Final Minutes of the Fourth Meeting of the Blue Ribbon Panel for Evaluation of Inflatable Restraint Performance-Field Data Collection and Analysis

January 28, 2002

Chairperson, Dr. Susan Ferguson, Senior Vice President, Research, of the Insurance Institute for Highway Safety (IIHS) called the meeting to order at 1:15 P.M. at the Miami Airport Marriott in Miami, Florida. All panel members and observers were present with the exception of member Dr. Maria Segui-Gomez and observers Mr. Chip Chidester and Mr. Robert Strassburger. An attempt was made to have Dr. Segui-Gomez participate by phone, but apparently she had to leave the country for a family emergency.

Dr. Ferguson asked for an around the table introduction since several guests were in attendance. George Bahouth and Jessica Steps introduced themselves as George Washington University Doctoral Candidates working with Dr. Kennerly Digges. Other panel members and observers in attendance, as noted above, introduced themselves.

Dr. Ferguson asked if everyone had a chance to review the draft minutes of the third meeting. There were no comments, so Dr. Ferguson entertained a motion for approval of the draft minutes as written. It was so moved and the draft minutes were approved by unanimous voice vote.

Dr. Ferguson asked Tom Carr to update the Panel on progress for the data collection efforts. Tom and some of the BRP members had visited the new PSU for Dade County, Florida (all of the County, except the city of Miami) the morning of January 28, prior to the meeting. The team leader is Alan Pagels; he comes from the existing NASS PSU in Flint, Michigan. The other crash researcher is Felix Neco. Felix has completed 2 weeks of training at TSI in Oklahoma. The PSU is working with 7 different law enforcement jurisdictions and over 50 medical care facilities. Bob Woodill, from Veridian Engineering, which is the NASS Zone Center contractor, was also in town to ensure that startup activities are going smoothly.

Alan and Felix have investigated 5 Pilot cases to date. Tom said that the Pilot cases would be shared with the Panel members when they are complete. Panel members on the PSU visit were run through one of the five cases in its current state of completion.

Some panel members were interested in the ability of investigators to read out Event Data Recorders (EDRs) that are resident in many of today's vehicles. The Dade County team has not been equipped with the EDR readout equipment as yet, but it is on order. Apparently, the current state of affairs with the NASS teams is that they can read out the EDR in GM and some Ford vehicles directly and that the EDR in other Ford vehicles can be downloaded, but the data must be sent to Ford for translation. Many other vehicles are equipped with EDRs of various levels of sophistication, but the manufacturers have not been forthcoming with means to read out the data. Tom said that the Alliance would

convene a meeting in early February to discuss EDR issues among the Alliance members. Vern Roberts said that NHTSA, ATA and others have ongoing efforts in this area. Tom asked for input on these efforts. Don Bischoff said that John Hinch was the person at NHTSA that was in charge of the Working Group looking at the issues concerning EDRs. The Panel has been concerned from the outset that it will be extremely difficult to evaluate the role of many advanced air bag technologies (dual level inflation for example) in injury mitigation or exacerbation without the EDR readout.

Tom said that the other two new PSUs were in about the same state of readiness. Those investigators that require training have been attending TSI. Preliminary arrangements for cooperation with law enforcement and medical facilities have been made and pilot case investigations initiated. The other two new PSUs are:

- Helena, Alabama (5 counties in central Alabama). The team leader has 2 years of NASS experience and the researcher has 1.5 years of NASS experience.
- Richardson, Texas (Dallas County). The team leader has 2 years of NASS experience and the researcher is a retired EPA chemist.

When it was noted that several of the pilot cases investigated to date at the Dade County PSU involved rental vehicles, a discussion ensued as to the desirability of having too many rental vehicles in the sample. Some members believed that this was problematical because it was often difficult to conduct interviews with the occupants (they may have left the area prior to selection of the case for investigation). It was also noted that Rental Companies policy to repair or scrap vehicles quickly may limit access to damaged case vehicles. Others believed that it will eventually be shown to be an asset, since the rental fleets will provide a rich source of current model year vehicle crashes (many of the new air bag technologies are only now showing up in the new vehicle fleet; whereas the sample will include vehicles 0-4 model years old). It was agreed to revisit this issue at a later date when the PSU has more experience with their ability to secure the requisite data on rental vehicle crashes.

Tom said the MOU between the Alliance, NHTSA and the contractors has not been signed. It is still under review by Counsel at the respective parties.

Tom reviewed the case selection criteria: 0-4 model years old, frontal damage, case vehicle towed from scene and air bag deployed. This touched off an extensive discussion of the sampling plan and the desire to ensure that the acquired cases are relevant to the analyses to be conducted. Some believe that cases with secondary crash events, such as rollover, should be excluded. Others pointed out that as we expand the selection criteria, there might not be sufficient cases in the study area to keep two investigators busy. Dr. Carra cautioned that the ability to make national projections could be compromised if we drill down too far with our case selection criteria.

Dr. Edwards asked: “What questions are we trying to answer with the data analyses?” Dr. Ferguson responded that there are two principal uses of NASS data: case-by-case analyses and analysis of overall effectiveness of occupant protection using the complete

NASS file. Various panel members had different ideas about exactly what effectiveness analyses would need to be conducted. Some argued for a relative comparison of advanced air bag systems to pre-depowered air bags. Others argued for effectiveness in specific crash configurations (e.g. pure frontals or only moderate or severe frontals) or effectiveness by body region (e.g. effectiveness for mitigation of head or chest injury). Ultimately it was agreed that the amount of data that was available would largely define the sophistication of the analyses that could be performed.

Don Bischoff said that the Panel should strive to avoid the use of the term depowered for describing advanced air bag systems. He pointed out that air bag aggressivity is influenced by many air bag system design variables. It was agreed at the last meeting that we would use the term "post 1998 model year" since none of the discussed terms seemed to adequately describe what we were dealing with: a mixture of depowering; use of advanced technologies, i.e. dual level inflation; and other system changes, i.e., raised deployment thresholds, different types of crash sensors, locations, arrays and crash sensor algorithms, etc

Dr. Ferguson asked Dr. Carra about the status of NHTSA's Report to Congress on the effectiveness of air bags. Dr. Carra said that the agency had decided to combine the 5th and 6th reports and that a draft of the report was in final review. Dr. Carra reviewed with the BRP a general summary of the results contained in the report. Overall, there has been very little change in effectiveness from the earlier reports. This lack of change is across all types of crashes (pure frontal, frontal and all crashes) and for both drivers and front seat passengers.

Dr. Ferguson reviewed the status of the BRP web site. The site has been on line for several months now. Several documents have been added to make it complete and the layout has been revised somewhat to make it easier to find things. Dr. Ferguson said that the minutes from the third meeting, which the BRP had just approved, would be added when she returned to the office.

Dr. Digges said that one of his graduate students had struggled mightily to cull particular cases on rollover from the NASS electronic files. Out of frustration with the difficulty in retrieving specific cases from NASS, he asked his graduate students to develop a quasi-automated front-end computer program for producing case summaries from the full NASS file. The front-end generates Excel spreadsheets of data for a group of cases and two page summaries with pictures and scene diagrams for each case of interest. The research is being funded by a gift to GWU from the Santos Family Foundation. Dr. Digges said that they intend to continue to develop the front-end in conjunction with the rollover project. They also intend to apply it to other crash configurations and are not seeking funding at this time. Because of the intricacies of the NASS files, he suggested that NHTSA be the proprietor of such a front-end. He plans to meet with NHTSA to provide assistance in this regard.

Dr. Digges asked George Bahouth, a GW Doctoral Candidate, to brief the BRP on the front-end computer program developed for sorting through NASS cases using specific

NASS variables of interest. This program uses SAS to access the NASS file and create a new database with Sequel. This allows the user to construct spreadsheets with any of the NASS variables displayed for cases that meet the search criteria. Mr. Bahouth constructed several spreadsheets in real time for the Panel. He also handed out hard copies of a prior search that included 2 page summaries of 14 rollover crashes involving SUVs. The summaries included extensive NASS data on the crash as well as scene diagrams and color pictures of the crash scene and vehicle damage.

There was a discussion of whether the GW program is a true generic "front- end search engine" for NASS. There seemed to be agreement that the GW system would meet the analysis needs of the Panel. Dr. Digges said that the program could be made available to the Panel. All agreed that we sorely need a means for selecting and reviewing cases based on some particular case variables.

The BRP supported early and periodic public disclosure and appropriate meetings with members of congress and policy level members of DOT, NHTSA to report the progress on implementation, and results to date. Tom Carr volunteered to talk to the Alliance about how they would like to proceed.

There was a discussion of the appropriate time and venue for the next meeting of the BRP. It was decided that it would be instructive to hold the next meeting at one of the two NASS Zone Centers so that the BRP could review the case sampling scheme, quality control procedures and other aspects of the NASS electronic system. The meeting was set for March 11-12, 2002 with the site to be determined (preference was expressed for San Antonio over Buffalo). It was also decided to hold the next full meeting of the Panel in Washington, D.C. July 29, 2002. (Meeting was ultimately moved to August 12 due to scheduling conflicts.)

Dr. Ferguson entertained a motion to adjourn and it was so moved and unanimously approved by voice vote.