



FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

UNIT TYPE:											
Lined MSWLF		LCID		YW		Transfer		Compost		SLAS	COUNTY: CATAWBA PERMIT NO.: 1809-INDUS- FILE TYPE: COMPLIANCE
Closed MSWLF		HHW		White goods		Incineration		T&P		FIRM	
CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF	

Date of Site Inspection: July 16, 2015 **Date of Last Inspection:** 2/20/2014 (routine) and 3/7/2014 (follow-up)

FACILITY NAME AND ADDRESS:

Duke Energy Carolinas, LLC - Marshall Steam Station
 Flue Gas Desulfurization (FGD) Residue Landfill
 8320 East NC Highway 150
 Terrell, North Carolina 28682

GPS COORDINATES: N: 35.60463 W: -80.9774

FACILITY CONTACT NAME AND PHONE NUMBER:

Tim Russell, 828-478-7622, Tim.Russell2@duke-energy.com

Kim Hutchinson, 336-215-4576, Kim.Hutchinson@duke-energy.com

FACILITY CONTACT ADDRESS:

Same as above

PARTICIPANTS:

- Kim Hutchinson, PE – Duke Energy
- Kyle Baucom – Duke Energy
- Tim Russell – Duke Energy
- Margie Barnes – Duke Energy
- Chris Randazzo – Duke Energy
- Tyler DuBose – Duke Energy
- Scott LaSalla – Duke Energy
- Shawn McKee – NCDENR, Solid Waste Section
- Larry Frost – NCDENR, Solid Waste Section
- Elizabeth Werner – NCDENR, Solid Waste Section
- Deb Aja – NCDENR, Solid Waste Section
- Shannon Aufman – NCDENR, Solid Waste Section

STATUS OF PERMIT:

Original Permit to Construct	April 12, 2006
Modification PTC: HDPE Liner and Cap System	May 22, 2006
Permit to Operate: Phase 1, Cell 1	November 21, 2006
Permit to Operate: Amendment – Five (5) Year Renewal	May 18, 2012
Permit to Operate: Modification, Chimney Drains	December 6, 2013

PURPOSE OF SITE VISIT:

Comprehensive Inspection

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 2 of 2

STATUS OF PAST NOTED VIOLATIONS:

15A NCAC 13B .0203(d) states: "By receiving solid waste at a permitted facility, the permittee(s) shall be considered to have accepted the conditions of the permit and shall comply with the conditions of the permit."

General Permit Condition Number 6 states:

"Operation of this solid waste management facility must be in accordance with the Solid Waste Management Rules, 15A NCAC 13B, Article 9 of the Chapter 130A of the North Carolina General Statutes (NCGS 130A-290, et seq.), the conditions contained in this permit; and the approved plan. Should the approved plan and the rules conflict, the Solid Waste Management Rules shall take precedence unless specifically addressed by permit condition."

The approved Operations Plan dated November 13, 2013, *Section 2.3.1 LCS Maintenance*, states in part:

"LCS pipes will be cleaned out by the use of a clean-out snake or high-pressure water flushing at least once a year, and the LCS piping will remote-camera monitored if cleaning indicates a blockage in the leachate collection system pipes."

On March 7, 2014, leachate collection system pipes were cleaned and remote-camera monitored. **The observed violation noted during the 2/20/2014 inspection has been resolved. Correspondence from the SWS dated March 31, 2014 also confirmed resolution.**

OBSERVED VIOLATIONS

None.

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to \$15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may also be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

ADDITIONAL COMMENTS

The facility is an industrial landfill permitted to receive the following waste generated at the facility: gypsum, clarifier sludge, fly ash, bottom ash, construction and demolition debris, mill rejects (pyrites), limestone material, land clearing and inert debris, boiler slag, ball mill rejects, sand blast material, and coal waste. This facility is permitted to receive solid waste generated by or at any Duke Energy Corporation property, as described in the approved plan and as defined in G.S. 130-290 (a)(2b), except where prohibited by the N. C. General Statutes Article 9 of Chapter 130A, and the rules adopted by the Environmental Management Commission.

1. The Permit and Operations Plan are maintained on-site as required and were reviewed during the inspection.
2. The facility is operated by Charah, Inc. which is responsible for hauling materials to the landfill, daily operations of the landfill, and conducting other associated activities.
3. Weekly logs of onsite inspections are maintained documenting monitoring and maintenance of stormwater conveyance systems, erosion and sedimentation controls, and status/confirmation of repairs.

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 3 of 3

4. Environmental monitoring records were reviewed during the inspection. Semi-annual sampling of groundwater, surface water, and leachate was conducted in March, 2015 and September, 2014 [Monitoring wells MS-8, MS-9, MS-10, MS-11, MS-12, MS-13, MS-14, MS-15, MS-16, Surface Water sampling point SW-1, and Leachate sampling point C1]. An inspection of all monitoring points was conducted during the inspection.

1809-INDUS: FGD Landfill			
Monitoring Well ID	Well Tag	Concrete Pad	Comments
MS-8	Yes	Yes	
MS-9	Yes	Yes	
MS-10	Yes	Yes	
MS-11	Yes	Yes	
MS-12	Yes	Yes	
MS-13	Yes	Yes	
MS-14	Yes	Yes	
MS-15	Yes	Yes	
MS-16	Yes	Yes	
SW-1	NA	NA	Needs surface water sample location signs - one directional sign at road and one at physical location
C-1	NA	NA	Sample taken at leachate sample port

5. Dust Control records were reviewed during the inspection. The records are not well organized and some were falling out of the 3 ring binder. The records should be reviewed and organized.
6. Leachate line cleaning was accomplished on March 4, 2015; no deficiencies were noted.
7. Charah, Inc. personnel are responsible for daily landfill operations; certified staff are always present when the landfill is in operation. Training records were documented and maintained on-site. The following Charah personnel are NC Certified Landfill Managers:
- Sam Byrd, 13-02M-00093, expires 9/19/16
 Jenson "Jay" Shults, 13-02M-00081, expires 7/23/2016
 Chris Emory, 13-02M-00079 , expires 7/23/2016
 Steven Faussete, 13-02M-000114, 7/23/17
8. The facility annual report was received on July 24, 2015. A total of 397,893.82 tons of waste were placed in the landfill during FY 2014-2015.
9. An annual volume survey was conducted on 4/1/2013. A total of 1,119,902.56 tons of capacity was reported used as of the survey date.
10. Signage was posted at the entrance to the facility in accordance with the approved operations plan. **I would recommend posting an additional sign next to the roadway that is currently being most utilized.**
11. The access road to the site was of all-weather construction and maintained in good condition. A truck wash station has been installed to clean trucks exiting the site.

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 4 of 4

12. Edge-of-waste markers delineating the permitted disposal area were visible and maintained in good condition. The markers are offset from the edge of the landfill liner.



Side slope of the landfill

13. While landfilling operations at the Industrial Landfill No. 1, Permit 18-12 are temporarily ceased, those wastes are being placed in the FGD landfill. The landfills are permitted to receive the same waste types.
14. Gypsum, ash, and mill rejects are placed at the active working face. Wastes at the working face appeared to be landfilled as required: in ten foot layers, spread in lifts no greater than 12 inches, working from upgradient to downgradient areas or as otherwise specified in the Operations Plan.
15. Clarifier sludge may also be placed at the active face and allowed to dry, mixed with ash or gypsum, and spread in thin lifts. High moisture content clarifier sludge is required to be placed no closer than 50 from the active face and spread in-place. At the time of the inspection all landfilled wastes appeared to be spread and compacted as required.
16. All wastes were placed in the smallest working face practicible in the center of the operational area in accordance with the approved Operations Plan. No wastes were placed within 25 feet of the exterior slopes.
17. Field and laboratory testing data of in-place density and moisture content was reviewed during the inspection. Monthly field tests and laboratory tests were performed to monitor the compaction and moisture conditioning during waste placement of gypsum and fly ash. Those reports each month indicated that waste placement was in compliance with moisture and compaction requirements.
18. No wastes were placed in areas of accumulated water and no water was observed ponded over waste.
19. Leachate Management: Leachate is transmitted via the collection system to the lined stormwater storage basin located within the permitted landfill footprint. Leachate and stormwater are routed to the Marshall Ash Basin (wet). Three chimney drains have been installed in the center of the landfill to convey leachate to the sump in the stormwater storage basin.
20. The lined stormwater storage basin within the footprint of the landfill appeared to be operating as designed.

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 5 of 5

- 21. Leachate collection system pipes were cleaned out with camera monitoring on 3/4/2015. The Operations Plan states that” LCS pipes will be cleaned out by the use of a clean-out snake or high-pressure water flushing at least once a year, and the LCS piping will remote-camera monitored if cleaning indicates a blockage in the leachate collection system pipes.”
- 22. Dust was well controlled at the time of the inspection.
- 23. Exterior landfill slopes were vegetated. There was no erosion observed on exterior landfill slopes.

Please contact me if you have any questions or concerns regarding this inspection report.



Phone: 919-707-8284

Environmental Senior Specialist
Regional Representative

Sent on: August 17, 2015		Email: X		Hand delivery		US Mail		Certified No. []
------------------------------------	--	-------------	--	---------------	--	---------	--	-------------------

Copies:

- Ellen Lorscheider, Section Chief, Solid Waste Section
- Ed Mussler, Permitting Branch Head, Solid Waste Section
- Jason Watkins, Field Operations Branch Head, Solid Waste Section
- Deb Aja, Western District Supervisor, Solid Waste Section
- Elizabeth Werner, Permitting Hydrogeologist, Solid Waste Section
- Larry Frost, Engineering Project Manager, Solid Waste Section
- Jessica Montie, Compliance Officer, Solid Waste Section