

January 30, 2024

Mr. Owen Rudloff  
Air Quality Modeler  
Oregon Department of Environmental Quality  
[owen.rudloff@deq.oregon.gov](mailto:owen.rudloff@deq.oregon.gov)

*RE: 30-0086 (PDX130) Generator Modeled Location Change Project – CAO Evaluation*

Dear Mr. Rudloff:

Amazon Data Services, Inc. (ADS) received Standard Air Contaminant Discharge Permit (ACDP) 30-0086-ST-01 on November 10, 2021, for a data center, PDX130, located in Umatilla, OR. Condition 15.3 states that the permittee must complete a risk reassessment when proposing to modify any physical feature of the source that was used as a modeling parameter in the risk assessment that may increase risk.<sup>1</sup> A permit modification application is required if the newly assessed risk requires additional or changed permit conditions.<sup>2</sup> This letter is being submitted as an addendum to the previously approved Cleaner Air Oregon (CAO) Level 3 evaluation for the operation of PDX130 and shows the proposed project results in an overall decreased risk for the surrounding communities. As such, ADS is requesting approval of this updated evaluation for the temporary generator and concurrence that the proposed change will not increase risk above a risk action level and require no further action under the CAO program.

Per discussion with Oregon Department of Environmental Quality (DEQ), the risk assessment must be approved prior to implementing the proposed projects. ADS has submitted \$4,800 in fees to the Oregon DEQ Business Office associated with the TEU Risk Assessment without permit modification (\$1,000) and the Level 3 modeling review (\$3,800).<sup>3</sup>

## **PROPOSED PROJECT**

ADS is proposing a temporary relocation of the existing permitted CAT 3516C 1,825 kW transitory generator to serve as backup for the facility's 450 kW IWW generator. The transitory generator will be placed next to the 450 kW location for up to six months. It will then be moved back to the location originally listed in the ACDP application.

## **UPDATED CAO DEMONSTRATION**

The emission inventory will not change as a result of the updated location.

A new set of toxics models were run with a temporary updated transitory generator location, impacting the modeling protocol. The exact location of the transitory generator during the temporary backup operation is specifically unknown but is expected to be next to the currently placed 450 kW IWW generator. Without

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<sup>1</sup> OAR 340-245-0100(8)(a) and (e).

<sup>2</sup> OAR 340-245-0100(8)(a)(D).

<sup>3</sup> OAR 340-216-8030 and Condition 13.1

more specific information, the temporary backup unit has been modeled assuming the same exhaust location as the 450 kW IWW generator. Table 1 summarizes the parameters with which the transitory generator was modeled and how they have changed with the proposed update.

**Table 1. Dispersion Characteristics for Transitory Generator**

| <b>Model ID</b>           | <b>ACDP ID</b> | <b>UTM X (m)</b> | <b>UTM Y (m)</b> | <b>Elevation (m)</b> |
|---------------------------|----------------|------------------|------------------|----------------------|
| Previous Model Submission | GENPORT        | 327,280.7        | 5,087,777.2      | 160.32               |
| TTP13-17_BackupGen        | GENPORT        | 326,862.4        | 5,087,740.5      | 159.87               |

The risk assessment work plan methodology remains consistent with historical submissions. Attachments 1 and 2 include the updated Appendix B through G from the risk assessment for the temporary transitory generator location update. Appendix E shows the updated screening model result rankings for the worst-case generators used in the risk assessment.<sup>4</sup> Attachment 3 includes electronic model files. The screening toxics model resulted in the same generator modeled concentration rankings as the original submission for the chronic evaluation. As a result, the same generators were considered in the final chronic risk assessment. For the acute risk assessment, the 1,500 kW ski lodge generator ranked higher than the highest main generator and was included in the final acute model. A comparison of the risk between the original submission and the updated transitory generator location can be found below in Table 2.

**Table 2. Risk Assessment Results by Exposure Category**

| <b>Risk Scenario</b>            | <b>Residential Chronic Cancer Risk</b> | <b>Residential Chronic Non-Cancer Risk</b> | <b>Child Chronic Cancer Risk</b> | <b>Child Chronic Non-Cancer Risk</b> | <b>Worker Chronic Cancer Risk</b> | <b>Worker Chronic Non-Cancer Risk</b> | <b>Acute Non-Cancer Risk</b> |
|---------------------------------|--|--|----------------------------------|--------------------------------------|-----------------------------------|---------------------------------------|------------------------------|
| Previous Submittal <sup>a</sup> | 0.29                                   | 0.01                                       | 2.83E-03                         | 2.97E-04                             | 2.19                              | 0.13                                  | 1.26                         |
| Temporary Backup Gen            | 0.25                                   | 0.01                                       | 2.44E-03                         | 2.59E-04                             | 2.00                              | 0.12                                  | 1.22                         |

a. Submitted to Oregon DEQ April 25, 2022.

As Table 2 shows, no change in risk action level will result from the design update. The expected risk will decrease from the original risk assessment for each exposure type. Table 3 summarizes the updates required for each file associated with the initial ACDP submission.

**Table 3. Document Update Summary**

| <b>File(s)</b>             | <b>Required Update(s)</b>            |
|----------------------------|--------------------------------------|
| Air Toxics Models          | Source location                      |
| Emission Inventory (AQ520) | No Change                            |
| Modeling Protocol          | Update transitory generator location |
| Risk Assessment Work Plan  | Modeled generator screening results  |
| Risk Assessment            | Calculated risk results              |

<sup>4</sup> Appendix B through F of the risk assessment are identical to Appendix B through F of the risk assessment work plan.

## CONCLUSION

The proposed temporary backup generator operation shows a decrease in both chronic and acute risk evaluated for all exposure types using methodologies and operations consistent with historically submitted documentation. No permit condition will be violated and there will be no increase in risk above a risk action level. ADS requests approval of the updated evaluation for the proposed project and concurrence that the proposed change will not increase risk above a risk action level and requires no further action under the CAO program.

If you have any questions or comments about the information presented in this letter, please do not hesitate to call me at 309.360.9610 or Beth Ryder at 458.260.6770.

Sincerely,

*S. Shri Vani*

Shri Vani Sripada  
Air Permitting Engineer, Amazon Data Services, Inc.

### Attachments

cc: Garrett Koehler, Amazon Data Services, Inc.  
Beth Ryder, Trinity Consultants  
Ania Loyd, Oregon DEQ  
JR Giska, Oregon DEQ

## **ATTACHMENT 1. Risk Assessment Appendix Updates**

Attached Electronically

## **ATTACHMENT 2. Model Results Updates**

Attached Electronically

## **ATTACHMENT 3. CAO Model Files**

Attached Electronically