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December 29, 2025

Attention: Mr. Jonathan Stercho, Asst Permit Administrator, NYSDEC Region 7
Email: DEP.R7@dec.ny.gov

Re: Cayuga Operating Company, LLC
State Pollutant Discharge Elimination System (SPDES) and Water Withdrawal
NonPublic Applications DEC ID#: 7-5032-00019/00004 & 7-5032-00019/00024
Town of Lansing, Tompkins County

Dear Mr. Stercho:

I have been hired by the Chris Dennis Environment Foundation to review the proposed SPDES permit and related information for this facility and have produced the following comments:

1. The public notice states that the current withdrawal from the lake is 1.44 MGD with a pending renewal application to change to 1.008 MGD, and down from a previous permitted volume of 245 MGD. The permit gives the 1.008 MGD value as the effluent daily maximum calculated numeric limit for Outfall 001 (permit page 6). These wildly differing numbers appear to be related to discontinuing power production, but do not seem to make sense, nor are they clarified in my reading of additional information in the Fact Sheet. It seems that the current withdrawal of 1.44 MGD would immediately put the facility in violation of the rather specific 1.0008 MGD permit limit, which I doubt is intended. Perhaps this needs to be clarified in the permit and/or Fact Sheet.

2. The draft permit has lower limits than the existing permit for a number of parameters, making it more protective in this regard. This appears to be related to changes in operation away from power generation. Other limits are held the same, and lower than what is described as might be allowed by calculated WQBEL (water quality-based effluent limits) based on antibacksliding regulations. Again, this is a positive feature of the draft permit for lake protection. However, other provisions and limits seem a bit confusing or counter to this.

3. The total arsenic (As) limit for Outfall 05A (former coal pile) is 0.050 mg/L monthly average and 0.10 mg/L daily maximum, while limits for same parameter at Outfall 013 are higher at 0.15 mg/L daily maximum with no limit (monitor only) for monthly average. It is unclear why the limits for the ash disposal site and related leachate discharge would be less restrictive for this pollutant; it seems like it should at least be the same.

4. Outfall 013 is variously described in the draft permit as the discharge from the ash disposal site, sediment pond, leachate, and stormwater. There does not appear to be any treatment other than running through a sand filter and dilution. It is unclear why these various sources are allowed to mix and dilute before monitoring and applying limits, or if separation is possible.

Various EPA rules and guidance provide that if stormwater is allowed to mix with leachate or other wastewater, it is all considered wastewater with applicable limits, and generally, waste streams should be monitored and limited before mixing. See EPA regulations at 40 CFR § 122.26 and 40 CFR § 261.3 and EPA representative sampling.

5. Outfall 013 contains numerous parameters, some in addition to the existing permit, but not all have numeric limits. For instance, selenium and phenol have been added, but as monitor only with no numeric limits. Since this is a discharge from coal ash disposal and associated leachate, the permit should have monitoring and numeric limits for all Coal Combustion Residuals (CCR).

I am aware, for example, that Murray McBride, a Cornell University agronomist and expert in heavy metals contamination who has conducted soil sampling at the site, has recommended that the following CCR elements be included in the permit for Outfall 013:

Beryllium
Cobalt
Lithium
Thallium
Lead
Molybdenum
Chromium (+6 oxidation state)
Radium (226 and 228 isotopes).

6. Monitoring locations given in the draft permit are rather vague. For example, Outfall 013, which is of primary concern, only gives monitoring location as "effluent." This could be the point of entrance to a pipe at the edge of the pond, or end of the pipe at the lake, or somewhere else. From the aerial on page 21 titled as "Monitoring Locations", labels do not exactly clear things up. It indicates a location along the lake shore that appears to be a combination of Outfall 009 and 013, with 009 given elsewhere in the permit as "uncontaminated stormwater."

This would seem to be allowing the mixing and dilution of the likely more contaminated wastestreams from 013 before monitoring, and thus not yielding representative testing as required by EPA (see above). There might be a rationale for this, but it needs to be explained in the permit or Fact Sheet. Looking at other aerials available online and with Google Earth, it is unclear where the discharge is located, or if it has the required sign.

7. Of significant interest is the method of determining some of the limits. Page 12 of the permit contains a section with the heading "Critical Receiving Water Data & Mixing Zone". It shows that a 10 to 1 dilution ratio is applied to most of the outfalls and many parameters. There is further mention of mixing zones throughout the permit.

However, there is no documentation of any required mixing zone analysis having been done, or if a mixing zone has been established for any outfall. This requirement is referenced as being in TOGS 1.3.1 (which was determined to be the state's Technical and Operational Guidance Series), where specifics for determining and allowing mixing zones are prescribed.

These include consideration of types of waterbodies (rivers, lakes), waterbody uses, drinking water intake locations, and establishing the physical size, shape, and location of any authorized mixing zone. It is not clear from the draft permit and associated Fact Sheet if any mixing zone

analysis was performed per these rules, or where any such mixing zones are located, or how the public is to know where the zones are located. If there is a mixing zone (or zones), it should be clearly supported with documentation, and area & location clearly given by map and description in the permit.

8. Also, in regard to the mixing zone issue, it is my understanding that, along the lake shore from 0.25 to 0.4 miles south of the plant discharges, are about 15 houses south of Milliken Creek where residents have private intakes of lake water for domestic use and/or shallow drinking water wells, whose delta aquifer is very likely refreshed by lake water. There is no indication that these uses were taken into account as part of any mixing zone (or dilution) allowance.

It should be noted that all parts of the lake are public waters where classified and existing uses must be protected. Without any properly authorized and identified mixing zones, limits would be set without use of dilution in public waters, and would be at least 10 times more stringent. Limits would thus be generally established at the end of the pipe as the water quality standard minus an amount of 10% or 20% as a margin of safety for each parameter to address antidegradation provisions for the area near discharges. [However, for Outfall 013 sampling of effluent should be specified to be prior to any admixture with waters from Outfall 09.]

While the mixing zone issues may have been accounted for in the preparation of the draft permit, it cannot be determined from what is provided.

Best regards,

Barry Sulkin, M.S.

Cc: John V. Dennis, Chris Dennis Environment Foundation

Attached: CV of Barry Sulkin, environmental consultant