

**DOCKETED**

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<b>Project Title:</b>	Valero Cogeneration Project-Compliance
<b>TN #:</b>	236908
<b>Document Title:</b>	2020 CEC Cogen Compliance Report
<b>Description:</b>	2020 CEC Cogen Compliance Report for Valero Refinery at Benicia, CA.
<b>Filer:</b>	Rina Putnam
<b>Organization:</b>	Valero Benicia Refinery
<b>Submitter Role:</b>	Applicant
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Submitted Electronically

February 24, 2021

Valero Cogeneration Project  
2020 CEC Annual Compliance Report  
Docket No. 01-AFC-05

Mr. Anwar Ali  
Compliance Project Manager  
Valero Cogeneration Project (01-AFC-05)  
California Energy Commission  
1516 Ninth Street (MS-2000)  
Sacramento, California 95814

Dear Mr. Ali:

Enclosed is a copy of the Annual Compliance Report for the calendar year 2020 for the Valero Cogeneration Project, as required by the General Conditions of the CEC's Commission Decision. Along with the compliance status information required by the CEC's General Conditions, documents are included in Section 3 of this report to comply with the following specific conditions:

- AQ-56 – Cooling Tower TDS Content
- HAZ-1 – List of Hazardous Materials Contained at Cogeneration Unit
- WASTE-2 – Waste Management Methods
- WQ-2 – Annual Monitoring Report to RWQCB
- WR-1 – Annual Water Use Summary

Please contact Ms. Rina Putnam at (707) 745-7940 should you have questions regarding this information.

Sincerely,

A handwritten signature in dark ink that reads 'Taryn Wier'.

Taryn Wier  
Manager - Environmental Engineering

TW/RBP

Enclosures

Document # 26693



**VALERO COGENERATION PROJECT**

**2020 ANNUAL COMPLIANCE REPORT FOR  
THE CALIFORNIA ENERGY COMMISSION**

**VALERO COGENERATION PROJECT**  
**2020 ANNUAL COMPLIANCE REPORT**

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**VALERO COGENERATION PROJECT**  
**2020 ANNUAL COMPLIANCE REPORT**

**Section 1: Updated Compliance Matrix (Open Conditions)**

## 2020 Annual Compliance Report

### Valero Cogeneration Project Conditions of Certification

Item No.	Condition No.	Requirement	Timing	No. of Days Prior	Status
2	<u>AQ-2</u>	SO <sub>2</sub> emissions offsets quarterly report	End of each quarter	Within 30 days after	Ongoing
13	<u>AQ-13</u>	Fire only refinery fuel or natural gas in gas turbines and HRSG duct burners	On-going	--	Ongoing
14	<u>AQ-14</u>	Combined heat input rate to the power train limited to 810 MM Btu per hour, averaged over any 3-hr period	On-going	--	Ongoing
15	<u>AQ-15</u>	Combined heat input rate to the power train limited to 19,440 MM Btu per calendar day	On-going	--	Ongoing
16	<u>AQ-16</u>	Combined cumulative heat input rate for each power train limited to 6,351,000 MM Btu per year	On-going	--	Ongoing
17	<u>AQ-17</u>	Properly operate and maintain SCR and CO Oxidation Catalyst abatement systems	On-going	--	Ongoing
18	<u>AQ-18</u>	Gas turbines and HRSGs shall comply with criteria pollutant emission limits when firing natural gas exclusively	On-going	--	Ongoing
19	<u>AQ-19</u>	Gas turbines and HRSGs shall comply with criteria pollutant emission limits under all operating scenarios	On-going	--	Ongoing
20	<u>AQ-20</u>	Sulfuric acid emissions limited to less than 7 tons in any consecutive 4 quarters	On-going	--	Ongoing
22	<u>AQ-22</u>	Total power train criteria pollutant emissions annual limits and annual report	On-going	--	Ongoing
23	<u>AQ-23</u>	Calculate and record criteria pollutant emissions on a daily basis	On-going	--	Ongoing
24	<u>AQ-24</u>	Notify District's Source Test Section prior to conducting any tests	Prior to source test	7	Ongoing
25	<u>AQ-25</u>	Submit monitoring reports in accordance with District procedures and time limits	On-going	--	Ongoing
26	<u>AQ-26</u>	Maintain records on site at least 5 years	On-going	--	Ongoing

## 2020 Annual Compliance Report

### Valero Cogeneration Project Conditions of Certification

Item No.	Condition No.	Requirement	Timing	No. of Days Prior	Status
27	<u>AQ-27</u>	Notify District of any violations of permit conditions per Title V	On-going	--	Ongoing
31	<u>AQ-31</u>	Start up period for gas turbines no longer than 256 min or achieve 1 hr in compliance	Start Up mode	--	Ongoing
34	<u>AQ-34</u>	Comply with Acid Rain program CEM requirements	On-going	--	Ongoing
36	<u>AQ-36</u>	Report H2S/TRS content of refinery fuel gas	End of each quarter	Within 60 days after	Ongoing
38	<u>AQ-38</u>	Install/maintain CEM and recorder for NOX, CO and O2	On-going	--	Ongoing
39	<u>AQ-39</u>	POC and PM10 quarterly source testing	Quarterly	--	Ongoing
40	<u>AQ-40</u>	SAM, SO2, SO3, ammonium sulfates quarterly source testing	Quarterly	--	Ongoing
42	<u>AQ-42</u>	Inspect HC valves per Reg 8-18	Quarterly	--	Ongoing
43	<u>AQ-43</u>	Equip connectors with graphitic-based gaskets and inspect per Reg 8-18	Quarterly	--	Ongoing
44	<u>AQ-44</u>	Equip HC centrifugal compressors with dual mechanical seals and inspect per Reg 8-18	Quarterly	--	Ongoing
54	<u>AQ-56</u>	Measured TDS content of cooling tower circulating water	Monthly, Annual; Annual Compl. Report	--	Ongoing
80	<u>HAZ-1</u>	List of Haz Materials in reportable quantities	Annual Compl. Report	--	Ongoing
85	<u>NOISE-2</u>	Noise Complaint Records	On-going	--	Ongoing
116	<u>WASTE-1</u>	Notify CPM of any enforcement action by any local, state or federal agency	As needed	--	Ongoing
123	<u>WATER QUALITY-2</u>	Notify CPM of any changes to NPDES permit, submit annual monitoring report	Receipt of NPDES permit, annual reporting; Annual Compl. Report	30 (after)	Ongoing
131	<u>WATER RES-1</u>	Water use metering, annual report	Annual Compl. Report	--	Ongoing

**VALERO COGENERATION PROJECT**  
**2020 ANNUAL COMPLIANCE REPORT**

**Section 2: Summary of Current Cogeneration Unit Operating Status**



# VALERO COGENERATION PROJECT

## 2020 ANNUAL COMPLIANCE REPORT

### Section 2: Cogeneration Unit Operating Status

The Cogen Unit 2020 GT-4901 availability for 2020 was 97.46% including all unplanned and planned maintenance down times (total of 222.26 shutdown hours).

Planned maintenance hours:

- Routine PMs were performed (filters, instrument calibrations, etc.)

Unplanned Outages for the year included:

- High Fuel Gas Pressure Trip
- Engine Swap
- Utility Grid Voltage Dip
- Fuel Gas Supply Valve Failure

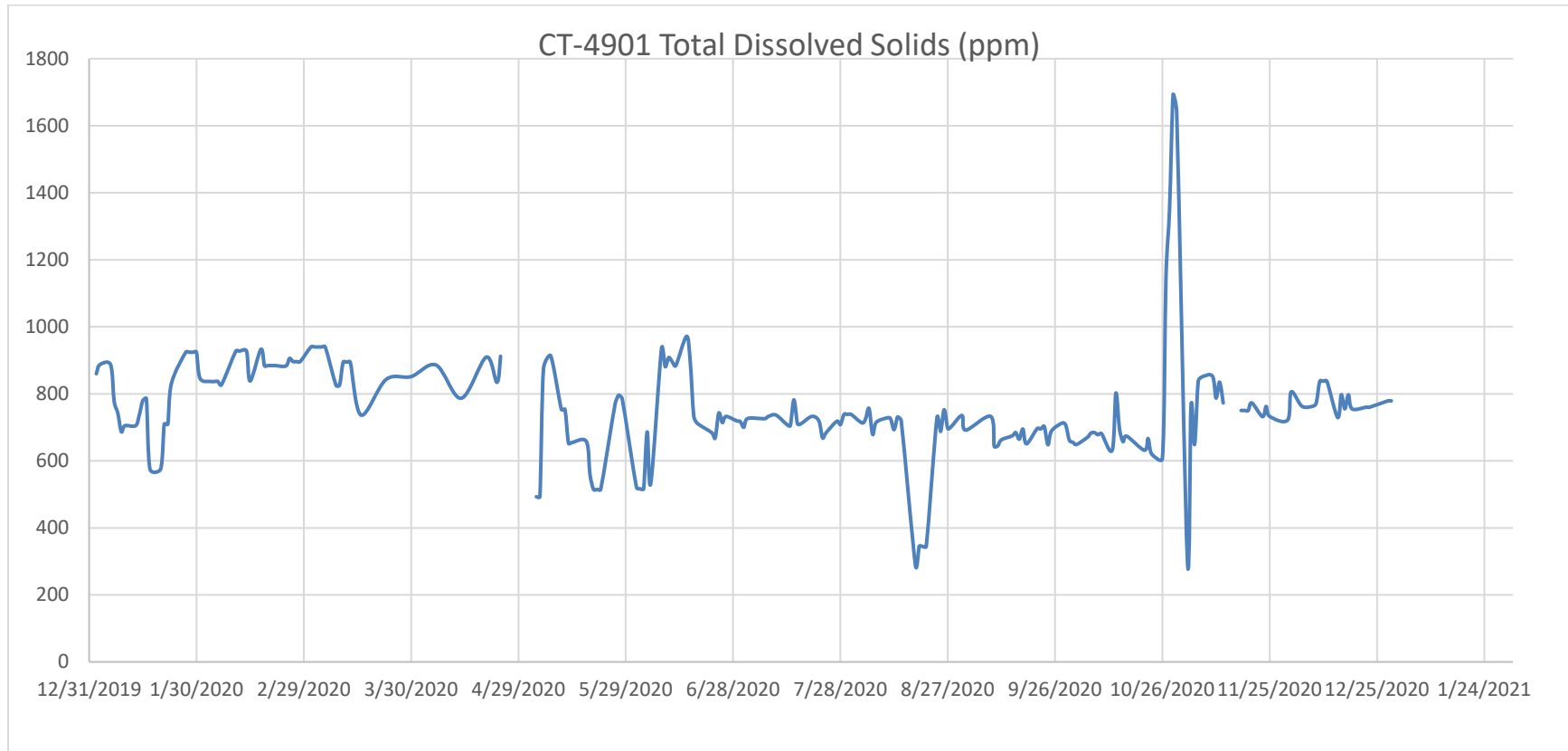
Major work:

- Engine Swap Outage – Lease engine installed due to LPT damage found on VLO engine during semi-annual borescope inspection

**VALERO COGENERATION PROJECT  
2020 ANNUAL COMPLIANCE REPORT**

**Section 3: Documents Required by Specific Conditions**

**VALERO COGENERATION PROJECT**  
**2020 ANNUAL COMPLIANCE REPORT**  
**AQ-56 Cooling Tower TDS Content**



**\* Please note breaks in data were due to Cogen downtime.**

**VALERO COGENERATION PROJECT**  
**2020 ANNUAL COMPLIANCE REPORT**

**Compliance with monthly and annual TDS average limits:**

<b>Month</b>	<b>Monthly Average (ppm)</b>
January	785
February	884
March	882
April	866
May	669
June	742
July	721
August	640
September	681
October	826
November	742
December	782

Annual Average = 759 ppm

**AQ-56:** The measured total dissolved solids (TDS) content of the circulating cooling water shall not exceed 1500 ppm TDS for any monthly average, or 1080 ppm TDS annual average, with a municipal water supply as cooling tower make-up. The use of alternative water supplies will require evaluation of new TDS limits for the cooling tower.

**Verification:** The project owner shall maintain appropriate measurement data records, and submit the monthly and annual average TDS of the cooling tower circulating water.

**VALERO COGENERATION PROJECT  
2020 ANNUAL COMPLIANCE REPORT**

**HAZ-1 Hazardous Materials Contained at Cogeneration Unit**

## Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. <b>Valero</b> Facility Name <b>Valero Benicia Refinery</b> 3400 E 2nd Street, Benicia 94510	Chemical Location <b>C5 COGEN</b>	CERS ID <b>10133161</b> Facility ID <b>48-000-020015</b> Status <b>Submitted on 11/24/2020 3:03 PM</b>
--	--------------------------------------	--

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.
	<b>EL-1515 VISCOSITY GRADE 10 TO 680</b>	<b>Pounds</b>	<b>1950</b>	<b>487</b>	1950		- Physical - Flammable - Health Acute - Health Skin - Corrosion - Irritation	POLYALKYLENE GLYCOL MIXTURE PROPRIETARY ADDITIVES	95 % 5 %	9038-95-3
	<u>CAS No</u>	<u>State</u> Liquid	<u>Storage Container</u> Steel Drum		<u>Pressue</u> Ambient	<u>Waste Code</u>				
		<u>Type</u> Mixture	Days on Site: 365		<u>Temperature</u> Ambient					
	<b>EMERACATM ADCAT CO CATALYST</b>	<b>Pounds</b>	<b>4800</b>	<b>4800</b>	4800		- Health - Carcinogenicity - Health Acute - Toxicity - Health Skin - Corrosion - Irritation - Health - Respiratory Skin - Sensitization - Health Serious - Eye Damage Eye - Irritation - Health Specific - Target Organ - Toxicity	ALUMINUM OXIDE PLATINUM		1344-28-1 7440-06-4
	<u>CAS No</u> 1344-28-1	<u>State</u> Solid	<u>Storage Container</u> Other		<u>Pressue</u> Ambient	<u>Waste Code</u>				
		<u>Type</u> Mixture	Days on Site: 365		<u>Temperature</u> > Ambient					
Combustible Liquid, Class II	<b>FYREWASH F1</b>	<b>Pounds</b>	<b>3200</b>	<b>400</b>	1600		- Health - Carcinogenicity - Health Acute - Toxicity - Health Skin - Corrosion - Irritation - Health Specific - Target Organ - Toxicity	NON IONIC SURFACTANT PETROLEUM DISTILLATES HEAVY AROMATIC NAPHTHA 2-BUTOXYETHHOXY ETHANOL	25 % 50 % 25 % 25 %	64742-47-8 64742-94-5 112-34-5
	<u>CAS No</u>	<u>State</u> Liquid	<u>Storage Container</u> Steel Drum		<u>Pressue</u> Ambient	<u>Waste Code</u>				
		<u>Type</u> Mixture	Days on Site: 365		<u>Temperature</u> Ambient					
	<b>ION EXCHANGE RESIN USF C-211</b>	<b>Pounds</b>	<b>710</b>	<b>710</b>	710		- Health Acute - Toxicity - Health Skin - Corrosion - Irritation - Health Serious - Eye Damage Eye - Irritation - Health Specific - Target Organ - Toxicity	WATER SULFONATED COPOLYMER OF STYRENE	60 % 70 %	7732-18-5 69011-22-9
	<u>CAS No</u>	<u>State</u> Solid	<u>Storage Container</u> Other		<u>Pressue</u> Ambient	<u>Waste Code</u>				
		<u>Type</u> Mixture	Days on Site: 365		<u>Temperature</u> Ambient					

## Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. <b>Valero</b>	Chemical Location <b>C5 COGEN</b>	CERS ID <b>10133161</b>
Facility Name <b>Valero Benicia Refinery</b>		Facility ID <b>48-000-020015</b>
3400 E 2nd Street, Benicia 94510		Status <b>Submitted on 11/24/2020 3:03 PM</b>

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.
	<b>MOBIL DTE 25</b>	<b>Pounds</b>	<b>800</b>	<b>400</b>	<b>400</b>		- Health Acute Toxicity	NON HAZARDOUS PROPRIETARY MIXTURE		
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>				
		Liquid	Steel Drum		Ambient					
		<u>Type</u>			<u>Temperature</u>					
		Mixture	Days on Site: 365		Ambient					
	<b>MOBIL JET OIL II</b>	<b>Pounds</b>	<b>2490</b>	<b>1250</b>	<b>2490</b>		- Health Acute Toxicity	TRICRESYL PHOSPHATE	5 %	1330-78-5
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Toxicity	1-NAPHTHYLAMINE, N-PHENYL	5 %	90-30-2
		Liquid	Aboveground Tank, Steel Drum,		Ambient		- Health Reproductive Toxicity			
		<u>Type</u>	Other		<u>Temperature</u>		- Health Skin Corrosion Irritation			
		Mixture	Days on Site: 365		Ambient		- Health Respiratory Skin Sensitization			
							- Health Serious Eye Damage Eye Irritation			
							- Health Specific Target Organ Toxicity			
DOT: 8 - Corrosives (Liquids and Solids)	<b>Nalco 3DTrasar 3DT230</b>	<b>Pounds</b>	<b>966</b>	<b>506</b>	<b>506</b>		- Physical Gas Under Pressure	Sulfuric Acid	5 %	✓ 7664-93-9
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	- Physical Explosive	Phosphoric Acid	5 %	7664-38-2
	7664-93-9	Liquid	Tote Bin		Ambient		- Physical Corrosive To Metal	Benzotriazole	5 %	95-14-7
		<u>Type</u>			<u>Temperature</u>		- Health Acute Toxicity			
		Mixture	Days on Site: 365		Ambient		- Health Skin Corrosion Irritation			
							- Health Respiratory Skin Sensitization			
							- Health Serious Eye Damage Eye Irritation			

## Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. <b>Valero</b>	Chemical Location <b>C5 COGEN</b>	CERS ID <b>10133161</b>
Facility Name <b>Valero Benicia Refinery</b>		Facility ID <b>48-000-020015</b>
3400 E 2nd Street, Benicia 94510		Status <b>Submitted on 11/24/2020 3:03 PM</b>

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)  Combustible Liquid, Class III-A	<b>NALCO H-550</b>	<b>Pounds</b>	<b>2400</b>	<b>2400</b>	1800	- Physical Corrosive To Metal	GLUTARALDEHYDE	60 %	111-30-8	
	CAS No 111-30-8	State Liquid	Storage Container Tote Bin	Pressue Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity - Health Aspiration Hazard - Health Germ Cell Mutagenicity				
		Type Mixture	Days on Site: 365		> Ambient					
	<b>NALCO STABREX ST70</b>	<b>Pounds</b>	<b>850</b>	<b>850</b>	425	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	SODIUM HYDROXIDE	5 %	1310-73-2	
	CAS No	State Liquid	Storage Container Tote Bin	Pressue Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation				
		Type Mixture	Days on Site: 365		Ambient					
DOT: 8 - Corrosives (Liquids and Solids)	<b>NALCO Trasar Trac 104</b>	<b>Pounds</b>	<b>570</b>	<b>50</b>	570	- Health Acute Toxicity	Sodium Molybdate	7 %	7631-95-0	
	CAS No 7631-95-0	State Liquid	Storage Container Plastic/Non-metalic Drum	Pressue Ambient	Waste Code					
		Type Mixture	Days on Site: 365		Temperature					



## Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. <b>Valero</b>	Chemical Location <b>C5 COGEN</b>	CERS ID <b>10133161</b>
Facility Name <b>Valero Benicia Refinery</b>		Facility ID <b>48-000-020015</b>
3400 E 2nd Street, Benicia 94510		Status <b>Submitted on 11/24/2020 3:03 PM</b>

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.
	<b>NATURAL GAS</b>	<b>Pounds</b>	<b>297</b>	<b>3240</b>	<b>297</b>		- Physical	METHANE	99 %	74-82-8
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Flammable	ETHANE	1 %	74-84-0
		Gas	Steel Drum, Other		> Ambient		- Physical Gas			
		<u>Type</u>			<u>Temperature</u>		Under Pressure			
		Mixture	Days on Site: 365		> Ambient		- Physical			
							Explosive			
							- Health Acute			
							Toxicity			
							- Health Simple			
							Asphyxiant			
	<b>PLATE TYPE CATALYST</b>	<b>Pounds</b>	<b>52000</b>	<b>52000</b>	<b>52000</b>		- Physical	MOLYBDENUM TRIOXIDE	10 %	1313-27-5
	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Corrosive To	TITANIUM DIOXIDE	80 %	13463-67-7
		Solid	Other		> Ambient		Metal	VANADIUM PENTOXIDE	2 %	✓ 1314-62-1
		<u>Type</u>			<u>Temperature</u>		- Health Acute			
		Mixture	Days on Site: 365		> Ambient		Toxicity			
							- Health			
							Respiratory Skin			
							Sensitization			
							- Health Specific			
							Target Organ			
							Toxicity			
	<b>REFINERY FUEL GAS</b>	<b>Pounds</b>	<b>407</b>	<b>3240</b>	<b>407</b>		- Health Acute	FUEL GAS		68308-27-0
Flammable Liquid, Class I-A	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Toxicity			
		Gas	Steel Drum, Other		> Ambient		- Health Skin			
		<u>Type</u>			<u>Temperature</u>		Corrosion			
		Mixture	Days on Site: 365		> Ambient		Irritation			
							- Health Serious			
							Eye Damage Eye			
							Irritation			
							- Health Simple			
							Asphyxiant			
DOT: 9 - Misc. Hazardous Materials	<b>SOUR WASTEWATER</b>	<b>Pounds</b>	<b>20</b>	<b>220</b>	<b>20</b>		- Physical	HYDROGEN SULFIDE	1 %	✓ 7783-06-4
Flammable Liquid, Class I-A	<u>CAS No</u>	<u>State</u>	<u>Storage Container</u>		<u>Pressue</u>	<u>Waste Code</u>	Flammable			
		Liquid	Steel Drum, Other		> Ambient		- Health Acute	WATER		7732-18-5
		<u>Type</u>			<u>Temperature</u>		Toxicity			
		Mixture	Days on Site: 365		> Ambient		- Health			
							Respiratory Skin			
							Sensitization			

## Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. <b>Valero</b> Facility Name <b>Valero Benicia Refinery</b> 3400 E 2nd Street, Benicia 94510	Chemical Location <b>C5 COGEN</b>	CERS ID <b>10133161</b> Facility ID <b>48-000-020015</b> Status <b>Submitted on 11/24/2020 3:03 PM</b>
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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.
	<b>SUVA 123</b>	<b>Pounds</b>	<b>1990</b>	<b>1010</b>	1990		- Health Acute Toxicity	EHTANE, 1,1 - DICHLORO-2,2,2-TRIFLUORO	100 %	306-83-2
	<u>CAS No</u>	<u>State</u> <u>Storage Container</u>	<u>Pressue</u> <u>Waste Code</u>	<u>Temperature</u> <u>Waste Code</u>			- Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity - Health Hazard Not Otherwise Classified			
	<b>TRANE OIL 22</b>	<b>Pounds</b>	<b>60</b>	<b>70</b>	60			WHITE MINERAL OIL	100 %	8042-47-5
	<u>CAS No</u>	<u>State</u> <u>Storage Container</u>	<u>Pressue</u> <u>Waste Code</u>	<u>Temperature</u> <u>Waste Code</u>						
	<b>USF A-284 ION EXCHANGE RESIN</b>	<b>Pounds</b>	<b>1060</b>	<b>1060</b>	1060		- Health Acute Toxicity	Trimethylamine functionalized,CHLOROMETHELAT ED COPOLYMER OF STYRENE AND DIVINYL BENZENE	70 %	609011-18-3
	<u>CAS No</u>	<u>State</u> <u>Storage Container</u>	<u>Pressue</u> <u>Waste Code</u>	<u>Temperature</u> <u>Waste Code</u>			- Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Specific Target Organ Toxicity	WATER		7732-18-5

VALERO COGENERATION PROJECT

2020 ANNUAL COMPLIANCE REPORT

WASTE-2 Documentation of Waste Management Methods

I certify that all wastes generated at the Valero Cogeneration Facility are properly characterized and managed according to waste management practices described in CTEMS EPL-4001 Container Labeling and Closure Policy and the Benicia Refinery Waste Management Compliance Manual.

Taryn Wier 2/25/21  
Taryn Wier Date  
Manager - Environmental Engineering

# VALERO COGENERATION PROJECT

## 2020 ANNUAL COMPLIANCE REPORT

### VALERO COGENERATION PROJECT 2020 ANNUAL COMPLIANCE REPORT Valero Benicia Refinery NPDES CA0005550

#### WQ-2: Annual Monitoring Data Submitted to RWQCB

The Valero Cogeneration Project sends a small amount of wastewater to the refinery's wastewater treatment system, which after treatment becomes a part of the refinery's effluent. Valero submits its self-monitoring data for the refinery's effluent monthly to the RWQCB electronically via the Internet to eSMR, the State Board electronic reporting system.

Attached is the 2020 NPDES Compliance Summary Table for the Valero Benicia Refinery, which provides a listing of the refinery's NPDES permit monitoring points and compliance parameters, along with a monthly accounting of the compliance status and number of samples taken each month.

For each month, the entry made in each row (e.g., 0/31) corresponds to the number samples exceeding the limit versus the number of samples taken during the month. An entry of 0/31 means that no samples exceeded the limit out of 31 (i.e., daily) samples that month.

During the 2020 reporting year, there were 0 samples results that exceeded an NPDES permit limit.

**VALERO COGENERATION PROJECT  
2020 ANNUAL COMPLIANCE REPORT**

2020 COMPLIANCE SUMMARY TABLE  
Valero Benicia Refinery NPDES CA0005550





























**VALERO COGENERATION PROJECT**

**2020 ANNUAL COMPLIANCE REPORT**

**WR-1 Annual Cogeneration Unit Water Use Summary**

**Valero Cogeneration Project  
2020**

<b>MONTHLY</b>								
		<b>Water Usage</b>				<b>Recycled Water</b>		<b>Off-Set</b>
		<b>GPD</b>			<b>Acre-Feet</b>	<b>Acre-Feet</b>		<b>Acre-Feet</b>
Gallons		Average	GPM	(min)	(max)	Total	Total	Net
Jan-20	1,732,764	55,896	39	51,637	69,369	5.3	15.8	10.5
Feb-20	1,897,738	65,439	45	57,288	84,399	5.8	13.3	7.5
Mar-20	2,271,022	73,259	51	58,709	81,458	7.0	15.0	8.1
Apr-20	1,813,087	60,436	42	9	82,260	5.6	12.9	7.4
May-20	1,928,796	62,219	43	10	73,105	5.9	13.6	7.6
Jun-20	2,409,602	80,320	56	62,932	92,134	7.4	13.8	6.4
Jul-20	2,619,861	84,512	59	80,839	92,313	8.0	13.3	5.3
Aug-20	3,311,871	110,396	77	86,148	175,693	10.2	16.5	6.3
Sep-20	3,059,583	101,986	71	69,564	120,847	9.4	16.6	7.2
Oct-20	3,266,499	105,371	73	91,837	119,369	10.0	14.9	4.9
Nov-20	2,541,856	84,729	59	22,072	114,250	7.8	11.7	3.9
Dec-20	2,588,609	83,504	58	81,452	94,701	7.9	12.6	4.7

<b>ANNUAL</b>								
		<b>Water Usage</b>				<b>Recycled Water</b>		<b>Off-Set</b>
		<b>GPD</b>			<b>Acre-Feet</b>	<b>Acre-Feet</b>		<b>Acre-Feet</b>
		Average	GPM	(min)	(max)	Total	Total	Net
<b>2020</b>		<b>80,672</b>	<b>56</b>	<b>9</b>	<b>175,693</b>	<b>90</b>	<b>170</b>	<b>80</b>
<b>2019</b>		<b>77,123</b>	<b>54</b>	<b>4</b>	<b>108,599</b>	<b>86</b>	<b>143</b>	<b>57</b>

GPD: Gallons per day

CEC Condition of Certification, Water Use Metering, WATER RES-1 & WATER RES-2

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**Section 4: Post-Certification Changes**

No changes were made in 2020.

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**Section 5: Resolution to Unmet Submittals**

There were no unmet submittals or resolutions to unmet submittals in 2020.

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### Section 6: Permits and Filings Involving Other Governmental Agencies

#### Bay Area Air Quality Management District (BAAQMD)

- Valero Cogeneration Project – 2020 Annual Mass Emissions Report to BAAQMD
- Routine Reports to BAAQMD:
  - Monthly Cogen NOx Report
  - Monthly Cogen CO Report
  - Monthly Cogen Fuel Gas Report (H2S/TRS)
  - Quarterly Cogen SO2 Curtailment Report
  - Quarterly Fuel Gas Sulfur Report
- Source Testing Reports:
  - Quarterly source test reports for SAM measurements
  - Annual source test reports for PM10, POC, SO2 measurements
- Form CEC-1304 - Quarterly Report for Power Plants 10 MW or Greater
- Title V, Renewed - Issued by BAAQMD April 30, 2013

#### Regional Water Quality Control Board (RWQCB)

- Valero Refinery NPDES Permit Renewal (including Cogeneration operations) RWQCB Order No. R2-2015-0037, CA 0005550: Approved by RWQCB on August 12, 2015, effective October 1, 2015 through September 30, 2020.
- Valero Refinery SWPPP Update (including Cogeneration operations)

#### Department of Energy (DOE) Energy Information Administration (EIA) reports

- EIA – 860 “Annual Electric Generator Report”
- EIA – 923 “Monthly Power Plant Operations Report”

#### Solano County CUPA / City of Benicia Fire Dept

- Valero Benicia Refinery 2020 Hazardous Materials Business Plan (including Cogeneration operations)

#### U. S. EPA

- Valero Benicia Refinery NSPS/MACT Semiannual Reports

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**Section 7: Projection of 2021 Compliance Activities**

Operations:

Maintain cogeneration unit operations in compliance with emission limits and other permit conditions.

Recordkeeping:

Continue collection of data and records and maintain compliance files.

Reporting:

Prepare and submit monthly CEM reports.

Prepare and submit required quarterly, semiannual, and annual reports.

Source Testing:

Conduct quarterly source testing for SAM. Conduct annual source testing for PM10, POC, and SO<sub>2</sub>.

Continuous Emissions Monitoring Systems (CEMS):

Continue to conduct quarterly accuracy audits (CGA & RATA).

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### 2020 ANNUAL COMPLIANCE REPORT

#### Section 8: 2020 Files

The following onsite compliance files have been established for the Valero Cogeneration unit and contain the information described for the previous year's operating period.

File Number	File Name	File Description
CGN AI-03-02	CEC Annual Compliance Report	Annual Compliance Reports for Cogen required by general conditions of CEC's Commission Decision
CGN AI-03-02	Routine Cogen Quarterly Reports	Cogen Quarterly SO2 Containment Report
CGN AI-03-03	Annual Mass Emissions Report	Cogen Report as required by Permit Conditions #22 and #23
CGN EA-17-00	CGN CEC Compliance Fees	Invoices, Cogen Facility Compliance Fees
CGN WA-03-02	Monthly Cogen Water Use Reports	Cogen Cooling Tower TDS by Conductivity Cogen H2O Report
Fed 60a AI-24-16	FED-60A QA/QC GT-4901/SG-4901	Cogen – CEMS Quality Assurance Plan
SRCTST AI-03-03	BAAQMD Notifications	Notifications of source tests for Cogen
SRCTST AI-03-03	Cogen – Monthly CEMS Report	Cogen - Monthly Gas Turbine and HRSG Monitoring Report Reg. 1-522.8
SRCTST AI-24-00	Monthly CEMS Down & OOC LOGS	2020 Monthly CEMS Downtime & Out of Control Logs
SRCTST AI-21-03	Cogen – Stack Source Tests	Source test for the Cogen Stack and Quarterly Source Test Submittals
SRCTST AI-21-03	SRCTST GT-4901 S-1030	Source Test Reports



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### **Section 9: Evaluation of the Onsite Contingency Plan**

#### Onsite Contingency Plan for Unexpected Temporary & Permanent Closure

The Onsite Contingency Plan for Unexpected Temporary and Permanent Closure is reviewed and updated annually.

#### Cogeneration Unit Operating Procedures

The normal and emergency procedures in the operating procedures manual are reviewed and updated annually.

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**Section 10: Complaints, NOVs, Warnings and Citations**

2020 Complaints:

The refinery received no complaints that have been determined to be related to the Cogeneration Unit.

2020 Notices of Violation (NOVs):

The BAAQMD issued the following NOVs for events that were related to the Cogeneration Unit (GT/SG-4901 stack emissions):

BAAQMD NOV #	Date Issued	Date of Event	Description
None			

2020 Warnings and Citations:

The refinery received no other warnings or citations that have been determined to be related to the Cogeneration Unit.