Marisa Weber

From:	PUBCOMMENT-OCC
Sent:	Tuesday, May 20, 2014 3:33 PM
To:	PUBCOMMENT-OCC2
Subject:	FW: Public comment on Permit Number WQ0002430000
Attachments:	2014-05-19 Comments on NRG Limestone NPDES Permit.pdf

WD 88238

From: jduggan@environmentalintegrity.org [mailto:jduggan@environmentalintegrity.org]
Sent: Monday, May 19, 2014 4:06 PM
To: donotReply@tceq.texas.gov
Subject: Public comment on Permit Number WQ0002430000

REGULATED ENTY NAME LIMESTONE ELECTRIC GENERATING STATION

RN NUMBER: RN100542927

PERMIT NUMBER: WQ0002430000

DOCKET NUMBER:

COUNTY: FREESTONE, LIMESTONE

PRINCIPAL NAME: NRG TEXAS POWER LLC

CN NUMBER: CN603207218

FROM

NAME: Jennifer Duggan

E-MAIL: jduggan@environmentalintegrity.org

COMPANY: Environmental Integrity Project

ADDRESS: 1000 VERMONT AVE NW Suite 1100
WASHINGTON DC 20005-4903

PHONE: 8022256774

FAX:

COMMENTS: Please find attached comments submitted on behalf of the Environmental Integrity Project regarding the draft TPDES permit for NRG Limestone Electric Generating Station's water quality permit no. WQ0002430000.

May 19, 2014

Chief Clerk, MC-105
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Comments on Draft TPDES Permit No. WQ0002430000 for the Discharge of Pollutants from the Limestone Electric Generating Station

The Environmental Integrity Project ("EIP") respectfully submits the following comments on Draft Permit No. WQ0002430000, which authorizes the discharge of pollutants from the NRG Limestone Electric Generating Station ("Draft Permit") into Lynn Creek, Lambs Creek, and Lake Limestone. EIP is a nonprofit, nonpartisan organization established to advocate for more effective enforcement of environmental laws, specifically those standards that protect our air and water from pollution from the coal and utility industries and other large pollution sources.

Each day across the United States, coal-burning power plants like the Limestone Plant dump millions of gallons of wastewater loaded with toxic pollutants like arsenic, boron, cadmium, chromium, lead, mercury, and selenium into our rivers, lakes, and streams. This pollution is discharged directly from plants; flows from old, unlined surface impoundments that many plants use to store toxic slurries of coal ash and smokestack scrubber sludge; and seeps from unlined ponds and landfills into ground and surface waters. EPA estimates that *at least 5.5 billion pounds* of pollution are released into the environment by coal-burning power plants every year.[1] Coal-burning power plants are responsible for at least 50 to 60 percent of the toxic pollutants discharged into waters of the U.S—more than the other nine top polluting industries *combined.*[2]

We applaud NRG's efforts to minimize the discharge of toxic pollution from the Limestone Plant. According to the permit application and fact sheet prepared by the Texas Commission on Environmental Quality ("TCEQ"), NRG recycles much of its wastewater and has not discharged pollution from seven out of eight outfalls since May of 2008.[3] Unfortunately, the effluent limits in the Draft Permit do not reflect NRG's ability to achieve "zero discharge" at the Limestone Plant. The Draft Permit does not prohibit discharges from these outfalls or set technology-based effluent limits for the various toxic pollutants routinely discharged from power

---

[1] EPA, Environmental Assessment for the Proposed Effluent Limitation Guidelines and Standards for the Steam Electric Power Generating Point Source Category 3-14 (Apr. 2013), Docket No. EPA-HQ-OW-2009-0819-2260 [hereinafter EA].
[2] *Id.* at 3-13.
[3] Fact Sheet at 2-3, 10.

plants. In fact, TCEQ did not even require NRG to submit analytical data for wastewater that would be discharged from the Limestone Plant if NRG fails to recycle the wastewater at some point in the future.[4]

The Application and the Draft Permit fail to comply with the federal Clean Water Act ("CWA") and state and federal regulations. Specifically, the Application and Draft Permit for the Limestone Plant are deficient in the following ways:

1. NRG failed to provide analytical data for wastewater discharged from the Limestone Plant.

2. The Draft Permit fails to include technology-based effluent limitations for numerous pollutants present in Limestone Plant wastewater.

3. The Final Permit Must Address All Discharges Associated With the Coal Combustion Waste Landfill and Impoundments.

Before issuing the final permit, TCEQ must address each of these issues to ensure that the final permit complies with the Clean Water Act and protects human health and the environment. Ensuring that the Limestone plant's TPDES permit protects water quality is especially critical, given that Limestone Lake, a Texas state park, is widely used by the public for recreation and fishing. Furthermore, the designated uses for the specific segment of the Brazos River Basin are primary-contact recreation, public water supply, and high aquatic life use.[5]

A. NRG Must Provide Analytical Data for Wastewater Discharged From the Limestone Plant.

TCEQ states that NRG did not provide analytical data "since the facility has not discharged for the last two years."[6] Yet federal regulations state that NPDES permit applications must include a detailed description of the process or operation that contributes wastewater to plant effluent and complete quantitative data for certain pollutants.[7] Applicants must "report quantitative data for every outfall for the following pollutants: Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia (as N), Temperature (both winter and summer), and pH."[8] In addition, applicants must also report data for a variety of toxic pollutants.[9] Applicants are also required to indicate whether they

[4] *See, e.g.*, Fact Sheet at 10.
[5] Fact Sheet at 6.
[6] *See, e.g.*, Fact Sheet at 10.
[7] *See* 40 C.F.R. §§ 122.21(g)(1)–(7) and (g)(9)–(13).
[8] 40 CFR 122.21(g)(7)(iii). The regulation does provide that "the Director may waive the reporting requirements for individual point sources or for a particular industry category for one or more of the pollutants listed in paragraph (g)(7)(iii) of this section if the applicant has demonstrated that such a waiver is appropriate because information adequate to support issuance of a permit can be obtained with less stringent requirements." *Id.* § 122.21(g)(7)(iv). However, the application offers no indication that such a waiver has been extended.
[9] *Id.* § 122.21(g)(7)(v).

know or have reason to believe that certain pollutants will be discharged from an outfall and, in certain cases, report quantitative data for these pollutants.[10]

The Clean Water Act requires persons wishing to discharge pollution into surface waters to submit a detailed application *before* the discharge occurs so that the permitting agency has enough information to make a reasoned decision to limit pollution and protect surface waters. For example, each NPDES permit issued by TCEQ must contain effluent limits that "restore" and "maintain" the receiving water body.[11] At a minimum, TCEQ must set technology-based effluent limits (TBELs) that reflect the ability of available technologies to reduce or eliminate pollution discharges.[12] If a discharge could cause or contribute to a violation of water quality standards in the receiving water, TCEQ must include water quality-based effluent limitations (WQBELs) in the NPDES permit to prevent the exceedance.[13]

It is impossible for TCEQ to conduct a reasoned analysis of the Limestone Plant waste streams and comply with Clean Water Act requirements when NRG has not provided analytical data. TCEQ acknowledges as much, noting that NRG must sample wastewater at Outfalls 001 through 008 and submit the data so that TCEQ can determine whether "to include additional effluent limitations and monitoring requirements."[14] Instead of authorizing discharges from these outfalls with minimal limitations and reviewing the missing analytical data after the fact, TCEQ must require that NRG submit the analytical data TCEQ needs to comply with the Clean Water Act before finalizing this permit renewal.

B. TCEQ Must Establish Technology-Based Effluent Limits in the Limestone TPDES Permit

The Draft Permit does not set technology-based effluent limits for the numerous pollutants that are regularly discharged in coal ash transport water and coal combustion leachate (though the permit does prohibit the discharge of wastewater from the Flue Gas Desulphurization ("FGD") system).[15] Under the CWA, NPDES permits must include TBELs for all discharged pollutants.[16] TBELs must reflect pollutant controls constituting the "best available technology economically achievable" ("BAT"), and these effluent limitations "shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him . . . that such elimination is technologically and economically achievable."[17] All sources and

---

[10] *Id.* § 122.21(g)(7)(vi-viii).
[11] 33 U.S.C. § 1251(a).
[12] *See* 33 U.S.C. §§ 1311, 1342(a)(1).
[13] 33 U.S.C. § 1312(a); 40 C.F.R. § 122.44(d)(1)(i).
[14] *See, e.g.*, Permit at 17 ¶ 12; Fact Sheet at 10.
[15] Permit at 14 ¶ 2.
[16] *See* 33 U.S.C. §§ 1311 (establishing technology-based effluent limitations) & 1342(a)(1) (requiring that NPDES permits incorporate technology-based effluent limits); 40 C.F.R. § 122.44(a) ("Each NPDES permit shall include...technology-based effluent limitations and standards based on: effluent limitations and standards promulgated under section 301 of the CWA, or new source performance standards promulgated under section 306 of CWA, or case-by-case effluent limitations determined under section 402(a)(1) of CWA, or a combination of the three, in accordance with § 125.3 of this chapter"); 40 C.F.R. § 122.44(e)("Each NPDES permit shall include...technology-based controls for toxic pollutants"); 30 TEX. ADMIN. CODE § 305.531 (incorporating 40 C.F.R. § 122.44 by reference).
[17] 33 U.S.C. § 1311(b)(2)(A).

all pollutants must be subject to technology-based effluent limits,[18] unless more stringent water quality-based effluent limits are required to avoid exceedances of water quality standards.[19]

To implement the CWA's technology-based effluent limit requirements, the U.S. Environmental Protection Agency ("EPA") is required to promulgate national effluent limitations and guidelines ("ELGs") to control discharges of pollutants into the waters of the United States from industrial point sources.[20] EPA and states look first to the ELGs when setting technology-based effluent limits, which represent the minimum standards of protection.[21] Where EPA has not yet promulgated ELGs for particular pollutants discharged by a given point source category, the CWA requires the TCEQ to stand in the shoes of EPA and use its best professional judgment ("BPJ") to set case-by-case TBELs for these pollutants in NPDES permits.[22] EPA last promulgated ELGs for the steam electric power generation industry in 1982 – approximately 30 years ago – before the agency was fully cognizant of threats posed by waste waters from coal ash handling and air pollution control systems. With respect to waste streams from power plants, such as the Limestone plant, the outdated ELGs cover only (1) pH and PCBs, (2) total suspended solids ("TSS"), and (3) oil and grease.[23]

EPA has not yet finalized ELGs for metals and other pollutants in waste streams from power plants. The steam electric power generating industry is by far the largest discharger of toxic pollutants and has caused widespread contamination of our rivers, lakes, and streams.[24] EPA has stated:

> An increasing amount of evidence indicates that the characteristics of coal combustion wastewater have the potential to impact human health and the environment. Many of the common pollutants found in coal combustion wastewater (e.g., selenium, mercury, and arsenic) are known to cause environmental harm and can potentially represent a human health risk. Pollutants in coal combustion wastewater are of particular concern because they can occur in large quantities (i.e., total pounds) and at high concentrations (i.e., exceeding Maximum Contaminant Levels (MCLs)) in discharges and leachate to groundwater and surface waters. In addition, some pollutants in coal combustion wastewater present an increased ecological threat due to their tendency to persist in the environment and bioaccumulate in organisms, which often results in slow ecological recovery times following exposure.[25]

---

[18] *See* 33 U.S.C. § 1311(b)(2)(A).
[19] *See id.* § 1312(a).
[20] 33 U.S.C. §§ 1311(b), 1314(b).
[21] *See Natural Res. Def. Council v. Envtl. Prot. Agency*, 859 F.2d 156, 183 (D.C. Cir. 1988).
[22] 33 U.S.C. § 1311(b)(2)(A); 33 U.S.C. § 1342 (a)(1)(B); 40 C.F.R. § 125.3(c), (d); *Natural Res. Def. Council v. Envtl. Prot. Agency*, 863 F.2d 1420, 1425 (9th Cir. 1988).
[23] *See* 40 C.F.R. §§ 423.12, 423.13 (also regulating for cooling tower blowdown waste streams only: chlorine, chromium, and zinc, in addition to 126 pollutants contained in chemicals added for cooling tower maintenance, and for metal cleaning wastes and chemical and non-chemical waste streams only: copper and iron).
[24] *See, e.g.* EA.
[25] U.S. EPA, *Steam Electric Power Generating Point Source Category: Final Detailed Study Report*, EPA 821-R-09-008, 3-19 (October 2009) ("EGU Detailed Study").

Specifically, EPA has identified 27 pollutants to analyze in coal ash wastewaters, including: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, selenium, silver, sodium, thallium, tin, titanium, vanadium, yttrium, and zinc.[26]

The agency has published a proposal to revise the ELGs for power plants to include metals and other pollutants as the Clean Water Act requires.[27] EPA does not plan to issue a final rule until at least September 30, 2015.[28] Thus, it could still be a number of years before EPA finalizes ELGs for metals and other pollutants from power plants. Accordingly, in the interim, the Clean Water Act requires that TCEQ use its best professional judgment to set BAT-based TBELs to limit pollution and protect Limestone Lake and the other water bodies that receive pollution from the Limestone Plant.[29]

The Draft Permit authorizes NRG to discharge ash transport water and other wastes from Outfalls 001, 002, 003, 004, 005, and 008.[30] In addition, stormwater discharges associated with a coal combustion waste landfill may be discharged from Outfall 002.[31] Any discharges from these outfalls likely contain numerous metals and other pollutants. Yet, beyond the already established ELGs for TSS and oil and grease, the Draft Permit only limits discharges of Free Available Chlorine, total copper, and total selenium from Outfall 001; total selenium from Outfall 002; total selenium and total dissolved solids from Outfall 004; total iron, copper, and selenium from Outfall 005; and total selenium from Outfall 008.[32] Thus, for the other pollutants identified by EPA as commonly found in coal combustion wastewater, the Draft Permit contains absolutely no effluent limits. In addition to the absence of limits for most toxic pollutants commonly found in these types of waste streams, the effluent limits that are identified appear to be water quality based limits.[33]

As required by the CWA, and EPA and TCEQ regulations, TCEQ must establish TBELs for pollution discharged from Outfalls 001-005, and 008. Using the wealth of data available from EPA and power plants in Texas, TCEQ can and must use its best professional judgment to set BAT-based numeric effluent limits in the final permit for pollutants discharged by the Limestone Plant, including the 27 pollutants identified by EPA as commonly present in coal ash wastewaters.[34] In evaluating BAT, TCEQ must consider the same mandatory factors that EPA would consider in setting national effluent limitations, including the age of the facility, the processes employed, and engineering aspects of various control techniques, process changes, and

---

[26] *Id.* at 3-34; *see also* U.S. EPA, *Notice of Final 2008 Effluent Guidelines Program Plan*, 73 Fed. Reg. 53,218 (Sept. 15, 2008).
[27] Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 78 Fed. Reg. 34,432 (June 7, 2013).
[28] EPA, Proposed Effluent Guidelines for the Steam Electric Power Generating Category, http://water.epa.gov/scitech/wastetech/guide/steam-electric/proposed.cfm#consent (last visited on May 14, 2014).
[29] 33 U.S.C. § 1311(b)(2)(A).
[30] Draft Permit at 2-2d, 2g.
[31] *Id.* at 2a.
[32] *Id.* at 2-2d, 2g.
[33] Fact Sheet at 34.
[34] 33 U.S.C. § 1342 (a)(1)(B); 40 C.F.R. § 125.3.

non-water environmental impacts.[35] While a thorough review of available technologies, including their cost and performance, is required, this analysis will not be overly burdensome because EPA has already done the groundwork in its proposed rule.

In this case, NRG has been achieving "zero discharge" by treating and recycling wastewater for use in cooling water systems, the FGD system, or the bottom ash transport system.[36] Thus, TCEQ should prohibit discharges from Outfalls 001-005 and Outfall 008.

C. The Permit Must Address All Discharges Associated With the Landfill and Impoundments.

TCEQ must assess whether NRG is discharging pollution from its coal combustion waste landfill and impoundments without a permit. The Limestone Plant has one landfill and several impoundments that handle coal combustion waste.[37] Although we do not have sufficient information to determine whether the landfill is lined with a protective composite liner, an NRG submission to EPA states that the impoundments do not have such a liner in place.[38] Without a protective composite liner in place and other safeguards, landfills and impoundments routinely seep and/or leak dangerous toxins into ground and surface waters.[39] As EPA has acknowledged, "several damage case studies have documented impacts to surface waters due to ground water contamination from [coal combustion waste] impoundments and landfills."[40] For example, nearly half (30 of 67) of EPA's documented surface water damage cases from landfills and impoundments were caused by pollution from groundwater.[41]

Discharges of leachate from the landfill and impoundments to surface waters and/or groundwater with a hydrogeological connection to surface water without a permit are prohibited by the Clean Water Act. Discharges to groundwater with a direct hydrogeological connection to "waters of the U.S." fall within the scope of the Clean Water Act.[42] All unpermitted discharges

---

[35] *Natural Res. Def. Council v. Envtl. Prot. Agency*,, 859 F.2d at 183; 33 U.S.C. § 1314(b)(2)(B); 40 C.F.R. § 125.3(d)(3).

[36] Fact Sheet at 10.

[37] Email from Ted Long, NRG to Gordon Cooper, TCEQ (Dec. 13, 2013); Letter from Gary Mechler, NRG to Richard Kinch, EPA Re Request for Information Under Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9604(e) (May 18, 2009), *available at* http://www.epa.gov/solidwaste/nonhaz/industrial/special/fossil/surveys/index.htm [hereinafter Mechler Letter].

[38] *See* Mechler Letter (noting that impoundments accepting bottom ash and FGD waste are lined with clay only).

[39] *See, e.g.*, EA at A-29-A-39.

[40] EA at 4-21.

[41] *See* EA at A-29-A-39.

[42] *See, e.g.*, *Hernandez v. Esso Standard Oil Co.*, 599 F.Supp.2d 175, 181 (D. Puerto Rico 2009) (reviewing federal case law and holding "that the CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States"). *See also* U.S. Envtl. Prot. Agency, Office of Wastewater Mgmt., National Pollutant Discharge Elimination System Permitting of Wastewater Discharges from Flue Gas Desulfurization and Coal Combustion Residuals Impoundments at Steam Electric Power Plants, Attachment B at 2 (2010) ("Permitting authorities should examine the need for [NPDES permit requirements such as lined impoundments and seepage interception systems] for hydrologically connected discharges that cannot be regulated through traditional NPDES outfalls"); U.S. Envtl. Prot. Agency, Office of Wastewater Mgmt., EPA-833-K-10-001, NPDES Permit Writer's Manual (2010) ("If a discharge of pollutants to ground water reaches waters of the United States ... it could be a discharge to the surface water (albeit indirectly via a direct hydrological connection, i.e. the ground water) that needs an NPDES permit"); U.S. Envtl. Prot. Agency, Notice of Final NPDES

from a point source to these waters are violations of the CWA.[43] Leaks in a pollution containment system, like coal combustion waste landfills and impoundments, are point sources.[44] Thus, discharges of toxic pollution from leaks in coal combustion waste landfills and impoundments are prohibited without an NPDES permit.[45]

TCEQ must assess whether the poorly lined coal combustion waste landfill and impoundments are illegally discharging pollution into groundwater and/or surface waters and act accordingly.

Thank you for considering our comments. Please contact me if you have any questions or would like to discuss our concerns in greater detail.

Sincerely,

Jennifer Duggan
Environmental Integrity Project
1000 Vermont Ave NW, Suite 1100
Washington, DC 20005
(802) 225-6774
jduggan@environmentalintegrity.org

General Permit for Egg Production Operations in New Mexico and Oklahoma NMG800000 and OKG800000, 67 Fed. Reg. 47,362-63 (July 18, 2002) ("The permit prohibits the discharge of process wastewater pollutants from retention or control structures to groundwater that has a direct hydrologic connection to Waters of the United States").

[43] *Id.*

[44] 33 U.S.C. § 1362(14) (defining "point source" broadly and specifically including "container" in the definition); *See, e.g.*, *United States v. Earth Sciences, Inc.*, 599 F.2d 368 (10th Cir.) (noting that "[w]hen a [closed circulating system] fails because of flaws in the construction or inadequate size to handle the fluids utilized, with resulting discharge, whether from a fissure in the dirt bern or overflow of a wall, the escape of liquid from the confined system is a point source").

[45] In fact, discharges that result from leaks and other failures of a pollution containment system should never be authorized by an NPDES permit because BAT is to contain the pollution. *See* 33 U.S.C. §§ 1311(b)(1), 1311(b)(2)(A), and 1314(b) (mandating that permitting agencies set technology-based effluent limits for all discharges).