

# Non-Road Engine Stakeholder Virtual Listening Session

November 17, 2020

A virtual meeting was held on Tuesday, November 17, 2020, for stakeholders to provide feedback to DNR as it develops guidance on air permitting of emissions from the manufacture of non-road vehicles and other equipment with non-road engines. There were 45 attendees from various engine manufacturing and testing facilities, Wisconsin Manufacturers and Commerce, and representatives from multiple environmental consulting firms and law firms. The main issues discussed involve understanding whether and when emissions from the manufacture of non-road vehicles and other equipment should be included in stationary source permits given that non-road vehicles and equipment are not, themselves, stationary sources.

Wisconsin DNR began the meeting with a presentation defining a non-road engine, how manufacturers of non-road engines, vehicles, and other equipment have historically been permitted, and a review of non-road engine determinations made to-date by EPA. Several discussion questions were provided to prompt audience response. The questions were:

- What are the costs or challenges associated with having engine testing in air pollution control permits?
- Are there specific concerns with compliance demonstration methods, monitoring or recordkeeping requirements associated with engine testing in your air permits?
- Are there specific concerns with limitations taken to meet ambient air quality standards, increment, or emission limitations taken to avoid major source permitting?
- Do the products you produce have to meet any other emission standards, i.e., marine engine standards, non-road engine standards?
- What questions do you have about the legal basis for including or not including non-road engine testing operations as stationary sources in permits?
- Are there any other concerns you have about including or not including non-road engine testing in air permits?

The floor was then open to the participants. The rest of the time was spent discussing each of the questions in turn.

Comments about costs and challenges facilities face centered on concerns about operational flexibility.

- Regulation of engine testing results in an inability to test newly developed products coming to market and limits the ability to quickly react to market demands.
- Limits on operating schedules make it difficult to efficiently run a facility and do not consider the natural ebb and flow of markets.

Practical implementation issues from compliance demonstration requirements were raised as well.

- Stationary source compliance emissions tests require testing at 100% capacity and testing of emissions at engine outlet and stack outlet.
- Engine certification testing uses weighted average testing requirements specific to engine standards.
- Compliance demonstration with emission limitations and recordkeeping requirements are very challenging and expensive considering the huge variety of engine types, sizes and fuels that may be involved at any single facility.

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Air quality modeling was also discussed as a challenge due to the short duration of engine emissions and the conditions under which the engines are tested. Some stakeholders noted that they have very onerous operational limitations in their permits set based on modeling where overestimates of emission rates input into the model likely resulted in greatly overestimating emission concentrations.

Another commenter mentioned that nonroad engines are already regulated in several other sections of the Clean Air Act. They noted that facilities have spent millions to meet Tier 4 engine standards and additional regulation under stationary source regulations is duplicative.

Other concerns raised included:

- Difficulty in defining modification of the “source” for engine testing because, for large engines, testing occurs in an area in a large building. This is not a traditional process line.
- Emission calculations that are too conservative for the nature of the testing, leading to inaccurate permit limits and onerous compliance requirements (i.e. fuel limits, operating time, complicated record keeping)
- Limits that preclude growth and research and development
- Limitations on flexibility (i.e. size and type of units that can be tested as well as stringent operating schedules)
- Problems that arise from forcing ill-fitting stationary source requirements onto engine manufacturing leading to inaccurate emissions estimates and overly high predicted impacts.
- Complicated compliance demonstration requirements that raise the probability of noncompliance.

Many in the audience took issue with DNR’s legal authority to regulate non-road engines in air permitting when they are clearly not stationary sources by definition. Specifically, one commenter asked which citation in Wisconsin Statutes provides DNR legal authority to include nonroad engine testing in air pollution control permits. Wisconsin DNR responded that these emissions have been regulated as stationary source emissions for decades. DNR argued that it must include these emissions in permits because the emissions from manufacturing non-road engines, vehicles, and other equipment is a stationary source.

Another topic was at what point in the manufacturing process is the engine considered “non-road”. The audience brought up the question of whether engines that are manufactured elsewhere and brought to another facility for testing and assembly are considered stationary sources or non-road engines. It was noted that the November 2015 U.S. EPA Region 5 determination for John Deere stated that the point in manufacturing is not relevant for determining whether non-road engines are stationary sources.

Other conversations included the applicability of the engine testing NESHAP PPPPP. The preamble language of the NESHAP, which is a stationary source regulation, applies to engines that are uninstalled or not integrated. This rule differentiates between installed or uninstalled. In response to this it was noted that s. 285.01(41), Wis. Stats., states “a stationary source does not include a motor vehicle or equipment which is capable of emitting an air contaminant while moving”. The audience continued to question Wisconsin DNR’s legal authority to regulate emissions from manufacture of non-road vehicles.

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The meeting concluded with DNR thanking the participants for their feedback. Notes from this meeting are to be posted to DNR's website. DNR will work on developing guidance to ensure fair, consistent, application of air permitting requirements to facilities that manufacture non-road engines, vehicles and other equipment. DNR will hold a follow up stakeholder meeting to review proposed guidance. DNR hopes to have the next meeting in January.



**JOHN DEERE**

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**Kathryn Hager**  
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November 13, 2020

Ms. Kristin Hart  
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101 S. Webster Street  
Madison, WI 53707

Re: DNR Listening Session on treatment of nonroad engine testing in air pollution control permits

Ms. Hart,

Thank you for the invitation to participate in the listening session on treatment of nonroad engine testing in air pollution control permits. John Deere Horicon Works intends to participate in the listening session but also wanted to provide responses to your questions in writing in case there is not adequate time during the meeting to cover the full responses. Below you will find the answers to the questions the WDNR has asked for input on.

**1. What are the costs or challenges associated with having engine testing in air pollution control permits?**

To clarify, John Deere Horicon Works is requesting removal of non-road engine emissions from mobile equipment start-up and testing from stationary source permitting. Testing of non-road engines (not associated with mobile equipment) was not proposed to be removed.

The largest challenges associated with having the non-road engine emissions from mobile equipment testing in the air pollution control permits is the rigid operating schedule along with extensive recordkeeping requirements. The current FESOP permit has established an operating schedule limiting the length of time an engine can run during a certain hour creating a significant logistical burden on the impacted department. This limits the schedule for product development and validation runs on the mobile equipment being tested.

In terms of the recordkeeping burden, the facility must keep records of types of fuel used, engine specific information such as horsepower for each type of engine tested, PM emission rates, records demonstrating stack filter configurations and control efficiencies, pressure drop across the filter control systems in the form of daily logs, filter control system maintenance records and a Malfunction, Prevention and Abatement Plan.

The extensive recordkeeping requirements and limitations on operating schedule impacts the speed of change for our departments and limits our product line growth potential in terms of research and development on new equipment models or ability to make improvements to existing products.

**2. Are there specific concerns with compliance demonstration methods, monitoring or recordkeeping requirements associated with engine testing in your air permits?**



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The specific concerns with testing of non-road engine emissions from mobile equipment testing at the facility are expressed above.

**3. Are there specific concerns with limitations taken to meet ambient air quality standards, increment, or emission limitations taken to avoid major source permitting?**

None other than expressed above.

**4. Do the products you produce have to meet any other emission standards, i.e., marine engine standards, non-road engine standards?**

John Deere Horicon Works does not produce engines at the facility but the engines installed in the non-road equipment produced and tested at John Deere Horicon Works are certified to meet the applicable nonroad engine emission standards as outlined in 40 CFR Parts 1039, 1048, 1051, 1054, 1060, and/or 1068, or are subject to the exemptions set forth in 40 CFR Part 1068 (such as prototype or export-only equipment). Each type of engine installed in non-road equipment meets the definition of “engine” in 40 CFR 1068.30 and satisfies the requirements of the standard setting part to which they are certified or exempt from.

**5. Are there any other concerns you have about including or not including non-road engine testing in air permits?**

John Deere Horicon Works understands the WDNR is the permitting authority for air pollution control construction and operation permits within the State of Wisconsin. It is also understood that WDNR issues air pollution control permits pursuant to its federally approved rules. The Federal CAA regulations and guidance (specifically under CAA Section 302(z)) state that a stationary source is defined as “a source of air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in section 216.”

40 CFR part 1068 defines “non-road engines” as an internal combustion engine that meets the following criteria:

1. It is (or will be) used in or on a piece of equipment that is self-propelled or serves as dual purpose of both propelling itself and performing another function (such as **garden tractors**, off-highway mobile cranes and bulldozers).

Therefore, the engines installed on riding lawn equipment or gator utility vehicles being tested at John Deere Horicon Works should not be subject to stationary source permitting requirements as they meet the definition of non-road engines.

John Deere Horicon Works respectfully requests WDNR align with the recommendation provided by US EPA Region 5 (dated October 31, 2019) regarding the proper classification of air emissions from product testing conducted during and after assembly of products manufactured at John Deere Horicon Works. In the response from U.S. EPA Region 5 it is stated that “EPA’s view is that direct emissions from the engines during product testing... are not subject to stationary source



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permitting requirements as long as those engines meet the applicable definition of “non-road” engines.”

The WDNR has previously made the determination for similar industries that non-road engines are not considered stationary sources under the Clean Air Act. One example of this is Toro Co. in Tomah, Wisconsin in which the FESOP permit issued by the WDNR references “Nonroad engines as defined in 40 CFR 1068.30 and Section 216 of the Clean Air Act. Nonroad engines are not considered to be included in the definition of a stationary source under the Clean Air Act”. Toro Co, Air Pollution Control Operation Permit No. 642028970-F30, fn. 8. issued by WDNR (May 15, 2017).

I am looking forward to the opportunity participate in the listening group session scheduled for November 17, 2020 in order to share John Deere Horicon Works’ response to the WDNR’s questions as well as hear the input from other industries participating. Should you have any questions or need additional information related to the responses above, please do not hesitate to reach out to me at 309-765-5697 or [hagerkathryns@johndeere.com](mailto:hagerkathryns@johndeere.com).

Thank you,

Katie Hager