

Permit No.	Scan Date	DIN
3612-INDUS-2008	January 2, 2014	20319

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Charlotte, NC 28202

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RECEIVED
December 23, 2013
Solid Waste Section
Asheville Regional Office

December 23, 2013

Mr. Bill Wagner
North Carolina Department of Environment and Natural Resources
Division of Waste Management, Solid Waste Section
2090 U.S. Highway 70
Swannanoa, NC 28778

Subject: Allen Steam Station
Retired Ash Basin (RAB) Ash Landfill (Permit No. 3612)
Notice of Release Beyond Edge of Liner

Dear Mr. Wagner:

As discussed during our phone conversation this morning, a release of ash and soil from the Allen RAB Ash Landfill beyond the edge of liner was discovered at approximately 7:15 a.m. on Monday, December 23, 2013. For your convenience, hand sketches of the landfill and release areas have been attached as Figures 1 and 2. Photos taken on December 21-22, 2013 before the incident are provided in Attachment A. Photos taken on December 23, 2013 after the incident are provided in Attachment B.

The release occurred on the southern sideslope of Cell 1, where two significant erosion rills were formed as a result of heavy rainfall. The western erosion rill (Rill 1) was more significant, and it is estimated that 20 cubic yards of ash/soil mixture was eroded away from Rill 1 at an approximate ash-to-soil ratio of 3-to-2 (i.e., approximately 12 cubic yards of ash). The eastern erosion rill (Rill 2) was less significant, and it is estimated that 5 cubic yards of ash/soil mixture was eroded away from Rill 2 at an approximate ash-to-soil ratio of 1-4 (i.e., approximately 1 cubic yard of ash). During the release event, the ash/soil mixture flowed down the remainder of the sideslope and into the drainage ditch that runs west-to-east along the landfill's southern perimeter. Contact stormwater also released to the stormwater channel south of the landfill, which ultimately drains to the Catawba River. Allen Stowe (Duke Energy) notified Wes Bell (NCDENR, DWR) this morning of this release from a surface water perspective.

At the Allen RAB Ash Landfill, a project has been underway since early November and was planned to be completed by December 31, 2013, as mentioned verbally and in an October 31, 2013 "Notice of Landfill Activity" letter addressed to Mr. Larry Frost. The project activities included reworking of the sideslopes; filling, regrading, and soil covering of the top deck; and implementation of down drains to improve landfill drainage and water management. As brought to NCDENR's attention previously, releases of waste material beyond the edge of liner occurred during September 2011, when a heavy rainfall event impacted the bottom ash corridor on the north side of Cell 1, and during October 2013, when a sinkhole developed on the western sideslope of Cell 1 due to inadequate drainage. The ongoing work seeks to address the root causes of these incidents, as was mentioned verbally and in a October 16 "Notice of Release Beyond Edge of Liner" addressed to Mr. Larry Frost.

During the weekend of December 21-22, 2013, the project was nearing its final stage, with completion anticipated by December 31. The sideslopes had been reworked and covered with

soil; approximately 90% of the top deck surface area had been filled to grade and covered with soil; and one of the three down drains had already been installed and operating in the northwest corner of Cell 1. The remaining project work included filling, regrading, and soil covering the last approximate 10% of the top deck surface area of Cell 1 and installing two down drains on the southern end of Cell 1. Weather forecasts called for approximately 1 inch of rain to fall on Sunday, December 22 and Monday, December 23. Ahead of the rain event, operations crews placed matting on portions of the top deck and along the completed northern and western sideslopes to prevent erosion of the recently placed soil. A soil berm was also placed along the southern edge of the top deck to prevent any overtopping of stormwater that may collect in the remaining 10% of the top deck that had not yet been graded and soil covered.

Rain from the storm event began falling at Allen Steam Station around 3:00 p.m. on Sunday, December 22. From the start of the storm event on December 22 through the initial discovery of the release (roughly 16 hours), Allen Steam Station received nearly 3 inches of rain, the consequences of which resulted in the release event described.

Crews immediately mobilized and began removing the released material beyond the edge of landfill liner, along the sideslopes, and in the drainage ditch. When remedial activities were observed at approximately 10:30 a.m. today, there were observed an excavator, dump truck, water truck, and four crewmembers with shovels addressing the released material. Meanwhile, several pieces of construction equipment were operating on the top deck addressing the root cause of the incident.

The remedial activities will continue until visual signs of the released material have been satisfied. All recovered material will be replaced in the landfill. Reworking, repairing, regrading, and soil covering of the southern sideslope will be immediately conducted, and the remaining 10% of the top deck will be filled, graded and soil covered (as was planned to finalize the repair project prior to this most recent incident). The two remaining down drains will then be installed, and the Cell 1 repair project will be completed. Completion of the repair project is still anticipated to be around December 31, 2013 and will prevent another such incident as well as the root causes of the September 2011 and October 2013 release events.

I will notify you once the released material has been completely remediated. I will also notify you once the repair project has been completed.

If there are any questions regarding this report, please contact me at (704) 382-4761.

Sincerely,

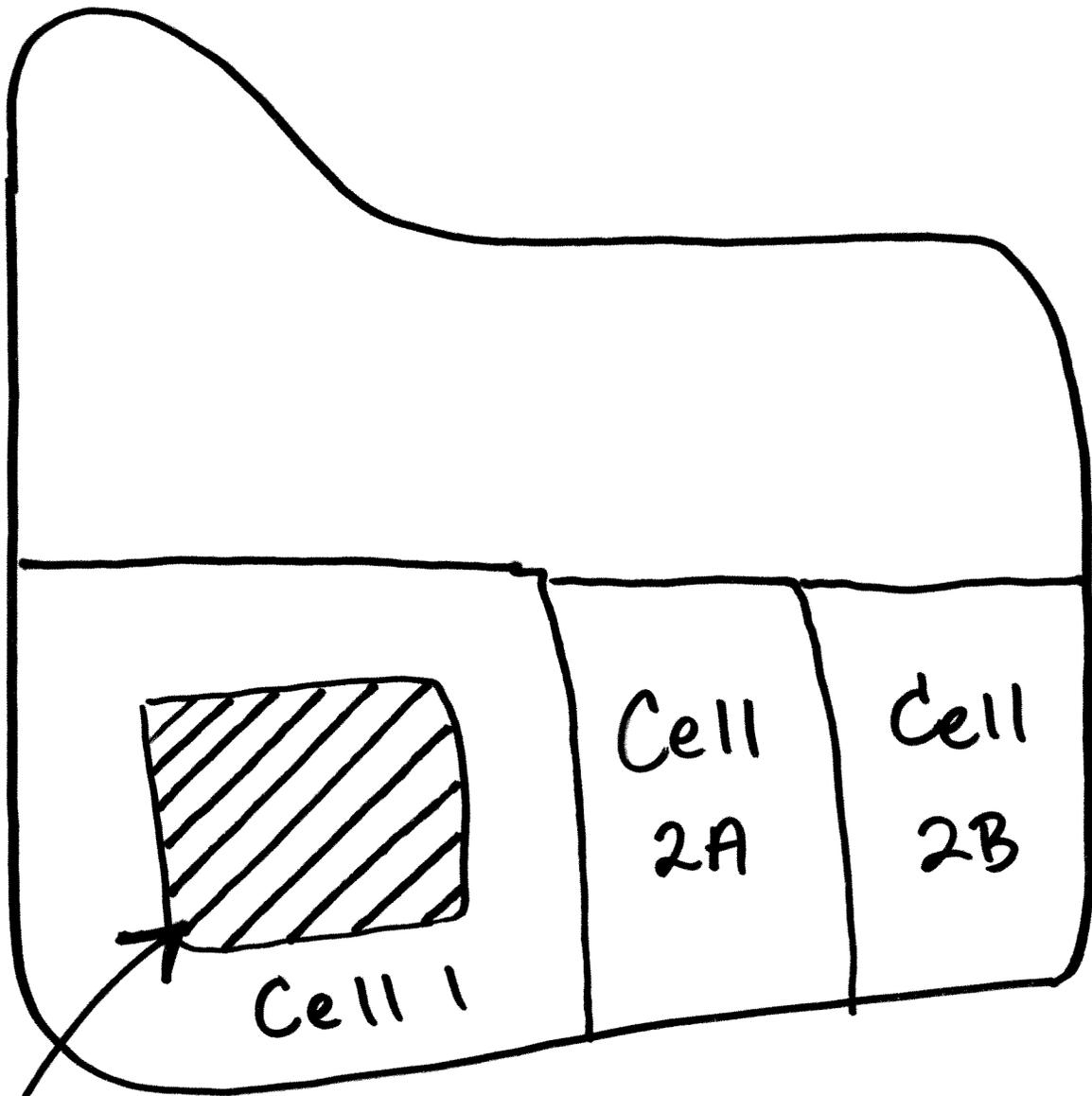


Sean DeNeale, Engineer II
Environmental Services

Electronic cc: Mr. Larry Frost – NCDENR, DWM, Solid Waste Section
Mr. Don Scruggs – Allen Steam Station
Mr. Ed Sullivan – Duke Energy Corporation

Figures

Allen RAB Ash Landfill (Permit # 3612)

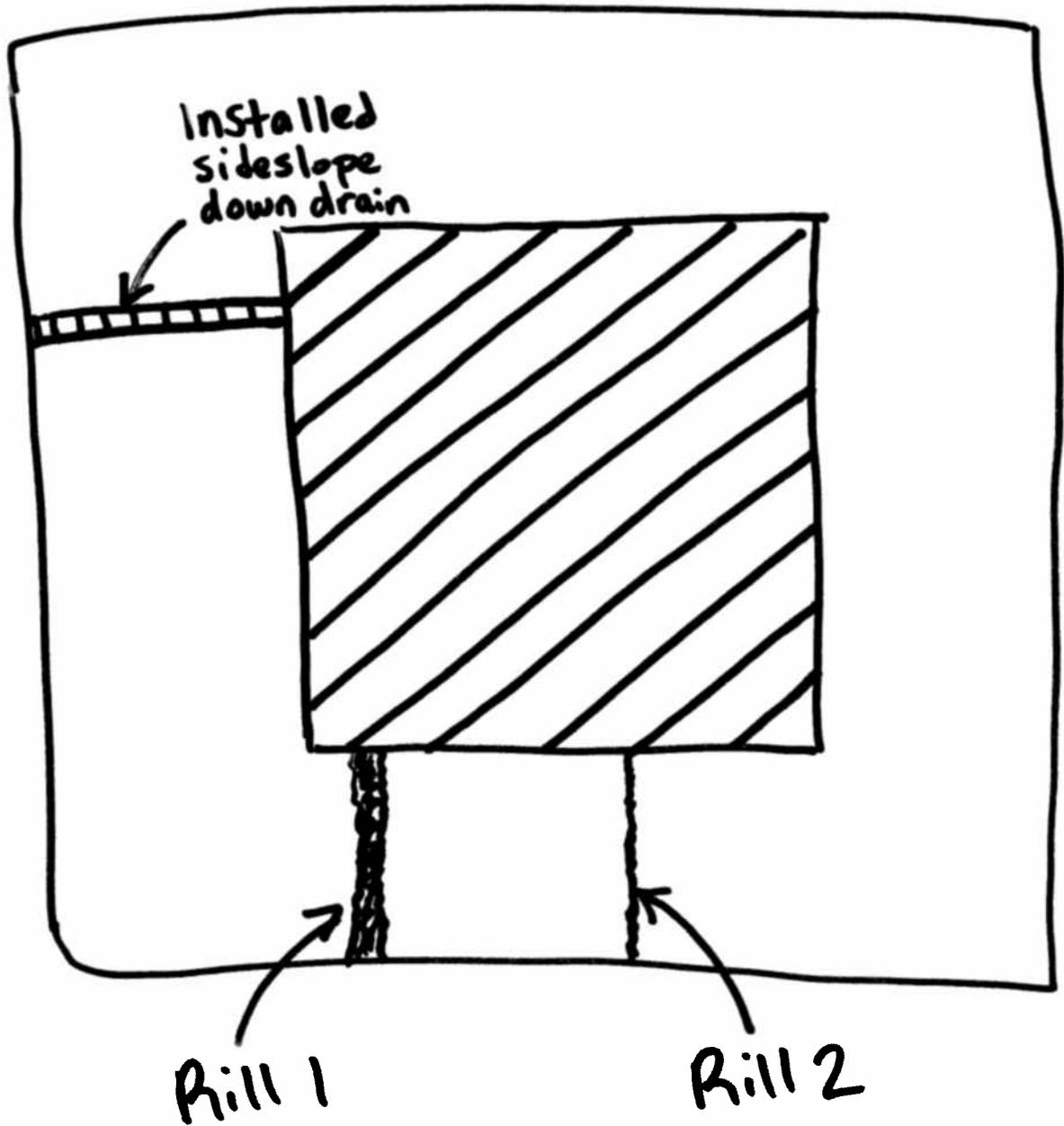


Cell 1 top deck

Figure 1

12/23/13
SMD

Allen RAB Ash Landf: 11
(Permit #3612)
Cell 1



 Cell 1 top deck

Figure 2 ^{12/23/13}
smd

Attachment A

Photos Taken Before the Release Incident

(Taken December 21-22, 2013)



North Slope

12/21/2013



North Slope

12/22/2013



South Slope

12/21/2013



South Slope

12/22/2013



West Slope Down Drain

12/21/2013



Southwest Corner of Cell 1

12/21/2013



Top Deck of Cell 1

12/21/2013



Top Deck of Cell 1

12/22/2013

Attachment B

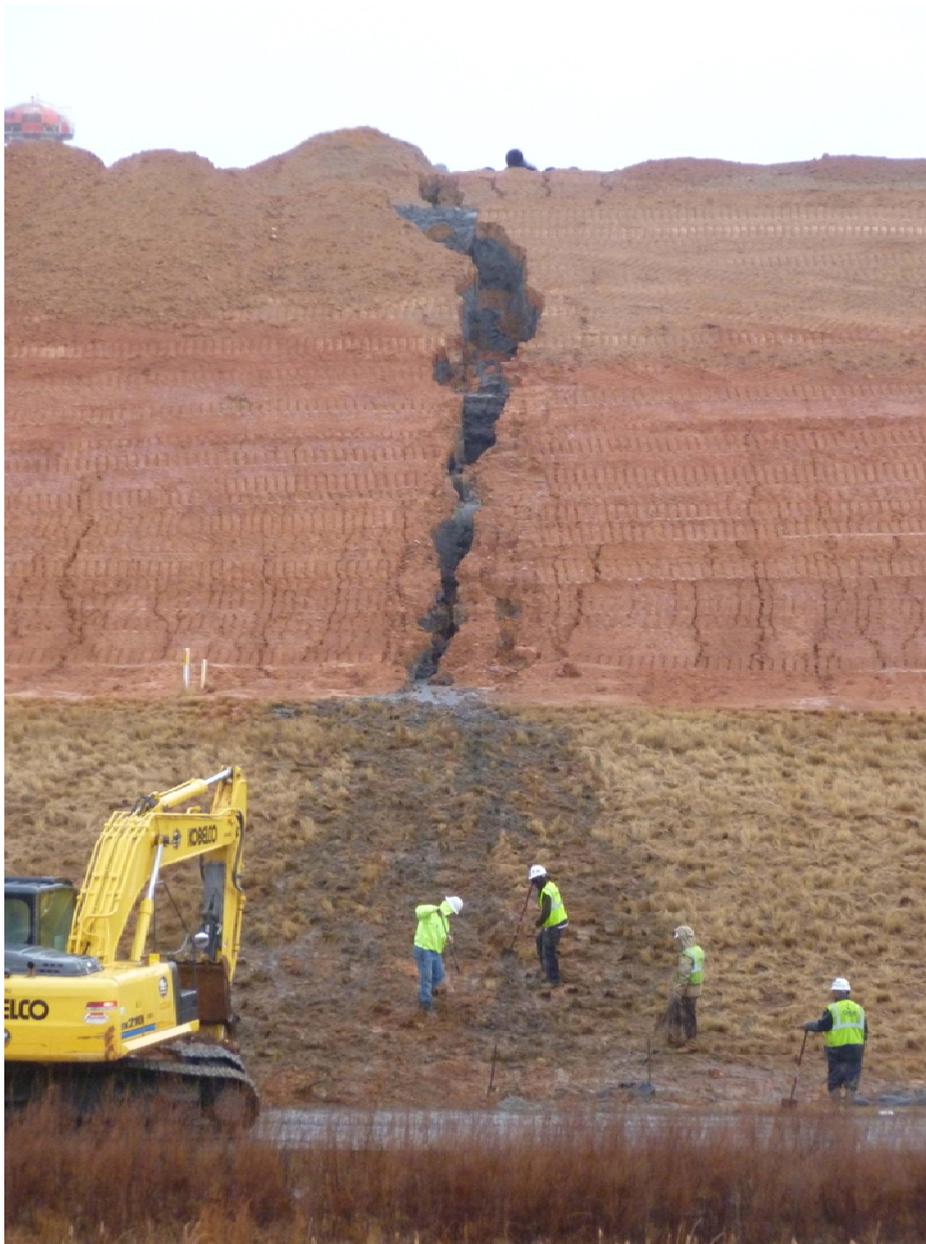
Photos Taken After the Release Incident

(Taken December 23, 2013)



Southern sideslope of Cell 1 showing Rill 1, Rill 2 , and remedial work (taken from ash pond Cell 2 dike)

12/23/2013



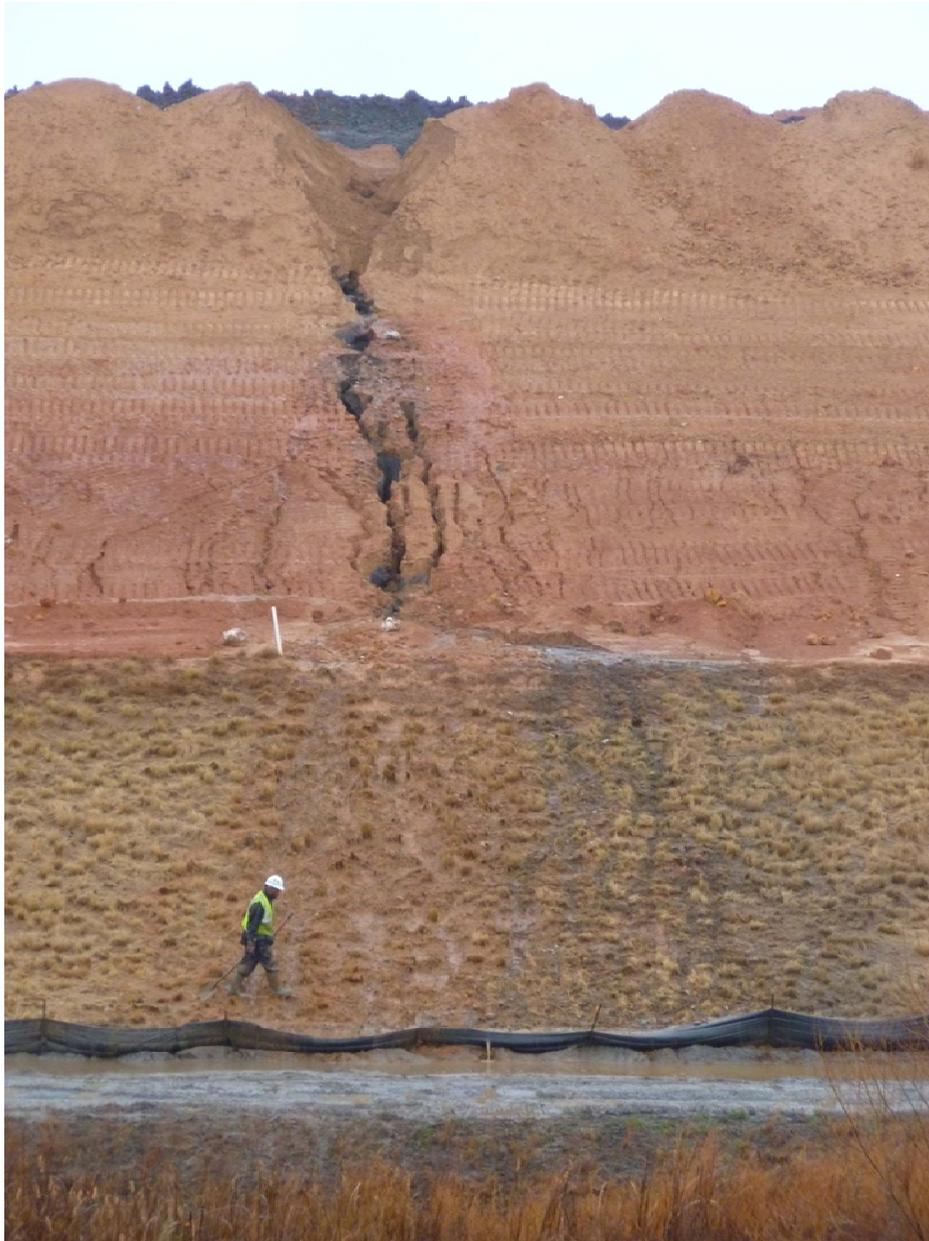
Rill 1 and remedial work (taken from ash pond Cell 2 dike)

12/23/2013



Rill 2 and remedial work, including loader on the top deck (taken from ash pond Cell 2 dike)

12/23/2013



Rill 2 and remedial work (taken from ash pond Cell 2 dike)

12/23/2013



Southern sideslope of Cell 1 showing Rill 1, Rill 2 , and remedial work (taken from ash pond Cell 2 dike)

12/23/2013