# FUGITIVE DUST CONTROL PLAN
# HUNTLEY GENERATION STATION
# 3500 RIVER ROAD
# TONAWANDA, NEW YORK

**PREPARED FOR:**
Huntley Power, LLC
Tonawanda, New York

**PREPARED BY:**
GZA GeoEnvironmental of New York
Buffalo, New York

October 2015
GZA File No. 21.0056757.00

**TABLE OF CONTENTS** **Page**

## REVISION LOG

| Date of Review | Reviewer Name | Amendment Required (YES/NO) | Sections Amended and Reason |
|---|---|---|---|
| October 2015 | Kevin Schroeder, NRG<br>Daniel Troy, GZA | N/A | Original Plan |
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## 1.0 INTRODUCTION

On December 19, 2014, the administrator of the United States Environmental Protection Agency signed the Disposal of Coal Combustion Residuals ("CCR") from Electric Utilities final rule ("the Rule"). The Rule was published in the Federal Register on April 17, 2015 and becomes effective on October 19, 2015. The Rule establishes a comprehensive set of requirements for the disposal of CCR in landfills and surface impoundments at coal-fired power plants under Subtitle D of the Resource Conservation and Recovery Act. These requirements include compliance with location restrictions, design criteria, operating criteria, groundwater monitoring and corrective action, and closure and post-closure care aspects. The operating criteria include air criteria specified in Title 40 of the Code of Federal Regulations ("CFR"), §257.80 to address the potential pollution caused by windblown dust from CCR units. According to the Rule, owners or operators of CCR units must adopt measures that will effectively minimize CCR from becoming airborne at the facility by developing and operating in accordance with a fugitive dust control plan ("Plan") with adequate dust control measures.

Huntley Power LLC ("Huntley") is a coal-fired power plant located in Tonawanda, New York. The Rule applies to this facility due to the disposal of CCR that is generated from the combustion of coal at the site. CCR units associated with the station operations include the Huntley Solid Waste Management Facility ("Huntley SWMF") and the South Pond. The locations of both facilities are shown on the attached Figure 1 – Locus Plan.

This Plan has been prepared to comply with the requirements as specified in §257.80(b)(1-7) of the Rule, including certification by a professional engineer as documented in Section 7.0 of this Plan. Additionally, this Plan will be placed in the Huntley facility's operating record per §257.105(g)(1), noticed to the State Director per §257.106(g)(1), and posted to the publicly accessible internet site per §257.107(g)(1).

Control of fugitive dust and comprehensive air quality monitoring are important aspects of daily activities at the Huntley Site and associated SWMF located on River Road in Tonawanda, New York. This document outlines procedures to establish and maintain an onsite dust control program as required by CCR Rule (40 CFR 257.80). Onsite dust monitoring is conducted in general accordance with the requirements of the New York State Department of Environmental Conservation Air Title V Facility Permit and Solid Waste Management Permit.

## 2.0 FACILITY DESCRIPTION

### 2.1 Process Overview

Fly ash generated from the electrical generation plant is stored in a vertical storage silo. Prior to transportation to the SWMF the fly ash is treated in a pugmill with "haulage", a wet application to prevent the fly ash from solidifying during transport. The volume of waste generation of the fly ash is dependent on the electrical generation demands of the Plant and therefore can vary. Eventual loading of the fly ash into dump trucks occurs in a drive-through bay door beneath the storage silo.

A bottom ash material is also sluiced to the South Pond and is routinely dredged and stockpiled adjacent to the pond for dewatering prior to eventual loading for transport to the facilities nearby landfill. Additionally, other potential sources of dust generation at the facility include unpaved roads adjacent to the settling pond, exposed ash piles being dewatered adjacent to the south settling pond, and exposed working face or placement areas of the facilities nearby landfill.

The normal travel areas along paved and unpaved in-plant access roads and haul roads within the landfill are maintained as necessary by wetting, using water trucks during dry, windy periods. Dust suppression using wetting methods work well except during extreme cold weather at which time a front-end loader may be used to scrape or back-drag the road ways to remove accumulation of loose fines to prevent them from becoming air-borne. Figure 2 illustrates the internal paved and unpaved roads that will routinely be wetted or scraped.

Additional steps to reduce generation of dust at the Huntley site and SWMF include reducing vehicle speeds and ceasing work activities during strong wind events (sustained winds greater than 25 mph).

If necessary, Huntley Plant employees can hose down the dump trucks as needed prior to their transporting waste ash to the landfill to remove residual ash accumulations. Truck rinsing is mainly done within the ash silo loading containment.

#### 2.1.1 Huntley Solid Waste Management Facility

The Huntley SWMF is located approximately two miles north from the Huntley station proper. The SWMF has been identified as an existing CCR landfill according to the Rule. CCR materials including fly ash and bottom ash are

transported by tarped trucks from the station to the ash disposal site where they are dumped and then spread and compacted with a bulldozer.

### 2.1.2 Fly Ash Handling

Fly ash is generated from coal combustion in the boiler and is removed from the gas stream through a baghouse, then pneumatically conveyed to a fly ash silo for storage. Fly ash loading activities into dump trucks for delivery to the nearby landfill is generally part of routine activities although is dependent on the rate of electrical generation demands of the Plant. A primary process in the generation of the fly ash is the pretreatment application in a pug mill of "haulage" which is blended with the ash in a wet form to prevent the ash from solidifying prior to disposal. From this silo, the ash is pneumatically conveyed to a pugmill where it is wetted to 10 to 15 percent moisture, mixed, and loaded into tarped trucks in a drive-through bay door beneath the storage silo for transport to the SWMF.

If needed to control potential dusting, the loading area is equipped with hoses to wet down the area and rinse vehicles to remove periodic ash accumulations. When waste ash is not being loaded for transport to the landfill, the drive-through access doors are closed to prevent potential residual ash waste from becoming airborne.

### 2.1.3 Bottom Ash Handling

Compared to fly ash, bottom ash is a heavier, coarser material that falls to the bottom of the boiler. From the ash hopper underneath the boiler, bottom ash is sluiced to the South Pond located at the south end of the Huntley station property. The South Pond is cleaned out periodically depending upon station operation and the removed materials dewatered and transported via tarped trucks to the Huntley SWMF.

Additionally, other potential sources of dust generation at the facility include unpaved roads adjacent to the settling pond and exposed ash piles being dewatered adjacent to the south settling pond.

### 2.1.4 Transport Roadways

As described above, trucks transport conditioned fly ash and bottom ash to the SWMF. Within the limits of the Huntley station, and with the exception of a minimal stretch of roadway near the bottom ash ponds, the trucks travel on paved roads. Once outside the station, the public roadways are paved including the initial portion into the ash disposal site. The internal roadways and haul routes are shown on Figure 2 of this Plan.

The normal travel areas along paved and unpaved in-plant access roads and haul roads within the landfill are to be maintained as necessary by wetting using water trucks during dry, windy periods. Dust suppression using wetting methods work well except during extreme cold weather at which time a front end loader may be used to scrape or back-drag the road ways to remove accumulation of loose fines to prevent them from becoming air-borne.

Additional steps to reduce generation of dust at the Huntley Plant and Landfill include reducing vehicle speeds and ceasing work activities during strong wind events (sustained winds greater than 25 mph).

Wheel wash stations are currently not required for use at the Site as the generated ash typically has sufficient moisture content due to application of “haulage” (fly ash pretreatment) which reduces its potential to become airborne. If necessary, Huntley Plant employees can rinse off dump trucks as needed prior to their transporting waste ash to the SWMF to remove residual ash accumulations. Truck rinsing is done within the ash silo loading containment area.

## 3.0 FUGITIVE DUST CONTROL REGULATORY REQUIREMENTS

### 3.1 CCR Rule Air Criteria

Under the Rule, the owner or operator of a CCR unit must adopt measures that will effectively minimize CCR from becoming airborne at the facility, including fugitive dust originating from CCR units, roads, and other CCR management and material handling activities. In order to document these measures, the owner or operator of the CCR unit must prepare and operate in accordance with a CCR fugitive dust control plan. According to §257.80(b), the Plan must include the following elements:

- Identification and description of the CCR fugitive dust control measures that will be used to minimize CCR from becoming airborne at the facility, along with an explanation of how the measures selected are applicable and appropriate for site conditions.

- Description of procedures used to emplace CCR as conditioned CCR at CCR landfills. (Conditioned CCR means wetting CCR with water to a moisture content that will prevent wind dispersal but will not result in the release of free liquids.)

- Description of procedures used to log citizen complaints received by the facility involving CCR fugitive dust events.

- Description of procedures to periodically assess the effectiveness of the Plan.

The Plan should be updated anytime there is a change in conditions that would substantially affect the written Plan. In addition to the fugitive dust control plan, §257.80(c) requires the owner or operator of a CCR unit to file an annual fugitive dust control report.

### 3.2 Other Fugitive Dust Requirements

Prior to the promulgation of the Rule, the Huntley and the SWMF have been required by other regulations and permits to minimize and monitor fugitive dust from the site.

### 3.2.1 Title V Operating Permit

The facility is operated according to New York State Air Title V Facility Permit ID:9-1464-00130/00020. The permit incorporates fugitive dust emission requirements as codified in 6 NYCRR 211. The following citations are relevant to fugitive emission restrictions:

• According to 6 NYCRR 211.3 for emissions units U-00003, air regulations, the permittee shall not conduct or allow to be conducted any materials handling operation in such a manner that emissions from such operation are visible at or beyond the property line. The ash silo dump and roadways described under emission unit U-00003 are subject to the opacity requirements under 6NYCRR Part 211. 3. The facility shall control fugitive emissions as follows:

Ash is removed from the silo by emptying into either tankers or dump trucks. The ash is mixed with water to prevent entrainment while unloading. The discharge boot drops onto the tankers and a chute with aprons is used to load the dump trucks. The operator must insure that the mix of ash to water is enough to ball up the ash and, minimize entrainment. Records of water usage and observations of ash condition must be recorded per shift in a bound notebook.

All dump trucks must be covered before leaving NRG property. All plant and landfill access roadways must be washed down to minimize dust entrainment, as necessary and daily records kept noting if water truck was used and if not why not.

1) This observation(s) must be conducted during daylight hours except during adverse weather conditions (fog, rain, or snow).

2) The results of each observation must be recorded in a bound logbook or other format acceptable to the New York State Department of Environmental Conservation (NYSDEC). The following data must be recorded:

- Weather condition
- Was opacity observed

3) If the operator observes any visible emissions (other than steam), then appropriate corrective action must be taken as described above.

### 3.2.2 Huntley Solid Waste Management Permit

The facility is operated according to New York State Solid Waste Management Permit ID: 9-1464-00089/00002. The permit incorporates fugitive dust emission requirements as codified in 6 NYCRR 360. The following citations are relevant to fugitive emission restrictions:

Variance 2 from 6 NYCRR Part 360-2.17 (c) requiring daily cover is approved. The permitted shall limit the daily working area to 3 acres and use compaction equipment and dust suppression agents to prevent fugitive dust emissions and other nuisance conditions. In addition, the following requirements related to dust emissions are observed:

- Vehicle traffic is limited to 15 miles per hour within the ash disposal site.
- All trucks shall be covered with tarps to minimize dust emissions during transit.
- A water tank truck will be used as necessary to suppress dust on active disposal areas, roadways, and parking areas.

## 4.0 FUGITIVE DUST CONTROL PRACTICES AND PROCEDURES

Potential CCR fugitive dust sources have been identified and described in Section 2.0 of this Plan. This section will detail control measures employed at the facility to minimize airborne dust from these sources in accordance with §257.80(b)(1-2) of the Rule.

Site contractors and Huntley Plant operators are responsible for controlling their specific operations to minimize dust generation. This includes limiting or stopping operations during heavy dusting conditions, management and training procedures that limit employee exposure, and engineered measures that protect equipment operators working in the ash area.

Dust suppression activities in the Huntley Plant and SWMF areas are task-specific. The equipment that operates in the ash excavation, processing, or dry stacking areas (excavators, dump trucks, dozers, etc.) will be equipped with enclosed cabs that are air conditioned, heated and filtered. Inspections of door gaskets, air conditioning units, filters and other devices that seal the cabs will be periodically made to check that they are properly maintained and that the inside cab area is clean from ash buildup. Management

and training procedures will be implemented to protect other personnel that work in the area (those that are not in equipment cabs).

Water trucks will be used for dust control wherever access allows as they are cost effective and do a satisfactory job of controlling the dust over the short-term, when needed. In general, the Huntley Plant and SWMF work areas do not require access roads through the ash with the exception of the immediate areas around the dredged ash dewatering area proximate to the South Pond and within the SMWF working face. As part of routine maintenance, the Huntley access roads are maintained to be free of ash material to reduce the potential for generation of fugitive dust from construction vehicles.

## 4.1 Fly Ash Handling

Fly ash is generated from coal combustion in the boiler and is removed from the gas stream through a baghouse then pneumatically conveyed to a fly ash silo for storage. From this silo, the ash is pneumatically conveyed to a pugmill where it is wetted to 10 to 15 percent moisture, mixed, and loaded into tarped trucks for transport to the Huntley SWMF.

### 4.1.1 Monitoring

As per section 3.2.1, Title V Operating Permit under 6NYCRR Part 211. 3, observations of visible emissions from the fly ash handling activities are performed once per day during normal daylight operations. A trained employee records whether any emissions are observed and records the information in a logbook.

Airborne dust monitoring is ongoing at Huntley and the SWMF and is managed as part of regular routine maintenance. Due to the currently low potential for fugitive dust migration from power plant ash (due to grain size and pretreatment wetting practices) monitoring activities are limited to observations for visible dust clouds both at locations within Huntley and the nearby SWMF and at their respective perimeter locations.

The Site representatives responsible for dust control management will be notified immediately if plant or landfill activities results in visible generation of dust clouds. The designated individuals will have the authority to direct resources necessary to

implement dust control measures. Onsite Huntley and SWMF personnel are directed to notify the designated individuals for visual observation of dust, which will require immediate attention. The daily site activities (and/or any other non-typical activity) that caused the dust emission will be ceased until a re-evaluation of dust control measures is completed and additional control measures implemented, if necessary.

An assessment of potential dust generation will be completed before starting new major site construction activity, such as excavation, processing, dredging, dewatering, or placement of landfill ash and landfill cap and cover. Appropriate modifications to dust control measures or personnel monitoring will be made based on specific activity assessment. A Huntley representative from the onsite environmental or safety and health group will observe any new activity as it starts up to provide feedback to field personnel and adjust dust control measures as necessary.

### 4.1.2 Recordkeeping

Ash handling records are maintained in logs completed by station personnel. The station maintains weekly records of visible emission observations of the fly ash handling operations. The completed logs are forwarded to the station's Environmental Department and retained for at least five years.

## 4.2 Bottom Ash Pond Cleaning

As necessary, the South Pond is periodically cleaned out, depending on operational time, to remove accumulated bottom ash materials and to restore capacity for settling solids. Once the bottom ash materials have been sufficiently dewatered (but not to the point of becoming dry), they are removed from the site and loaded into tarped trucks. The tarped trucks then travel to the Huntley SWMF.

## 4.3 Transport Roadways

Paved and unpaved road surfaces internal to the Huntley plant and the SWMF (refer to Figure 2) are watered to reduce fugitive dust emissions. The amount of time dedicated to watering the roads is a function of traffic and the dryness of the surface and is determined through daily observations by station personnel. The amount of water applied varies seasonally. Fugitive dust emissions are further controlled by posting and maintaining a maximum vehicle speed limit of 15 miles per hour within the boundaries of the station property.

All trucks exiting the station and carrying fly ash or bottom ash are equipped with automatic tarping systems that are designed to provide an adequate seal and prevent windblown CCR emissions during transport. Drivers routinely inspect the tarping system for proper closure, tears, rips or any other defects that could contribute to excessive dust emissions during transport.

## 4.4 Huntley Solid Waste Management Facility

Fly ash and bottom ash are transported by tarped trucks from the station to the Huntley SWMF. Fugitive dust is minimized at the ash disposal site by spreading and compacting the materials with a bulldozer. Additionally, a water truck regularly circulates to spread water on the internal roadways and the open operating areas of the disposal site. Vehicle traffic operating within the disposal site is restricted to a 15-mile-per-hour speed limit.

Due to the coarse-grained gradation of the power plant generated bottom ash and the high moisture content from the "haulage" pretreatment of the fly ash, the generation of dust at the nearby landfill facility is generally minimal. Once the ash is delivered and placed on the landfill working face, the ash is graded and compacted. In accordance with the landfill permit requirements, the SWMF is only allowed to operate an open work face area of 3 acres. Portions of the open landfill not receiving regular waste ash are either covered with a denser, daily cover material that will inhibit dust generation and that also acts as erosion control. Additionally, grasses or other temporary vegetation will be used at the non-operational portions of the landfill in lieu of the final cover system to improve overall dust control and reduce erosion.

As ash placement activities are completed in a given area, the area will be graded to reduce any steep slopes and allow development of vegetative cover. Exposed ash surfaces will be seeded with temporary vegetation until final cap and cover are placed.

Alternative materials and methods for dust suppression, as well as alternative final vegetative cover or interim cover approaches, will continue to be analyzed to find ways to improve dust control, if necessary. It is anticipated that this effort will continue for the life of the project or specific cell closure.

### 4.5 Annual Reporting

In accordance with §257.80(c), the station must prepare an annual fugitive dust control report that includes the following information:

- A description of actions taken to control CCR fugitive dust
- A record of all citizen complaints
- A summary of any corrective actions taken

The first annual report must be completed no later than 14 months after placing the initial CCR fugitive dust control plan in the Huntley facility's operating record. Subsequent annual reports will be completed one year after the date of the initial annual report. Additionally, as required, the annual reports will be placed in the Huntley facility's operating record per §257.105(g)(2), noticed to the State Director per §257.106(g)(2), and posted to the newly established publicly accessible internet site per §257.107(g)(2).

## 5.0 PROCEDURES FOR CITIZEN COMPLAINTS

In accordance with §257.80(b)(3) of the Rule, this section outlines the procedure that Huntley follows to log citizen complaints involving fugitive dust events at the station and the ash disposal site. Within 24 hours of receiving a citizen complaint, the station's environmental coordinator will log the complaint in Huntley's Environmental Management Information System (EMIS) database. The EMIS database will automatically forward notice of the complaint to the station manager, regional environmental manager, and the Corporate Environmental Department. Huntley will then conduct a thorough investigation. The results of the investigation will be recorded in a complaint log, entered into the EMIS database, and communicated to the appropriate parties. If the investigation confirms a fugitive dust emission event, Huntley will undertake a root cause analysis to address the source of the excess fugitive dust and will develop a plan to mitigate future occurrences and remediate impacts, as necessary.

Citizens can contact the Huntley Station directly at 716-879-3800.

## 6.0 PROCEDURES FOR PLAN ASSESSMENTS AND AMENDMENTS

Fugitive dust control practices for each source of CCR fugitive dust are described in Section 4.0 of this Plan. Based on current monitoring requirements and observations, these control measures have been determined to be effective. This Plan will be periodically reviewed by the station's environmental coordinator to ensure full compliance with all fugitive dust control, monitoring, and recordkeeping procedures as outlined herein. During this review, the Plan's effectiveness will be assessed as required per §257.80(b)(4) of the Rule. This review will serve to either confirm the continuing effectiveness of the Plan or will identify sections which require revision/upgrade to reflect any relevant changes in station operations, CCR unit aspects, or necessary improvements in fugitive dust control protocols.

Accordingly, when new processes or modifications of existing processes are planned, the station's environmental coordinator will evaluate the project for potential changes to this Plan. In accordance with §257.80(b)(6) of the Rule, the Plan will be amended to add any new CCR units or to update any modifications in the operation of existing fugitive dust sources. The amended Plan will be reviewed and recertified by a registered professional engineer and will be placed in the Huntley facility's operating record as required per §257.105(g)(1). The amended Plan will supersede and replace any prior versions. Availability of the amended Plan will be noticed to the State Director per §257.106(g)(1) and posted to the newly established publicly accessible internet site per §257.107(g)(1).

A record of Plan reviews/assessments is provided on the first page of this document, immediately following the Table of Contents.

## 7.0 POINT OF CONTACT

The following Huntley Plant personnel should be contacted with respect to dust suppression requirements and observations.

Regional Environmental Compliance Specialist
Huntley Power LLC
3500 River Road
Tonawanda, NY 14150
Office: 716-879-3800

## 8.0 PROFESSIONAL ENGINEER CERTIFICATION

The undersigned registered professional engineer is familiar with the requirements of §257.80 and has visited and examined the Huntley Station or has supervised examination of the facilities by appropriately qualified personnel. The undersigned registered professional engineer attests that this CCR Fugitive Dust Control Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and meets the requirements of §257.80, and that this Plan is adequate for the Huntley Station. This certification was prepared as required by §257.80(b)(7).

Name of Professional Engineer: **Daniel J. Troy, P.E.**

Company: **GZA GEOENVIRONMENTAL OF NEW YORK**

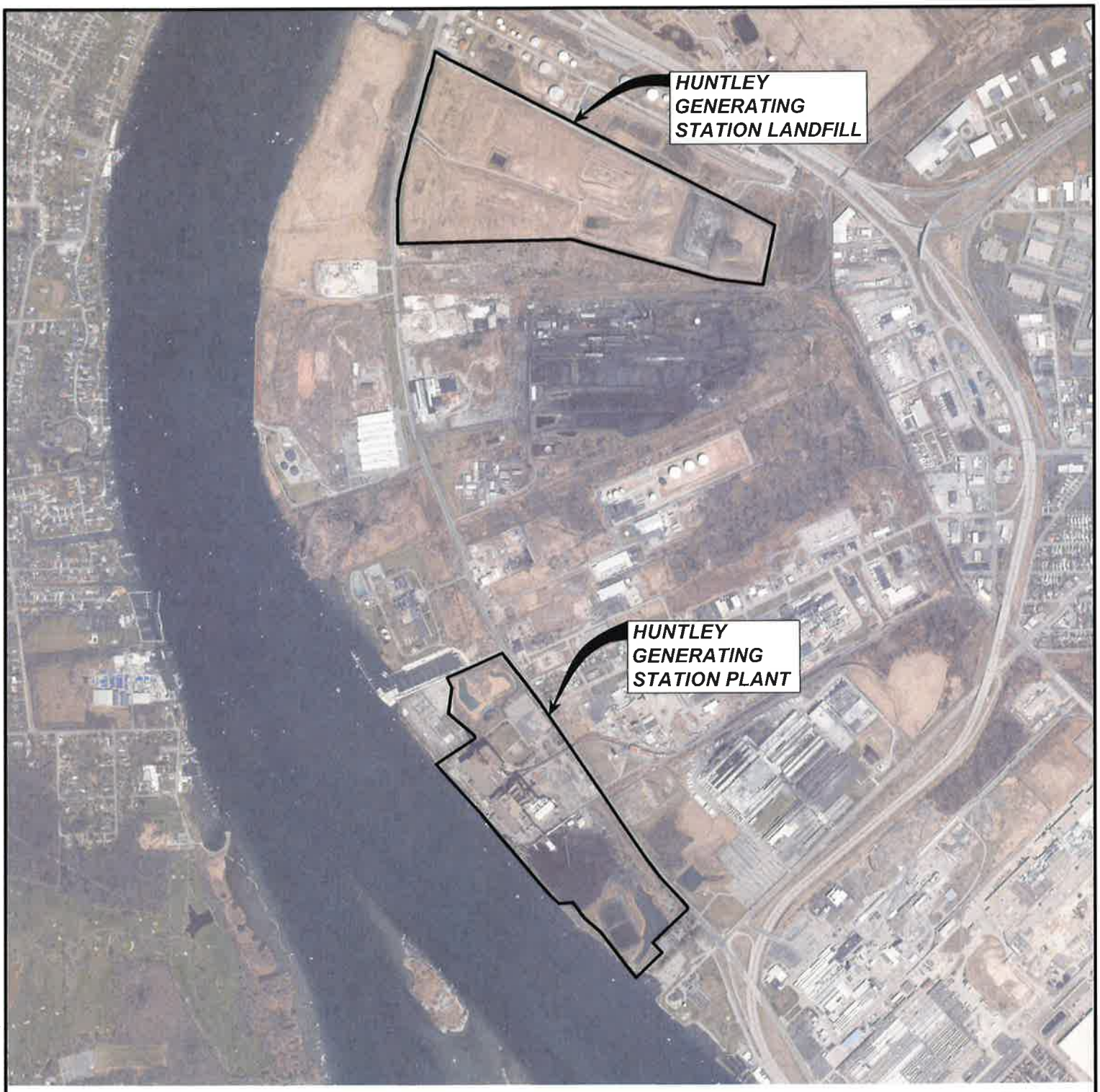
Signature: _____

Date: **October 5, 2015**

PE Registration State: **New York**

PE Registration Number: **081139-1**

Professional Engineer Seal:

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# HUNTLEY GENERATION STATION
3500 RIVER ROAD
TONAWANDA, NEW YORK

## FUGITIVE DUST CONTROL PLAN

## LOCUS PLAN

FIGURE
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HUNTLEY GENERATION STATION
3500 RIVER ROAD
TONAWANDA, NEW YORK

FUGITIVE DUST CONTROL PLAN

SITE LAYOUT AND POTENTIAL FUGITIVE DUST SOURCES



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