

Ammonia Combustion Technical Working Group meeting minutes
May 6, 2025

Brian Kaul, Oak Ridge National Laboratory

- Presentation: Dual-fuel in diesel engines
- Q&A
 - Will Northrop
 - What overall equivalence ratio?
 - Lambda 1, 1.4, 1.6; similar results to what Will has seen
 - Mike Burke
 - Any significant cyanide emissions? Do you need to consider H₂ as greenhouse gas?
 - Haven't looked at HCN but may be there. Expect that they have several % H₂ but not sure.
 - Clint Bedick
 - This engine doesn't have EGR?
 - Did not run with EGR for this data but could be interesting with H₂ or NH₃ in exhaust.

Will Northrop, University of Minnesota

- Presentation: Pure NH₃ operation in reciprocating engines
- Q&A
 - Wesley Boyette
 - Health or climate impacts of ammonia nitrate?
 - Lots of other industries emit some ammonia nitrate so there is plenty of data in aerosol sciences. Any particulate will have some negative health consequences.
 - Mike Burke
 - Where is ammonia nitrate forming?
 - Probably in the colder post-combustion regions.

Closing discussion

- Is any progress being made on cost of ammonia?
 - Core issue is cost of hydrogen.
- Rob Steele - how to access EDX data sharing
 - Should not need anything to access