EPA United States Environmental Protection Agency

Region 9 Enforcement and Compliance Assurance Division (ECAD)

INSPECTION REPORT

Inspection Date(s):	11/17-18/2021	**Inspection Announced:** No	
Time:	**Entry:** 12:55 pm on 11/17	**Exit:** 11:00 am on 11/18	
Media:	Air		
Regulatory Program(s)	Title V, Part 71 -Stationary Source/Biomass Electric Power Generation		
Company Name:	Desert View Power Inc. (an affiliate of Greenleaf Power LLC)		
Facility or Site Name:	Desert View Power Plant		
Facility/Site Physical Location:	62-300 Gene Welmas Drive		
(city, state, zip code)	Mecca, CA 92254		
Geographic Coordinates:	33.586, -116.088		
Mailing address:	2600 Capitol Ave., Suite 430 (Corporate HQ)		
(city, state, zip code)	Sacramento, CA 95816		
Tribe/County:	Cabazon Band of Mission Indians (Riverside County)		
Facility/Site Contact and Personnel Participating in Inspection:	Kevin Lawrence, Plant Manager (760) 262-1644; klawrence@greenleaf-power.com		
Facility/Site Identifier:	FRS 110022450729		
Media Number:	ICIS-AIR CA00000006065CAB27 (09000000CAB0DP1)		
NAICS:	221117, Biomass Electric Power Generation		
SIC:	4911, Electric Services		

Inspector(s):			
Andrew CHEW, Lead	ENF-2-1	Enforcement Officer/Environmental Engineer	chew.andrew@epa.gov; (415) 947-4197
Yvezee LAPADA	ENF-2-1	Enforcement Officer/Physical Scientist	Lapada.YvezeeNikita@epa.gov; (415) 947-8700

Additional Persons Participating in Inspection: (None)

Mark Boucher, Corporate EHS Manager, Greenleaf Power LLC. Jonathan Lopez, Environmental Analyst, Cabazon Band of Mission Indians. Javier Aceves, Environmental Manager, Cabazon Band of Mission Indians. Kenneth Dudash, Air Quality Inspector, South Coast Air Quality Management District.

Inspection Report Author:			
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Roshni Brahmbhatt	/s/ 1/19/2022		
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SECTION I – INTRODUCTION

Purpose of the Inspection Objective

The purpose of this on-site Full Compliance Evaluation (FCE) was to determine the facility's compliance with applicable stationary source requirements and prohibited acts promulgated through Title I and Part 71 of the Clean Air Act (CAA). Inspectors of the Air Section of the Enforcement and Compliance Assurance Division in EPA Region 9 led the inspection. Air quality inspector Kenneth DUDASH of the South Coast Air Quality Management District (SCAQMD) accompanied EPA inspectors by invitation throughout the duration of this inspection (see also Monitoring and Enforcement Agreement dated May 10, 1989 concerning relevant authorities). Two representatives of the Cabazon Band of Mission Indians (CBMI) – Environmental Analyst Jonathan LOPEZ and Manager Javier ACEVES – had been invited for the duration of our inspection, but were present at the opening and closing conferences only. This inspection had been unannounced.

Opening Conference

The five of us, - EPA Inspectors CHEW and LAPADA; SCAQMD Inspector DUDASH; CBMI Analyst LOPEZ and Manager ACEVES – arrived at the front office of Desert View Power's facility at 62-300 Gene Welmas Drive, Mecca, at 12:55 pm local time on November 17, 2021. The facility is on land within CBMI boundaries.

Photograph 1: *View of front office entrance at 62-300 Gene Welmas Drive, Mecca, CA 92254, identifying Desert View Power, Inc.'s location.*

As the inspection team was waiting at the front entrance of the business office, a facility representative in a work uniform walked toward us at 1:05 pm. He greeted us and introduced himself as Kevin LAWRENCE. Inspector CHEW told him that we were there to conduct an unannounced Clean Air Act inspection and asked him if we could speak to a manager. He replied that he was the plant manager. Inspector CHEW asked Mr. LAWRENCE for a conference room where we could sit and explain the purpose of our visit.

Inspector CHEW told him that we were there to conduct an unannounced inspection to determine the facility's compliance with the CAA. Inspector CHEW presented his inspector credentials to Mr. LAWRENCE and Inspectors CHEW and LAPADA gave him their business cards. Inspector CHEW explained that today's inspection was led by EPA where EPA had extended the invitation to SCAQMD and CBMI to participate.

Inspector CHEW explained that it would take up an estimated 30 minutes of his time for the opening conference and said he would start with questions about the facility's business and operations. Mr. LAWRENCE told us that there were around 14 employees working at facility at this moment. Mr. LAWRENCE gave us his business card. Inspector CHEW asked if the environmental health and safety manager would be joining us. Mr. LAWRENCE said that would be him. After Mr. BOUCHER joined the opening conference by phone after Mr. LAWRENCE called him at 1:12 pm, EPA inspectors reiterated the purpose of our inspection. Inspector DUDASH, CBMI Manager ACEVES and Analyst LOPEZ introduced themselves to the participants of the opening conference.

Inspector DUDASH asked if it was okay for him to be on site and take photographs at the facility. Mr. BOUCHER replied yes and that Mr. LAWRENCE would also take photographs simultaneously. Inspector CHEW said he would send an email to Mr. BOUCHER to exchange each other's contact information. At 1:15 pm, Inspector CHEW presented his inspectors credentials to Mr. LAWRENCE. Inspector CHEW also asked the facility representatives to point out anything that had claims as confidential business information. Inspector CHEW did not hear any statements making such claims.

Inspector CHEW asked if there was an environmental health and safety manager onsite at the facility. Mr. LAWRENCE said there was a temporary environmental health and safety consultant from TRC consultants. There used to be a person for that role on-site but no longer. He said they were slated to get one. Before this, it was Kit Plessing about 6 months ago in June. Previously, the role had been with Jim Robertson and Russell Hoffman. For now, this is handled by the plant manager.

Inspector CHEW asked if the facility performed regular inspections on the sorbent system servicing the common stack. Mr. LAWRENCE replied yes, that monthly inspections occur at locations that include the baghouse, hydrated lime system, and hopper.

Inspector CHEW asked for work orders related to the hydrated lime system that were available for us to inspect. Mr. LAWRENCE said he would provide copies of recent work orders and told us that they were performed by the plant operators and mechanics. However, as to physically checking (for suction pressure) at the hydrated lime delivery at the lances, he said there was nothing internally planned. No written procedures had been in place or identified during the time of inspection.

Inspector CHEW asked where the biomass fuels came from. Mr. LAWRENCE said the fuels came from agricultural suppliers from local Coachella Valley. They included construction and demolition wood that had gone through a sorting station. Examples included citrus trees that went through a grinder. There was also wood delivered from the Big Bear area but predominately from Southern California. He said there were also different suppliers. Mr. LAWRENCE said the deliveries brought in were accounted for, weighed, and tracked, such as how much had been taken in locally per the facility's Title V air permit and where to get feedstock and keep the material.

Mr. LAWRENCE said the last time the facility used petroleum (pet) coke had been over 10 years ago. The pet coke system had not been used for a long while. It would have been weighed and recorded but not with dates and amounts. Also, the fuels would have been commingled before combustion for over several hours. Although the silo or pet coke barn was still called as such, it stored only miscellaneous nonfunctioning machinery parts and tire-derived fuel (TDF).

Mr. LAWRENCE said that the facility conducted a TDF sample burn this year when a fuel buyer brought in the TDF and sample wood. He said the TDF sample was not "adverse" as 2.1 tons were burned. He said this was the first time in four and a half years since TDF had not been burned since the TDF system had been closed off. Mr. BOUCHER mentioned a lease agreement related to use of TDF.

Mr. LAWRENCE said the fuels burned included corrugated paper, municipal and construction woody waste, but not railroad ties. The facility also did not burn wood treated with pesticides or creosote.

Inspector CHEW asked Mr. LAWRENCE if there were challenges in getting proper fuel. Mr. LAWRENCE said Steve Kozlowski is the facility's fuel manager. Mr. LAWRENCE said that the criteria get tougher as the facility brings in fuel locally. There is an emphasis on enforcement and monitoring. Inspector CHEW asked Mr. LAWRENCE for a copy of the fuel analysis performed by Hazen – the company had been identified in the facility's source test report. Inspector CHEW asked what value the facility had been using for the biomass fuel factor in the emission calculations, and if it was using the EPA standard for dry standard cubic foot per million British thermal units (dscf/MMBtu) [that is, based on wood (not to bark)]. Mr. BOUCHER replied that it was about 8890 to 9240 dscf/MMBtu based on Method 19 of Appendix A (Part 60). Inspected CHEW asked for a copy of an actual example of emission calculations using the value and what was the value of the specific molar volume used (abbreviated as SV as previously used in the facility's source test report). Mr. BOUCHER pointed out the CEMS data were taken from the facility's CISCO System (Custom Instrumentation Services Corporation).

Mr. LAWRENCE continued that Greenleaf Power LLC bought the power plant in 2011 from Colmac Energy, Inc. Greenleaf Power's company office was located in Sacramento. Mitchell Martin was the operations and engineering director from that office. Mr. LAWRENCE said he had been the operations manager for four and a half years at Desert View Power before becoming the plant manager. He said he became the plant manager in September 2021.

Mr. LAWRENCE said there were two shifts – the day shift operated from 6:00 am to 6:30 pm. The night shift between 6:00 pm to 6:30 am consisted of four people – a control room/operation supervisor, two plant operators, and one heavy equipment operator. Day shifts on Mondays through Fridays consisted of two extra persons – heavy equipment operator and scale house attendant/field yard operator. Mr. LAWRENCE said that the facility was operating today at about 86% capacity. Manager ACEVES and Analyst LOPEZ said they would not participate in the facility tour and would depart the facility for the day. However, they said they would join the next day for the closing conference. Inspector CHEW said that EPA would send the facility a copy of the inspection report around 70 days from the date of the on-site inspection (i.e., 70 days from November 18). Shortly after, the inspection team adjourned the opening conference at about 2:20 pm.

Facility/Site Description

The following excerpt is incorporated from the Final Statement of Basis for the Final Part 71 Permit issued by EPA Region 9's Air Permits Office in September 2020 (*https://downloads.regulations.gov/EPA-R09-OAR-2020-0266-0049/content.pdf*).

The Source is a biomass electrical generation facility located approximately 40 miles southeast of Palm Springs in Riverside County, California. The Permittee is under a long-term power purchase agreement to supply power to the Imperial Irrigation District. The Permittee supplies no other entity with power, nor sells excess power to the grid.

The Permittee operates two 300 million British thermal unit per hour (MMBTU/hr) circulating fluidized bed boilers that drive one Siemens steam turbine generator. The generator is capable of producing 47 megawatts (MW) of electricity per hour. The boilers can operate together or independently. Each boiler is equipped with a baghouse/fabric filter for particulate matter (PM) control, a thermal deNOx ammonia injection system for nitrogen oxides (NOx) control and a limestone/Direct Sorbent Injection (DSI) system that injects limestone into the fuel feed to the combustion chamber for sulfur dioxide (SO2) control, and hydrated lime into the combustion gases upstream of each fabric filter for SO2 and hydrogen chloride (HCl) control.

The facility is permitted to burn agricultural biomass, municipal woody waste, commercial and industrial wood residues, scrap railroad ties, corrugated paper waste, petroleum coke and TDF with certain restrictions. Natural gas is used for boiler start-up and flame stabilization when required. The facility includes air pollution control equipment, fire protection equipment, and material handling and storage facilities.

The inspection team did not materially inspect any other areas on-site or see any indications where other business activities were being conducted beyond what had been described in the following observations.

SECTION II – OBSERVATIONS

At 2:20 pm, Mr. LAWRENCE led our walk-through of the plant that included EPA Inspectors CHEW and LAPADA; and SCAQMD Inspector DUDASH. Inspector CHEW told Mr. LAWRENCE that Inspector LAPADA would take photographs and invited Mr. LAWRENCE to use his camera to do so simultaneously to obviate the need to transfer files of photographs later. Inside the engineering control room, Inspector LAPADA took photographs of visual displays appearing on the video screens. There were recordings taken from their Continuous Emissions Monitoring Systems. At the time, Mr. LAWRENCE said 171 to 172 thousand pounds per hour of steam were produced at each boiler, generating about 38.6 megawatts. A module showed that CISCO stood for Custom Instrumentation Services Corporation. The inspection team noted that the opacity recorded at that moment showed 1.83%.

Photograph 2: *View of visual display of CEMS real-time data in the facility's engineering control room.*

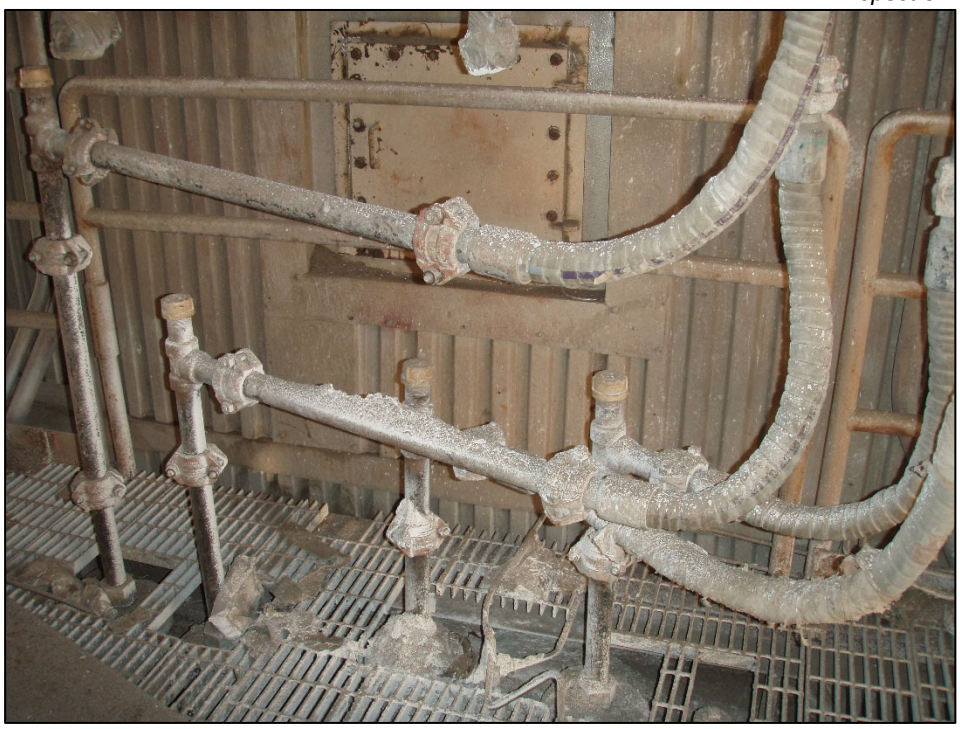
Next, the inspection team climbed at least 8 flights of stairs at the boiler unit to view the ductwork for the selective non-catalytic reduction (SNCR) system that uses ammonia to reduce nitrogen oxide emissions (NOx). Mr. LAWRENCE said that the injection valves were 7% open at Boiler units 1 and 2. Inspector LAPADA took photographs of the Sensidyne gauges that showed readings of zero ppm ammonia. Inspector CHEW asked why the readings said zero. Mr. LAWRENCE explained the next day that the Sensidyne gauges were used to measure the concentrations of ammonia outside the system for worker safety reasons. They were not used to measure the SNCR's effectiveness. A separate system controlled the SNCR's settings and parameters.

Photograph 3: *View of Sensidyne gauge showing 0 ppm of ammonia at the SNCR unit.*

Next, the inspection team went to see the pig trailers that stored the hydrated lime used for the control of sulfur oxides (SOx) and hydrogen chloride emissions. Mr. LAWRENCE had been using a rubber mallet twice per shift per day to assess when hydrated lime needed replenishing at the pig trailers. The echoing sounds made in the pig trailer after impact with his rubber mallet would indicate to him if one of the four pods was close to being empty and a work order be made for more hydrated lime deliveries. Mr. LAWRENCE said the feed rate of the hydrated lime was set at 200 pounds per hour from the day bin to the baghouse inlet. Inspector LAPADA took photographs of the day bin. The inspection team noted that the controller for each bin was set at a range of 80 to 120 to 150 pounds per hour.

Photograph 4: *View of pig trailer storing hydrated lime.*

Following that, the inspection team asked Mr. LAWRENCE to take us to the delivery system where hydrated lime would be introduced into the combustion gases. Inspector CHEW asked Mr. LAWRENCE how the facility would know if the lances used to introduce hydrated lime into those gases had been clogged. He replied that an operator would inspect each of the four 6-foot long lances each shift and check for pressure suction to ensure delivery of hydrated lime. He said 60 fabric filter bags had been replaced during the last monthly inspections during an outage. The operators would clean the baghouse every 90 days using puffed air. There were 250 bags per module and eight modules in the baghouse. Their system reading was 1.8% opacity earlier today. Inspector CHEW asked to see the facility's recent work orders for bag replacement.



Photograph 5: *View of 6-foot lances that deliver hydrated lime to the combustion gases.*

Next, the inspection team went to the pet coke barn. Mr. LAWRENCE said there were 2.1 tons of TDF sample burned earlier this year. Inspector CHEW asked him to give us a rough estimate of TDF that was in the barn. He said 40 tons.

Photograph 6: *View of storage pile of tire-derived fuel, TDF (roughly estimated at 40 tons).*

Afterward, the inspection team went inside the control room in which continuous emissions monitoring was taking place and noted the readings where Inspector LAPADA took photographs. At 3:39 pm, the inspection team ended the tour and told Mr. LAWRENCE that the team would return the next day at 10 am to look at the inventoried bags and conduct the closing conference. At 3:50 pm, the inspection team left the facility.

At around 10:45 am the next morning, the inspection team entered a shipping container where the surplus bags to be used in the baghouse had been stored. Inspector LAPADA took photographs of fabric filter bags stored inside. Mr. LAWRENCE said there were close to 80 bags and the facility was purchasing 75 more. Mr. LAWRENCE said the purchases for bags typically take place twice a year - in the spring and fall. The facility would inventory the bags every 90 days, such as shorter outages when inspection took place as recently as two weeks ago.

Photograph 7: *View of box inside storage trailer containing surplus fabric filter bags.*

Mr. LAWRENCE explained that if opacity increased, the facility would need to isolate modules one at a time to perform more thorough inspections to look for bags with holes or tears inside the baghouse. He said the facility performed thorough bag inspections around four years ago in 2017. That was when the facility transferred to a new system, he said. As to visible emissions readings, Mr. LAWRENCE said the facility had a certified E and I technician performing their Method 9 readings. Inspector DUDASH said he was certified for Method 9 visible emissions reading. As the inspection team evaluated the proper circumstances for such readings, the inspection team stated that it could not properly perform visible emission readings at the main stack due to the time of the day, sun's position at the reader's back, and the lack of a proper contrasting background behind the smoke plume when facing the southern direction. Despite those circumstances, the inspection team made a preliminary attempt and Inspector DUDASH did not come up with any 15-second interval readings that exceeded 5% opacity. Upon checking against the opacity reading of 1.91% in the engineering control room about 20 minutes later, the inspection team said that the preliminary readings would appear to be consistent with the instrumentation's reading.

Photograph 8: *View of main stack on which preliminary attempts were made to perform proper Method 9 visible emissions readings.*

Inspectors CHEW and DUDASH asked Mr. LAWRENCE about the venting that was taking place to the left side of the main stack when facing the southern direction. Mr. LAWRENCE said that would be the blowdown vent before the sump and the cooling tower. Inspector CHEW asked Mr. LAWRENCE to lead the team there. At the blowdown drum, Inspector LAPADA took photographs of the blowdown vent and drain before the sump and cooling tower. The inspection team did not note any particulate fallout on nearby equipment surfaces.

Over a railing, Inspector CHEW observed that a truck was stationary with a tarp covering the trailer bed and asked Mr. LAWRENCE about the contents. Mr. LAWRENCE replied that the truck would load bottom ash to be delivered to a nearby recycling site or concrete manufacturer, neither of which was owned by Desert View Power Plant or Greenleaf Power.

Photograph 9: *View of blowdown vent and nearby equipment surfaces.*

As to the lances delivering hydrated lime for use at the boilers, Mr. LAWRENCE told us that alarm screens would alert a technician if a lance had been clogged. This was a measure taken in addition to physical checks during every shift and round sheets to check for working pressure suction at the lances at both boiler units.

SECTION III – AREAS OF CONCERN

Inspector CHEW started our closing conference the next day (Nov. 18) a few minutes after 10:00 am. Joining us by teleconference was Mr. BOUCHER, Mr. Steve KOZLOWSKI (identified as the fuels manager), and Mr. Rahul DEUSKAR (identified as the environmental contractor from TRC's Houston, Texas, office). Inspectors CHEW and LAPADA thanked Mr. LAWRENCE and his colleagues for their time. Inspector CHEW reiterated the purpose of the inspection and asked the facility representatives to point out anything that had claims as confidential business information. No one spoke up to make a claim. As to combustion emission calculations, Mr. KOZLOWSKI affirmed that the facility had been using Method 19 values for calculations. Inspector CHEW said he might have follow-up questions after getting an opportunity to review actual sample calculations.

Inspector CHEW commented to the inspection team that there was a lot of dust whenever winds were gusty and noted water trucks were observed spraying water on the grounds on the second day. As to visible emission readings, the inspection team needed a dark background that had not been available. At this point, our inspection

team stated that follow-up on opacity recordings was needed as the team had not been able to perform in-person Method 9 visible emission field readings properly.

Inspector DUDASH commented that vehicle miles traveled (VMT) for truck traffic associated with deliveries of hydrated lime had been recorded for 292 miles round trip. Inspector CHEW said the team would check in with the EPA Permits Office staff as this contrasts with monthly total range permit limit of 280 miles. Mr. LAWRENCE told us there were 4 miles of travel in and out of the gate.

Inspector CHEW reiterated that EPA would send the facility a copy of the inspection report around 70 days from the date of the on-site inspection (70 days from November 18). Analyst LOPEZ and Manager ACEVES asked for a copy of the report when available. Inspector CHEW also explained that the EPA did not make compliance determinations in the field as a matter of policy and that the presentation of areas of concern did not constitute a formal compliance determination or violation.

SECTION IV – DOCUMENTS REQUESTED DURING INSPECTION AND ANALYTICAL RESULTS

Mr. LAWRENCE provided us with a copy of the facility site plan and a basic plant diagram. He also provided written procedures dated 6/6/2021 for the hydrated lime monthly baghouse filter inspections. Mr. LAWRENCE provided us copies of internal Work Orders RT000382–01 and -02, as well as RT000383–01 and -02, that identified baghouse and hydrated lime injection system inspections at both boilers that were dated as recently as early November.

Inspector CHEW asked for records starting two months before July 2020 to the present for the sensor readings. Inspector CHEW also asked for a copy of the risk management plan or audit plan in an electronic form. Mr. LAWRENCE said there had been one compiled during their last three-year review.

Inspector CHEW asked for a water chemistry analysis at the blowdown equipment.

SECTION V – LIST OF APPENDICES

Appendix 1 – Photograph Log –46 photographs presented from 11/17 to 11/18/21.

APPENDIX 1: PHOTOGRAPH LOG

1. Inspector Name: Yvezee Lapada	**2. Date(s) of Inspection:** November 17 and 18, 2021
3. Company/Facility Name: Desert View Power Plant	**4. Street Address, City, State:** 62-300 Gene Welmas Drive, Mecca, CA 92254
5. Number of Images: 46	**6. Archival Record Location:** Microsoft SharePoint Site

Image Number	File Name	Description of Image
1	P1010125.JPG	Main Office Entrance
2	P1010126.JPG	Real-time monitors in the control room
3	P1010127.JPG	Units 1 and 2 monitors
4	P1010129_.JPG	Units 1 and 2 monitors
5	P1010130.JPG	Camera Monitors (1 of 2)
6	P1010131.JPG	Camera Monitor (2 of 2)
7	P1010133.JPG	Unit 1 Ammonia Injection
8	P1010136.JPG	Unit 1 Ammonia Leak Detection Gauge reading 0 ppm
9	P1010139.JPG	Unit 2 Ammonia Leak Detection Gauge reading 0 ppm
10	P1010142.JPG	Hydrated Lime Pod #4 with red light indicating that it is empty
11	P1010143.JPG	Hydrated Lime Pig Trailer with four pods
12	P1010145.JPG	Day Controller
13	P1010147.JPG	Day controller
14	P1010149.JPG	Hopper 1 & 2 Scale Controller
15	P1010151.JPG	Procedure to transfer from pig to silo
16	P1010152.JPG	Unit 2 Lances delivering hydrated lime
17	P1010153.JPG	Baghouse ash hopper
18	P1010154.JPG	Baghouse ash hopper
19	P1010155.JPG	Pet Coke Barn
20	P1010156.JPG	Pet Coke barn
21	P1010157.JPG	TDF Pile
22	P1010159.JPG	TDF Pile
23	P1010161.JPG	Unit 1 Analyzer Instrument
24	P1010163.JPG	Unit 2 Analyzer Instrument
25	P1010164.JPG	Continuous Emission Monitoring System (CEMS) Plumbing (P&ID) Diagram
26	P1010166.JPG	CEMS Plumbing (P&ID) Diagram
27	P1010168.JPG	CEMS Plumbing (P&ID) Diagram
28	P1010169.JPG	South Coast AQMD CEMS Approval Letter dated Jan. 22, 2014
29	P1010170.JPG	Box containing extra bags
30	P1010171.JPG	Box containing extra bags
31	P1010172.JPG	North view of stack
32	P1010174.JPG	Steam plume from blowdown unit

Image Number	File Name	Description of Image
33	P1010178.JPG	Steam plume from blowdown unit
34	P1010180.JPG	North view of stack
35	P1010181.JPG	North view of stack
36	P1010182.JPG	North view of stack
37	P1010187.JPG	Steam
38	P1010188.JPG	Steam
39	P1010189.JPG	Steam
40	P1010190.JPG	Steam
41	P1010191.JPG	Steam
42	P1010192.JPG	Steam
43	P1010193.JPG	Identification Plate at Blowdown drum
44	P1010194.JPG	Identification Plate at Blowdown drum
45	P1010195.JPG	Instrumentation readings, Units 1 and 2
46	P1010197.JPG	Instrumentation readings, Units 1 and 2