November 30, 2025

Gail Wright
Washington Department of Ecology Eastern Regional Office
4601 North Monroe Street
Spokane, WA 99205-1295

RE: Cyrus One Comments

Dear Ms. Wright,

Please accept my comments on the Cyrus One revised permit application.

First, according to this application at 3.1, Cyrus One is using the Monte Carlo analysis for short term PM 2.5 and 24-hour PM10 NAAQS because Ecology accepted it in a prior Sabey application. I am requesting that Ecology provide proof that the use of the Monte Carlo for the 24-hour PM10 NAAQS, and annual PM2.5 is as protective, or more protective, than the approved modeling necessary to demonstrate compliance with the NAAQS for these criteria air pollutants.

I am also requesting proof of approval from EPA for the use of the Monte Carlo analysis for this purpose.

Additionally, assumptions that PM10 emissions equal the PM2.5 emissions is not acceptable. Instead, emission estimates based on worst case scenarios to model PM10 must be conducted. Assumptions may underestimate these emissions. According to Table 3, Quincy is approaching both the PM10 NAAQS limits (and PM2.5), but Ecology only monitors for PM2.5 in Quincy. It is time for Ecology to include PM10 to the air monitor in Quincy. [Ecology should also monitor for NO2, because as we learned in 2010 from Jim Wilder's email, Quincy has a NOx problem due to the surrounding agricultural activities].

Regarding worst-case scenarios, there needs to be clarification of exactly what that is with regard to emissions during power outages at 3.3.1. The application states "worst-case, at or near full load (≥50%)", but 50% is far from "full load". This range appears to give a great deal of latitude to Cyrus One to comply within engine operational limits, but does not address the exposure estimates during a power outage. There is a greater amount of velocity at higher loads, than at 50%, which I assume has been factored into exposure data. Doesn't explicitly identifying the load and the velocity at which pollutants will be emitted play a role in compliance with those calculations? In other words, if you don't explicitly model for the exact load, how can you model for the expected impact, including distance emissions travel?

Along that same line of thought, which NAAQS is the limiting factor during a power outage, and how will we know if it has been violated?

Another concern that I have is low load emissions. According to Table B-1 the highest pollutant emitting load for PM2.5 and PM10, is at 10% load, but the rain caps don't open all the way at that load due to a lack of velocity. What is the increased risk for residents downwind of Cyrus One or the workers onsite when engines are run at low load?

Also, in looking at Table B-2, I noticed that DEEP is only considered at the front-half PM2.5 emissions, and PM for front-half plus back-half is considered the vendor's NTE PM and HC. Why the distinction? Also, why aren't "shut down" emissions considered in this permit? Shutdown is a period of time when pollutant levels, especially NOx, can spike. Please redo the emission calculations to include shut down emissions. Emissions created during engine shut-down need to be included in all air quality permits for diesel engines.

Conveniently absent from this document is compliance with the NAAQS for 1-hour and annual NO2. Will this permit be in compliance with the NO2 NAAQSs? Please provide documentation.

Nitrogen Dioxide (NO_2)	primary	1 hour	100 ppb	Annual 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	primary and secondary	1 year	53 ppb (2)	Annual Mean

In Table B-7 the assumed power outage occurs between 7am and 7pm. That is not a reasonable assumption, and the model should be run for times after 7pm and before 7am since power outages can occur any time and are not constrained to the time between 7am and 7pm. Please rerun this scenario for power outages such that they occur after 7pm and before 7am, and share this new information with the public in response to our comments.

Also, I find nothing in the documents about the 1 year NAAQS for PM2.5. See table below. Does this permit comply? What is Cyrus One's current contribution to the 1 year annual NAAQS for PM2.5? Please provide documentation that modeling demonstrates compliance.

Particle Pollution (PM)	$PM_{2.5}$	primary	1 year	9.0 µg/m^3	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m^3	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years

As you are undoubtedly aware, the 1-year NAAQS for PM2.5 was reduced from 12 ug/m3 to 9.0 ug/m3 in 2024. And as you are aware, PM2.5 is more dangerous than PM10 because of its small size and impacts on the human body. Compliance with this standard is extremely important to the health of our community.

Looking back at the 2018 Cyrus application it appears that if Cyrus would have installed the remaining engines (see table below), it would violate NAAQS for the annual PM2.5. What is Cyrus One's current impact on the annual PM2.5?

Particulate Matter ($PM_{2.5}$)									
Annual average	15	15	12	Theoretical Max. Year	PM25_ANN.ADI	2.3	2.9	6.5	9.4
24-hour average	35	35	35	Scheduled operations (i.e., maintenance)	PM25_24HR_MT.ADI	11 [e, f]	11	21	32

https://ecology.wa.gov/getattachment/64318502-2e62-4dd6-b82e-40c007c1367b/20190219CyrusOneNOCAppWithAdd.pdf

Why is Cyrus being allowed to use the Monte Carlo analysis for the 24-hour PM10 and annual PM2.5? This permit application appears to circumvent conventional modeling methodologies - with the blessing of Ecology - in favor of increased pollution and less protection for area residents. It is imperative that Ecology require that this permit revision fully considers the annual PM2.5, the NAAQS of which may be in violation by Cyrus One.

Reviewing changes to the CAA regulations, I see that in addition to the more stringent annual PM2.5 standard, there have been changes to several of the air quality models, e.g., AERMOD, etc., that are used for compliance purposes. Please list the models Cyrus One used in its modeling, and the year the model was last updated. Also, why is Cyrus One not being required to model for compliance with all the NAAQS?

Moving on from the NOC and supporting documents to the NOC Approval Order, I note that only the filterable portion of the PM is being considered for compliance with manufacturer's emission rates during commissioning. During commissioning and stack testing is the perfect time to determine the amount of condensable PM2.5 being emitted with each load. Including the filterable portion during commission testing would provide additional information to assist in more accurately estimating emissions and their impact on surrounding communities.

Finally, in reviewing these documents I did not find any evidence that pollution controls – SCRs, DPFs or DOCs – were being used at Cyrus One. Is that the case? Is Cyrus One operating without pollution reduction devices? If so, why? As has been mentioned in earlier permit challenges, Ecology has failed to apply the ± 30% cost of BACT with each permit. Had Ecology done so, BACT costs would be more in line with the cost of pollution control prevention devices as envisioned by the Act.

Please let me know if you have any questions regarding my comments. I look forward to reading your responses to my concerns. Thank you for giving them full consideration.

Respectfully submitted,

Patricia Martin
Quincy, WA