



AMERICAN COLLEGE OF  
OCCUPATIONAL AND  
ENVIRONMENTAL MEDICINE

July 25, 2019

Docket Management Facility  
U.S. Department of Transportation  
1200 New Jersey Avenue SE  
West Building, Ground Floor, Room W12-140,  
Washington, DC 20590-0001

Re: Docket No. FMCSA–2018–0037

To Whom It May Concern:

The American College of Occupational and Environmental Medicine (ACOEM) welcomes the opportunity to comment on questions posed by the Federal Motor Carrier Administration (FMCSA) seeking comments on Safe Integration of Automated Driving Systems-Equipped Commercial Motor Vehicles related to medical or drug testing issues in the operation of Automated Driving System (ADS)-Equipped Commercial Motor Vehicles.

ACOEM believes that any driver responsible for the operation of any commercial motor vehicle, even if only in an emergency or via remote operations, should be free of risk of sudden or gradual impairment or incapacitation. Most importantly, such individuals should not be at risk of impairment from any medical condition, including fatigue or medication, which could impact their cognitive function. Maintaining all medical standards, including those addressing impairing prescription and over the counter medications, hours of service requirements and drug testing, is essential for the individual responsible for any aspect of operation of these vehicles. This is necessary to ensure that the individual alert and fully aware if any input is required.

Complacency and lack of attention could occur if constant input by the operator is not required such as in SAE Levels 4-5 where the ADS can control all aspects of the driving task, with the operator is only required to act if an emergency or unanticipated event occurs. In these cases, it is even more important that the operator remain vigilant to be able to react when required, especially if responsible for the movement of more than one vehicle at a time.

These individuals should also be subject to the same Drug and Alcohol Testing Requirements, since impairment due to use of illegal drug or illicit use of legal medications could contribute to cognitive impairment.

Some of the musculoskeletal requirements could be lessened or eliminated if the individual is not expected to perform any of the manual tasks of the CMV operator such as loading, unloading, working with load securement devices, inspecting the vehicle, etc. If these are or might be a component of the job requirements, then those also should remain.

We believe this is analogous in some ways to airmen who are operating long flights and spend much of the flight time with the aircraft in auto-pilot or to locomotive engineers or conductors who may operate as Remote-Control Operators (RCOs) of trains. The most important point is that operational authority remains with the carbon-based life form with the operational certificate (not the silicon-based system that works most of the time but cannot appropriately react to the unexpected); we cannot allow the automated system to be the operational authority. Any operator with ultimate responsibility for operating this type of equipment must not have any medical issue which might interfere with their cognitive function to ensure that they are able to react if and when the need arose.

Responses to the specific questions which address medical or drug testing issues are below.

### 3. Drivers' Hours of Service (HOS) Rules

§ 3.1. Should HOS rule changes be considered if ADS technology performs all the driving tasks while a human is off-duty or in the sleeper berth, or physically remote from the CMV?

**ACOEM comment:** no, for reasons explained above.

§ 3.2. Should the HOS requirements apply to both onboard and remote operators?

**ACOEM comment:** no for reasons explained above.

§ 3.3. If so, how should HOS be recorded when an individual is not physically in control of the vehicle?

**ACOEM comment:** The HOS requirements should be maintained but noted when operation in conjunction with an ADS vehicle and the SAE Level of the vehicle.

### 4. Medical Qualifications for Human Operators

§ 4.1. Should some of the physical qualification rules be eliminated or made less stringent for humans remotely monitoring or potentially controlling ADS-equipped CMVs?

**ACOEM comment:** no, for reasons explained above except when the operator would not be responsible for any non-driving tasks such as loading, unloading, working with load securement devices, inspecting the vehicle, etc.

§ 4.2. If so, which of the requirements should be less restrictive for human operators who would take control of an ADS-equipped CMV remotely?

**ACOEM comment:** N/A, except as mentioned above.

§ 4.3. Should the Agency consider less restrictive rules for humans who have the benefit of ADS technology to assist them in controlling the vehicle (e.g., technologies that would enable individuals with limb impairments to operate at a level comparable to individuals without such impairments)?

**ACOEM comment:** no, for reasons explained above

## 6. Safe Driving and Drug and Alcohol Testing

§ 6.1. Should FMCSA consider revising its rules to ensure that (1) any human exercising control of an ADS-equipped vehicle must continue to comply with all the rules under Part 392, and (2) a CMV under the control of a Level 4 or Level 5 ADS must satisfy the operational rules?

ACOEM comment: no, for reasons explained above.

§ 6.3. For scenarios in which the control of the ADS-equipped CMV alternates, or may alternate, between a human and the technology, should FMCSA require that both the human operator and ADS comply with the applicable operational rules?

**ACOEM comment:** yes, for reason explained above.

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Thank you for the opportunity to comment. We are available to discuss the issues further at your request.



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President