,278.711	6,100
AVERAGE	8,425,723.58	2,275
	GALLONS	GALLONS

ANNUAL TOTALS		
	RECYCLE	POTABLE
GALLONS	101,108,683	27,300
ACRE-FEET	310.29	0.08378

Divide gallon
by / 325,851

YEAR	RECYCLE GALLONS	POTABLE GALLONS	AVERAGE RECYCLE	AVERAGE POTABLE	RANGE RECYCLE	RANGE POTABLE
2007	19,393,396	1,121,252	9,696,698	560,626	2,349,468	467,500
2008	173,325,812	19,278,952	1,606,579	1,606,579	25,880,052	13,541,044
2009	195,834,628	231,880	16,319,552	19,323	21,445,908	107,712
2010	133,425,248	97,988	11,118,771	8,166	25,010,128	32,912
2011	44,785,004	323,136	3,732,084	26,928	15,782,052	68,068
2012	165,731,368	665,720	13,810,947	55,477	24,362,360	199,716
2013	165,444,136	586,432	13,787,011	48,869	25,059,496	198,220
2014	135,300,484	480,216	11,275,040	40,018	25,474,636	106,964
2015	176,179,432	471,988	14,681,619	39,332	21,033,012	109,208
2016	115,772,448	41,5888	9,647,704	34,657	24,060,168	120,428
2017	18,581,816	434,588	1,548,484	36,215	5,578,584	107,712
2018	76,291,512	299,948	11,737,155	46,145	14,555,332	80,036
2019	82,147,859	322,410	6,845,655	26,868	15877,,361	88,269
2020	101,108,683	27,300	8,425,723	2,275	24,238,316	5,500

j) SOIL & WATER-8

Zero Liquid Discharge (ZLD) Operational Status Report

- **Disruptions**
 - Replaced failing vapor compressor B
 - Replaced failed heater for distillate tank B
 - Replaced failed heater for distillate tank A
- **Maintenance**
 - All routine preventative maintenance tasks were completed as necessary
 - Additional maintenance tasks included but were not limited to:
 - Performed belt press repairs and maintenance as needed
 - Performed vendor recommended routine maintenance for all pumps and motors
 - Performed annual vapor compressor maintenance
 - Replaced various HERO and UF filters as needed
 - Performed quarterly silica and hardness analyzer maintenance
 - Replaced expansion boots as needed
 - Efficiency improvements made to the ultra-filtration skid to minimize loading on the membranes.
 - Improvements to the acid system to reduce downtime and streamline performance.
 - Chemical pump replacements for sodium hypochlorite.
 - Replaced sodium hypochlorite day tank.
- **Volumes of interim waste streams stored onsite**
 - The maximum waste stream volumes stored at any one time are limited to the following onsite storage capacities:
 - NaZ regeneration waste – 40,000 gallons
 - WAC neutralized regeneration waste – 20,000 gallons
 - HERO reject – 40,000 gallons
- **Volumes of residual solids generated and transported to landfills**
 - REP ZLD generated approximately 298 tons of solid waste in 2021.
 - All solid wastes were shipped for disposal to Western Placer Waste Management Authority.

k) TRANS-4

All hazardous materials are transported from REP by Fremouw Environmental Services. Below is their hazardous materials transport license.

 STATE OF CALIFORNIA DEPARTMENT OF CALIFORNIA HIGHWAY PATROL HAZARDOUS MATERIALS TRANSPORTATION LICENSE CHP 360H (REV. 1/00) OPI 062	CONTROL NUMBER	LICENSE NUMBER	ISSUE DATE	EFFECTIVE DATE	EXPIRATION DATE
	250660	135386	2/11/2021	4/1/2021	3/31/2022
	CHP CARRIER NUMBER	LOCATION	☐ Duplicate ☐ Initial		☐ Replacement ☒ Renewal
	CA 274461	365			
PROPERTY OF THE CALIFORNIA HIGHWAY PATROL (CHP) The original valid license must be kept at the licensee's place of business as indicated on the license and a legible copy must be carried in any vehicle or combination transporting hazardous materials and must be presented to any CHP officer upon request. This license is NON-TRANSFERABLE and must be surrendered to the CHP upon demand or as required by law. A majority change in ownership or control of the licensed activity shall require a new license. This license may be renewed by submitting an application and appropriate fee to the CHP. Persons whose licenses have expired or are otherwise no longer valid must immediately cease the activity requiring a license. THERE IS NO GRACE PERIOD. For licensing information contact CHP, Commercial Vehicle Section at (916) 843-3400.					
LICENSEE NAME AND PHYSICAL STATION ADDRESS (if different than below) FREMOUW ENVIRONMENTAL SERVICES, INC. 6940 TREMONT ROAD DIXON CA, US 95620					
LICENSEE NAME AND MAILING ADDRESS FREMOUW ENVIRONMENTAL SERVICES, INC. 6940 TREMONT ROAD DIXON CA, US 95620					
This carrier is on the special routing/safe stopping place mailing lists as indicated below: ☐ (HMX) Explosives subject to Division 14, California Vehicle Code (CVC). ☐ (HMPH) Poison Inhalation Hazard materials in bulk packages subject to Division 14.3, CVC. ☐ (HMRCQ) Highway Route Controlled Quantity radioactive materials subject to Division 14.5, CVC.					
Any person who dumps, spills, or causes the release of hazardous materials or hazardous waste upon any highway shall immediately notify the CHP or the agency having jurisdiction for that highway. The minimum fine for failure to make the appropriate notification is \$2,000.00. (CVC Section 23112.5)					

l) VIS-2

REP constructed the Cooling Tower according to the CEC approved design. As a result of a prior CEC request, sound dampening walls were installed around fan motors. No further modifications have been made since.

m) VIS-4

REP constructed the facility according to the plan that was approved by the CEC and the City of Roseville Planning Department.

n) VIS-5

REP has drafted an RFP for developing the landscaping design now that the Blue Oaks and Phillip Road extensions were completed. The project will take place over the next 12 months and completion is expected by FY24.

o) WASTE-5

2021 WASTE MANAGEMENT ACTIVITIES

WASTE STREAMS	ACTUAL	PLANNED	COMMENTS
Rags, discarded metal & machine parts, electrical material from routine maintenance, empty containers, other solid waste including typical industrial refuse, office wastes	N/A	N/A	All metals, machine parts and large electrical wastes are recycled. Minor waste streams, ordinary refuse, are not tracked.
Oily rags, oil absorbent	2	2	Drums
Sanitary waste		N/A	Not tracked
Nitrate blowdown of ZLD	731,234	Varies	Varies based on facility capacity
Plant equipment drains	0	0	All drains go to Cooling Tower
Turbine/HRSR wash water	330	330	Washed turbines once, filled 1-330 gal tote.
Cooling Tower sludge	2,545	0	
Used oil	2	0	Varies based on oil analysis and filtration limitations
Used oil filters	0	0	Drums
Laboratory analysis waste	0	0	
SCR & CO catalyst units	2	0	
Chemical cleaning waste	0	0	Drums
Condensate from natural gas pipeline	0	0	
Batteries, alkaline, lead acid, nickel cadmium, mercury	0	0	