DOCKETED	
Docket Number:	98-AFC-01C
Project Title:	Pittsburg District Energy Facility - Commission Adoption Order (Order No. 99-0817-01)
TN #:	231412
Document Title:	2018 Annual Compliance Report
Description:	N/A
Filer:	Maria Barroso
Organization:	Calpine Corporation
Submitter Role:	Applicant
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Docketed Date:	1/8/2020

LOS MEDANOS ENERGY CENTER, LLC

750 E. THIRD STREET
PITTSBURG, CA 94565

February 15, 2019

Mr. John Heiser, Compliance Project Manager
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

Re: Los Medanos Energy Center, LLC 98-AFC-1
2018 Annual Air Quality Report

Dear Mr. Heiser,

As required by various General and specific Conditions of Certification of Commission Decision 98-AFC-1, commencing from AQ-14 for the Los Medanos Energy Center (LMEC), this will serve to satisfy the requirement for the Annual Report for Calendar Year 2018.

Enclosed please find information documenting emissions and other verification confirming compliance with the Air Quality Conditions of Certification for your review.

If you have any questions do not hesitate to contact Maria Barroso, EHS Specialist III at (925) 529-8286 or myself at (925) 252-2096.

Sincerely,

Jody Batten
Authorized Signatory and General Manager
Los Medanos Energy Center, LLC

Enclosures

Los Medanos Energy Center

Annual Compliance Report 2018

This Report will serve to satisfy the California Energy Commission Final Decision 98-AFC-1 for the Los Medanos Energy Center (LMEC) for an Annual Report for compliance with General Conditions and with specific Air Quality Conditions of Certification. Included, herein, will be information and documentation to demonstrate compliance with the CEC Conditions and information where there may have been instances of non-compliance with any Conditions.

Updated Compliance Matrix

Included, as **Attachment 1**, is a current compliance matrix indicating the status of the Conditions of Certification. Omitted from the list are Conditions determined to have been completed by the CEC Compliance Project Manager (CPM). The remaining Conditions are generally those that require reporting on either a semi-annual or annual basis.

Summary of Current Project Operating Status

The LMEC commenced Commercial Operation in October 2001. Both combustion turbine generators and steam turbine generator have been in normal operation since that date. The plant combustion turbines operated approximately 14,241 hours during calendar year 2018. Unit 1 operated approximately 6,453 hours in calendar year 2018. Unit 2 operated approximately 7,788 hours during calendar year 2018. The Auxiliary Boiler operated to support the steam production for USS POSCO Industries (UPI) and DOW Chemical Co. during periods of CTG outage activities. It operated a total of 885 hours during calendar year. There were neither cold steam turbine startups nor tuning events in 2018.

LMEC continues to operate under an "Automatic Generation Control" (AGC) mode through the Independent System Operator (ISO). While in AGC mode, the ISO controls the loads of the units, raising or lowering the load as conditions require.

Documents and Information Required by Specific Conditions.

Several Conditions of Certification require the submittal of certain information and/or documentation to demonstrate compliance or to provide the CEC with specific information. Those Conditions are described below:

Hazardous Materials A list of hazardous materials used at LMEC is required to be submitted to the CEC on an annual basis as required by **HAZ-1**. This list is included as **Attachment 2**

Air Quality Emissions from LMEC are monitored through the use of Continuous Emissions Monitoring Systems (CEMS). Numerous air quality conditions require the submittal of emissions data obtained from the CEMS. The data for the Combustion Turbines and the Auxiliary Boiler was previously submitted in the Semi-Annual Report in July 2018 and January 2019 and will not be duplicated with this Annual Report. Emissions data for the following is included as **Attachment 3**: 12 Month Periods for total mass emissions for 2018.

In accordance with Condition AQ-42, LMEC has maintained Toxic Air Contaminant levels significantly below the Test Waiver Limits listed in AQ-42(b) during the last three consecutive biennial source tests. Pursuant to the CEC condition, LMEC has resumed testing on a once per five year schedule pursuant to BAAQMD Title V Permit Condition 42 (b). The projected annual emission rates for 2019 were submitted in the semi-annual compliance report in January 2019.

Other air quality conditions require a statement and/or confirmation that compliance has been maintained throughout the year. Non-compliance is to be reported on an "exception" basis. **Table 1** Air Quality Exceptions Report affirms compliance with the conditions, except where noted.

Waste Management Condition of Certification **WASTE-3** requires that LMEC report on the methods used to dispose of the hazardous waste generated from the plant. The typical types of hazardous wastes generated include used oil, oily solids, and other miscellaneous waste generated during tank cleanings or maintenance activities. LMEC had multiple shipments of waste shipped off-site for disposal. The used oil is recycled through a licensed used oil recycler. A matrix of the hazardous waste management methods identifying the actual waste management methods used during the year is required to be submitted to the CEC on an annual basis as required by WASTE-3. The matrix is included as **Attachment 4**.

Transmission Line Safety and Nuisance Condition of Certification **TLSN-2** requires the reporting of any complaints of radio or television interference from operation of LMEC. There have been no complaints of any interference since the plant has been in operation. Condition TLSN-4 requires that the transmission line right of way be inspected annually and be maintained free of any combustible materials. An inspection of the transmission right of way was performed on April 2018 and October 2018. Excess plant growth was removed by Planned Environments in

the area of the transmission towers. The transmission line inspection report is included as **Attachment 5.**

Site Maintenance Condition of Certification, **VIS-1** requires reporting on the status of the color treatment (paint) at LMEC. Overall, the color treatment has held up well and extensive or touch up repainting has not been required.

Condition **VIS-6** requires complying with the City of Pittsburg Zoning Ordinance Section 18.82.045. LMEC has maintained compliance with the ordinance by keeping the exterior of the buildings and other structures in a good state of repair and the exterior finish clean and well maintained. Additionally, the site is 95% paved and the northern perimeter of the plant is landscaped. However, there is a recurring need to periodically remove weeds that may grow. The remainder of the plant site has been kept in a neat and orderly manner, free of weeds, loose trash, debris and other litter.

Plant Efficiency Condition of Certification **EFF-1** requires the annual submittal of the calculations of the operating standard and efficiency standard achieved by the plant, showing how the plant meets the minimum required standards. The calculations and resultant data are presented in **Attachment 6**.

Post-Certification Changes

There have been eight Amendment requests submitted and approved by the CEC since the Final Decision was approved. **Attachment 7** describes the eight Amendments. There have also been 16 requests for Condition of Certification Verification Language changes. They are described in **Attachment 8**.

Submittal Deadlines Missed.

There was one late RCA submittal to Bay Area Air Quality Management District for an indicated excess that occurred on January 30, 2018. The RCA report and Title V Deviation Reports were submitted after the allowed reporting period.

Filings Made to or approved by other agencies.

During the calendar year 2018, several applications were submitted for new or modified permits and other reports were submitted as required. Besides the CEC, other agencies to which applications or reports were made included the BAAQMD, Contra Costa County, Delta Diablo

Sanitation District, Department of Toxic Substance Control, EPA and the Regional and State Water Boards. The specific applications and/or reports are described below:

BAAQMD

- Annual Information Update
- Annual STG cold start and tuning report
- Source Test Reports
- Annual RATA and Source Test notifications
- Annual Source Test Plan
- Monthly CEMS Reports
- Title V Compliance Certification
- Title V Semi Annual Monitoring Report

Contra Costa County Health Services

- Hazardous Materials Business Plan and Inventory
- Updated Hazardous Materials Inventory and Plot Plans

Delta Diablo Sanitation District

- Quarterly Industrial Blowdown Monitoring Reports
- Semi-Annual Wastewater Discharge Reports

Department of Toxic Substances Control

- Hazardous Waste Manifests and EPA Identification Number Verification Report

Environmental Protection Agency

- Annual Source Test and RATA notifications
- Semi-Annual NSPS Reports
- Title IV Acid Rain Quarterly Electronic Data Reports
- Title V Compliance Certification Report

Regional Water Quality Control Board

- Annual Storm Water Monitoring Report
-

State Water Resources Control Board

- None

Compliance Activities Scheduled For Coming Year

There are several compliance activities that will occur during the upcoming year.

Additions To The On-Site Compliance File

The significant on-site compliance files for LMEC currently consists of all of the Monthly Compliance Reports, copies of Amendment requests and approvals, Verification Language Requests, correspondence with the CPM and other CEC staff, and reports or permits granted by other governmental agencies. Other compliance files include EPA New Source Performance Standards (NSPS) and Electronic Data Reporting (EDRs) submittals. Both the NSPS and EDR

files are an on-going compliance activity and will be added to the on-site files as they are submitted. Other additions to the file would include BAAQMD correspondence and required reports that include any emissions Episodes Reports or Notices of Violation, monthly CEMS reports, and other operating data.

Evaluation Of The On-Site Contingency Plan

The on-site Contingency Plan for LMEC was developed and submitted to the CEC in April 2001. Information contained in other Calpine plans was reviewed for incorporation into the LMEC contingency plan. All of the mechanisms remain in place that would facilitate the unexpected temporary or permanent closure of LMEC. Evacuation and Emergency Action plans have already been developed in the event of an emergency evacuation and temporary shutdown of the plant. Maintenance procedures are in place to accommodate any extended shutdown. Insurance mechanisms are also in place to coordinate any unexpected or permanent plant closure.

Non-Compliance With Conditions Of Certification

On March 23, 2018 LMEC management submitted a late RCA report to BAAQMD for a 3.0 ppm NOx indicated excess that occurred on January 30, 2018. The DAHS for gas turbine Unit 2 included two minutes of calibration gas readings in the hourly calculation and recorded the indicated excess. The event was a permit deviation because it was reported outside of the allowed 96 hours from the time of occurrence. The operator on shift did not recognize that the incident had to be reported to BAAQMD. The incident was discovered during an audit of the daily reports and reported on March 23, 2018. On January 31, 2019 the BAAQMD issued the site a Notice of Violation.

Table 1

Air Quality Exceptions Report

AQ Condition	Response
14	The CTs, HRSGs and Aux. Boiler were fired exclusively on natural gas.
15	The combined heat input limit of 2,225.1 MMBTU/hr for either CT/HRSG averaged over any 3 hr rolling average was not exceeded. There were no violations of any permit conditions.
16	The combined heat input limit of 50,738.4 MMBTU/day for either CT/HRSG was not exceeded for either CT or HRSG.
17	The combined cumulative heat input rate of 34,010,400 MMBTU for both CTs/HRSGs was not exceeded for the 12-month period.
18	The duct burners in either HRSG were not operated without a CT in operation.
19/20	There were no problems encountered with the CO catalyst or SCR for either HRSG.
21	There were no indicated exceedances of the emission limits for CO, NH3 or POCs during the operation of the CTs. On 1/30/18, one NOx indicated excess event was recorded for gas turbine Unit 2. The incident was caused by the ICE tech returning the CEMS to normal operation when calibration gas was still present in the sample line after a cal gas bottle replacement. The inclusion of cal gas resulted in a 3.0 ppm NOx hourly average. The incident was not reported timely and the site received an NOV.
22	There were no exceedances of emission limitations during transient conditions for the CTs.
23	There were no exceedances of emission limitations during any start up for the CTs.
24	There were no simultaneous start ups of two CTs.
26	The hourly fuel consumption limit of 320 MMBTU/hr was not exceeded for the Aux. Boiler.
27	The annual fuel consumption limit of 480,000 MMBTU/yr was not exceeded for the Aux. Boiler.
28	There were no exceedances of the NOx, CO or POC emission limitations for the Auxiliary Boiler during non-startup and shutdown hours.
30	The combined daily fuel consumption limit of 109,157 MMBTU/day for all combustion sources was not exceeded.
31	The combined annual fuel consumption limit of 34,490,400 MMBTU for all combustion sources was not exceeded.
32	The combined daily emission limits for all combustion sources, including any two cold starts on the same day, was not exceeded.
33	The combined annual emission limitation (tons) for all sources was not exceeded.
34	The maximum projected annual Toxic Air Contaminant emissions from the combustion sources were not exceeded.

ATTACHMENT 1

Los Medanos Energy Center, LLC
CEC Annual Compliance Matrix
Pittsburg, California

Technical Area/ Condition No.	Page	Lead Party/Support Party	Recipient	Submittal	Date Submittal Required	Notes	Scheduled Date Required	Actual Submittal Date	Compliance Status
General Conditions	33	PDEF/KIC	CPM	Compliance Matrix	Throughout the year	Include in Air Quality Reports	2/18/2019	2/15/2019	On-going
General Conditions	34	PDEF	CPM	Annual Compliance Report	Feb. 18th .	Annual Report 2017	2/18/2019	2/15/2019	Complete
General Conditions	35	PDEF/KIC	CPM	Application for confidentiality		Accompany confidential information			
GEN-9	54	PDEF	1) City of Pittsburg 2) Contra Costa County 3) CPM	Copy of closure/decommissioning plan	At least 12 months prior to closure of facility	Review & Approval	Prior to closure	Prior to closure	Upon plant closure
Power Plant Efficiency (EFF)-1	70	PDEF	CPM	Compliance file with monthly records of operation and efficiency	Feb. 18th	Include in annual compliance reports	2/18/2019	2/15/2019	On-going
Transmission Line Safety & Nuisance	90	PDEF	CPM	Written records of complaints of radio or television interference	Feb. 18th .	Included in Annual Compliance Report	2/18/2019	2/15/2019	On-going
TLSN-4	91	PDEF	CPM	Summary of transmission line ROW inspection and fire prevention	Feb. 18th .	Included in Annual Compliance Report	2/18/2019	2/15/2019	On-going
Air Quality (AQ)-14	113	PDEF	CPM	Air Quality Report--including exceptions report and complete data report for fuel sulfur content compliance	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-15	113	PDEF	CPM	Information regarding exceedance of hourly fuel consumption limits for CTG, HRSG. Any violations of permit conditions must also be reported in a timely manner	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-17	113	PDEF	CPM	Information regarding exceedance of daily fuel consumption limits for CTG and HRSG. Any violations of permit conditions must also be reported in a timely manner	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-18	114	PDEF	CPM	Report of violation of combined cumulative heat input rate per year for CTG, HRSG	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-18	114	PDEF	CPM	Report of date, time and duration of violation for operating HRSG without CTG operations	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-19	114	PDEF	CPM	Information on any major problem in operation of Oxidzing Catalyst and SCR Systems for CTGs and HRSGs (S-1 & S-2)	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-20	114	PDEF	CPM	Information on any major problem in operation of Oxidzing Catalyst and SCR Systems for CTGs and HRSGs (S-2 & S-3)	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-21	114	PDEF	CPM	Report of violation of NOx, CO, NH3 and POC emission limits	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-23	118	PDEF	CPM	Report of any violation of transient condition emission limits (start-up and shutdown)	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-24	119	PDEF	CPM	Report of gas turbine simultaneous start-up violations	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-25	119	PDEF		Compliance with AQ-14 is deemed compliance with AQ-25			7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-26	119	PDEF	CPM	Information (data & time) when hourly fuel consumption for auxiliary boiler exceeds hourly limit	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-27	119	PDEF	CPM	Information on violations of annual fuel consumption limit for auxiliary boiler	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-28	119	PDEF	CPM	Information on violations of NOx, CO and POC emission limits	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-30	120	PDEF	CPM	Report of violation of combined daily fuel consumption limits for all sources	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-30	120	PDEF	CPM	Report of violation of combined annual fuel consumption limits for all sources	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-32	121	PDEF	CPM	Report of violation of combined daily emission limits for all sources	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going

Los Medanos Energy Center, LLC
CEC Annual Compliance Matrix
Pittsburg, California

Technical Area/ Condition No.	Page	Lead Party/Support Party	Recipient	Submittal	Date Submittal Required	Notes	Scheduled Date Required	Actual Submittal Date	Compliance Status
		PDEF	CPM	Identify days in which two cold starts occurred and the associated maximum emissions	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-33	121	PDEF	CPM	Report of violation of combined annual emission limits for all sources	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-37	124	PDEF	CPM	Maximum projected annual emissions of formaldehyde, benzene and specified PAH's	Feb. 18th and July 30st	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
AQ-39	125	PDEF	1) District 2) CPM	Notification of annual source test on exhaust point P-1 & P-2	Within 7 working days before the execution of the source test	Prior approval of protocols req'd per AQ-41	6/23/2018	5/23/2018	Completed
		PDEF	1) District 2) CPM	Source test results	Within 60 days of conducting the test		10/2/2018	9/28/2018	Completed
AQ-40	126	PDEF	1) District 2) CPM	Notification of annual source test on exhaust point P-3	Within 7 working days before the execution of the source test	Prior approval of protocols req'd per AQ-41	6/23/2018	5/23/2018	Completed
		PDEF	1) District 2) CPM	Source test results	Within 60 days of conducting the test		10/2/2018	9/28/2018	Completed
AQ-41	126	PDEF	1) District Source Test Section 2) CPM	Source test procedures for all source tests	Prior to conducting any source test	Review & Approval	6/23/2018	5/23/2018	Completed
		PDEF	1) District Source Test Section 2) CPM	Notification of source test protocol and projected test dates	At least 7 days prior to source test dates		6/23/2018	5/23/2018	Completed
		PDEF	1) District Source Test Section 2) CPM	Source tests results	Within 60 days of conducting the test		10/2/2018	9/28/2018	Completed
AQ-42	126	PDEF	1) District 2) CPM	Notification of biennial source testing	7 working days before source testing		6/23/2018	5/23/2018	Completed
		PDEF	1) District 2) CPM	Source test results	Within 60 days of conducting the test		10/2/2018	9/28/2018	Completed
AQ-43	127	PDEF	CPM	All reports as required by District Rules or Regulations	Within 30 days after they are due		EOM	EOM	On-going
AQ-44	127	PDEF	1) District 2) CEC 3) California Air Resources Board	All records and reports for a period of 5 years	Upon Request		Upon Request	Upon Request	On-going
AQ-45	128	PDEF	1) District 2) CPM	Notification of any violation of permit conditions	In a timely manner following violation. Also included in Air Quality Reports	Include in Air Quality Reports	7/30/18 & 2/18/19	7/30/18 & 2/15/19	On-going
Hazardous Material Management (HAZ)-1	154	PDEF	CPM	List of hazardous materials contained at the facility	Feb. 18th	Include in Annual Compliance Report	2/18/2019	2/15/2019	On-going
WASTE-3		PDEF	CPM	Document actual waste management methods used relative to planned methods	Feb. 18th	Include in Annual Compliance Report	2/18/2019	2/15/2019	On-going
SOILS&WATER-5	192	PDEF	CPM	Notification (by phone & in writing) if backup water supply is used for more than 3 consecutive days			2/18/2019	2/15/2019	On-going

Los Medanos Energy Center, LLC
CEC Annual Compliance Matrix
Pittsburg, California

Technical Area/ Condition No.	Page	Lead Party/Support Party	Recipient	Submittal	Date Submittal Required	Notes	Scheduled Date Required	Actual Submittal Date	Compliance Status
Visual Resources (VIS)-1	246	PDEF	CPM	Status report of treatment maintenance	Feb. 18th	Include in Annual Compliance Report	2/18/2019	2/15/2019	On-going
VIS-6	251	PDEF	CPM	Statement of compliance with Section 18.82.045 of the City of Pittsburg's Zoning Ordinance for site maintenance	Feb. 18th	Include in Annual Compliance Report	2/18/2019	2/15/2019	On-going
NOISE-2	262	PDEF	1) City of Pittsburg Planning Division 2) CPM	Noise Complaint Resolution Form	Within 30 days of receiving noise complaint		2/18/2019	2/15/2019	On-going

ATTACHMENT 2

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **AMMONIA SKID - Map #1**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic	**AQUEOUS AMMONIA 24.5%** CAS No 1336-21-6 Map: 1	**Gallons** State Liquid Type Mixture	**17000** Storage Container Aboveground Tank Days on Site: 365	**10000**	15000 Pressue > Ambient Temperature > Ambient	Waste Code 122	- Physical Flammable - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Simple Asphyxiant	AMMONIUM HYDROXIDE 24.5% WATER Ammonia	100 % 76 % 25 %	 ✓	1336-21-6 7664-41-7 7732-18-5

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **CEMS BUILDINGS- Map# 40**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.3 - Toxic Gases Flammable Gas	**Carbon Monoxide** CAS No	**Cu. Feet** State: Gas Type: Mixture	**3000** Storage Container: Cylinder Days on Site: 365	**265**	3000 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Health Acute Toxicity - Health Reproductive Toxicity - Health Specific Target Organ Toxicity	NITROGEN CARBON MONOXIDE	50 % 80 %		7727-37-9 630-08-0

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **CEMS BUILDINGS- Map# 45**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	NOx,NO, CO, Nitrogen GAS	**Cu. Feet**	**700**	**175**	525		- Physical Gas Under Pressure - Health Simple Asphyxiant	carbon monoxide	0 %		630-08-0
								nitric oxide			
								nitrogen oxide			

CAS No

Map: 45

State: Gas
Storage Container: Cylinder
Pressue: > Ambient
Waste Code
Type: Mixture
Days on Site: 365
Temperature: Ambient

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **COMBUSTION AND STEAM GENERATORS - Map # 38**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Flammable Gas	**HYDROGEN** CAS No 1333-74-0	**Cu. Feet** State Gas Type Pure	**17730** Storage Container Cylinder Days on Site: 365	**200**	17730 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **COOLING TOWER / WATER TREATMENT BUILDING - Map#25**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**SODIUM HYPOCHLORITE >12.5%** CAS No 7681-52-9 Map: 25	**Gallons** State Liquid Type Mixture	**6900** Storage Container Aboveground Tank Days on Site: 365	**6900**	6000 Pressue Ambient Temperature Ambient	Waste Code	- Physical Contact Water Emits Flammable Gas - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	SODIUM HYPOCHLORITE >12.5%-15% WATER Sodium Hydroxide Caustic Soda	13 % 88 % 0 %		7681-52-9 1310-73-2

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **COOLING TOWER AREA**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	DREWPLUS FG720 FOAM CONTROL AGENT	**Gallons**	**500**	**250**	500			FORMALDEHYDE	0 %		50-00-0
	CAS No	State: Liquid	Storage Container: Tote Bin		Pressue	Waste Code					
		Type	Days on Site: 365		Temperature						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **COOLING TOWER AREA - Map #14**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	DPB-629 CORROSION INHIBITOR	**Gallons**	**500**	**250**	400		- Health Acute Toxicity	SULFONIC ACID ALKYL DERIVATIVE	50 %		254504001-5448
	CAS No	State: Liquid Type: Mixture	Storage Container: Tote Bin Days on Site: 365		Pressue Temperature	Waste Code	- Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	SULFONIC ACID DERIVATIVE	5 %		254504001-5896

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **COOLING TOWER AREA - Map 29**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	MICROBIOCIDE BIOSPERSE CX9400	**Gallons**	**6000**	**6100**	5000			MICROBIOCIDE	100 %		
	CAS No	State: Liquid	Storage Container: Aboveground Tank		Pressue	Waste Code					
		Type: Mixture			Temperature						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **COOLING TOWER AREA -Map # 7**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	TOWERBROM 960	**Pounds**	**7110**	**2370**	2370		- Physical Oxidizer	sodium dichloroisocyanurate	90 %		2893-78-9
	CAS No 2893-78-9 Map: 7	State Solid Type Mixture	Storage Container Plastic/Non-metalic Drum, Tote Bin Days on Site: 365		Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	sodium bromide	10 %		7647-15-6

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **FIRE PUMP HOUSE- Map# 10**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**NO. 2 DIESEL FUEL** CAS No 68334-30-5 Map: 10	**Gallons** State Liquid Type Pure	**595** Storage Container Aboveground Tank Days on Site: 365	**500**	500 Pressue Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **GAS COMPRESSOR BLDG MAP# 18**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	BIOSPERSE BIOPENETRANT	**Gallons**	**400**	**250**	400		- Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	SULFONIC ACID ALKYL DERIVATIVE	15 %		254504001-5448
	CAS No	State: Liquid Type	Storage Container: Tote Bin Days on Site: 365		Pressue: Ambient Temperature: Ambient	Waste Code		SULFONIC ACID DERIVATIVE	2 %		254504001-5896

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **GAS COMPRESSOR BLDG MAP# 9**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
	SODA ASH	**Pounds**	**1014**	**50**	881		- Health Serious Eye Damage Eye Irritation				
	CAS No 497198	State Solid	Storage Container Bag		Pressue Ambient	Waste Code					
		Type Pure	Days on Site: 365		Temperature Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **GAS COMPRESSOR BUILDING STORAGE AREA- Map#17**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	ZOK 27 GAS TURBINE COMPRESSOR CLEANING FLUID	**Gallons**	**800**	**400**	600		- Health Serious Eye Damage Eye Irritation	Non-ionic surfactant			Proprietary
								Dipropylene Glycol Monomethyl Ether	2 %		34590-94-8
								Corrosion Inhibitor Blend	10 %		Proprietary
								Water			7732-18-5

State: Liquid
Storage Container: Tote Bin
Pressue: Ambient
Waste Code:
CAS No:
Type: Mixture
Days on Site: 365
Temperature: Ambient
Map: 17

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **HAZARDOUS STORAGE AREA - Map# 4**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Grease	**Gallons**	**50**	**5**	50			Highly refined mineral oil (C15 - C50)	99 %		mixture
	CAS No	State: Liquid	Storage Container: Can		Pressue: Ambient	Waste Code		Zinc dialkyldithiophosphate	5 %		68649-42-3
	Map: 4	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **HAZARDOUS WASTE STORAGE AREA - Map# 5**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	USED OIL	**Gallons**	**600**	**200**	300	4500					
	CAS No	State: Liquid	Storage Container: Tank Inside Building, Steel Drum		Pressue: Ambient	Waste Code					
	Map: 5	Type: Waste	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **HAZARDOUS WASTE STORAGE AREA- Map# 5**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	OILY SOLIDS	**Pounds**	**440**	**55**	220	4400					
	CAS No	State	Storage Container		Pressue	Waste Code					
Toxic		Solid	Steel Drum		Ambient	223					
	Map: 5	Type			Temperature						
		Waste	Days on Site: 365		Ambient						
	USED OIL FILTERS	**Gallons**	**110**	**55**	55	550					
	CAS No	State	Storage Container		Pressue	Waste Code					
		Solid	Steel Drum		Ambient	223					
	Map: 5	Type			Temperature						
		Waste	Days on Site: 365		Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **HIGH VOLTAGE SWITCHYARD- Map #46**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	SF6 CAS No 2551-62-4 Map: 46	**Cu. Feet** State Gas Type Pure	**3628** Storage Container Other Days on Site: 365	**340**	3366 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Health Skin Corrosion Irritation - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER** | Chemical Location | CERS ID **10016338**

Facility Name **LOS MEDANOS ENERGY CENTER** | **HRSG AREAS** | Facility ID **07-000-772865**

750 E 3rd St, Pittsburg 94565 | Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**NITROGEN / NITROUS OXIDE GAS**	**Cu. Feet**	**5000**	**340**	3000		- Physical Gas	NITROGEN	50 %		7727-37-9
							Under Pressure	NITROUS OXIDE	50 %		10024-97-2

CAS No: 7727-37-9

State: Gas | Storage Container: Cylinder | Pressue: > Ambient | Waste Code

Type: Pure | Days on Site: 365 | Temperature: Ambient

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **HRSG AREAS - Map # 44**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**NITROGEN**	**Cu. Feet**	**18400**	**230**	18000		- Physical Gas Under Pressure				
	CAS No: 7727-37-9	State: Gas	Storage Container: Cylinder		Pressue: > Ambient	Waste Code					
		Type: Pure	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**LOS MEDANOS ENERGY CENTER**	Chemical Location	CERS ID **10016338**
Facility Name	**LOS MEDANOS ENERGY CENTER**	**LUBE OIL RESERVOIRS AND HAZ MAT STORAGE AREA - Map# 3**	Facility ID **07-000-772865**
	750 E 3rd St, Pittsburg 94565		Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids	**Turbine Oil**	**Gallons**	**17230**	**6200**	17230						
	CAS No 64741-88-4 Map: 3	State Liquid	Storage Container Aboveground Tank		Pressue Ambient	Waste Code					
		Type Pure	Days on Site: 365		Temperature Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **MOTOR CONTROL CENTERS & UPS AREA- Map# 28**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 2	**Electrolyte/sulfuric Acid** CAS No 7664-93-9 ✓EHS Map: 32	**Pounds** State Liquid Type Mixture	**6548** Storage Container Other Days on Site: 365	**52**	6548 Pressue Ambient Temperature Ambient	Waste Code 791	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	sulfuric acid water	40 % 60 %		✓ 7664-93-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **PIPELINE - MAP # 23**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Flammable Gas	**NATURAL GAS** CAS No 74-82-8	**Cu. Feet** State Gas Type	**5000000** Storage Container Other Days on Site: 365	**5000000**	5000000 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Health Simple Asphyxiant	natural gas	100 %		74-82-8

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **STEAM TURBINE AREA- Map# 6**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	FYRQUEL EHC	**Gallons**	**270**	**135**	130		- Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	trixylyl phosphate	50 %		25155-23-1
	CAS No	State: Liquid	Storage Container: Steel Drum		Pressue: Ambient	Waste Code		t-Butylphenyl diphenyl phosphate	21 %		56803-37-3
	Map: 6	Type: Mixture	Days on Site: 365		Temperature: Ambient			Bis(t-butylphenyl) phenyl phosphate	21 %		65652-41-7
								Tri(t-butylphenyl) phosphate	9 %		78-33-1
								Triphenyl phosphate	15 %		115-86-6

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **TRANSFORMERS- Map #2**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	DIELECTRIC OIL	**Gallons**	**91650**	**20780**	91650			Hydrotreated Mid Distillate	50 %		64742-467
	CAS No	State: Liquid	Storage Container: Aboveground Tank, Other		Pressue: Ambient	Waste Code		Hydrotreated Light Napthenic Distillate	50 %		64742-53-5
		Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **TURBINES #1 & #2 GENERATORS 1&2 AND STG - Map#31**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases Cryogen	**CARBON DIOXIDE -** CAS No 124-38-9 Map: 31	**Gallons** State Liquid Type Pure	**4000** Storage Container Aboveground Tank Days on Site: 365	**1500**	4000 Pressue Ambient Temperature Cryogenic	Waste Code	- Physical Gas Under Pressure - Health Skin Corrosion Irritation - Health Simple Asphyxiant	CARBON DIOXIDE	100 %		124-38-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **VARIOUS PLANT BLDG A/C UNITS-Map # 33**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**REFRIGERANT, R-22, R410A**	**Cu. Feet**	**1230**	**164**	1230		- Physical Gas	Difluoromethane	50 %		75-10-5
	CAS No 75-45-6 Map: 33	State Gas	Storage Container Cylinder		Pressue > Ambient	Waste Code	Under Pressure - Health Simple Asphyxiant	Pentafluoroethane	50 %		354-33-6
		Type Pure	Days on Site: 365		Temperature < Ambient			CHLORODIFLUOROMETHANE	100 %		75-45-6

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BLDG- Map # 27**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	BIOBROM C-103L	**Gallons**	**800**	**400**	500		- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	polyethylene glycol			25322-68-3
								water			7732-18-5
								2,2 dibromo-3-nitrilopropion amide			10222-01-2
	CAS No	State: Liquid	Storage Container: Tote Bin		Pressue: Ambient	Waste Code					
	Map: 27	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING - Map # 34**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**ARGON CARBON DIOXIDE GAS**	**Cu. Feet**	**2400**	**350**	1200		- Physical Gas Under Pressure	ARGON	75 %		7440-37-1
	CAS No	State: Gas	Storage Container: Cylinder		Pressue: > Ambient	Waste Code		CARBON DIOXIDE	25 %		124-38-9
		Type: Mixture	Days on Site: 365		Temperature: Ambient						
DOT: 2.2 - Nonflammable Gases	**ARGON COMPRESSED GAS**	**Cu. Feet**	**3360**	**336**	3360		- Physical Gas Under Pressure				
	CAS No: 7440-37-1	State: Gas	Storage Container: Cylinder		Pressue: > Ambient	Waste Code					
		Type: Pure	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING - Map # 37**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases Oxidizing, Class 2	**OXYGEN** CAS No 7782-44-7	**Cu. Feet** State Gas Type Pure	**3372** Storage Container Cylinder Days on Site: 365	**281**	2810 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Oxidizer				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING - Map # 43**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Flammable Gas	**LIQUEFIED PETROLEUM GAS (LPG)** CAS No 74-98-6	**Gallons** State Liquid Type Pure	**200** Storage Container Cylinder Days on Site: 365	**20**	100 Pressue > Ambient Temperature < Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 11**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	BIOSPERSE CN-2150 MICROBIOCIDE	**Gallons**	**600**	**400**	400		- Physical Oxidizer	5-chloro-2-methyl-4-isothiazolin-3-one	5 %		26172-55-4
	CAS No	State: Liquid	Storage Container: Tote Bin		Pressue: Ambient	Waste Code	- Health Skin Corrosion Irritation	magnesium chloride	2 %		7786-30-3
	Map: 11	Type: Mixture	Days on Site: 365		Temperature: Ambient		- Health Respiratory Skin Sensitization	magnesium nitrate	5 %		10377-60-3
							- Health Serious Eye Damage Eye Irritation				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 12**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	AMEROYAL C801 ANTISCALANT	**Gallons**	**440**	**55**	55		- Health Acute Toxicity	organic salt	10 %		254504001-5135
	CAS No	State: Liquid	Storage Container: Plastic/Non-metalic Drum		Pressue: Ambient	Waste Code	- Health Skin Corrosion Irritation	organic salt	5 %		254504001-5208
	Map: 12	Type: Mixture	Days on Site: 365		Temperature: Ambient		- Health Serious Eye Damage Eye Irritation	polymer	5 %		254504001-5818
							- Health Aspiration Hazard				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 13**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	DREWCLEAN 2010	**Gallons**	**440**	**55**	55		- Health Acute Toxicity	organic acid	60 %		254504001-5226
	CAS No	State: Liquid	Storage Container: Plastic/Non-metalic Drum		Pressue: Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation - Health Aspiration Hazard	ethylenediaminetriacetti C AC, 3NA	5 %		139-89-9
	Map: 13	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 15**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	DREWPHOS PT	**Gallons**	**1000**	**250**	500		- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation - Health Aspiration Hazard	Sodium Hydroxide	10 %		1310-73-2
								Inorganic Salt	10 %		25404001-5309
	CAS No	State: Liquid	Storage Container: Tote Bin		Pressue: Ambient	Waste Code					
	Map: 15	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 16**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Flammable Liquid, Class I-C	**AMERCOR 8750 CORROSION INHIBITOR** CAS No 108-91-8 Map: 16	**Pounds** State Liquid Type Mixture	**1050** Storage Container Tote Bin Days on Site: 365	**800**	500 Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	cyclohexylamine morpholine	50 % 50 %		108-91-8 110-91-8

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 19**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	AMERSEP 5320 NEUTRALIZING AGENT CAS No Map: 19	**Gallons** State: Liquid Type: Mixture	**800** Storage Container: Tote Bin Days on Site: 365	**400**	800 Pressue: Ambient Temperature: Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	Ferric sulfate Sulfuric acid			10028-22-5 7664-93-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING -Map# 20**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 1, Toxic	**SULFURIC ACID 93%** CAS No 7664-93-9 Map: 20	**Pounds** State Liquid Type Pure	**91800** Storage Container Aboveground Tank Days on Site: 365	**91800**	76500 Pressue Ambient Temperature Ambient	Waste Code 791	- Physical Oxidizer - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Sulfuric Acid	96 %	✓	7644-93-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 21**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	PERFORMAX DC5202	**Gallons**	**5000**	**5000**	3000			Acrylic Polymer	50 %		254504001-5727
	CAS No	State: Liquid	Storage Container: Aboveground Tank		Pressue: Ambient	Waste Code					
	Map: 21	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 22**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	MILLSPERSE MS7600	**Gallons**	**5000**	**5000**	3000		- Health Serious Eye Damage Eye Irritation	Salt	40 %		254504001-5150
	CAS No	State: Liquid	Storage Container: Aboveground Tank		Pressue: Ambient	Waste Code					
	Map: 22	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 26**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic, Water Reactive, Class 1	**Sodium Hydroxide** CAS No 1310-73-2 Map: 25	**Gallons** State Liquid Type Pure	**7000** Storage Container Aboveground Tank Days on Site: 365	**6000**	5000 Pressue Ambient Temperature Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Sodium hydroxide Sodium chloride	51 % 1 %		1310-73-2 7647-14-5

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 36**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Flammable Gas	**ACETYLENE** CAS No 74-86-2 Map: 36	**Cu. Feet** State Gas Type Pure	**4200** Storage Container Cylinder Days on Site: 365	**420**	2100 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING -Map# 41**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**Helium Gas**	**Cu. Feet**	**1500**	**300**	1500		- Physical Gas Under Pressure - Health Simple Asphyxiant				
	CAS No 7440-59-7	State Gas	Storage Container Cylinder		Pressue > Ambient	Waste Code					
		Type Pure	Days on Site: 365		Temperature Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 42**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**NITROGEN/OXYGEN GAS**	**Cu. Feet**	**1000**	**300**	1000		- Physical Gas	NITROGEN	80 %		7727-37-9
	CAS No	State: Gas	Storage Container: Cylinder		Pressue: > Ambient	Waste Code	Under Pressure	OXYGEN	20 %		7782-44-7
		Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING- Map# 8**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	DREWGARD 315	**Gallons**	**400**	**55**	220		- Health Acute Toxicity	inorganic salt	15 %		254504001-5271
	CAS No 254504001-5271 Map: 8	State Liquid Type Mixture	Storage Container Plastic/Non-metalic Drum Days on Site: 365		Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity	triazole derivative sodium hydroxide	5 % 2 %		25404001-5183 1310-73-2

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **LOS MEDANOS ENERGY CENTER**
Facility Name **LOS MEDANOS ENERGY CENTER**
750 E 3rd St, Pittsburg 94565

Chemical Location **WATER TREATMENT BUILDING-Map # 24**

CERS ID **10016338**
Facility ID **07-000-772865**
Status **Submitted** on 2/13/2019 12:19 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	AMEROYAL 710 ANTISCALANT	**Gallons**	**750**	**250**	250		- Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity - Health Aspiration Hazard	Organic acid	20 %		254504001-5139
	CAS No	State: Liquid	Storage Container: Tote Bin		Pressue: Ambient	Waste Code		Sodium chloride	10 %		7647-14-5
	Map: 24	Type: Mixture	Days on Site: 365		Temperature: Ambient			Organic salt	2 %		254504001-5008

ATTACHMENT 3

Babcock & Wilcox Power Generation Group NetDAHS© Version 47.0

Average Values Report
Generated: 2/15/2019 11:52

Company: Calpine Los Medanos Energy
Plant:
City/St:
Source: FACILITY

Period Start: 1/1/2018 00:00
Period End: 12/31/2018 23:59
Validation Type: 60/60 min
Averaging Period: 24 hr
Type: Block Avg

Period Start:	Total TOT_NOXLBH #	Total TOT_COLBH #	Total TOTPM10LBH #	Total TOT_POCLBH #	Total TOT_SO2LBH #
01/01/2018 00:00	590.4	24.0	132.0	16.8	26.4
01/02/2018 00:00	612.0	12.0	136.8	19.2	26.4
01/03/2018 00:00	636.0	26.4	141.6	19.2	28.8
01/04/2018 00:00	590.4	26.4	132.0	19.2	26.4
01/05/2018 00:00	556.8	72.0	124.8	16.8	26.4
01/06/2018 00:00	556.8	38.4	127.2	16.8	26.4
01/07/2018 00:00	588.0	40.8	132.0	19.2	26.4
01/08/2018 00:00	604.8	7.2	136.8	19.2	26.4
01/09/2018 00:00	525.6	105.6	117.6	16.8	24.0
01/10/2018 00:00	520.8	189.6	115.2	14.4	24.0
01/11/2018 00:00	535.2	55.2	127.2	16.8	26.4
01/12/2018 00:00	554.4	50.4	127.2	16.8	26.4
01/13/2018 00:00	566.4	115.2	127.2	16.8	26.4
01/14/2018 00:00	568.8	72.0	127.2	16.8	26.4
01/15/2018 00:00	595.2	64.8	134.4	16.8	26.4
01/16/2018 00:00	595.2	16.8	136.8	19.2	26.4
01/17/2018 00:00	571.2	74.4	129.6	16.8	26.4
01/18/2018 00:00	568.8	45.6	129.6	16.8	26.4
01/19/2018 00:00	556.8	86.4	122.4	16.8	24.0
01/20/2018 00:00	338.4	24.0	48.0	9.6	4.8
01/21/2018 00:00	410.4	72.0	81.6	12.0	12.0
01/22/2018 00:00	580.8	76.8	129.6	16.8	26.4
01/23/2018 00:00	588.0	79.2	129.6	16.8	26.4
01/24/2018 00:00	585.6	84.0	129.6	16.8	26.4
01/25/2018 00:00	580.8	96.0	127.2	16.8	26.4
01/26/2018 00:00	566.4	124.8	124.8	16.8	24.0
01/27/2018 00:00	314.4	4.8	96.0	9.6	24.0
01/28/2018 00:00	319.2	9.6	96.0	9.6	24.0
01/29/2018 00:00	489.6	69.6	108.0	12.0	24.0
01/30/2018 00:00	583.2	86.4	129.6	16.8	26.4
01/31/2018 00:00	554.4	74.4	127.2	16.8	26.4
02/01/2018 00:00	542.4	72.0	124.8	16.8	26.4
02/02/2018 00:00	331.2	62.4	45.6	9.6	4.8
02/03/2018 00:00	300.0	45.6	45.6	9.6	4.8
02/04/2018 00:00	300.0	45.6	45.6	9.6	4.8
02/05/2018 00:00	307.2	45.6	45.6	9.6	4.8
02/06/2018 00:00	297.6	38.4	45.6	9.6	4.8
02/07/2018 00:00	295.2	120.0	52.8	12.0	7.2
02/08/2018 00:00	400.8	177.6	86.4	12.0	14.4
02/09/2018 00:00	403.2	69.6	74.4	12.0	12.0
02/10/2018 00:00	304.8	50.4	45.6	9.6	4.8
02/11/2018 00:00	309.6	45.6	45.6	9.6	4.8
02/12/2018 00:00	429.6	112.8	86.4	14.4	14.4
02/13/2018 00:00	588.0	43.2	132.0	19.2	26.4
02/14/2018 00:00	604.8	19.2	134.4	19.2	26.4
02/15/2018 00:00	554.4	88.8	122.4	16.8	24.0
02/16/2018 00:00	585.6	93.6	124.8	16.8	24.0
02/17/2018 00:00	316.8	12.0	48.0	9.6	4.8
02/18/2018 00:00	331.2	57.6	50.4	12.0	7.2
02/19/2018 00:00	321.6	72.0	48.0	9.6	4.8
02/20/2018 00:00	417.6	232.8	91.2	12.0	16.8

Period Start:	Total TOT_NOXLBH #	Total TOT_COLBH #	Total TOTPM10LBH #	Total TOT_POCLBH #	Total TOT_SO2LBH #
02/21/2018 00:00	604.8	62.4	134.4	16.8	26.4
02/22/2018 00:00	590.4	64.8	132.0	16.8	26.4
02/23/2018 00:00	439.2	48.0	76.8	12.0	12.0
02/24/2018 00:00	328.8	0.0	48.0	9.6	4.8
02/25/2018 00:00	321.6	76.8	48.0	9.6	4.8
02/26/2018 00:00	559.2	45.6	132.0	19.2	26.4
02/27/2018 00:00	537.6	103.2	122.4	16.8	24.0
02/28/2018 00:00	578.4	67.2	132.0	16.8	26.4
03/01/2018 00:00	583.2	55.2	132.0	16.8	26.4
03/02/2018 00:00	597.6	86.4	129.6	16.8	26.4
03/03/2018 00:00	321.6	52.8	48.0	9.6	4.8
03/04/2018 00:00	348.0	132.0	64.8	12.0	9.6
03/05/2018 00:00	564.0	201.6	124.8	16.8	24.0
03/06/2018 00:00	566.4	139.2	122.4	16.8	24.0
03/07/2018 00:00	621.6	52.8	136.8	19.2	26.4
03/08/2018 00:00	547.2	160.8	120.0	16.8	24.0
03/09/2018 00:00	544.8	146.4	120.0	16.8	24.0
03/10/2018 00:00	614.4	74.4	136.8	19.2	26.4
03/11/2018 00:00	566.4	146.4	124.8	16.8	24.0
03/12/2018 00:00	580.8	110.4	129.6	16.8	26.4
03/13/2018 00:00	576.0	84.0	129.6	16.8	26.4
03/14/2018 00:00	554.4	76.8	124.8	16.8	24.0
03/15/2018 00:00	537.6	105.6	120.0	16.8	24.0
03/16/2018 00:00	537.6	86.4	117.6	16.8	24.0
03/17/2018 00:00	422.4	57.6	74.4	12.0	12.0
03/18/2018 00:00	352.8	100.8	67.2	12.0	9.6
03/19/2018 00:00	554.4	124.8	122.4	16.8	24.0
03/20/2018 00:00	616.8	16.8	136.8	19.2	26.4
03/21/2018 00:00	624.0	16.8	139.2	19.2	28.8
03/22/2018 00:00	540.0	74.4	120.0	16.8	24.0
03/23/2018 00:00	357.6	40.8	69.6	12.0	12.0
03/24/2018 00:00	283.2	26.4	45.6	9.6	4.8
03/25/2018 00:00	307.2	206.4	64.8	9.6	9.6
03/26/2018 00:00	350.4	148.8	57.6	9.6	7.2
03/27/2018 00:00	518.4	122.4	93.6	12.0	19.2
03/28/2018 00:00	324.0	12.0	93.6	9.6	24.0
03/29/2018 00:00	324.0	0.0	91.2	9.6	24.0
03/30/2018 00:00	324.0	60.0	91.2	9.6	24.0
03/31/2018 00:00	324.0	86.4	91.2	12.0	21.6
04/01/2018 00:00	19.2	40.8	4.8	2.4	2.4
04/02/2018 00:00	23.1	46.2	6.3	2.1	2.1
04/03/2018 00:00	4.5	9.6	1.2	0.4	0.4
04/04/2018 00:00	N/A	0.0	N/A	N/A	N/A
04/05/2018 00:00	N/A	0.0	N/A	N/A	N/A
04/06/2018 00:00	N/A	0.0	N/A	N/A	N/A
04/07/2018 00:00	N/A	0.0	N/A	N/A	N/A
04/08/2018 00:00	N/A	0.0	N/A	N/A	N/A
04/09/2018 00:00	0.0	0.0	N/A	N/A	N/A
04/10/2018 00:00	N/A	0.0	N/A	N/A	N/A
04/11/2018 00:00	0.2	0.0	0.0	0.0	0.0
04/12/2018 00:00	0.0	0.0	N/A	N/A	N/A
04/13/2018 00:00	N/A	0.0	N/A	N/A	N/A
04/14/2018 00:00	0.0	0.0	N/A	N/A	N/A
04/15/2018 00:00	0.0	0.0	N/A	N/A	N/A
04/16/2018 00:00	N/A	0.0	N/A	N/A	N/A
04/17/2018 00:00	4.8	10.8	1.2	0.6	0.6
04/18/2018 00:00	0.0	0.0	N/A	N/A	N/A
04/19/2018 00:00	0.0	0.0	N/A	N/A	N/A
04/20/2018 00:00	14.4	32.0	4.8	1.6	1.6
04/21/2018 00:00	19.2	40.8	4.8	2.4	0.0

Period Start:	Total TOT_NOXLBH #	Total TOT_COLBH #	Total TOTPM10LBH #	Total TOT_POCLBH #	Total TOT_SO2LBH #
04/22/2018 00:00	19.2	36.0	4.8	2.4	0.0
04/23/2018 00:00	26.4	64.8	7.2	2.4	2.4
04/24/2018 00:00	200.1	146.4	67.2	7.2	16.8
04/25/2018 00:00	228.0	122.4	67.2	7.2	16.8
04/26/2018 00:00	54.0	73.7	21.0	2.1	4.9
04/27/2018 00:00	57.0	129.2	22.4	3.2	6.4
04/28/2018 00:00	104.5	91.2	24.7	3.8	7.6
04/29/2018 00:00	26.4	55.2	7.2	2.4	2.4
04/30/2018 00:00	26.1	102.4	16.5	2.2	4.4
05/01/2018 00:00	138.7	130.0	44.1	6.3	10.5
05/02/2018 00:00	74.4	105.0	23.0	3.0	6.0
05/03/2018 00:00	65.0	109.2	21.6	2.4	6.0
05/04/2018 00:00	92.3	112.5	30.0	3.0	7.5
05/05/2018 00:00	93.0	110.4	28.8	3.6	7.2
05/06/2018 00:00	84.8	120.6	27.0	3.6	7.2
05/07/2018 00:00	122.4	125.4	34.2	3.8	9.5
05/08/2018 00:00	165.6	106.0	56.0	6.0	14.0
05/09/2018 00:00	115.6	136.0	40.0	4.0	10.0
05/10/2018 00:00	130.5	106.0	32.3	3.4	8.5
05/11/2018 00:00	22.0	121.0	13.2	4.4	4.4
05/12/2018 00:00	297.6	38.4	91.2	9.6	21.6
05/13/2018 00:00	290.4	60.0	86.4	9.6	19.2
05/14/2018 00:00	460.8	196.8	98.4	12.0	24.0
05/15/2018 00:00	369.6	141.6	72.0	12.0	12.0
05/16/2018 00:00	439.2	160.8	98.4	12.0	21.6
05/17/2018 00:00	405.6	165.6	88.8	9.6	21.6
05/18/2018 00:00	300.0	38.4	45.6	9.6	4.8
05/19/2018 00:00	307.2	0.0	45.6	9.6	4.8
05/20/2018 00:00	290.4	69.6	43.2	9.6	4.8
05/21/2018 00:00	309.6	141.6	48.0	9.6	4.8
05/22/2018 00:00	403.2	201.6	81.6	12.0	14.4
05/23/2018 00:00	388.8	141.6	76.8	12.0	12.0
05/24/2018 00:00	453.6	360.0	98.4	12.0	19.2
05/25/2018 00:00	331.2	24.0	48.0	9.6	4.8
05/26/2018 00:00	302.4	60.0	45.6	9.6	4.8
05/27/2018 00:00	285.6	67.2	45.6	9.6	4.8
05/28/2018 00:00	326.4	117.6	64.8	12.0	9.6
05/29/2018 00:00	448.8	127.2	88.8	12.0	16.8
05/30/2018 00:00	309.6	7.2	45.6	9.6	4.8
05/31/2018 00:00	309.6	57.6	48.0	9.6	4.8
06/01/2018 00:00	285.2	64.4	48.0	12.0	7.2
06/02/2018 00:00	312.0	38.4	48.0	9.6	7.2
06/03/2018 00:00	312.0	31.2	48.0	9.6	4.8
06/04/2018 00:00	324.0	24.0	48.0	9.6	4.8
06/05/2018 00:00	319.2	0.0	45.6	9.6	4.8
06/06/2018 00:00	319.2	0.0	45.6	9.6	4.8
06/07/2018 00:00	319.2	21.6	45.6	9.6	4.8
06/08/2018 00:00	312.0	38.4	45.6	9.6	4.8
06/09/2018 00:00	302.4	55.2	45.6	9.6	4.8
06/10/2018 00:00	300.0	43.2	45.6	9.6	4.8
06/11/2018 00:00	352.8	98.4	69.6	12.0	9.6
06/12/2018 00:00	520.8	69.6	117.6	14.4	24.0
06/13/2018 00:00	501.6	62.4	112.8	14.4	24.0
06/14/2018 00:00	508.8	60.0	115.2	14.4	24.0
06/15/2018 00:00	566.4	2.4	127.2	16.8	26.4
06/16/2018 00:00	463.2	175.2	103.2	14.4	21.6
06/17/2018 00:00	345.6	115.2	57.6	12.0	9.6
06/18/2018 00:00	326.4	72.0	50.4	12.0	7.2
06/19/2018 00:00	364.8	110.4	74.4	12.0	12.0
06/20/2018 00:00	508.8	62.4	115.2	16.8	24.0

Period Start:	Total TOT_NOXLBH #	Total TOT_COLBH #	Total TOTPM10LBH #	Total TOT_POCLBH #	Total TOT_SO2LBH #
06/21/2018 00:00	528.0	62.4	117.6	16.8	24.0
06/22/2018 00:00	532.8	60.0	120.0	16.8	24.0
06/23/2018 00:00	463.2	86.4	103.2	14.4	21.6
06/24/2018 00:00	453.6	175.2	100.8	12.0	21.6
06/25/2018 00:00	494.4	120.0	110.4	14.4	21.6
06/26/2018 00:00	518.4	60.0	115.2	14.4	24.0
06/27/2018 00:00	506.4	105.6	112.8	14.4	24.0
06/28/2018 00:00	494.4	62.4	115.2	14.4	24.0
06/29/2018 00:00	444.0	110.4	105.6	14.4	21.6
06/30/2018 00:00	496.8	60.0	117.6	14.4	24.0
07/01/2018 00:00	501.6	108.0	117.6	14.4	24.0
07/02/2018 00:00	501.6	100.8	117.6	16.8	24.0
07/03/2018 00:00	506.4	74.4	115.2	14.4	24.0
07/04/2018 00:00	511.2	112.8	112.8	14.4	21.6
07/05/2018 00:00	542.4	52.8	120.0	16.8	24.0
07/06/2018 00:00	568.8	19.2	127.2	16.8	26.4
07/07/2018 00:00	583.2	14.4	129.6	16.8	26.4
07/08/2018 00:00	573.6	9.6	129.6	16.8	26.4
07/09/2018 00:00	600.0	19.2	134.4	19.2	26.4
07/10/2018 00:00	624.0	21.6	136.8	19.2	28.8
07/11/2018 00:00	636.0	9.6	141.6	19.2	28.8
07/12/2018 00:00	621.6	26.4	139.2	19.2	28.8
07/13/2018 00:00	604.8	21.6	134.4	19.2	26.4
07/14/2018 00:00	578.4	36.0	129.6	16.8	26.4
07/15/2018 00:00	477.6	144.0	108.0	14.4	21.6
07/16/2018 00:00	487.2	163.2	110.4	14.4	21.6
07/17/2018 00:00	487.2	144.0	110.4	14.4	21.6
07/18/2018 00:00	525.6	74.4	120.0	16.8	24.0
07/19/2018 00:00	544.8	38.4	122.4	16.8	24.0
07/20/2018 00:00	564.0	9.6	129.6	16.8	26.4
07/21/2018 00:00	561.6	64.8	120.0	16.8	24.0
07/22/2018 00:00	552.0	76.8	122.4	16.8	24.0
07/23/2018 00:00	580.8	19.2	129.6	16.8	26.4
07/24/2018 00:00	595.2	62.4	132.0	16.8	26.4
07/25/2018 00:00	636.0	9.6	141.6	19.2	28.8
07/26/2018 00:00	585.6	62.4	129.6	16.8	26.4
07/27/2018 00:00	604.8	9.6	136.8	19.2	26.4
07/28/2018 00:00	573.6	12.0	129.6	16.8	26.4
07/29/2018 00:00	576.0	19.2	129.6	16.8	26.4
07/30/2018 00:00	614.4	28.8	136.8	19.2	28.8
07/31/2018 00:00	631.2	57.6	141.6	19.2	28.8
08/01/2018 00:00	619.2	9.6	139.2	19.2	28.8
08/02/2018 00:00	547.2	33.6	127.2	16.8	26.4
08/03/2018 00:00	614.4	12.0	136.8	19.2	26.4
08/04/2018 00:00	588.0	16.8	134.4	16.8	26.4
08/05/2018 00:00	559.2	31.2	124.8	16.8	26.4
08/06/2018 00:00	568.8	7.2	134.4	19.2	26.4
08/07/2018 00:00	580.8	7.2	141.6	19.2	28.8
08/08/2018 00:00	631.2	28.8	139.2	19.2	28.8
08/09/2018 00:00	446.4	74.4	96.0	14.4	16.8
08/10/2018 00:00	453.6	84.0	100.8	14.4	19.2
08/11/2018 00:00	400.8	175.2	93.6	12.0	19.2
08/12/2018 00:00	434.4	201.6	93.6	12.0	19.2
08/13/2018 00:00	296.7	156.4	62.1	9.2	11.5
08/14/2018 00:00	484.8	304.8	40.8	7.2	7.2
08/15/2018 00:00	268.8	237.6	52.8	9.6	7.2
08/16/2018 00:00	379.2	156.0	91.2	12.0	19.2
08/17/2018 00:00	530.4	86.4	100.8	12.0	24.0
08/18/2018 00:00	331.2	36.0	45.6	9.6	4.8
08/19/2018 00:00	374.4	129.6	69.6	12.0	12.0

Period Start:	Total TOT_NOXLBH #	Total TOT_COLBH #	Total TOTPM10LBH #	Total TOT_POCLBH #	Total TOT_SO2LBH #
08/20/2018 00:00	540.0	57.6	122.4	16.8	24.0
08/21/2018 00:00	513.6	141.6	115.2	14.4	24.0
08/22/2018 00:00	492.0	189.6	115.2	16.8	24.0
08/23/2018 00:00	499.2	100.8	112.8	14.4	21.6
08/24/2018 00:00	314.4	45.6	45.6	9.6	4.8
08/25/2018 00:00	314.4	45.6	45.6	9.6	4.8
08/26/2018 00:00	262.0	33.6	45.6	9.6	4.8
08/27/2018 00:00	314.4	24.0	45.6	9.6	4.8
08/28/2018 00:00	314.4	0.0	45.6	9.6	4.8
08/29/2018 00:00	314.4	86.4	60.0	12.0	7.2
08/30/2018 00:00	535.2	57.6	122.4	16.8	24.0
08/31/2018 00:00	511.2	100.8	115.2	14.4	24.0
09/01/2018 00:00	482.4	96.0	108.0	14.4	21.6
09/02/2018 00:00	532.8	81.6	120.0	16.8	24.0
09/03/2018 00:00	552.0	76.8	122.4	16.8	24.0
09/04/2018 00:00	544.8	55.2	122.4	16.8	24.0
09/05/2018 00:00	487.2	146.4	110.4	14.4	21.6
09/06/2018 00:00	525.6	91.2	117.6	16.8	24.0
09/07/2018 00:00	556.8	86.4	124.8	16.8	24.0
09/08/2018 00:00	552.0	43.2	124.8	16.8	26.4
09/09/2018 00:00	568.8	43.2	127.2	16.8	26.4
09/10/2018 00:00	556.8	81.6	124.8	16.8	26.4
09/11/2018 00:00	316.8	0.0	93.6	9.6	24.0
09/12/2018 00:00	312.0	0.0	93.6	9.6	24.0
09/13/2018 00:00	309.6	0.0	93.6	9.6	24.0
09/14/2018 00:00	314.4	0.0	93.6	9.6	24.0
09/15/2018 00:00	302.4	0.0	93.6	9.6	24.0
09/16/2018 00:00	304.8	0.0	93.6	9.6	24.0
09/17/2018 00:00	312.0	0.0	96.0	9.6	24.0
09/18/2018 00:00	470.4	136.8	103.2	12.0	24.0
09/19/2018 00:00	465.6	105.6	103.2	12.0	24.0
09/20/2018 00:00	528.0	43.2	117.6	16.8	24.0
09/21/2018 00:00	561.6	57.6	122.4	16.8	24.0
09/22/2018 00:00	309.6	2.4	45.6	9.6	4.8
09/23/2018 00:00	319.2	45.6	45.6	9.6	4.8
09/24/2018 00:00	314.4	31.2	45.6	9.6	4.8
09/25/2018 00:00	417.6	127.2	72.0	12.0	12.0
09/26/2018 00:00	542.4	40.8	122.4	16.8	24.0
09/27/2018 00:00	547.2	9.6	180.0	14.4	24.0
09/28/2018 00:00	504.0	88.8	184.8	12.0	21.6
09/29/2018 00:00	300.0	0.0	139.2	9.6	24.0
09/30/2018 00:00	304.8	0.0	139.2	9.6	24.0
10/01/2018 00:00	662.4	124.8	220.8	14.4	28.8
10/02/2018 00:00	604.8	4.8	223.2	14.4	28.8
10/03/2018 00:00	561.6	33.6	208.8	12.0	26.4
10/04/2018 00:00	564.0	48.0	208.8	12.0	26.4
10/05/2018 00:00	542.4	79.2	201.6	12.0	24.0
10/06/2018 00:00	528.0	21.6	211.2	12.0	26.4
10/07/2018 00:00	360.0	105.6	141.6	9.6	21.6
10/08/2018 00:00	314.4	9.6	141.6	9.6	24.0
10/09/2018 00:00	607.2	124.8	192.0	12.0	24.0
10/10/2018 00:00	607.2	21.6	225.6	14.4	26.4
10/11/2018 00:00	561.6	57.6	206.4	12.0	26.4
10/12/2018 00:00	535.2	60.0	196.8	12.0	24.0
10/13/2018 00:00	535.2	45.6	199.2	12.0	24.0
10/14/2018 00:00	554.4	28.8	204.0	12.0	24.0
10/15/2018 00:00	609.6	14.4	225.6	14.4	26.4
10/16/2018 00:00	626.4	7.2	232.8	14.4	26.4
10/17/2018 00:00	614.4	4.8	228.0	14.4	26.4
10/18/2018 00:00	602.4	9.6	223.2	14.4	26.4

Period Start:	Total TOT_NOXLBH #	Total TOT_COLBH #	Total TOTPM10LBH #	Total TOT_POCLBH #	Total TOT_SO2LBH #
10/19/2018 00:00	597.6	24.0	220.8	14.4	26.4
10/20/2018 00:00	597.6	45.6	223.2	14.4	26.4
10/21/2018 00:00	624.0	43.2	232.8	14.4	28.8
10/22/2018 00:00	595.2	19.2	220.8	14.4	26.4
10/23/2018 00:00	607.2	19.2	225.6	14.4	26.4
10/24/2018 00:00	616.8	14.4	228.0	14.4	28.8
10/25/2018 00:00	626.4	16.8	232.8	14.4	28.8
10/26/2018 00:00	585.6	28.8	218.4	14.4	26.4
10/27/2018 00:00	604.8	19.2	225.6	14.4	28.8
10/28/2018 00:00	552.0	45.6	206.4	12.0	26.4
10/29/2018 00:00	588.0	67.2	216.0	12.0	26.4
10/30/2018 00:00	561.6	93.6	208.8	12.0	26.4
10/31/2018 00:00	576.0	50.4	213.6	14.4	26.4
11/01/2018 00:00	585.6	64.8	216.0	14.4	26.4
11/02/2018 00:00	511.2	182.4	189.6	12.0	24.0
11/03/2018 00:00	506.4	146.4	187.2	12.0	24.0
11/04/2018 00:00	504.0	170.4	187.2	12.0	24.0
11/05/2018 00:00	487.2	216.0	175.2	9.6	21.6
11/06/2018 00:00	468.0	91.2	139.2	7.2	12.0
11/07/2018 00:00	595.2	57.6	218.4	14.4	26.4
11/08/2018 00:00	597.6	55.2	223.2	14.4	26.4
11/09/2018 00:00	549.6	72.0	201.6	12.0	24.0
11/10/2018 00:00	504.0	103.2	172.8	9.6	19.2
11/11/2018 00:00	388.8	76.8	144.0	7.2	14.4
11/12/2018 00:00	664.8	9.6	247.2	14.4	31.2
11/13/2018 00:00	643.2	14.4	240.0	14.4	28.8
11/14/2018 00:00	616.8	45.6	230.4	14.4	28.8
11/15/2018 00:00	619.2	36.0	232.8	14.4	28.8
11/16/2018 00:00	532.8	124.8	180.0	12.0	26.4
11/17/2018 00:00	484.8	100.8	172.8	9.6	19.2
11/18/2018 00:00	441.6	86.4	156.0	9.6	14.4
11/19/2018 00:00	648.0	24.0	240.0	14.4	28.8
11/20/2018 00:00	602.4	96.0	220.8	14.4	26.4
11/21/2018 00:00	609.6	67.2	218.4	14.4	26.4
11/22/2018 00:00	321.6	62.4	93.6	4.8	4.8
11/23/2018 00:00	316.8	24.0	91.2	4.8	4.8
11/24/2018 00:00	398.4	124.8	134.4	7.2	12.0
11/25/2018 00:00	296.0	67.2	146.4	7.2	14.4
11/26/2018 00:00	566.4	122.4	216.0	12.0	26.4
11/27/2018 00:00	528.0	182.4	199.2	12.0	24.0
11/28/2018 00:00	319.2	69.6	105.6	4.8	7.2
11/29/2018 00:00	571.2	55.2	230.4	14.4	28.8
11/30/2018 00:00	307.2	16.8	144.0	9.6	24.0
12/01/2018 00:00	489.6	103.2	175.2	12.0	26.4
12/02/2018 00:00	564.0	148.8	218.4	12.0	26.4
12/03/2018 00:00	568.8	156.0	220.8	12.0	26.4
12/04/2018 00:00	532.8	151.2	213.6	12.0	26.4
12/05/2018 00:00	576.0	52.8	237.6	14.4	28.8
12/06/2018 00:00	564.0	50.4	230.4	14.4	28.8
12/07/2018 00:00	292.8	9.6	144.0	9.6	24.0
12/08/2018 00:00	290.4	0.0	141.6	9.6	24.0
12/09/2018 00:00	290.4	0.0	141.6	9.6	24.0
12/10/2018 00:00	290.4	0.0	144.0	9.6	24.0
12/11/2018 00:00	513.6	141.6	153.6	9.6	24.0
12/12/2018 00:00	499.2	208.8	194.4	12.0	24.0
12/13/2018 00:00	602.4	235.2	206.4	12.0	26.4
12/14/2018 00:00	316.8	98.4	93.6	7.2	7.2
12/15/2018 00:00	292.8	91.2	91.2	7.2	7.2
12/16/2018 00:00	304.8	48.0	86.4	4.8	4.8
12/17/2018 00:00	336.0	146.4	96.0	9.6	7.2

Period Start:	Total TOT_NOXLBH #	Total TOT_COLBH #	Total TOTPM10LBH #	Total TOT_POCLBH #	Total TOT_SO2LBH #
12/18/2018 00:00	328.8	151.2	93.6	9.6	7.2
12/19/2018 00:00	446.4	302.4	163.2	9.6	16.8
12/20/2018 00:00	304.8	45.6	91.2	4.8	4.8
12/21/2018 00:00	304.8	45.6	91.2	4.8	4.8
12/22/2018 00:00	391.2	132.0	139.2	7.2	12.0
12/23/2018 00:00	530.4	208.8	196.8	12.0	24.0
12/24/2018 00:00	516.0	230.4	192.0	12.0	24.0
12/25/2018 00:00	362.4	158.4	110.4	7.2	9.6
12/26/2018 00:00	364.8	129.6	129.6	7.2	12.0
12/27/2018 00:00	415.2	108.0	132.0	7.2	12.0
12/28/2018 00:00	309.6	117.6	91.2	7.2	7.2
12/29/2018 00:00	261.6	153.6	33.6	4.8	2.4
12/30/2018 00:00	321.6	45.6	93.6	4.8	4.8
12/31/2018 00:00	326.4	48.0	93.6	4.8	4.8
Final Average*	**434.6**	**72.2**	**115.5**	**12.4**	**18.9**
Total*	**155168.9**	**26367.6**	**40535.2**	**4367.1**	**6622.3**

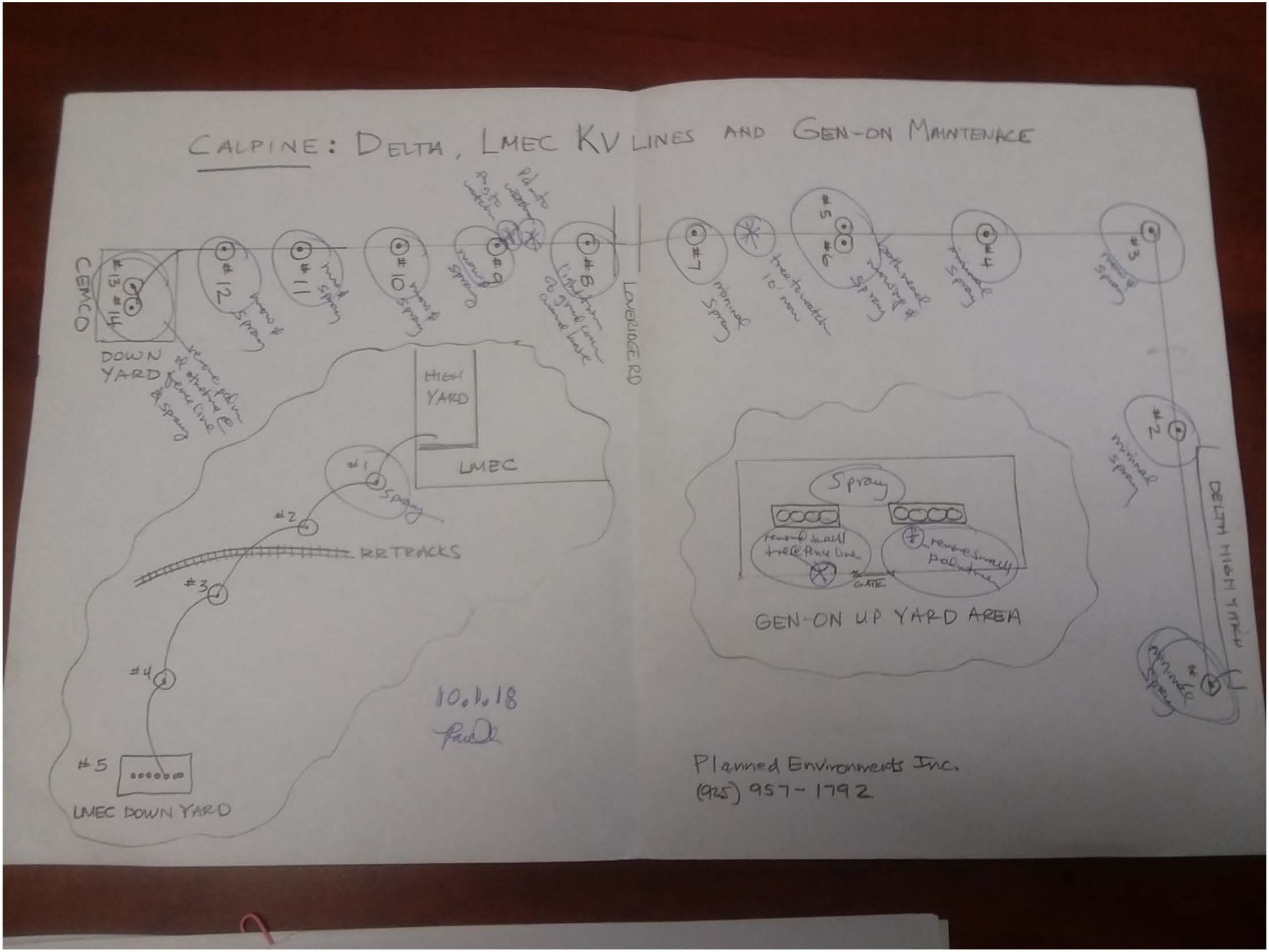
* Does not include Invalid Averaging Periods ("N/A")

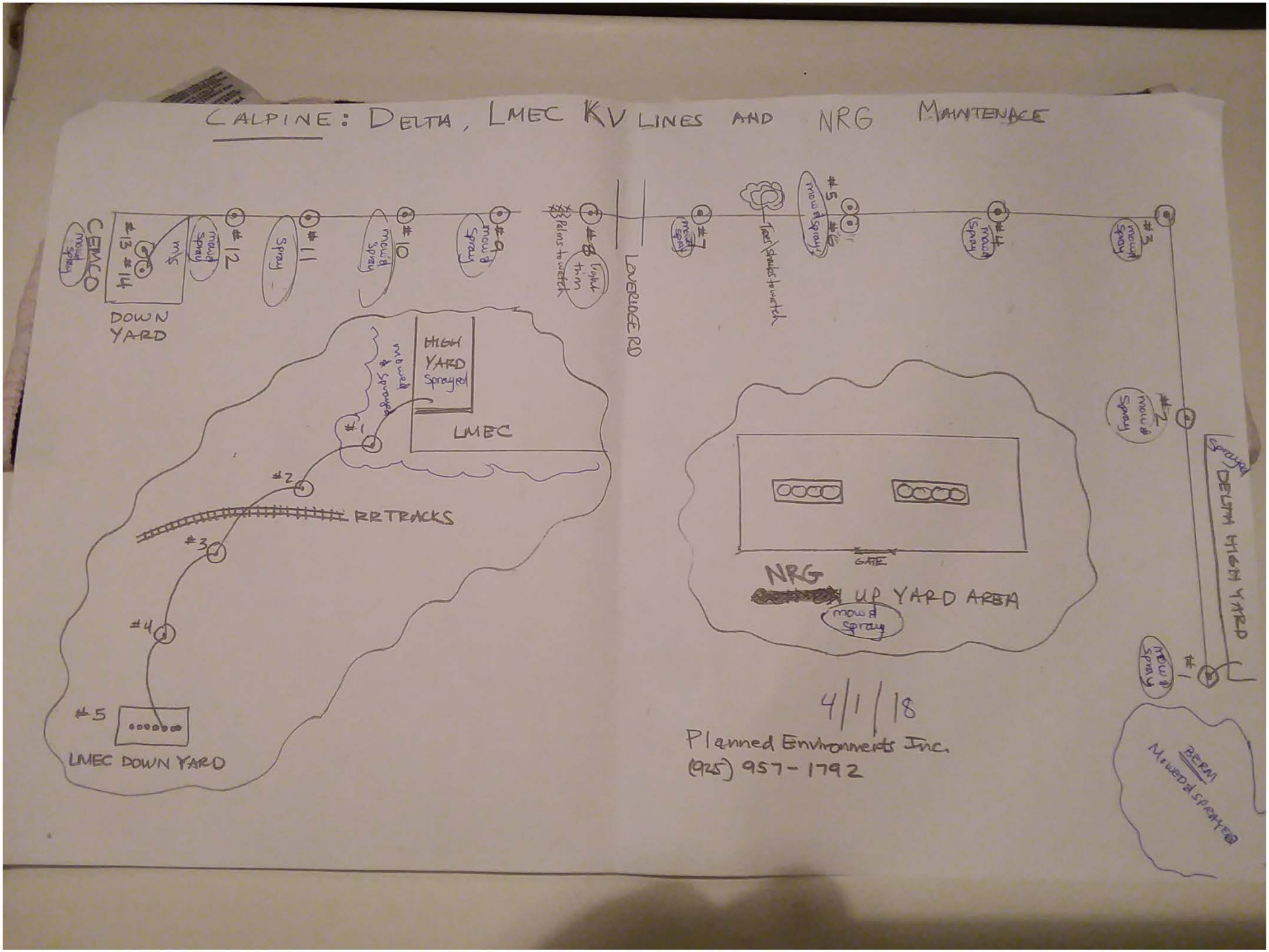
ATTACHMENT 4

WASTE-3
Actual Waste Management Methods - 2018
Los Medanos Energy Center, 98-AFC-3

Manifest #	Date	Waste Description	Total	Unit	Category	Waste Code	Management Method	Waste Lbs.
018141551JJK	1/31/2018	OILY DEBRIS	900	LBS	NON-RCRA	352	H141	900
018141581JJK	2/21/2018	USED OIL	75	GALS.	NON-RCRA	221	RECYCLED	555
018790007JJK	5/21/2018	OILY DEBRIS	300	LBS	NON-RCRA	352	H141	300
019175783JJK	8/2/2018	WASTE SOLID, TRISODIUM PHOSPHATE	300	LBS.	NON-RCRA	181	H141	300
019175784JJK	8/2/2018	OILY DEBRIS	800	LBS.	NON-RCRA	352	H141	800
019175628JJK	8/2/2018	USED OIL	130	GALS.	NON-RCRA	221	RECYCLED	962
019174351JJK	10/2/2018	USED OIL	75	GALS.	NON-RCRA	221	RECYCLED	555
019172551JJK	10/2/2018	OILY DEBRIS	400	LBS	NON-RCRA	352	H141	400
019177743JJK	10/9/2018	USED OIL	500	GALS.	NON-RCRA	221	H141	3700
019912037JJK	12/6/2018	OILY DEBRIS	270	LBS	NON-RCRA	352	H141	270
019912037JJK	12/6/2018	OILY SLUDGE	50	GALS.	NON-RCRA	223	H141	450
							POUNDS	**9,192**
							TONS	**4.596**

ATTACHMENT 5




CALPINE: DELTA, LMEC KV LINES AND NRG MAINTENACE
CEMCO
mow & spray
#13 #14
mow & spray
#12
spray
#11
mow & spray
#10
mow & spray
#9
Palms to weed
light thin
#8
LOVERIDGE RD
#7
mow & spray
Tall shrubs to watch
#5
mow & spray
#6
#4
mow & spray
#3
mow & spray
#2
mow & spray
DELTA HIGH YARD
spray
#1
mow & spray
DOWN YARD
HIGH YARD Sprayed
mowed & sprayed
#1
LMEC
#2
RR TRACKS
#3
#4
#5
LMEC DOWN YARD
GATE
NRG
UP YARD AREA
mow & spray
BERM
Mowed & SPRAYED
4/1/18
Planned Environments Inc.
(925) 957-1792

ATTACHMENT 6

PPA and G-Cog COMPLIANCE MONITORING PROGRAM

Operating Year: 2018

Project Los Medanos Energy Center

Cogenerator: Data Table 1 ***Use only units listed in columns***

Calendar Month in Operating Year 2018	Natural Gas Energy Input (i)	Oil Energy Input (i)	Other Energy Input (ii)	Net Electric Output (iii)	Useful Thermal Energy Output (iv)	Hours on Line
Units Used	THERMS	THERMS	THERMS	kWh	THERMS	
January	22,331,627	0	0	336,298,000	779,182	744
February	15,978,445	0	0	235,650,000	699,314	672
March	19,608,327	0	0	292,327,000	706,150	743
April	15,464,745	0	0	223,825,000	649,188	716
May	14,576,245	0	0	208,252,000	661,328	740
June	16,667,427	0	0	243,472,000	778,830	720
July	23,390,155	0	0	346,035,000	860,843	739
August	18,384,264	0	0	250,526,000	788,191	571
September	17,217,618	0	0	251,916,000	704,551	720
October	23,231,109	0	0	346,994,000	811,896	744
November	20,386,000	0	0	300,919,000	760,628	721
December	16,523,936	0	0	239,022,000	680,328	727
Total	(A) **223,759,900**	(B) **0**	(C) **0**	(D) **3,275,236,000**	(E) **8,880,429**	**8,557**

(i) Indicate higher or lower heating values (HHV or LHV). **LHV used** (see efficiency standard calculation)

(ii) Indicate type of fuel and heating values, HHV and LHV.

(iii) Defined as gross electric less auxiliary loads.

(iv) Check one: Is useful thermal energy output estimated ___ or measured **X** ?
If measured, briefly describe method of measurement below.
Orifice plate flow meter

Note: waste fuels should be listed in the table above, but not included in the efficiency calculation.

Cogenerator: Data Table 2

Calendar Month in Operating Year 2018	Steam to Process			Condensate Recovery			Useful Thermal Energy Output (ii)
	Flow (i)	Temp.	Enthalpy	Flow	Temp.	Enthalpy	
Units Used	Lbs	degrees F	Therms/Lb	Lbs	degrees F	Therms/Lb	Therms
January	67,167,687	435	0.01229	35,898,000	161	0.00129	779,182
February	60,917,516	425	0.01224	42,106,000	142	0.0011	699,314
March	61,132,927	419	0.0122	36,733,000	140	0.00108	706,150
April	57,148,087	418	0.01219	34,633,000	169	0.00137	649,188
May	58,600,102	420	0.01221	44,776,000	153	0.00121	661,328
June	67,685,044	425	0.01223	43,326,000	145	0.00113	778,830
July	75,573,472	424	0.01221	51,591,000	152	0.0012	860,843
August	67,686,600	423	0.01221	32,985,000	148	0.00116	788,191
September	62,761,848	424	0.01223	45,343,000	171	0.00139	704,551
October	71,339,800	424	0.01221	48,100,000	155	0.00123	811,896
November	66,160,947	423	0.01221	38,686,000	154	0.00122	760,628
December	60,280,831	420	0.0122	41,741,000	164	0.00132	680,328
Total	**776,454,861**	0		**495,918,000**	**1,853**		(E) **8,880,429**

(i) Exclude steam to deaerator

(ii) Check one: Is useful thermal energy output estimated ___ or measured X?

If measured, briefly describe method of measurement below:

Orifice plate flow meter

Cogenerator: Data Table 3

Please calculate your projects' values!

Operating Standard

$$\text{Percent Thermal Output} = \frac{E}{(D \times 3413/100{,}000) + E} \times 100\%$$

using data totals from page 1, where : D is in KWh;
E is in Therms

Percent Thermal Output % = E / (Dx3413/100,000) + E

= 8.88E+06 / 1.21E+08

= 7.36%

D=	3.28E+09
(Dx3413/100,000) =	1.12E+08
E=	8.88E+06

>15% then efficiency must be **>42.5%**

>5% then efficiency must be **>45%**

Efficiency Standard

$$\text{PURPA Efficiency} = \frac{(D \times 3413/100{,}000) + (1/2 \times E)}{A + B + C} \times 100\%$$

using data totals from page 1, where : A, B & C are in Therms (LHV);
D is in kWh
E is in Therms

Efficiency Standard % = (Dx3413/100,000) + (1/2 E) / A + B + C

= 1.16E+08 / 2.24E+08

= 51.9% @LHV

A=	2.24E+08
B=	
D=	3.28E+09
(Dx3413/100,000) =	1.12E+08
E=	8.88E+06

PG&E Project Log Number: _____

Project Name: Los Medanos Energy Center LLC

Address: 750 E. 3rd St. Pittsburg, CA 94565

Data Provider's Name: Reginald Littlejohn

Title: Operations Manager

Phone: (925)252-2093

E-mail Address: rlittlejohn@calpine.com

Signature: _____

I certify that the aforementioned data is correct.

Date of Data Submission: 1-25-2019

ATTACHMENT 7

LOS MEDANOS ENERGY CENTER
POST-CERTIFICATION CHANGES

Amendment	Date	Description
1	November 1999	Amendment #1 made the following changes. 1. Connected the Pittsburg/USS POSCO steam line to the existing USS POSCO/Dow Steam line. 2. Add another circuit to the 115 kV transmission line dedicated to USS POSCO. 3. Revised the LMEC fuel gas supply pipeline to interconnect with the Delta Energy Center gas pipeline. 4. Changed the name to the Los Medanos Energy Center (formerly known as the Pittsburg District Energy Facility)
2	December 1999	Amendment #2 made the following changes: 1. Added a new 16-inch potable/firewater line. 2. Added two cells to the cooling tower. 3. Revised the site arrangement of several buildings.
3	May 2000	Amendment #3 made the following changes: 1. Formalized the transfer in ownership from PDEF, LLC to CCFC. 2. Increased combustion turbine and heat recovery steam generator duct burner fuel consumption limits to reflect full load operation at the minimum ambient air temperatures. 3. Revised and increased air emission limits consistent with new fuel consumption limits. 4. Increased the size of the Auxiliary Boiler from 266 to 320 MMBTU/hr. 5. Reduced the combustion turbine start up/shutdown emissions rates. 6. Increased the size of the duct burners from 83 to 300 MMBTU/hr. 7. Added a 600 kV natural gas fired emergency generator and a diesel fired fire pump. 8. Revised air emission offset requirements to reflect the new emissions limits.
4	July 2000	Amendment #4 made the following change: 1. Amended the route of the 115 kV transmission line from the Los Medanos Energy Center site to USS POSCO.
5	August 2000	Amendment #5 made the following change: 1. Added Contra Costa Water District's raw water as an additional back-up water supply source.
6	December 2000	Amendment #6 made the following change: 1. Allowed the LMEC 115 kV transmission station to remain in its current location.
7	March 2003	Amendment #7 made the following change: 1. Increased the time permitted for cold Steam Turbine Generator start up to 6 hours. 2. Allowed for the periodic tuning of the Combustion Turbines.
8	January 2007	Amendment #8 made the following change: 1. Decreased PM10 mass emission limits at P-1 and P-2 from 16.3/lbh (or 0.0073 lb/MMBtu) to 9.0/lbh (or 0.0040 lb/MMBtu) . 2. Decreased total combined PM10 emissions at S-1, S-2, S-3, S-4, and S-5 from 780 lbs per day to 465 lbs per day. 3. Decreased cumulative PM10 emissions at S-1, S-2, S-3, S-4, and S-5 from 131.6 tons per year to 69.2 tons per year.

ATTACHMENT 8

LOS MEDANOS ENERGY CENTER
VERIFICATION LANGUAGE CHANGES

Condition	Date	Topic	Description
BIO-4	8/25/99	Worker Awareness Plan	Postponed Plan for Linears
BIO-5		Bio monitoring plan	Postponed Plan for Linears
LAND-1	8/30/99	Zoning Ordinance compliance	Separates lot area, set backs, etc. Landscaping plan not due until 90 days prior to completion of construction of power plant
LAND-2		Zoning Ordinance compliance	Allows partial submittal
LAND-6		T-12, T-13 and Chapter 15.88 compliance	Submit 30 days prior to each increment of construction.
LAND-7		HRSG and boiler stacks	Submit 30 days prior to each increment of construction, demonstrate stack heights comply with Pittsburg resolution.
VIS-8	8/25/99	Screening Plan	Submit 60 days prior to first planting season following start of construction.
VIS-9		Landscaping Plan	Submit 60 days prior to first planting season following start of construction.
VIS-10	8/25/99	Transmission Towers	Separate from plant and include with linears; submit 60 days prior to construction of transmission poles.
WORKER/ SAFETY -1	8/25/99	Safety and Health Program and PPE	Submit at lest 90 days after commencement of construction incorporating CalOSHA's comments.
TSE-1	12/99	115 kV electric transmission line	Add a double circuit 115 kV line to UPI
HAZ-2	09/00	Submittal and approval of RMP/PSM	Submit required plans (RMP/PSM) prior to delivery of ammonia.
AQ-18	12/02	Semi-Annual Air Quality Reports	Continue submittal of air district reports and discontinue submittal of the semi-annual report.
AQ-39, 40 & 41	03/04	Source Test Report submittals	Changes submittal period from 30 to 60 days of completion of source tests.
AQ-41	03/04	Approval of source test protocols	Modifies Condition of Certification requirement for official approval of test protocols to automatic approval if protocol contains only approved test methods or written rejection is received.
AQ-21(h), 32(d), 33(d) & 60	01/07	Reduction of PM10 emissions limits	Modifies Conditions of Certification to lower annual PM10 emission limits and adds a Condition of Certification that allows for banking of the excess PM10 emission reduction credits.