



November 29, 2021

Ann E. Carlson
Chief Counsel
National Highway Traffic Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue S.E.
West Building, Room W12-140
Washington, D.C. 20590

Re: Notice and Request for Comment; Incident Reporting for Automated Driving Systems and Level 2 Advanced Driver Assistance Systems; Docket No. NHTSA-2021-0070; 86 Fed. Reg. 54287 (Sept. 30, 2021)

Dear Ms. Carlson,

Aurora Operations, Inc. (Aurora) appreciates the opportunity to respond to the National Highway Traffic Safety Administration's (NHTSA or Agency) above-referenced proposal to extend its currently approved information collection, the "Incident Reporting for Automated Driving Systems (ADS) and Level 2 Advanced Driver Assistance Systems (ADAS)," under Standing General Order 2021-01 (SGO).¹ Aurora supports transparency across the autonomous vehicle (AV) industry and ensuring NHTSA has reliable and targeted data and information to evaluate the safety of both ADS- and L2 ADAS-equipped vehicles on U.S. public roads. In this spirit, our comments seek to offer ways for NHTSA to enhance the quality, utility, and clarity of the information collected under the SGO before a three-year extension is granted.²

¹ SGO 2021-01 (June 2021); First Amended SGO 2021-01 (Aug. 2021).

² See 5 C.F.R. § 1320.8(d)(iii).

Aurora's Mission

Aurora's mission is to deliver the benefits of self-driving technology safely, quickly, and broadly. We are building the Aurora Driver, a platform that combines hardware, software, and data services that allows vehicles to move people and goods safely and efficiently through the world. When complete, the Aurora Driver will enable a transportation ecosystem, bringing together automakers, truck manufacturers, logistics services, mobility services, and fleet management providers to deliver the benefits of self-driving technology to a wide segment of the population.

There were 36,096 fatalities in motor vehicle crashes in the United States in 2019 and that number is projected to have increased in 2020.³ What is more, NHTSA estimates that 20,160 people died in crashes in the first half of 2021 alone—the highest number of projected fatalities in that time period since 2006.⁴ That status quo is not acceptable. We are motivated to build this technology because we want to reduce crashes, injuries, and fatalities. Safety is our first priority when it comes to developing the Aurora Driver and you can see that in everything we do, from the people we hire to the way we develop and test our technology.

Quality, Utility, and Clarity of Information Collection

We believe the SGO's information collection mandate is overly broad as currently written, and so question whether it will provide NHTSA with the quality data needed to evaluate ADS and L2 ADAS safety. Accordingly, our comments, which focus specifically on the reporting requirements for ADS manufacturers and operators, suggest ways NHTSA can enhance the quality, utility, and clarity of the information collected under the SGO before it is further extended.

³ NHTSA, "Early Estimate of Motor Vehicle Traffic Fatalities in 2020," Traffic Safety Facts: Crash Stats (May 2021), <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813115>.

⁴ NHTSA, "Early Estimate of Motor Vehicle Traffic Fatalities for the First Half (January-June) of 2021," Traffic Safety Facts: Crash Stats, <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813199>.

Terms and Definitions Used in SGO

Definitions contained in the SGO may compromise the quality, utility, and clarity of the information collected and should be revisited.

Manufacturers and operators of ADS (i.e., reporting entities) must report to NHTSA each “crash” involving an AV with an ADS engaged of which they received “notice” under the SGO. The SGO defines a reportable “crash” as “any physical impact between a vehicle and another road user ... or property that results or allegedly results in any property damage, injury, or fatality ... [including when an AV] contributes or is alleged to contribute ... to another vehicle’s impact with another road user or property.”⁵ An incident report detailing the crash then must be submitted to NHTSA within a specified timeframe after the reporting entity receives “notice” of its occurrence. NHTSA defines “notice” to include information from “any internal or external source and in any form (whether electronic, written, verbal, or otherwise) about an incident that occurred or is alleged to have occurred; including ... media reports.”⁶

However, this terminology deviates from that terminology manufacturers are subject to under NHTSA’s TREAD Act early warning reporting regime.⁷ Under the existing TREAD Act reporting requirements, certain motor vehicle and equipment manufacturers must provide NHTSA with information that the Agency can use to identify potential safety-related defects. Manufacturer submissions include information on incidents involving death or injury based on *claims* or *notices* received by the manufacturer.⁸ NHTSA defines a “claim”, in short, to mean “a written request or written demand for relief...” and “notice” to mean “**a document, other than a media article**, that does not include a demand for relief, and **that a manufacturer receives from a person** other than NHTSA.”⁹ So, where a reportable claim under the SGO requires reporting entities to submit all mere allegations—whether or not

⁵ Notice and Request for Comment; Incident Reporting for ADS and Level 2 ADAS; Docket No. NHTSA-2021-0070; 86 Fed. Reg. 54287, at 6 (Sept. 30, 2021).

⁶ Notice and Request for Comment, at 8.

⁷ Pub. L. 106-414; 49 C.F.R. part 579.

⁸ 49 C.F.R. § 579.21(b).

⁹ 49 C.F.R. § 579.4(c) (emphasis added).

supported by fact or reported directly and seriously to the company—that are seen by the company, including those written in the media or social media posts, NHTSA’s long-standing TREAD Act only deems an incident to be reportable when detailed in writing and actually received by the manufacturer.

As a result, a reporting entity under the SGO is required to present potentially unsubstantiated speculation to NHTSA (and the public) about this new and important technology. By requiring reporting entities to quickly submit mere allegations of crashes presented verbally or contained in unverified media reports such as blog and social media posts, NHTSA will inevitably receive incorrect, unreliable, or incomplete incident reports. This compromised information will then be commingled with the more reliable and complete reports of crashes, potentially skewing NHTSA’s overall understanding of ADS-related safety events. In addition, this requirement ultimately results in reporting entities needing to proactively search the internet and various news sources to identify statements that may be sufficient to trigger a crash report, creating an unnecessarily heavy burden for potentially little safety benefit.

While Aurora supports NHTSA’s aim of information gathering to better understand crashes of ADS-equipped vehicles, we strongly believe the current definitions will ultimately result in the submission of information that will draw the Agency’s attention and resources away from verified and serious reports of ADS-safety events. In light of NHTSA’s intention to make summary crash information received under the SGO publicly available,¹⁰ it is even more imperative that such information is serious and substantiated, so the public has an accurate understanding regarding the safety of AVs and the overall benefits our technology will bring to the Nation’s roads.

Accordingly, we urge NHTSA to refine the SGO’s definition of “notice” to ensure information collected by the Agency is most useful. This can be accomplished by aligning the definition with that of “notice” in the TREAD Act, thereby removing the requirement that a reporting

¹⁰ See SGO at 11 and NHTSA, “SGO on Crash Reporting for Levels of Driving Automation 2-5: FAQs,” <https://www.nhtsa.gov/laws-regulations/standing-general-order-crash-reporting-levels-driving-automation-2-5>.

entity submit crash allegations and omitting verbal and media reports, and requiring all incidents to be made in writing to and received by a reporting entity. Aurora believes this will lessen the burden on reporting entities, while simultaneously providing NHTSA with more valuable and reliable information upon which to base its performance-based regulatory framework for AV and ADS safety.

Collection of Extraneous Data

The SGO's excessive look-back period for the crash data that must be reported to NHTSA may also compromise the quality, utility, and clarity of the information collected and should be revisited as well.

Pursuant to the SGO, reporting entities are required to submit incident reports for all crashes where the ADS on the AV "was engaged **at any time** during the period from 30 seconds immediately prior to the commencement of the crash through the conclusion of the crash."¹¹ The 30-second look-back period can lead reporting entities to submit a potentially substantial amount of data unrelated to ADS-safety and for crashes where ADS was not a contributing factor. For example, if a human driver testing an AV disengages the ADS and is then involved in a collision 29 seconds later, it is a reportable event under the SGO. In this instance, if driving at 55 miles per hour on an Interstate Highway, the vehicle may travel approximately 2,400 feet in those 29 seconds, or the length of nearly seven football fields. A lot can happen on the road in 29 seconds, having nothing to do with the safety or operability of an ADS itself. This point does not affect NHTSA's existing authority to request data from manufacturers and other covered entities and is limited to the affirmative reporting structure outlined in the SGO.

The potential inclusion of a large number of crash reports submitted under the SGO where the ADS was not a contributing crash factor may result in a data set that is of low quality or utility and will require a significant amount of Agency resources to sort through and analyze. And while not a focus of our comments given the scope of this proceeding, it would be

¹¹ See SGO at 13, 15 (emphasis added).

beneficial if NHTSA provided clarity regarding how the Agency will handle such a large amount of data and whether the Agency has in place adequate cybersecurity practices to protect against its inadvertent disclosure.

Accordingly, we believe NHTSA should revise the SGO by narrowing this look-back period to five seconds, consistent with a leading industry standard and best practice regarding collision reconstruction practices,¹² and only for crashes whereby the reporting entity received written notice alleging that the ADS was a contributing factor. These modifications will ensure the information NHTSA collects is most useful and allow the Agency to focus resources on those events in which ADS may more likely have played a role in their occurrence.

* * *

Aurora encourages NHTSA to refine and narrow the scope of the SGO as described in our comments so the Agency receives quality, targeted, and useful data about the safety of ADS operations. Our suggestions will help ensure the information collection is a sustainable and scalable framework as we and other companies move forward with the testing and deployment of AVs across the United States. We also encourage NHTSA to consider a shorter extension of this information collection—for a period of 18 months, for example—to create an earlier point in time in which the Agency re-evaluates the quality and utility of the information collected under the SGO, particularly in light of the varying stages of ADS development across the industry. Aurora is a member of the Self-Driving Coalition for Safer Streets, and we support the Coalition's submitted comments as well.

We stand ready to serve as a partner and technical resource to NHTSA as the Agency re-evaluates the SGO's breadth and develops any similar requests in the future. We thank NHTSA for providing us with the opportunity to comment on this information collection request, and look forward to continuing the conversation on this important topic.

¹² See SAE J1698, "Event Data Recorder" (revised Mar. 2017) and Automated Vehicle Safety Consortium, "Best Practice for Data Collection for ADS-Dedicated Vehicles to Support Event Analysis" (Sept. 2020), at 23 (recommending "a recording interval of 5 seconds prior to time zero" and stating that this interval "has been sufficient for collision reconstruction of human driven vehicles").

Best regards,



Charity Allen

Deputy General Counsel, Regulatory