Remarks prepared for

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For

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Good afternoon. Thank you for the invitation to be here.

Thank you, Tom. These are positive days in the traffic safety business. Our most recent numbers show a continuing dramatic reduction in the overall number of highway deaths.

Our analysis reported early this year projected that traffic fatalities have declined and will be under 34,000 in 2009, the lowest annual level since 1954. In terms of lives lost per 100 million vehicle miles traveled, the number of deaths dropped to 1.16, again the lowest level on record. This was almost a 9 percent improvement from the year before.

We are very encouraged by the numbers, but, we must do more. The loss of nearly 34,000 people in traffic-related crashes in a single year represents a serious public health problem to our nation.

As you know, the work we do at NHTSA touches on a broad spectrum of programs. We believe these programs, both vehicle related and behavioral, are making a difference in saving lives and reducing injuries to the American public.

At NHTSA; we are a data-driven organization and we believe in sound science. We use the data and science

to make informed decisions about what programs to support or what actions to take to reduce the high toll that traffic crashes have on the American public.

It took us years of research and outreach to convince the American public that crashworthiness was an essential part of a vehicle purchase decision—that they should learn and care about safety. And they got it.

Today, the 5-Star Government Ratings program is well-known and used by vehicle manufacturers to promote the sale of their products.

But, we're on the threshold of a new era, where the next generation of advanced vehicle safety technology aims to prevent crashes from occurring, or alternatively, automatically take action to reduce crash severity.

How we evaluate these technologies, how we implement and regulate them, how we convince the public they need these technologies are just some of the questions we are dealing with at NHTSA.

We are actively working on crash avoidance technologies and believe they offer great hope for safety in the future. Vehicle-based technologies such as Electronic Stability Control, Forward Collision Warning Systems, and Lane Departure Warning Systems will provide drivers with help when they need it most.

There are many more new crash avoidance technologies that are currently being introduced to the fleet or that we are evaluating for future potential injury reduction benefits.

We prioritize these by looking at the crash types that each technology might address. We know that the rear-end crashes represent the largest number of crashes. We believe that Forward Collision Warning Systems and Crash Imminent Braking have a significant potential to reduce that particular type of crash.

On the other hand, intersection crashes tend to be more severe, so our hope is that in the future V2V and V2I technologies can play an important role to mitigate those crashes.

Other technologies have the potential to address many of the different crash types. For example, I'm thinking specifically about advanced alcohol detection technology, which is being developed under a cooperative research effort between NHTSA and the auto industry. This is a vehicle-driven technology aimed at detecting alcohol impairment before the vehicle is allowed to move. The challenge is to make it reliable and cost-effective.

The one thing we know for certain is that the answer to every question we pose about any technology will be

answered based on: good data, science, and engineering.

Notice I said good data first. As you all know, without good data you cannot develop effective countermeasure technologies. What are some of the data sets we use to make our evaluations?

Our first data source is the Police Accident Report (PAR), which supports our FARS and GES data sets. Data is collected after the crash occurs and in both FARS and GES is limited to whatever information is collected on the Police Accident Report. In the past,

we have used this data to estimate the target populations for these safety technologies. However, this data was designed for obtaining high level statistical descriptions on fatal and injury crashes.

Another kind of data we use is the NASS CDS. It contains much more detail about the crash because it begins with the PAR, and is further enhanced with the follow-on investigation conducted. The CDS data was designed to analyze vehicle crashworthiness and occupant injuries.

A third source of data we rely on is On-scene data from crash causation studies. In order to obtain more accurate pre-crash information, a new methodology was developed for the Large Truck Crash Causation Study and duplicated in the National Motor Vehicle Crash Causation Survey for passenger vehicle crashes. Our researchers traveled to the scenes of crashes and were able to collect data – scene evidence and driver interviews – before evidence disappeared or memories faded.

And, when installed in a vehicle, Event Data Recorders can provide us with vehicle information

when a crash occurs – information such as engine speed, brake switch status, and delta v.

Naturalistic Data is the best opportunity that we have to obtain the most detailed information about what was happening just prior to the crash. It is especially useful for studying driver behavior. The advantages of naturalistic data go well beyond studying crashes.

Naturalistic Data offers some unique advantages to researchers and regulators alike. For starters, it offers exposure data: it shows us what is going on in the real world. It allows us to see how drivers are similar and

how they differ. For example, how do drivers change their behavior when distracted, fatigued, or impaired?

Naturalistic data helps us with benefits estimations. It helps us refine target populations that are estimated using PAR-based data.

This type of data can help us learn about the role of behavioral issues in driving—issues like fatigue, alcohol, and distraction. It helps us answer the question: how often are people engaging in specific high-risk behaviors? It can identify changes in driving behaviors to help with detection technologies.

What do I mean by that? For example, naturalistic data can show us if a fatigued or inebriated driver behaves differently behind the wheel. Is he or she struggling to keep his eyes open? So then, to continue the example, we can assess the potential benefits of a technology that can monitor a driver's eye closures.

Another distinct advantage of naturalistic driving data is its re-usability. It is literally an endless data bank to reduce and or analyze. We can reuse the data sets for years, going back in and asking different questions to answer the new high-priority questions. We can

reevaluate the data for safety benefits estimations to compare, for example, enhancements to the crash avoidance algorithm.

Even though we can map crash avoidance technologies to their corresponding crash types to estimate target populations, better effectiveness estimates are possible by studying specific crash scenarios that are captured using naturalistic data. This helps us to refine our target populations for the cost/benefit analysis and it informs our regulatory decisions.

The SHRP 2 study will include vehicles equipped with advanced safety technologies and should help us better understand their benefits in the field.

This last point leads right into an important distinction of naturalistic data. It's the level of fidelity: Even the best simulators are still just that—simulations.

Of course, simulators offer up a level of experimental control we don't have in naturalistic data. While naturalistic data provides a glimpse into the real world, there is little to no experimental control. This

limits whether we can answer specific research questions. For example, if none of the drivers (or an inadequate number) use hands-free devices, the naturalistic data cannot tell us the relative risk of hands-free vs. hand-held.

Naturalistic data tells us what is going on in the real world. Simulators tell us how drivers will react to a specific situation or stimulus. At NHTSA, we look at all the data sets in our research, depending on the research question. We'd like to use naturalistic data to help make simulations more realistic. We can identify high-risk situations, or the situations where

drivers are more likely to engage in a certain behavior, and model scenarios after those.

At the risk of repeating myself, I want to conclude by emphasizing that timely, accurate, and accessible data, is the lifeblood of our safety work at NHTSA. Naturalistic Data is a critical piece of that work. As our data improves, so will our safety programs. As those improve, more lives will be saved.

Thank you.