B2185
MANUAL

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B218532486

FACILITY: DETROIT PUBLIC LIGHTING DEPARTMENT		**SRN / ID:** B2185
LOCATION: MISTERSKY POWER STATION, DETROIT		**DISTRICT:** Detroit
CITY: DETROIT		**COUNTY:** WAYNE
CONTACT:		**ACTIVITY DATE:** 12/10/2015
STAFF: Stephen Weis	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Compliance inspection of the City of Detroit's Mistersky Power Station. The Mistersky facility is scheduled for inspection in FY 2016.		
RESOLVED COMPLAINTS:		

Location:
Detroit Public Lighting Department
Mistersky Power Station (SRN B2185)
5425 West Jefferson Avenue
Detroit

Date of Activity:
Thursday, December 10, 2015

Personnel Present:

Steve Weis, DEQ-AQD Detroit Office
Krishnamoorthy (San) Sankaran, contract environmental staff and primary contact at the power plant.
Brian Carter, Walker-Miller Energy Services, LLC/TMCA

Purpose of Activity

A self-initiated inspection of the City of Detroit Public Lighting Department's Mistersky Power Station (hereinafter "Mistersky") was conducted on Thursday, December 10, 2015. The Mistersky facility was on my list of sources targeted for an inspection during FY 2016. The purpose of this inspection was to determine compliance of operations at the Mistersky facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control) and via Federal standards. The facility is also subject to the terms and conditions of Renewable Operating Permit MI-ROP-B2185-2014.

Facility Description

The Mistersky facility is located on the south side of Jefferson Avenue, stretching roughly between Junction and Summit Streets. The facility also has frontage along the Detroit River. Mistersky used to fire No. 6 fuel oil in their boilers, and the facility took delivery of the fuel via a riverfront offloading area and tank farm. Most of these storage tanks are now owned and operated by Waterfront Petroleum Terminal Company as part of their facility (5431 West Jefferson Ave., SRN P0305), and the remaining tanks are no longer used. Aside from the Detroit River, the Mistersky facility is bounded by the former Revere Copper Works property, a portion of which is now being used for material storage piles, followed by the Historic Fort Wayne property on the downriver side; the Nicholson Terminal/Wayne County Port Authority property on the upstream side (with some vacant land and the abandoned Boblo Boat dock/building in between); and a mix of residential and vacant land on the inland side of Jefferson Avenue. The nearest residence is approximately 150 yards from Mistersky's fence line. Canada lies directly across the Detroit River, and the nearest residential property on the Canadian side of the river is over ½ mile away.

The Mistersky facility operated as part of the City of Detroit's Public Lighting Department (PLD). The Detroit Public Lighting Authority was incorporated on February 6, 2013 as a State of Michigan created independent authority, which is to oversee public lighting in the City of Detroit. According to the Authority's website, the Authority has taken over operation of the PLD. Specifically, in the Frequently Asked Questions section of the website, in response to a question asked "Is the PLA replacing the Public Lighting Department?", the answer provided is "Yes, the PLA is taking over operation of the Public Lighting Department as it installs new street lights." The City of Detroit's website no longer has any references to the Public Lighting Department, or to the

Public Lighting Authority. At this point in time, the existing interchange lines (or tie lines) at the Mistersky facility are used to route power that is generated by DTE Energy to the distribution lines formerly operated and maintained by PLD; the facility thus serves as part of the DTE grid.

As of December 10, 2015, the Mistersky facility consists of:

- A multi-story brick building at the west end that houses two boilers, Nos. 5 and 6, and their associated turbines, as well as the aforementioned tie lines. This building used to house additional boilers that have since been dismantled. There is also an auxiliary boiler located in the building, rated at 36 MMBTU/hr, that is used exclusively to produce heat for this building. The auxiliary boiler, identified as EU004 in the ROP, is not subject to the requirements of 40 CFR Part 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial ,and Institutional Boilers and Process Heaters) as the Mistersky facility is not a major source of HAP emissions. The auxiliary boiler is operated sparingly as heating needs for the portions of the building that are still in use are oftentimes provided by portable/space heaters. The future operation of this unit is uncertain due to lack of personnel to maintain and operate it.

- A multi-story sided metal building at the east end of the property that houses Boiler No. 7, its associated turbines, a laboratory and some equipment.

- A one story building close to Jefferson Avenue that used to house the facility offices.

- A two story brick building that formerly served as the facility's machine shop, and contained offices and classrooms in the upstairs area.

- The gas turbine and its associated building, located near Jefferson Avenue at the northern end of the facility.

Some of the facility property adjacent to the former machine shop is used for outdoor storage of manholes, transformers, large wire spools, and other materials used for maintenance activities associated with the electric infrastructure in Detroit.

Facility Operations

The Mistersky facility formerly operated as an electric generating facility that at one point had a generating capacity of 184,000kW. Over the past few years, Mistersky has ceased operating their three remaining boilers, Nos. 5, 6 and 7, as well as the combustion turbine (referred to as the "GT", or gas turbine). Mistersky/Detroit PLD permanently shut down Boiler No. 5 effective April 30, 2010. Unit Nos. 6 and 7 were placed in long-term cold storage, as defined in 40 CFR Part 72, effective August 31, 2011. According to facility records, Unit No.6 was shut down on September 29, 2010, while Unit No.7 was shut down on January 30, 2008. The combustion turbine, which is rated at 420 MMBTU/hr with a generating capacity of 27 MW, last operated on January 13, 2013, and the unit was placed in long-term cold storage effective March 31, 2014.

As previously mentioned, Mistersky has a power interchange, also referred to as a tie line, of 80,000kW capacity that routes electricity from the DTE grid to the electrical distribution lines serving PLD's former customers. This portion of the facility, which is located in the Unit 5 and 6 building, continues to be a 24 hours per day, 7 days per week operation, as staff needs to be on site to monitor the output readings to the power interchange/tie lines. There are currently no air emission sources or regulated equipment associated with this aspect of the facility.

The aforementioned maintenance activities and outdoor storage are the responsibility of a group called Transmission Maintenance Construction Allies (TMCA), which is affiliated with Walker-Miller Energy Services, LLC. They are contracted by DTE and the City of Detroit to work on new substation construction and maintenance activities. There is one storekeeper on site (Brian Carter) who manages the materials on site. Maintenance crews come to the facility in the morning to pick up supplies for their work projects. It is assumed that there is 24 hour security at the site to monitor the inventory that is stored on site.

Inspection Narrative

I arrived at the facility at 1:30pm. I was met by San in the parking lot near the main entrance gate, and we proceeded to walk around the facility. San and I discussed the status of the combustion equipment and building at the facility. I had met with San and some other persons representing the Mistersky facility on June 11, 2014 to discuss the planned demolition of the Unit 7 building and the structures associated with the gas turbine. During this meeting, it was discussed that the building housing Units 5 and 6 would not be touched, but that plans were

being made to demolish the Unit 7 and gas turbine buildings down to the slab, leaving the foundation as a cap over the underlying soil, with the boilers and turbines being scrapped or sold. San told me that bids were received as part of a six month bid process to demolish the Unit 7 building and the combustion turbine building, and to scrap the contents. The accepted bid involved having the demolition and scrapping operations completed by the end of 2015. However, the deal was cancelled by the contractor, citing the low price of scrap (particularly copper) as making the project less profitable. There are no immediate plans to re-bid the demolition of these structures.

San and I then walked around the yard area between the Unit 7 building and the Unit 5 and 6 building. We observed inventory, ranging from manhole covers to transformers to large spools of wire, stored in the open lot. San described the operations of TMCA, and we proceeded to the office building where I was introduced to Brian Carter of Walker-Miller Energy Services/TMCA. Brian briefly described the work done by the TMCA work crews that are based out of the facility.

San and I briefly discussed the facility's MAERS report. I left the facility at 2:10pm.

Permits/Orders/Other

The Mistersky facility is currently subject to the terms and conditions of Renewable Operating Permit (ROP) MI-ROP-B2185-2014, which became effective on December 2, 2014. The ROP includes an Acid Rain Permit, and CAIR Sulfur Dioxide Permit, a CAIR Annual Nitrogen Oxide Budget Permit, and a CAIR Ozone Nitrogen Oxide Permit.

As mentioned in this report, all of the combustion units, with the exception of the auxiliary boiler, have been placed in long-term cold storage, and will not be operated in the future. The City of Detroit had gone so far as to commit to the permanent removal of Unit 7 and the gas turbine from the property before the demolition contract was cancelled. In addition, there are no longer any cold cleaners in operation at the site; during my last site visit in 2014, I observed the last remaining cold cleaner in the building that houses Units 5 and 6 and the auxiliary boiler, and it was drained and had not been maintained for future operation.

The representatives of the facility have been complying with the reporting requirements of the ROP; the annual and semi-annual compliance reports have been submitted for every reporting cycle. In addition, MAERS reports have been submitted for the facility. As long as the ROP is active, these reports will still need to be submitted.

Compliance Determination

Based upon the results of the December 10, 2015 site visit, the Mistersky Power Station appears to be **in compliance** with all of the terms and conditions of their ROP, as well as applicable state and federal regulations. The facility is not operating the major emission units that are addressed by the ROP, and the former PLD took the necessary measures to notify AQD and US EPA that these emission units have either been retired, or are in long-term cold storage.

NAME Steve Weis DATE 2/25/16 SUPERVISOR JK