Rationale for not including provisions for low pressure system

1. An overall policy and specific provisions for detection of leakage of hydrogen fuel in the enclosed and semi-enclosed areas have already been established. These provisions require shutoff of the fuel system and a warning to the driver in the event that hydrogen gas reaches 4% concentration levels in those areas. The concern with downstream pressure limits is to prevent leaks and possible bursts. The provisions mentioned in this paragraph (i.e., shutoff at 4%) already address the leakage scenario. The following rationales will explain that it's not necessary to regulate low pressure system for burst.
2. It is not necessary to regulate hydrogen systems down-stream of the compressed hydrogen storage system based on the fact that the systems are less than 25 bar-liters as used in the European Pressure Equipment Directive (PED). While the survey of all manufacturers is incomplete, it seems highly probably that all current and foreseeable hydrogen systems (even for buses) are well less than 25 bar-liter trigger-point of the PED. These systems, therefore, do not contain adequate "energy" to pose a significant hazard. Even with an ultra-conservative burst calculation, the real risk is within a couple feet of the burst.
3. While injuries are possible if people are within close proximity and underneath of the vehicle floor of the low pressure hydrogen systems, the likelihood and severity of such events can be effectively managed through the use of "standard engineering practice" (SEP) as defined in many existing standards such as SAE J2579. In the USA, the occupation safety and health agency (OSHA) work rules would require lock-out; tag-out (LOTO) before any repairs on the low pressure system itself. We expect that other countries would have similar safety procedures when servicing pressure systems.
4. Currently, there are other critical components of the fuel system that would result in worse consequences in the event of malfunction such as fuel shut-off valve or thermal PRD – and we do not have any provisions for those.
5. In our opinion, the vehicle's safety is being addressed at the system level and that subjective "design guidance" requirements, component-level requirements, and in some cases design-specific requirements are appropriate for industry codes and standards, which provide a valuable resource to help manufacturers design their products in accordance with best industry practices. Thus, industry codes and standards are ideally suited for this type of requirements. It is not necessary for government regulations and this GTR to micro-manage specific component designs by including such detailed provisions.
6. We suggest providing this requirement in Part A of the GTR as a recommended advisory – without including it as specific regulatory requirements in Part B of the GTR.