

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Eden NC Coal Ash Spill - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV

**Subject:** POLREP #12  
Interim Final - Removal Operations  
Eden NC Coal Ash Spill  
B41W  
Eden, NC  
Latitude: 36.4878601 Longitude: -79.7189733

**To:**  
**From:** Kenneth Rhame, Region 4 OSC, Myles Bartos, Region 3 OSC,  
**Date:** 6/24/2014  
**Reporting Period:** May 10 to July 4

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	B41W	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Emergency
<b>Response Lead:</b>	PRP	<b>Incident Category:</b>	Removal Assessment
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	2/3/2014	<b>Start Date:</b>	2/3/2014
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>	1073018, 1073040	<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

**NOTE:** Fifteen (15) Situation Reports (SITREPS) were generated for the reporting period beginning February 3, 2014 through February 21, 2014. The SITREPS can be found at [http://epaossc.org/site/doc\\_list.aspx?site\\_id=9065](http://epaossc.org/site/doc_list.aspx?site_id=9065). Future response updates will be transmitted via Pollution Reports (POLREPS) using the established POLREP distribution process.

#### 1.1.1 Incident Category

Emergency Response, Inactive Facility

#### 1.1.2 Site Description

The Dan River Steam Station is a decommissioned coal-fired electric generation plant operated by Duke-Energy. The plant is located in Eden, NC adjacent to the Dan River. Duke-Energy began decommissioning the plant in 2012 when a new natural gas-fired electric generation facility was brought on-line. The Site consists of the Dan River Steam Station and the Dan River; from the Duke Energy Dan River Steam Station Plant in Eden downstream including Kerr Reservoir.

##### 1.1.2.1 Background and Description of Threat

Please see POLREP #7 for background and description of threat.

##### 1.1.2.1 Removal Site Inspection

Duke Energy reported that 50,000 – 82,000 tons (60,000 – 100,000 Cubic Yards) of coal ash and 27 million gallons of coal ash contaminated water was released to the Dan River. This estimate was later updated to 30,000 - 39,000 tons of coal ash. Coal ash deposits in the river vary from up to 6 feet at the storm drain outfall to a few inches down-river. The majority of the coal ash appears to have deposited between the release location and the City of Danville Dam, approximately 20 river miles for the release site. Initial water quality monitoring and sampling indicated elevated metals concentrations that exceeded State water quality standards and EPA Removal Screening Levels.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

The following activities occurred during this reporting period:

**Coal Ash Assessments along the Dan River:** During this reporting period, the second and third round of transect samples were collected.

**Coal Ash Removal:** Duke's clean up contractor, Phillips and Jordan (P&J) tested the dredging system on May 9th and May 10th. P&J initiated dredging operations on May 12th and met several production issues that required addressing. First was the dredging direction, this was changed from being parallel to the bank to being perpendicular to the bank. There was a mechanical issue requiring the replacement of a control board and the repair of the motor. Intermittent elevated Total Suspended Solids (TSS) from the discharge required adjustments. The adjustments included attempting the addition of bag filters of various sizes (this did not work due to clogging of the filters), relocating the belt press effluent from the bottom of the clarifier to various locations within the clarifier and adding a polymer (polyaluminum hydroxychlorosulfate). This addition of the polymer required a pH adjustment, sodium hydroxide is being used to insure the pH is within discharge limits. Turbidity and TSS is being monitored via hand held meters, samples are collected as necessary per discharge requirements.

Dredging Operations continued at the Schoolfield Dam Location, on June 20th Duke Energy submitted a proposal to reduce the dredge area based on most recent analytical results. The proposed reduction area consisted of lines 2, 3, and 4. EPA reviewed and approved the proposal as an amendment to the Work Plan.

Dredging Operations were completed at the Schoolfield Dam Location on July 3rd, 2014.

Duke Energy's Consultant prepared a work plan for removal of depositional ash from a sandbar at the confluence of Town Creek and the Dan Rivers. This location is approximately two miles downstream from the initial release point. Site Access was obtained by Duke Energy from the property owners along with proper approvals from the North Carolina State Historical Preservation Office and NCDENR Water Resources regarding erosion control.

US EPA contractors delineated the area of the sandbar to be removed, excavation of the ash at Town Creek Sandbar was completed on June 30th, 2014.

**Weekly Stakeholders/Technical Working Group Meeting:** After collecting, analyzing and reviewing the data from the 1st, 2nd and 3rd round of transect samples; it was determined that continued transect sampling was not necessary. Areas that exceed eco-screening thresholds associated with coal ash will continue to be sampled by Duke Energy. EPA will collect location specific samples in areas of ash deposition that exceed eco-screening thresholds that are outside eco-sensitive areas and that are not located in areas that have been determined to be of concern due to the presence of legacy contaminants (pcb and mercury). The location specific sampling will be done to determine ash deposition size and persistence. Duke Energy will submit a long term monitoring plan to EPA July 15. Duke Energy has initiated negotiations with the Virginia and North Carolina Trustees and the US Fish and Wildlife Service to conduct additional sampling/assessment actions related to natural resource damages.

**Surface Water Sampling:** The Danville Water Treatment Plant initiated an alternate pumping schedule during dredging operations. While dredging operations were underway, the City of Danville would not pump water from intake to the water treatment plant; they would pump water on an alternate schedule when dredging operations were not underway. The City of Danville had adequate water capacity to support this plan. Duke Energy supplied the water treatment plants with sampling supplies to collect water samples in the event that unique or suspect observations were made. After the dredging completion date, it is not anticipated that additional surface water sampling will be necessary.

**Public Meeting:** EPA and Duke Energy provided a site tour of the dredging operations to the Virginia Lt. Governor (Ralph Northam), the Director of Virginia Department of Environmental Quality (David Paylor) and several of their staff members.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)** Duke Energy is the Potentially Responsible Party

The Administrative Order and Agreement on Consent (AOC) was signed on May 22, 2014.

#### 2.1.4 Progress Metrics

<i><b>Waste Stream</b></i>	<i><b>Medium</b></i>	<i><b>Quantity</b></i>	<i><b>Manifest #</b></i>	<i><b>Treatment</b></i>	<i><b>Disposal</b></i>
Coal Ash	Solid/Liquid	~22 cu yds	NA	N/A	Returned to the Coal Ash Basin
Ash and Sediment From Danville Water Treatment Facility	Solid	460 cu yds	NA	Solidification	Upper Piedmont Regional Landfill
Ash and Sediment From South Boston Water Treatment Facility	Solid	6 cu yds	NA	Solidification	Upper Piedmont Regional Landfill
Schoolfield Dam	Solid	3,600 cu yds	NA	Solidification	Upper Piedmont Regional Landfill

Town Creek Sandbar	Solid	258 cu yds	NA	N/A Solid	Upper Piedmont Regional Landfill
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## 2.2 Planning Section

### 2.2.1 Anticipated Activities

Decontaminate Equipment

Begin Demobilization of Equipment and Personnel

Restoration of City Park at the Schoolfield Dam Dredge Site

#### 2.2.1.1 Planned Response Activities

Review Duke Energy's Long Term Monitoring Plan

## 2.3 Logistics Section

No new logistical issues.

## 2.4 Finance Section

No information available at this time.

## 2.5 Other Command Staff

### 2.5.1 Safety Officer

Duke-Energy, with EPA oversight, is providing safety officers and assistant safety officers.

### 2.5.2 Liaison Officer

The EPA Region 4 Office of External Affairs continues to be actively engaged in fulfilling information requests in coordination with external affairs programs in EPA Region 3 and EPA Headquarters.

### 2.5.3 Information Officer

#### Public Information and Community Involvement

The EPA Region 3 and 4 Community Involvement Coordinators (CIC) are engaged with Duke Energy developing site-specific information updates to inform the community of on-going activities. Community briefing were held in Danville, VA, Eden, NC and the South Boston, VA. While public outcry over the spill is understandably high, the sessions were generally well-received, and EPA collected questions from the public to generate an FAQ sheet. EPA Region 4 and 3 continue to share validated sampling results with our response partners. Validated data is prepared for public release in coordination with the Region 4 Regional Emergency Operations Center, Region 4 Office of External Affairs, and EPA Headquarters on the incident-specific website. Duke and NCDENR analytical results are posted on their websites.

EPA issued fact sheet #4 which provided an update on results of sampling efforts in Kerr Reservoir.

## 3. Participating Entities

### 3.1 Unified Command

EPA Region 3 and 4

North Carolina Department of Environment and Natural Resources

Virginia Department of Environmental Quality

Duke Energy

### 3.2 Cooperating Agencies

US Fish and Wildlife

US Army Corp of Engineers

US Coast Guard

North Carolina Health and Human Services

North Carolina Wildlife Resources Commission

North Carolina Office of Emergency Management

North Carolina, Rockingham County Department of Health and Human Services

City of Eden, NC

Dan River Basin Association

Virginia Department of Environmental Quality

Virginia Department of Health

Virginia Department of Game and Inland Fisheries

City of Danville, VA

Town of South Boston, VA

#### **4. Personnel On Site**

- 1 Region 4 On-Scene Coordinators
- 1 Region 3 On-Scene Coordinators
- 4 Superfund Technical Assistance Response Team Members
- 3 US Coast Guard Gulf Strike Team Members
- 2 Community Involvement Coordinators (CIC) - providing support from the Regional Offices

#### **5. Definition of Terms**

1. OSC - On-Scene Coordinator
2. CIC - Community Involvement Coordinator
3. SESD - Science and Ecological Support Division
4. PRP - Potential Responsible Party
5. VDEQ - Virginia Department of Environmental Quality
6. NCDENR - North Carolina Department of Environmental and Natural Resources
7. EPA - Environmental Protection Agency
8. WTP - Water (drinking) Treatment Plant
9. USACE - United States Army Corp of Engineers
10. USCG - United States Coast Guard
11. NPDES - National Pollution Discharge Elimination System Permit Program
12. USFWS - United States Fish and Wildlife Services
13. VDGIF - Virginia Department of Game and Inland Fisheries

#### **6. Additional sources of information**

##### **6.1 Internet location of additional information/report**

- EPA sample results and sample location maps can be found at <http://epa.gov/region04/duke-energy/>
- EPA Operational Information can be found at <http://epaossc.org/edencoalash>
- NCDENR Dan River Site Information can be found at <http://portal.ncdenr.org/web/guest/dan-river-spill>
- VDEQ Dan River Site Information can be found at <http://deg.virginia.gov/ConnectWithDEQ/EnvironmentalInformation/NorthCarolinaCoalAshSpill.aspx>

##### **6.2 Reporting Schedule**

Pollution Reports (POLREPS) will be transmitted using the established distribution process. The distribution frequency of POLREPS will vary based on the operational needs of the emergency response.

#### **7. Situational Reference Materials**

No information available at this time.