

By certified mail

December 21, 2011

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Re: Public Comment Regarding TVA Johnsonville Active Ash Pond Preliminary Closure Plan, NPDES Permit No. TN0005444

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Dear Commissioner Martineau:

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Please accept this letter and the attached expert report as comments from Earthjustice, Environmental Integrity Project, Southern Alliance for Clean Energy and the Tennessee Clean Water Network (together, “Commenters”), on TVA’s Active Ash Pond Preliminary Closure Plan for the Johnsonville Fossil Plant.

Developing closure plans that ensures protection of public health and the environment is essential. The Johnsonville ash pond is currently releasing toxic leachate into the Tennessee River, and this ongoing pollution will continue in perpetuity if the pond is not properly capped and closed. Further, our investigation of the Johnsonville ash pond has revealed that TVA used coal ash as a dike construction material. Given the permeability of ash, the structural integrity of the Johnsonville ash “island” will continue to deteriorate over time. The use of coal ash to construct dikes at TVA’s Kingston’s plant was a root cause of the catastrophic dam collapse in 2008. In order to avoid another such failure at Johnsonville, TVA must address structural integrity concerns in the Johnsonville closure plan (and in closure plans for the many other TVA plants where ash has been used to construct dikes).

TDEC should further ensure that revisions to the Johnsonville plan address the recommendations included in the attached report in order to secure the safe, long-term, containment of any coal ash stored at Ash Disposal Area 2. We also ask that TDEC address the legal and procedural concerns raised below.

I. TDEC must provide notice and opportunity for comment on closure plans.

As an initial matter, we are concerned that TDEC has not provided notice nor solicited public comment on this or other closure plans. Closure plans are mandated by TDEC-issued National Pollution Discharge Elimination System (“NPDES”) permits. In particular, Part III of the final Johnsonville NPDES permit requires that TVA “shall submit an Ash Pond Closure Plan for

division approval....”¹ As TDEC required submission and is approving the Closure Plan pursuant to its NPDES authority, TDEC should adhere to the notice and comment provisions required under the Federal Water Pollution Control Act (“Clean Water Act” or “CWA”), and implementing regulations promulgated under the Tennessee Water Quality Control Act (“WQCA”).²

Further, given the public’s high level of interest in safely phasing out TVA’s ash ponds, TDEC must solicit comment on the proposed plans at an early stage so TVA planning can reflect and respond to recommendations and concerns of citizens.

II. NPDES and solid waste permitting requirements apply to TVA’s ash impoundments after closure.

Substantively, we are concerned the plan does not contemplate any regulatory oversight to prevent water contamination from TVA’s ash ponds after they are closed. Absent effective safeguards, closure will not prevent the toxic metals in coal ash and sludge from leaching out of unlined impoundments and into ground and surface water. Moreover, without post-closure monitoring and timely corrective action in the event of contamination, closed ponds may leave a legacy of harmful pollution that goes undetected and unaddressed.

The Johnsonville Preliminary Closure Plan claims there are no regulations that apply to closure of coal ash impoundments.³ While it is true there are no regulations prescribing the precise process of closure, Tennessee’s statutory and regulatory schemes to protect water quality and ensure safe waste disposal necessarily dictate the adequacy of any given closure plan. Whether a facility is designated as “closed” or “active,” the CWA and the WQCA prohibit the discharge of pollutants to state waters without a NPDES permit.⁴ Similarly, the Tennessee Solid Waste Disposal Act (“SWDA”) prohibits storage of solid wastes without a permit.⁵

A. TDEC must provide for compliance with NPDES permitting requirements in the closure plan.

Under the Clean Water Act, TDEC cannot ignore ongoing unpermitted discharges from the Johnsonville ash pond that are virtually certain to continue after closure. As discussed in the attached report, even with a composite cap and indefinite post-closure monitoring, Johnsonville’s

¹ TDEC, Final NPDES permit No. TN0005444, Johnsonville Fossil Plant, 14 (Feb. 9, 2011).

² Federal Water Pollution Control Act, 33 U.S.C. § 1251(e) (Public participation in the development, revision, and enforcement of any...standard...plan, or program established by...any State under this chapter shall be provided for, encouraged and assisted by... the States.”); Tenn. Comp. R. & Regs. 1200-4-5-.06.

³ Stantec Consulting Services Inc., “TVA Johnsonville fossil plant NPDES Permit No. TN0005444 Active Ash Pond Preliminary Closure Plan,” Revision 0, 4 (May 24, 2011) (hereinafter “Closure Plan”).

⁴ Tenn. Code Ann. § 69-3-108(b)(6) (“It is unlawful for any person...to...discharge [] industrial wastes or other wastes into waters...”).

⁵ Tenn. Code Ann. § 69-211-106; Tenn. Comp. R. & Regs. 1200-01-07-.02(1)(b) (“no facility can lawfully store, process, or dispose of solid waste unless the operator has a permit.”).

Active Ash Pond is almost certain to have continued infiltration of water, resulting in an ongoing discharge to Kentucky Lake.

The attached expert report explains that TVA used coal ash in dike construction. The use of coal ash in dike construction at Johnsonville presents a potential for structural failure as the ash cohesion degrades, which could lead to a significant release of pollutants to Kentucky Lake. This was identified as one of the root causes of the 2008 Kingston dike collapse. In addition to the Kingston plant, Commenters have discovered the use of ash as a construction material at each of the plants we have so far investigated. Commenters are therefore concerned that this threat may be widespread throughout TVA's coal fleet.

In addition, ash is highly conductive in water, which allows the ash to easily pass from within the impoundment into ground and surface water. This fact alone requires that TDEC give greater consideration to discharges after closure. Moreover, as TDEC is aware, there are also documented seeps at the Johnsonville impoundment.⁶ This ongoing unpermitted discharge will require NPDES coverage, including effluent limits and monitoring requirements, so long as it continues after closure. Thus, TDEC must require that the Closure Plan address the process for NPDES permit renewal.

Pollution from previously closed ash ponds at the Johnsonville plant underscores the practical importance of NPDES permitting requirements post-closure. TVA already has documented substantial seepage from a closed ash storage area known as Area A.⁷ Area A (also known as Ash Pond B) ceased operation in 1976, and for 20 years thereafter TVA undertook groundwater monitoring.⁸ That monitoring showed significant water contamination, including arsenic levels as high as 570 parts per billion. Notwithstanding these alarming results, monitoring ceased in the 1990s.⁹ There is no reason to believe the problem has lessened, and other reports have demonstrated that this contaminated groundwater is entering the surface water of Kentucky Lake.¹⁰

TDEC must consider Area A in developing the Closure Plan in two respects. First, the Area A seepage confirms that mere closure of a storage facility will not necessarily eliminate all discharges. Second, TDEC should require resumption of groundwater monitoring at Area A and

⁶ Commenters believe that similar conditions may exist at other TVA ash ponds, particularly where the dikes are constructed using coal ash. These ash ponds are often adjacent to rivers, and can be expected to have a continuing interaction with waters of the state even without a designated outfall.

⁷ E-mail from Denise Smith, FOIA Officer, Tennessee Valley Authority, to Kimberly Wilson, Environmental Integrity Project (June 3, 2010, 16:08 EST) (on file with authors).

⁸ *Id.*

⁹ *Id.*

¹⁰ Area A is immediately adjacent to the Tennessee River. A 1995 groundwater assessment noted that groundwater under Area A “flows in a southwesterly direction . . . across the site toward the Tennessee River” and cited an earlier report in which “[t]he quantity of flow entering the Tennessee River was predicted to be 590 m³/d along Ash Pond A.” Tennessee Valley Authority, Johnsonville Groundwater Assessment, at 32 (Mar., 1995). *See also* Stantec, Inc., Report of Phase 1 Facility Assessment, Coal Combustion Product Impoundments and Disposal Facilities, Appendix G: Johnsonville Fossil Plant, North Abandoned Ash Disposal Area 1 (CDA1) at 2 (June 24, 2009) (observing that “[s]eepage along the west perimeter dike along the bank of Kentucky Lake has been reported for years.”).

monitoring of passage from Area A's contaminated groundwater into Kentucky Lake to address the cumulative impacts of ongoing discharges.

B. TDEC must provide for compliance with SWDA requirements in the closure plan.

In the unlikely event that TVA is able to prevent all discharges from the Johnsonville ash ponds, it would still need a permit under the SWDA. The SWDA requires a permit for any facility that stores solid waste.¹¹ There are two exemptions related to facilities that process industrial wastewater and are subject to NPDES permits,¹² but in no event, would these exemptions apply to Ash Disposal Area 2 if there is no operative NPDES permit, as TDEC has already recognized.¹³

Further, the SWDA's permitting requirements should apply post-closure even under the more likely scenario in which a NPDES permit is required for ongoing discharges from TVA's ash ponds. One exemption applies to "processing of industrial wastewaters in on-site facilities subject to regulation under [the WQCA]."¹⁴ The other applies to processing or disposal of "industrial wastewater discharges that are point source discharges subject to permits under [the WQCA]."¹⁵ In short, both of these exemptions apply exclusively to "industrial wastewaters." However, the discharge from a closed ash pond will consist of infiltrated rainwater and other non-industrial influent rather than industrial wastewater. Thus, any closure plan must recognize and provide for compliance with applicable solid waste permitting obligations.

Permitting under both regimes is also practically necessary because the SWDA and WQCA address different environmental concerns. TDEC has taken a narrow view of its authority under the WQCA¹⁶, leaving NPDES permits to essentially cover only surface water discharges. SWDA permits, however, address structural integrity, groundwater monitoring, leachate collection, run-on and run-off controls, fugitive dust controls, financial assurances and corrective action,¹⁷ all of which are concerns associated with coal ash storage but largely ignored in NPDES permitting.

III. The closure plan's provisions should be incorporated into binding and enforceable permits.

¹¹ *Id.*

¹² Tenn. Comp. R. & Regs. 1200-01-07-.02(1)(b)(3).

¹³ Letter from Paul Sloan, TDEC, Deputy Commissioner, to Josh Galperin, Southern Alliance for Clean Energy, Policy Analyst and Research Attorney and Kimberly Wilson, Environmental Integrity Project, Attorney, 3 (Sept. 7, 2010).

¹⁴ Tenn. Comp. R. & Regs. 1200-01-07-.02(1)(b)(3)(x).

¹⁵ Tenn. Comp. R. & Regs. 1200-01-07-.02(1)(b)(3)(xi)(II).

¹⁶ *E.g.*, TDEC, *Office Memorandum from Vojin Janjic, Permit Section, Water Pollution Control to Patrick Parker, Enforcement and Compliance Section*, 1-2, (Oct. 14, 2011)

¹⁷ Tenn. Code Ann. § 69-3-108(b); Tenn. Comp. R. & Regs. 1200-04-5-.06, 1200-04-05-.07.

Commenters are further concerned that the ash closure plan fails to set forth enforceable obligations as none of its provisions are incorporated into permits or otherwise binding documents. TVA, apparently after consultation with TDEC's Division of Water Pollution Control ("WPC"), determined that both TVA and TDEC would pursue ash pond closure at Johnsonville and elsewhere "under the NPDES permit regulatory framework."¹⁸ Yet TDEC's stated position is that it lacks authority under the NPDES program to mandate pond closures.¹⁹ We ask TDEC to identify the statutory or regulatory basis on which it intends to accept and enforce the Johnsonville Closure Plan.

As set forth above, the Clean Water Act governs discharges that are likely to occur during and after the closure process. Alternatively, if the Closure Plan successfully "eliminate[s] discharge of potential pollutants to both the surface and groundwater,"²⁰ its provisions must be embodied into a binding and enforceable SWDA permit. In any case, a NPDES permit will be required for ongoing discharges during the pond phase-out process, as the current permit is set to expire in just over 2 years. TDEC must incorporate the closure plan as a binding requirement of a NPDES renewal or amendment.

IV. TDEC should adopt expert recommendations for safe closure of Johnsonville's ash ponds

Finally, we incorporate the technical analysis set forth in the attached expert report of Charles Norris. The report highlights three primary areas of concern that TVA must address to improve the plan. To protect against catastrophic dike failure and minimize the likelihood of further discharge and groundwater contamination, TDEC should require full removal of ash from the impoundment. In lieu of fully safeguarding against failure and contamination, TDEC should require TVA to install a composite cap to prevent water infiltration. Finally, TVA must plan for an indefinite post-closure care and monitoring period. These recommendations are fully supported in the attached report.

V. Conclusion

We appreciate your review of these comments. Because TDEC has not opened a formal comment period for this plan we ask that you please confirm your receipt of these comments and advise us whether you will accept and respond to these comments as public comments.

¹⁸ Closure Plan, *supra* note 3, at 4.

¹⁹ TDEC, *Office Memorandum from Vojin Janjic, Permit Section, Water Pollution Control to Patrick Parker, Enforcement and Compliance Section*, 1-2, (Oct. 14, 2011) ("...there is no regulatory basis for such compliance schedule to be imposed in the NPDES permit.").

²⁰ *Id.*

Sincerely,



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