

PPL Ash Removal at the Outfall to the Delaware River
Phase I – Ash Removal “In the Wet”
Summary of Work Completed 9/16-19/05

PPL Delaware River – Background

On August 23, 2005 one of the wooden stop-log components of the main ash basin's discharge control structure failed within Ash Basin 4 at PPL's Martins Creek Steam Electric Station (SES). This release resulted in an estimated mixture 100 million gallons of water and fly ash to flow out of the basin. The resulting release deposited ash onto PPL owned land, the dry Oughoughton creek bed, and into the Delaware River. The ash was released into the Delaware River in the immediate area of the Ash Basin 4 discharge structure.

PPL has been proactively addressing issues related to the recent release of fly ash with the thorough and complete delineation and removal of virtually all land-side fly ash impacted areas. Area roadways that were impacted with fly ash have been repeatedly swept and washed. Agricultural areas, open ground, drainage swales and creek bed areas have had the fly ash removed and hydro-seeded for erosion control provisions. Removed fly ash and impacted soils have been returned to the PPL Martins Creek facility and placed within Ash Basin 1.

This report summarizes only the work completed during Phase I of the Delaware River cleanup. The following information is specific to the removal of fly ash and impacted sediments in the immediate vicinity of the Ash Basin #4 discharge structure, which was heavily impacted. This work was completed while a more complete remedial plan (Phase II – Excavation in the Dry) was developed.

PPL Delaware River – Introduction

In an effort to take advantage of existing river conditions, PPL requested permission to excavate bulk fly ash impacts from the immediate area of the ash basin #4 discharge structure. This phase of the cleanup along and within the Delaware River is being referenced as Phase I, or Excavation in the Wet. A final work scope and written request to proceed was submitted to the PA DEP on September 16, 2005. Mr. Craig Shamory, PPL Supervisor, Remediation Group, submitted the work scope to the PA DEP by e-mail. The PA DEP approved the Phase I work scope in the afternoon of the 16th. The approval was received by e-mail sent by Dino Agustini, PA DEP.

PPL Delaware River – Work Completed

At 06:00 AM on September 17, 2005, a tailboard was conducted with H&K (site contractor) to review the final plan approved by the PA DEP the previous day. Copies of the Phase I work scope were provided for review to each employee working in the excavation area. As detailed in the work scope, the turbidity curtain was inspected prior to starting excavation, the Easton Water Authority was notified, and routine Delaware River sampling for total metals continued.

Excavation of ash and impacted sediment from the Delaware River began at approximately 07:30 AM on September 17th. During the excavation, downstream areas were continuously monitored to ensure turbid water was being properly contained.

PPL Ash Removal at the Outfall to the Delaware River
Phase I – Ash Removal “In the Wet”
Summary of Work Completed 9/16-19/05

Bulk areas of fly ash located inside the turbidity curtain were removed through excavation of the material while still under water. Long reach (50') excavators carefully scraped the river bottom removing these bulk deposits of fly ash. Prior to and during the excavation, larger river rocks were removed and placed on shore. These rocks will either be cleaned and reused for restoration during Phase II or disposed of.

The fly ash material removed by the excavators was staged in temporary piles along the shoreline and allowed to drain of water. The drained ash was then loaded into rock trucks and transported to Ash Basin #4 for disposal.

At 11:30 AM on September 17th, the first loads of ash were taken to Ash Basin #4 for disposal. The rocks trucks were minimally loaded and all material that was disposed into Ash Basin #4 was witnessed by an engineer to ensure the liner was not jeopardized at any time. The first load of ash into Basin #4 went as planned, nothing but fly ash and impacted sediment. The second load had several larger boulders and was returned to the excavation area where the larger rocks were removed. To address this issue and eliminate larger material from being dumped into Basin #4, 2" angle iron was welded on the bucket at 10" on center. This restricted any future removal of any rock 8" or greater.

Excavation continued per the plan until no more bulk deposits of ash were located within the reach of the excavator. Upon final confirmation that no more ash was accessible, excavation was stopped at 1:30 PM on September 19, 2005.

PPL Delaware River – Summary

During the excavation, a total of 34 loads of fly ash were removed from the river. At an average weight of 13 tons/load, this equated to approximately 442 tons.

All work was conducted in a manner that ensured minimal disturbance to the river bed and banks. Minor plumes of turbid water were noted on several occasions at the start of the project and work was suspended until the turbidity curtain was re-inspected and the issue was properly addressed. No further turbidity issues were noted or major failures of the turbidity curtain experienced during the remainder of the work.