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October 4, 2016

Nelson Morvant
Entergy Services, Inc.
639 Loyola Ave.
New Orleans, LA 70113

RE: Run-on / Run-off Control Plan
EPA Final CCR Rule (§ 257.81)
Nelson Coal Generation Station
Coal Ash Disposal Landfill

Dear Mr. Morvant:

Pivotal Engineering LLC (Pivotal) has been retained by Entergy Louisiana, LLC to prepare the following assessment of the EPA's requirements under the Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities [RIN-2050-AE81; FRL-9149-4] (EPA Final CCR Rule) associated with the Run-on and Run-off Control for CCR Landfills. Presented below is the project background, summary of findings, limitations, and certification.

1.0 BACKGROUND

As required by §257.81 of the EPA Final CCR Rule, by October 17, 2016, documentation is required to show that the run-on and run-off control systems have been designed and constructed to meet the 25-year, 24-hour design storm event.

2.0 SUMMARY OF FINDINGS

The Nelson (Coal Ash Disposal Landfill) CADL is located within the Roy S. Nelson Power Station boundaries, approximately 3,500 feet south-southwest of the plant buildings. The site lies entirely within the drainage basin of the Calcasieu River. The Houston River, which is a tributary to the Calcasieu River, lies north of the CADL and is the nearest natural drainage feature with continuous flow.

Regional drainage, consisting of a series of natural swales and man-made channels, conducts precipitation to either the Houston or Calcasieu Rivers. The CADL drainage system and local drainage features for areas adjacent to the disposal site are shown in Figure 1 in Attachment 22 of the Nelson Coal Ash Disposal Landfill permit (GD-019-0261/P-0018-R1-M5). As shown in the figure, the adjacent areas show a quite mild relief with slopes of 2 percent or less flowing away from the CADL. Hence, a negligible amount of precipitation drains toward the facility and

is intercepted by man-made channels preventing rainfall run-on to the site. Accordingly, a Run-on analysis is not warranted.

An internal system of ditches collects rainfall runoff and other water associated within the operation of the facility, and conveys them to the Nelson Unit 6 Settling Pond for treatment and discharge. The discharge from the Settling Pond is a LPDES permitted discharge (Permit No. LA0059030). A complete description of the Settling Pond is contained in the Solid Waste Permit Application Unit 6 Settling Pond - Nelson Coal Generating Plant.

The disposal cells are designed so that during construction and operation, rainfall runoff from a particular cell(s) will be routed to the Settling Pond. Only runoff from active disposal cells and the marketable ash staging area will be routed to the Settling Pond. All other noncontact areas at the CADL site will drain via the non-contact ditches to natural drainages. Runoff from capped cells will also be routed to natural drainages by non-contact ditches. A schematic of the CADL drainage plan is shown on Figure 1 in the Stormwater Run-on and Run-off Control Plan for the Nelson Coal Ash Disposal Landfill.

The 24-hour/25-year storm is 10.2 inches. This data is from the U. S. Weather Bureau Technical Paper Number 40. Runoff from a given cell will drain into the cell's sump and is pumped to the pond and neutralized. The pond and ditches are sized to collect the design rainfall event per LAC 33: 711.A.3 runoff from the active areas of the landfill and pond. The Stormwater Run-on and Run-off Control Plan for the Nelson Coal Ash Disposal Landfill, provides the calculations using SCS TR-55 method providing the peak flows and supporting the ditch cross sections. Accordingly, the existing south and west side perimeter ditches are reconstructed to flow towards the settling pond.

Discharge from the Settling Pond is routed through the permitted LPDES Outfall 003 which is regularly monitored according to the permit requirements.

Based on the results in the table below, Pivotal has determined the Landfill meets the requirements of EPA Final CCR Rule §257.81 for run-on and run-off flows. As discussed above, run-on is prevented from entering the site. Run-off flows have been calculated as follows.

Table 1: Landfill Run-off Conveyance Assessment

(a) Peak Design Storm Discharge, cfs	171.67
(b) Ditch Capacity, cfs	191.95
(b-a) Additional Ditch Capacity, cfs	20.28

Table 2: Landfill Run-off Storage Assessment

	Inflow Design Storm	Storage Basin	
(a) Water Surface Elevation, feet	10.29	14.0	Maximum Water Surface/Storage Basin Crest, feet (b)
(c) Peak Water Volume, acre-feet	38.27	60.84	Maximum Volume, acre-feet (d)
(b-a) Freeboard, feet			3.71
(b-a) Freeboard (d-c) Additional Storage Volume, acre-feet			22.57

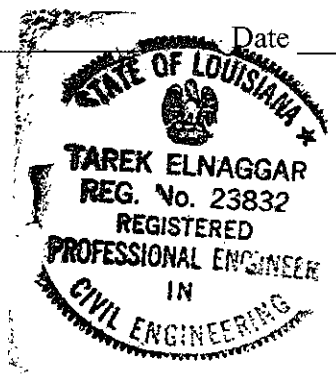
3.0 LIMITATIONS

The signature of Pivotal's authorized representative on this document represents that to the best of our knowledge, information and belief in the exercise of its professional judgment, it is Pivotal's professional opinion that the aforementioned information is accurate as of the date of such signature. Any recommendation, opinion, or decisions by Pivotal are made on the basis of our experience, qualifications and professional judgment and are not to be construed as warranties or guaranties. In addition, opinions relating to environmental, geologic, and geotechnical conditions or other estimates are based on available data and actual conditions may vary from those encountered at the times and locations where data are obtained, despite the use of due care.

4.0 CERTIFICATION

I, Tarek Elnaggar, being a Registered Professional Engineer in accordance with the Louisiana Professional Engineer's Registration do hereby certify to the best of my knowledge, information and belief, that the information contained in this report is true and correct and has been prepared in accordance with the accepted practice of engineering.

Signature: _____ Date 10/17/16



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References: Attachment 22, Nelson Coal Ash Disposal Landfill Permit (GD-019-0261/P-0018-R1-M5)

Stormwater Run-on and Run-off Control Plan
Nelson Coal Ash Disposal Landfill, October 17, 2016