UNSCOE TDG 51st Session – Discussion of Papers

UNSCOE TDG 51st Session – Day 1 Summary

The Chairman welcomed delegates to the first meeting of the 2017-2018 Biennium. The Secretariat noted a number of leadership changes have occurred at the UNECE and some positions remain open. Further, Mr. Kervella explained that in December, he will reach the mandatory retirement age for the UN. While he is working with the UN Admin to extend the age to 65, a positive result is in doubt. Therefore, he explained this may be his last session. Mr. Kervella indicated he would update the Subcommittee as soon as a final decision had been made.

As the Explosives Working Group (EWG) is scheduled to occur parallel to the plenary session, the morning session was dominated by a review of papers that are to be reviewed by the EWG.

Explosive Issues

INF6 – Manual of Tests and Criteria, Proposal to amend section 10.3.3.4 – Sweden proposed to clarify the applicability of Test Series I. *The paper was referred to the EWG.*

INF19 – Recommendations for improvement of Series 8(c) Koenen Test – IME proposed to develop a modified Koenen Test for ANEs and use the Minimum Burning Pressure (MBP) as an interim alternative test. *The paper was referred to the EWG.*

INF28 – Comparison of standard detonators – The Netherlands compared test results between the USA and European detonator. *The paper was referred to the EWG.*

WP14/INF33 – New UN entries for electronic detonators – AEISG proposed new entries for detonators. In INF 33, Sweden suggested the new detonators should be covered under the existing entry DETONATORS, ELECTRIC but add “or ELECTRONIC”. Many in the Subcommittee supported the approach in INF33. The Netherlands suggested a comprehensive review could be made on all detonator entries. *The papers were referred to the EWG.*

WP3/INF9/INF24 – Stability tests for industrial nitrocellulose – Germany proposed including an ignition temperature and Bergmann Junk tests to the UN Manual for applicable test methods. IN INF9, CEFIC provided additional support for the Germany proposal. SAAMI supported the proposals in WP3 in principle, but added in INF24 consideration of Methyl Violet Paper Test instead of the Bergmann-Junk test. AESIG and the Netherlands supported the proposals in principle, but agreed with SAAMI that alternative tests exist. *The papers were referred to the EWG.*

INF10 – Classification of desensitized explosives for the purpose of supply and use according to UN GHS Chapter 2.17: Test Results on industrial nitrocellulose – CEFIC proposed to use data

collected by the Germany competent authority BAM for the classification of industrial nitrocellulose products. *The paper was referred to the EWG.*

WP19/WP20 – Application of security provisions to explosives – The UK proposed expanding the security provisions of 1.4 to a larger volume of Class 1 materials. Both WP19 and WP20 provide proposals to achieve that end. Spain supported the papers but added a number of the Div. 1.4 should not be excluded from the security provisions including 0431 and 0432. Sweden also supported the work and felt additional discussion was needed. The US supported the proposals in WP19 but indicated additional discussion was needed to include all Div. 1.6 materials. SAAMI also supported the effort but preferred the positive reference (UN number that are included) vs. an exclusion list (UN numbers that are not included). Norway also supported expanding the applicability of the security requirements. *The papers were referred to the EWG.*

INF15 – Status of the work of the informal correspondence group on the revision of GHS Chapter 2.1 – Sweden updated the Subcommittee on the work indicating two different approaches are emerging. Sweden proposed the IWG could meet after the EWG concluded this week. The Netherlands supported the effort and noted any results of the discussion could be given on Day 5. *The IWG will be held on Day 4 and results will reported on Day 5.*

WP23/INF34 – Transporting fireworks in small quantities – Switzerland pointed out many consumer fireworks are purchased online and shipped via post. They proposed a new special provision for UN0337 that would enable such materials to be offered under the Limited Quantity provisions. Germany noted the difficulties with applying LQ to Class 1 and suggested a different approach may be necessary to achieve the desired result. The US shared Germany's concern and added when other Class 1s were extended to LQ, a review of what the article did outside the package was considered. The US supported the discussion but encouraged the EWG to consider factors beyond just the packaging. ICAO spoke on behalf of the UPU and shared that the current UPU provisions do not allow fireworks in the Post for safety AND security reasons. Therefore, they were strongly opposed to the proposal. The Netherlands added they have experienced problems with fireworks in the post and also opposed the proposal. Sweden felt any discussion of exceptions for Class 1 should be held before a specific exception is provided for fireworks. Spain did not support the proposal. The EU added the European Aviation Safety Administration has received several reports of incidences of these types of fireworks and indicated if the Subcommittee supported the approach, the EU felt conditions should be added to prevent their transport by air. France pointed out these types of materials are already being shipped by air in the post today illegally. Therefore, it is not just an issue of providing an exception or not. It is how to we prevent the illegal transport today. Belgium and the UK also opposed the proposal. SAAMI explained that ammunition does not travel by post and therefore the conditions applicable to ammunition are different than those discussed in this document. China commented additional testing would be needed before they could support the proposal. Although the Subcommittee did not generally support the proposal, the Chairman suggested the EWG could discuss a potential way forward. *The paper was referred to the EWG.*

INF7/Add.1/Add.2 – Revision of the Manual of Tests and Criteria: Section I, Part I, Part II – The Chairman of the EWG indicate the group will review revisions to the UN Manual in the context of the GHS. The Chairman did not expect the work to be completed during this session. *The papers were referred to the EWG.*

Non-Explosive Matters

WP2 – Clarification of special packing provisions PP13 and PP33 – Germany proposed clarifying that single packaging is not permitted for UN2870 and UN1308. Sweden did not agree that clarification was needed. Austria did not oppose the proposal but suggested the current provisions were not adequate to protect safety. The Netherlands agreed with Sweden, but added if the proposal was adopted, composite packaging should be added. Poland commented adoption of this proposal would have a consequential impact to similarly worded provisions elsewhere in the Model Regulations. The US voiced support for reviewing the packing provisions as they believed single packagings were authorized but agreed with Austria that the provisions may not be adequate. The UK felt strongly the existing language is appropriate with no amendments required. France agreed with the UK adding the current wording is very restrictive. *Based on the discussion, Germany withdrew the paper and requested the report indicate that only combination packagings are authorized for UN2870 and UN1308. They also indicated they would return at a future session with an additional paper to discuss the topic.*

WP5 – Exemption in special provision 375 for environmentally hazardous substances of UN3077 and 3082 – Switzerland proposed modifying SP375 to clarify use of the exception is optional. Germany did not feel clarification was needed. Poland supported the proposal voicing confusion from their industry. The US agreed with Germany and opposed the proposal. The Netherlands supported the language proposed in proposal 1(b). The UK stated that proposal 1(b) suggests additional requirements are necessary to use the exception. Canada supported Proposal 1(a). Austria supported proposal 1(b). Spain agreed with the UK. Sweden, COSTHA, Portugal, DGTA and the Republic of Korea also opposed the language in proposal 1(b). *Based on the comments from the Subcommittee, Switzerland withdrew the paper.*

WP10 – Interpretation of special provision 366 – Germany proposed to require additional packaging provisions for damaged or defective mercury-containing instruments and articles. Austria did not believe the proposed language solved the problem in question. The Netherlands supported the proposal. Switzerland stated damaged or defective instruments that are leaking mercury must be consigned as mercury and packed accordingly. They supported the concept of requiring packaging for undamaged articles or instruments to contain mercury if the devices become damaged in transport. The UK agreed with Switzerland that damaged or leaking mercury-containing devices should not be subject to SP366. The UK noted some shippers have identified broken lamps as UN3077 with little or no free mercury still present. The US also opposed the proposal. DGTA suggested clarity was needed on the term “damaged or defective manufactured instruments and articles.” *Germany requested the report indicate that SP366*

should not apply to damaged or defective articles, and indicated they would return to discuss the issue at a further session.

WP12 – Application of packing instruction P003 to large articles – Germany pointed out the current provisions do not permit large UN3164 Articles, pressurized pneumatic above 400 kg to be transported under P003. Therefore, they proposed adding a new packing provision to P003. Sweden supported the proposal but suggested combining PP32 applicable to refrigerating machines. Belgium supported the comments of Sweden. The UK preferred to develop a large packaging instruction to address the problem. The US supported action regardless of whether it was the new PP or a new LP instruction. The Netherlands identified a number of inconsistencies in the proposal and suggested the proposal needed additional work. Switzerland suggested editorial amendments. *Germany indicated they would use the comments from the Subcommittee to prepare a revised document for the next session.*

WP25/INF11 – Classification and packaging for infectious waste of Category A – Canada provided provisions for shipping Category A Infectious waste. The paper was based on discussions from the 2015-2016 biennium and intercessional meetings, however the proposals are from Canada and the UK and do not necessarily address the concerns raised by other delegations. In INF 11, Switzerland provided comments and amendments to the proposals in WP25. Germany was not convinced the paper address their concerns regarding the increased level of safety for Category A materials. They felt the increased testing requirements currently for Cat A should be retained, or additional justification should be made to remove them. Sweden supported the approach in WP25. Austria did not believe a new entry for Animals Only is not needed. They supported WP25 in principle. FAO preferred to include an entry for Animals Only so that it all Category A materials would be handled in the same manner. Australia and Belgium supported WP25. Australia questioned the limit of one inner packaging per each intermediate packaging. Belgium supported Option 1 for sharps. The Netherlands also supported WP25 but felt cushioning material would be necessary. The US voiced support for WP25 but questioned the inclusion of glass as an option as an inner packaging. Norway preferred Option 2 for sharps. The UK addressed the concern voiced by Germany that a reduced risk is not confirmed. Comments from medical resources suggest that these materials do represent a lower risk and thus lesser packaging is justified. *Canada indicated they would revise their proposal and requested a lunchtime working group on Day 3 to further discuss the revised paper.*

INF36 – Classification and packaging for infectious waste of Category A: Fibreboard box moisture penetration test – Based on the proposals in WP25, the UK decided to test fibreboard boxes using liquid. They noted packages with all seems taped took 150 minutes to release 10 L of liquid, while packages where only closures were taped allowed the liquid to leak in 7 minutes. They concluded that all seams deemed not leakproof should be taped. *The paper was referred to the Day 3 Lunchtime Working Group on Infectious Waste.*

INF5 – Corrections to the Model Regulations – The Secretariat pointed out a needed correction in the French text to P410 regarding bags. However, the correction was deemed to be appropriate for both the French and English versions. *The proposal was agreed as presented.*

INF32 – Revision of packing instruction P801 – Canada noted industry confusion as to the applicability of the additional requirements under P801 when used batteries are shipped in open top "battery boxes". They also pointed out the provisions for battery boxes has been removed from P801 in ADR and has been added to P801A. They proposed changes to P801 and recommended the creation of a new packing instruction to cover when the additional requirements are not possible. Germany supported the proposal as written. Austria shared experience with battery boxes, noting that practically, it is impossible to meet the new additional requirement 5) in P801. *The Subcommittee will continue to discussion of INF32 on Day 2.*

End of Day 1

UNSCOE TDG 51st Session – Day 2 Summary

Thanks to Dave Boston with IME, the following summary of the EWG papers from Day 1 has been included:

Explosive Working Group

Agenda Item 2: Explosives and related matters

- **UN/SCETDG/51/INF.6 - (Sweden)** Manual of Tests and Criteria - Proposal to amend section 10.3.3.4
    - Plenary: General support for this proposal was expressed by the Netherlands who also noted that any revisions to 10.3.3.4 should also take into account the GHS. It was felt that this could be done during discussions in the EWG.

Action: Referred to the EWG.

    - EWG: Several editorial comments offered to improve wording. Extensive conversation on the status of Test Series 1 and whether it should be mentioned in 10.3.3.4. General agreement that TS 1 is not used for classification but is valuable for hazard assessment and hazard communication (i.e., the GHS). Some discussion of whether TS 1 should be moved from Part I to Part V of the test manual.
      Action: Sweden and USA may have an updated proposal for discussion tomorrow.
- **UN/SCETDG/51/INF.19 - (IME)** Recommendations for Improvement of Series 8 (c) Koenen test

- Plenary: General agreement that the current 8(c) Koenen Test is inappropriate for classifying ANEs; however, Germany and Spain opposed use of MBP as interim fix. EWG to consider if time permits.

Action: Referred to the EWG.

- EWG: Pending

- **UN/SCETDG/51/INF.28 - (Netherlands)** Comparison of standard detonators
  - Plenary: No comments from plenary.

Action: Referred to the EWG.

- EWG: Some believe that impact of changing standard detonator to something like the "alternative" detonators in INF.28 would be greater on the chemical industry rather than the "intentional explosives" industry. It was also observed that n.e.w. of detonator is more likely to impact chemical industry and that physical aspects like the actual explosives used, shell material, shell design (dimpled bottom) may have more impact on the "intentional explosives" industry. The EWG chair noted that the EWG has to keep in mind that, whether true or not, USA and EU standard detonators are considered equal in the test manual.
  Action: The work will continue.

- **ST/SG/AC.10/C.3/2017/14 - (AEISG)** New UN entries for electronic detonators and **UN/SCETDG/51/INF.33 - (Sweden)** Comments on ST/SG/AC.10/C.3/2017/14 about new UN entries for electronic detonators
  - Plenary: General support for recognizing electronic detonators as an article distinct from electric detonators but strong preference to proposal by Sweden to expand current electric detonator entries to include electronic detonators rather than the AEISG proposal to create 3 new entries. Some concern expressed for potential confusion of "electric" vs "electronic" with a recommendation to consider using "digital" to describe the latter. Also, concern expressed over "pre-programmed electronic detonators" and how they should be addressed in the UN system. IME expressed general support and suggested that detailed discussion of AEISG's concerns might assist the EWG in making a recommendation. SAAMI was generally favorable expanding current entries rather that creation of new ones, but reserved final assessment until discussion in EWG.

Action: Referred to the EWG.

- EWG: Many in the EWG preferred INF.33 proposal (expand current entries); however, the EWG agreed that electronic detonators need to be distinguished from electric detonators for downstream uses (i.e., storage, handling, use) and not so much for transport safety. The EWG noted that confusion can be expected when electronic

detonators (described as such in product identification information on the package) are labeled electric detonators. Confusion also arises when UN numbers are used for purposes other than transport safety, for which they were designed. Due to confusion between "electric" and "electronic" it was suggested to use "digital" to describe the latter. The EWG agreed that distinction needs to made, but could not come to consensus on how to do that.

Action: AEISG still prefers separate entries and, taking account of the concerns and comments of the working group, may return with an updated proposal.

- **ST/SG/AC.10/C.3/2017/3 - (Germany)** Stability tests for industrial nitrocellulose
  UN/SCETDG/51/INF.9 - (CEFIC, WONIPA) Stability tests for industrial nitrocellulose
  UN/SCETDG/51/INF.24 - (SAAMI) Stability tests for industrial nitrocellulose
    - Plenary: Statements of support from the Netherlands and AEISG. Concerns expressed about placement of proposed test in test manual appendix 8 vs. elsewhere in the test manual.

Action: Referred to the EWG.

    - EWG: Pending

- **UN/SCETDG/51/INF.10 (UN/SCEGHS/33/INF.04) - (CEFIC, WONIPA)** Classification of desensitized explosives for the purposes of supply and use according to UN GHS paper chapter 2.17: test results on industrial nitrocellulose
    - Plenary: No comments from plenary.

Action: Referred to the EWG.

    - EWG: Pending

- **ST/SG/AC.10/C.3/2017/19 - (UK)** Application of security provisions to explosives
  ST/SG/AC.10/C.3/2017/20 - (UK) Application of security provisions to explosives
    - Plenary: General agreement that this is an important issue that requires some action. Concern expressed by Spain, Sweden, Norway and others about whether all of the items identified in the UK proposal should be included and whether some excluded items should actually be considered security risks and; therefore, included. USA was concerned about proposal in 2017/20 covering all of Division 1.6 and suggested establishment of a threshold to determine when security provisions might be appropriate. SAAMI was generally supportive but for the indicative list, prefers a positive listing (what is subject to Chapter 1.4) rather than a negative listing (what is not subject).

Action: Referred to the EWG.

- EWG: General support for INF/20 (i.e., include all of Division 1.6). IME noted that the Table 1.4.1 is a list "indicative" of those explosives that are subject to the security provisions of Chapter 1.4 and that, as such, the list should be positive (i.e., list those entries to which the provisions apply), rather than negative (exclusion list) as proposed by UK. SAAMI agreed with this position. It was generally felt that entries that are freely available are not security risks and shouldn't be subject to Chapter 1.4 requirements. AEISG suggested that this might be the way the indicative list should read, i.e., applicable to all class 1 except those freely available. That would then leave the decision to the authorities as to what "freely available" means and what items in their jurisdiction should be subject to Chapter 1.4.
  Action: UK will consider the EWG comments and return with an updated proposal.

- **UN/SCETDG/51/INF.15 (UN/SCEGHS/33/INF.07) - (Sweden)** Status of the work of the informal correspondence group on the revision of GHS Chapter 2.1
  - Plenary: Discussion as to when requested EWG review might take place. EWG Chairman advised that it would most likely be Wednesday afternoon and/or Thursday during the informal portion of the EWG meeting.

Action: Referred to the EWG.

- EWG: Pending

- **ST/SG/AC.10/C.3/2017/23 - (Switzerland)** Transporting fireworks in small quantities
  - Plenary: No support for the proposal by Switzerland but sympathy for the issues raised in this document (i.e., distribution of fireworks and other dangerous goods on the Internet and how to adequately control such to ensure transport safety).

Action: Referred to the EWG.

- EWG: Pending

Agenda Item 10(d): Use of the Manual of Tests and Criteria in the context of the GHS

- **UN/SCETDG/51/INF.7 (UN/SCEGHS/33/INF.3) - (EWG chair)** Revision of the Manual of Tests and Criteria: Section 1
  UN/SCETDG/51/INF.7/Add.1- UN/SCEGHS/33/INF.3/Add.1 - (EWG chair) Revision of the Manual of Tests and Criteria: Part I: Section 10
  UN/SCETDG/51/INF.7/Add.2 - UN/SCEGHS/33/INF.3/Add.2 - (EWG chair) Revision of the Manual of Tests and Criteria: Part II: (sections 20 to 28)
  - Plenary: No comments from plenary.

Action: Referred to the EWG.

- EWG: Pending

Day 2

INF32 – Revision of packing instruction P801 – The Subcommittee concluded the discussion of INF32. The US generally supported the proposal with minor amendments. PRBA noted the proposals are consistent with current industry practices. Both the US and PRA pointed out clarity was needed to determine which packing instruction applied for used batteries. Sweden supported the proposal and pointed to SP598 in the ADR that could also be considered. The UK reminded the Subcommittee that the term "box" is used in the new P80X. A "box" has 6 sides. Thus packaging authorized in P80X would be an increased level of packaging than the current P801. While supporting the effort, the UK also questioned whether the packing instruction was overly restrictive based on current technology. Belgium agreed with comments of previous speakers. *Canada indicated they would return at the next session with a formal proposal.*

WP27/INF25 – Lithium battery test summary document – MDBTC indicated they discovered some anomalies when preparing test summaries that meet the requirements of 38.3.5. They pointed out paragraph 38.3.5(a) applies to cells, batteries, and products, however application of the test summary to products is difficult. They provided an example summary as well as questions that should be asked when developing an example summary. MDBTC requested a lunchtime working group to discuss the issues raised in the paper. In INF25, PRBA supported the comment by MDBTC that noted the difficulties in producing test summaries for cells or batteries manufactured prior to January 1, 2019, including the fact that some manufacturers may no longer be in business. Therefore, they requested the test summary only apply to cells and batteries manufactured after January 1, 2020. The UK acknowledged the challenges noted by MDBTC and PRBA and welcomed additional discussion. Germany pointed out transitional provisions already exist for ADR (mid 2019) and IMDG Code (2020). They were not sympathetic to the grandfather clause, however, noting cells and batteries today must pass the UN38.3 so the information should already be available. The US indicated they were willing to consider an extension to the test summary, but were not in favor of applying the test summary to new cell/battery designs only. IATA shared the opinion of others the test summary requirement should apply to all cells and batteries including those currently in manufacture adding the test summary is proof for the shipper that the cell/battery has been successfully tested under UN38.3. France agreed with MDBTC and PRBA that the content of the test summary should be reviewed for completeness, but they agreed with previous speakers and were not in favor of exempting cells and batteries manufactured prior to 2019 from the test summary requirement. France pointed out the test summary contains information that is already required to be collected and provided to competent authorities upon request. The difference with the test summary is simply the form. The Subcommittee agreed to a lunchtime working group on Day 2. The topics will include:

- Understandability of the test summary;

- Transitional period extension;
- Grandfather consideration.

Lunch time working Group – The Vice Chairman summarized the lithium battery test report working group.

- A grandfather clause was agreed to not require a test summary for cells/batteries manufactured prior to 2003 as these would have to be retested to be shipped.
- The group agreed to provide an extended transition period to 2020 for the test summary. This decision is requested to be in the report so that it may be communicated to the Modal bodies.
- The group also agreed to revised test to clarify the elements of the report.

An INF will be prepared for discussion later in the session.

WP16/INF3 – Report of the informal working group of lithium batteries on its first session of the biennium 2017-2018 – France presented the report of the first session of the Informal Working Group on Lithium Batteries. They explained the mandate to the group is to review and identify the inherent hazards presented by lithium batteries, and then determine how to measure the associated hazards. The Vice-Chairman drew attention to the tables in the Annex that identified the hazards that are relevant to batteries and could be further reviewed. Paragraph 42 identified topics to be discussed during a working group session to be held at the end of the Day 2. INF3 included the list of participants who attended the meeting. France also draw attention to INF26 for possible next steps. They also reminded the Subcommittee the work is still in a beginning stage and the next steps of the group should include sharing existing data and determination of what additional tests may be necessary to limit cost and burden of the effort. *A summary of the Working Group Meeting on lithium battery classification will be provided on Day 3*.

INF26 – Hazard based classification of lithium batteries – investigative testing to assess their reactivity – France presented a thought starter on how a testing plan could be implemented to determine if the hazards identified by the IWG could be quantified. MDBTC commented the proposed test provisions do not clearly encourage safer battery designs, and consideration should be given to how to regulate a cell/battery that is inherently safer than other battery designs. The Chairman envisioned a potential threshold that could be identified where regulation exceptions could be considered. France commented the testing program would result in data that could then be used to identify such thresholds. If theoretical models were developed before data comparison and testing is generated, the models would be subject to question. Therefore, data should be considered as theoretical models are created. RECHARGE noted much of the burden will be on the industry and they voiced strong support to use existing testing data. Austria commented batteries are inherently reactive, but safer batteries should be encouraged, and they supported the work proposed. *The paper will be discussed during the Working Group on lithium battery classification at the end of Day 2.*

WP6 – Exemption of batteries installed in vehicles under UN3166 – Switzerland proposed adding UN3166 to SP239. Germany suggested a better solution to the issue would be to delete the last sentence in SP239 as the full conditions of batteries installed in vehicles are addressed in SP388. Belgium and the Netherlands agreed with Germany's suggestion. Sweden questioned whether sodium batteries are installed in vehicles. Canada confirmed that sodium batteries are used in vehicles, at least in Canada. They also supported the deletion of the last sentence in SP239 as suggested by Germany. Switzerland questioned whether deletion of the sentence would create a problem in the air mode. Belgium explained that UN3166 and UN3171 are regulated by air and the provisions for those entries address batteries installed in vehicles. France supported deletion of the last sentence of SP239 and they pointed out several additional papers from Switzerland address a similar issue. *The Subcommittee agreed to delete the last sentence of SP239.*

WP8 – Exemption of batteries of UN 2800, 2794, 2795, 3028, and 3496 installed in vehicles – Based on the decision on WP6, the proposal in WP8 is not necessary. *Therefore, WP8 was withdrawn by Switzerland.*

WP11 – Assignment of equipment powered by batteries to UN 2800, 2794, 2795, 3028 and 3496 – Switzerland proposed to include other battery types that could be included in equipment covered under SP388. The US felt the proposal is not necessary given the decisions made WP6 and WP8. Germany indicated the proposal would create a discrepancy within SP388 and therefore should not be adopted. Sweden proposed adding batteries containing potassium should be added to SP388. *Based on the discussion, Switzerland withdrew WP11.*

INF22 – Size of the UN number on lithium battery mark – IATA requested the Subcommittee discuss options for requiring a minimum size of the UN number on the lithium battery mark. The US did not believe a minimum size of the UN number was necessary, stating that the minimum size of the mark already protects hazard communication. MDBTC did not support the minimum size requirement. Belgium pointed out there are many areas in the Model Regulations that dictate sizes. Not having one for this mark may cause industry to ask for one. However, they were not necessarily for or against the idea. *Based on the comments from the Subcommittee, IATA indicated they would not return with a formal proposal unless additional information dictates such an action.*

WP9 – Transport of damaged or defective lithium cells and batteries contained in vehicles and their equipment – Switzerland proposed to permit damaged or defective lithium batteries to be transported separately from a vehicle without a competent authority. Germany indicated the language was a compromise solution to allow the Modes to make decisions on what conditions a competent authority would be required. Therefore, they were reluctant to make any changes to the wording. OICA agreed with the comments from Germany, noting any changes may make the provisions more complicated. Sweden felt once the battery is separated from the vehicle, the provisions for UN3480 and UN3090 would apply. The UK and France also agreed with previous speakers that the proposal was not appropriate. *Based on the discussion, Switzerland withdrew the proposal.*

WP4 – UN3536 and Special provision 389 – Switzerland identified a number of questions regarding the new entry UN3536 LITHIUM BATTERIES INSTALLED IN A CARGO TRANSPORT UNIT. These questions identified confusion as to how a shipper would choose the proper entry for their product, UN3481, UN3091, or UN3536. Discussion of each proposal is covered below:

- Proposal 1 – The Netherlands questioned whether a battery installed in a vehicle should be considered a lithium battery installed in a cargo transport unit. The US opined the current text of SP389 covers the issue and thus did not support changes to SP360. Germany answered the Netherlands stating that a Cargo Transport Unit included the term vehicles. Germany supported the modification in the proposal. France did not support the proposal suggesting the scenario presented is no different than a road tank vehicle being transported as cargo by sea. PRBA indicated they were not in favor of the proposal. The UK agreed with France. IATA pointed out it might be difficult for a shipper to find the entry UN3536. They supported adding the statement in SP360 but recommended removing "including vehicles". The US did not feel references to entries should be added to all special provisions. Switzerland reiterated that a cargo transport unit is a vehicle and thus the entry must refer to vehicles. Austria supported the proposal. Belgium generally supported the proposal, but agreed with IATA that "including vehicles" should be removed. The UK suggested a resolution would be to change the proper shipping name to MULTI-MODAL FREIGHT CONTAINER. France provided additional suggestions to revised text. The Subcommittee continued discussion of the best way forward. *By majority vote, the proposal was adopted as amended.*
- Proposal 2 – Similar to Proposal 1, Switzerland suggested adding language to SP388 as to when UN3536 was applicable. The UK did not support the proposal and indicated the reader would not look for clarification on this point by looking at SP388. The Netherlands and the US agreed with the UK. Germany felt the proposal had merit. Sweden also supported the proposal. *By majority vote, the proposal was adopted as amended.*
- Proposal 3 – Switzerland proposed adding SP360 to UN3536. The US felt it was redundant and unnecessary to make reference to a special provision that points the reader back to the entry that applies. Belgium agreed. *Switzerland decided to withdraw Proposal 3.*
- Proposal 4 – *Switzerland withdrew the proposal.*
- Proposals 5 and 6 – Switzerland proposed adding clarity that would cover how to handle damaged or defective lithium batteries in the Unit. But suggested proposal 6 may be a more appropriate approach. Germany and the US opposed either proposal. *Based on the discussion, Switzerland withdrew the proposal.*

The remaining proposal will be discussed on Day 3.

End of Day 2

UNSCOE TDG 51st Session – Day 3 Summary

Thanks to Dave Boston with IME, the following summary of the EWG papers from Day 2 and 3 has been included:

Agenda Item 2: Explosives and related matters

- **UN/SCETDG/51/INF.19 - (IME)** Recommendations for Improvement of Series 8 (c) Koenen test
    - Plenary (7/3): General agreement that the current 8(c) Koenen Test is inappropriate for classifying ANEs; however, Germany and Spain opposed use of MBP as interim fix. EWG to consider if time permits.

Action: Referred to the EWG.

- EWG (7/4): After considerable discussion, the working group agreed that the most ANEs can be successfully classified using data from the 8(c) Koenen test, but emulsions, due to their high water content, present a unique challenge and is not suitable for classifying emulsions. IME claimed that this leaves emulsion manufacturers with no acceptable way to qualify their products as Division 5.1 material instead of Division 1.1 explosives. Despite the general agreement by the EWG regarding the unsuitability of the Koenen test to evaluate emulsions, Germany, was remained unconvinced that the Koenen Test needed any work to make it suitable for evaluating emulsions and would like more info on composition and what in that composition contributes to this unique challenge.

AEISG reminded the working group that it had already previously determined that the 8(c) Koenen test is not suitable for classifying emulsions Further, they stated their preference that the MBP added to TS8, not as a replacement for the Koenen test, but as a test that provides additional useful information that could be used in classifying emulsions. There was some support for this from the working group, especially after IME agreed that it would work on some guidance as to what the MPB tests purpose was in regards TS8.

Action: In the end, the working group could find no clear way forward and asked if IME would lead continued work to investigate the possibility of amendments to the Koenen test, to determine suitability of the MBP test as an additional test, and to research other possible tests that could be added to TS8 to aid in classification of ANEs including emulsions. IME agreed that it would work with Spain, AEISG, and others to come up with an acceptable proposal.

- **ST/SG/AC.10/C.3/2017/3 - (Germany)** Stability tests for industrial nitrocellulose
  UN/SCETDG/51/INF.9 - (CEFIC, WONIPA) Stability tests for industrial nitrocellulose
  UN/SCETDG/51/INF.24 - (SAAMI) Stability tests for industrial nitrocellulose

- Plenary (7.3): Statements of support from the Netherlands and AEISG. Concerns expressed about placement of proposed test in test manual appendix 8 vs. elsewhere in the test manual.

Action: Referred to the EWG.

- EWG (7/4): Much of the discussion surrounded the issue of stabilization of NC and the need for such, especially once the NC is dried. The working group agreed that stabilization was required to ensure safe handling of NC but also determined that the 3(c) thermal stability test was not suited for evaluating NC stabilization. The working group concluded that the Bergmann Junk test and the Violet Paper tests were suitable tests for such an assessment and recommended their performance in place of the 3(c) test when classifying NC.

Action: CEFIC will lead an intercessional group to work out details of implementation, test procedures, and placement of the Bergmann Junk test and the Violet Paper test in the Model Regulations and the test manual and will consider some allowance for grandfathering currently existing class 1 NC approvals.

- **UN/SCETDG/51/INF.10 (UN/SCEGHS/33/INF.04) - (CEFIC, WONIPA)** Classification of desensitized explosives for the purposes of supply and use according to UN GHS paper chapter 2.17: test results on industrial nitrocellulose
  - Plenary (7/3): No comments from plenary.

Action: Referred to the EWG.

- EWG (7/4): This proposal will be addressed by the intercessional group discussed in the previous topic.

- **UN/SCETDG/51/INF.15 (UN/SCEGHS/33/INF.07) - (Sweden)** Status of the work of the informal correspondence group on the revision of GHS Chapter 2.1
  - Plenary: Discussion as to when requested EWG review might take place. EWG Chairman advised that it would most likely be Wednesday afternoon and/or Thursday during the informal portion of the EWG meeting.

Action: Referred to the EWG.

- EWG: Pending (to be discussed on Thursday)

- **ST/SG/AC.10/C.3/2017/23 - (Switzerland)** Transporting fireworks in small quantities
  - Plenary: No support for the proposal by Switzerland but sympathy for the issues raised in this document (i.e., distribution of fireworks and other dangerous goods on the Internet and how to adequately control such to ensure transport safety).

Action: Referred to the EWG.

- EWG: The working group provided several recommendations to the expert for Switzerland regarding how it might go about improving its proposal to make it more acceptable to the TDG Sub-committee. It also provided 4 principles that had been used by the working group and SAAMI to develop the final proposal that was accepted by the TDG Sub-committee leading to a limited quantity option for certain small arms ammunition. However, the working group was not optimistic that fireworks could be made to meet these principles and doubted that there would be success of any proposal relating to fireworks.

Agenda Item 2: Explosives and related matters

- **UN/SCETDG/51/INF.15 (UN/SCEGHS/33/INF.07) - (Sweden)** Status of the work of the informal correspondence group on the revision of GHS Chapter 2.1
  - Plenary: Discussion as to when requested EWG review might take place. EWG Chairman advised that it would most likely be Wednesday afternoon and/or Thursday during the informal portion of the EWG meeting.

Action: Referred to the EWG.

- EWG: Pending (to be discussed on Thursday)

Agenda Item 10(d): Use of the Manual of Tests and Criteria in the context of the GHS

- **UN/SCETDG/51/INF.7 (UN/SCEGHS/33/INF.3) - (EWG chair)** Revision of the Manual of Tests and Criteria: Section 1
  UN/SCETDG/51/INF.7/Add.1- UN/SCEGHS/33/INF.3/Add.1 - (EWG chair) Revision of the Manual of Tests and Criteria: Part I: Section 10
  UN/SCETDG/51/INF.7/Add.2 - UN/SCEGHS/33/INF.3/Add.2 - (EWG chair) Revision of the Manual of Tests and Criteria: Part II: (sections 20 to 28)
  - Plenary: No comments from plenary.

Action: Referred to the EWG.

- EWG: INF.7 and INF.7/Add.1 were completely reviewed, some changes noted. The EWG chair will consolidated the changes and produce new working documents for further review. INF.7/Add.2 will be reviewed at a later date.

Day 3

WP4 – UN3536 and special provision 389 – Continued from Day 2. *Switzerland decided to withdraw the recommendations in Proposal 7.*

INF31 – Global Recognition of Pressure Receptacles – EIGA and CGA explained that work is continuing to expand recognition of cylinders, including UN, EU, DOT, and TC cylinders. CGA has submitted a petition for Rulemaking in the US and EIGA has made initial proposals to the Joint Meeting. *EIGA and CGA will update the Subcommittee as the effort progresses.*

WP1/INF39 – Adsorbed gases – exemption for gases of Class 2.2 (not toxic, not flammable) – Germany proposed to modify the exemption in 2.2.2.3 to limit the amount of adsorbed gases that are not subject to the regulations. As it currently reads, the exemption may full deregulate adsorbed gases. In INF39, CGA suggested 4 gases should be included in the exemption. EIGA and Germany indicated additional consideration would be needed to review the INF39 proposal. Germany indicated even a 20 g limit could result in a pressure of 34 bar in a fire. *Germany withdrew the proposal and will work with industry representatives to prepare a paper for the December session.*

WP15 – Acetylene cylinders – standards for the requirements according to sub-section 6.2.1.1.9 – Germany proposed removing the requirement to follow a standard recognized by a competent authority noting such cylinders are already subject to ISO standards. ISO opposed the change noting ISO Standards are not used or recognized in all locations across the globe. If the statement is removed, it may lead to competent authorities reducing the oversight of filling cylinders with a porous material. The US agreed with ISO noting the statement is in a general section that applies to locations where ISO standards are not used. EIGA initially supported the proposal but conceded that if the language was beneficial to others, they would not oppose retaining the language. CGA aligned their comments with EIGA. CTIF indicated that if the ISO standard is not used globally, the language should be retained. The UK agreed with previous speakers. *Based on comments from the Subcommittee, Germany withdrew the proposal.*

WP17 – Update of ISO standards in Class 2 – ISO recommended several amendments and a revision update to ISO standards referenced in the Model Regulations. Proposal 4 was withdrawn. At the prompting of Canada, ISO explained they would like to review ISO 11119-4:2016 again before submitting for review. *Proposals 1-3 as amended, were adopted.*

WP18/INF8 – Miscellaneous amendments to Class 2 – ISO presented 3 proposals for consideration.

- Proposal 1 – ISO recommended permitting additional construction materials for MEGCs. However, they noted aluminum is not authorized for portable tanks. Therefore, they amended their proposal to remove reference to seamless aluminum. Germany, the UK and Switzerland supported the proposal, but Switzerland added an additional amendment. The Netherlands indicated they have had issues with composite cylinders in their country and requested additional justification for including composite cylinders. ISO responded that many of the problems have been with small composite cylinders, and added the UN has already authorized composite

construction of tubes. MEGCs are one use of tubes. ISO further explained the composite cylinder standards are performance standards, not construction standards. *The proposal was adopted as amended.*

- Proposal 2 – ISO explained the marking requirement includes the country of approval. But it is not clear whether the country of approval would be the country that approved the design type or the first inspection. ISO proposed to add a note that explains the country of approval is the initial inspection country. Norway questioned whether the proposed language would be in conflict with 6.2.2.2.5.2.1. The UK supported the proposal. Germany voiced concern that the competent authority authorizing the design and the initial inspection body should not be different. The US agreed with Germany and requested additional time to discuss.
- Proposal 3 – ISO recommended providing a minimum thickness for pressure drums used for the transport of four (4) toxic gases:
    - UN1067 DINITROGEN TETROXIDE
    - UN1076 PHOSGENE
    - UN1975 NITRIC OXIDE AND DINITROGEN TETROXIDE MIXTURE
    - UN3057 TRIFLUOROACETYL CHLORIDE
- ISO noted the proposal would be for all pressure drums (new and existing) and therefore could have a significant impact. They recommended adopting the text in square brackets to permit industry a chance to determine if requirement would apply to only new construction. CGA did not support the proposal citing a lack of incident or justification for the formula. The US voiced concern that the approach would apply to all pressure drums, but they indicated they would be interested in discussing the issue further. *Based on the discussion, the proposal was withdrawn. EIGA and CGA requested industry contact them for additional discussion.*

INF30 – Provisions for closures of pressure receptacles – EIGA and CGA updated the Subcommittee on the progress on provisions for closures of pressure receptacles. Their research has confirmed there are significant differences in the assessment of closures, and they are planning additional discussions later in 2017. *No proposal was made.*

INF17/INF41 – Specification of hazard labels and marks – IATA explained the difficulties with specificity of the width of the outside line on labels. Specifically, enforcement of the label is problematic. IATA requested the Subcommittee discuss the issue and consider flexibility in the regulation. The US supported the discussion and recalled the previous discussions were intended to avoid these types of over-regulation that does not impact safety. COSTHA agreed with the effort noting pre-printed packaging can also lead to variations in the line thickness and this does not impact safety. Canada supported the discussion and believed a more practical approach is necessary. CEFIC agreed with previous speakers. Austria opined the solution cannot be in the regulations but should be found in guidance to enforcement or the modal regulations. SAAMI shared they have experienced rejections already. DGAC noted challenges between electronic images and the final printed product as line thickness may change. Belgium fully supported the effort and a more general approach. DGTA supported the concept of

guidance. IATA prepared revised text in INF41. Australia was not sure the revision would have the desired result. Instead, they encouraged better training of and guidance for inspectors. Sweden supported the revised proposal in INF41 but commented Figure 5.2.6 would also need to be addressed. Austria and CEFIC agreed with Australia. The US opined the current language does not allow interpretation; it clearly requires the label border to be 2 mm. They felt the language in INF41 solved the problem. MDBTC, Belgium, Switzerland, Canada and DGAC also supported the revised proposal. Switzerland pointed out "approximately" is used elsewhere in the same section. Canada also suggested similar language could be adopted for placards. FAO requested the UN3373 mark should also be revised. The UK indicated their willingness to accept the proposal. *IATA requested the comments of the Subcommittee be captured in the report so that modal bodies and competent authorities may see the position of the Subcommittee. The proposal in INF41 was adopted. The square brackets around "approximately" were removed. IATA also indicated they would prepare a formal proposal to address similar issues with placards and other marks.*

WP13/WP22/INF27 – Exemption for lithium battery powered cargo tracking units and data loggers – IN WP13, Germany and IATA proposed to provide an exception for cargo tracking units containing small lithium batteries. They noted however that lithium batteries up to 5 g of lithium may be used for vessel shipping. In WP22, Switzerland suggested expanding the scope of the exception in 1.1.1.2 to allow for electronic devices, including lithium batteries, to be excepted from regulation. The intent would be to except devices that are not part of the consignment (packed) but are to be used during transport. This could include the tracking units identified in WP13 as well. The Netherlands suggested additional discussion was needed before 1.1.1.2 was amended. Their concerns were voiced in INF27. They requested intercessional work be conducted to address the problem. The UK preferred to the approach in WP13 but supported additional discussion. France noted technology has advanced greatly since the regulations were originally written, and a solution needs to be found quickly. They noted the current provisions of 1.1.1.2 are not restrictive to the types of fuel that may be used. France felt the Subcommittee could take a quick look at the proposal in WP13 now and then consider the broader question in WP22 at a later date. The US supported the approach of the Netherlands to review the scope before taking immediate action. IATA reiterated the multi-modal nature of these tracking devices and explained additional regulations are beginning to mandate their use. CEFIC shared their support WP13. COSTHA commented WP13 was more beneficial than WP22 at this point. They also recommended adding a note in P903 and SP188 if modifications are adopted. Sweden and Belgium supported an intercessional discussion on the topic. France suggested combining the proposals in WP13 and WP22 and attempt a resolution at this session. Germany requested their proposal in WP13 be considered for adoption with the amendment to remove paragraph (c)(2). IATA added an amendment. Switzerland suggested the exception should be found in Part 4 instead of Part 1. The Netherlands requested any adopted text be kept in square brackets so that the text could be referenced after the intercessional discussions. France supported adopting text now. The UK, Sweden and US agreed with the Netherlands and preferred to wait. The Subcommittee continued to discuss the benefit of adopting text at this session vs. conducting intercessional discussions. *By a vote of 8-6, the proposal in WP13 as amended was adopted and will be placed in square brackets*.*Based on the decision on WP13, WP22 was withdrawn*

and will be discussed during the intercessional correspondence group to be led by the Netherlands. The Netherlands requested interested delegates indicate their interest.

WP16 – Report of the informal working group on lithium batteries on its first session of the biennium 2017-2018 – The Vice Chairman indicated the Day 2 lunchtime working group was beneficial but a second working group was requested for Day 4. *Therefore, a second working group is scheduled for Day 4.*

INF20 – Additional marking of the maximum stacking load of IBC – Germany pointed out inconsistencies with the requirement with the marking for maximum stacking load on IBCs and the marking of maximum permissible stacking load. They requested feedback from the Subcommittee as to whether the current text should be amended. Austria believed the maximum stacking load was intended to be marked only once. The UK agreed with Austria but agreed clarity was needed. Spain stated the maximum permissible stacking load should be included once, but often the plate is too small to include the load limit. Thus it is often applied as a label. When the label is applied, it must be maintained and replaced if necessary. The US was willing to allow the pictogram to be less than the maximum stacking load identified in 6.5.2.2.1. The Russian Federation suggested amended text to address the problem. Canada confirmed confusion and welcomed clarity. Belgium believed the stacking load on the plate and the symbol should NOT be the same. ICPP agreed with the US and noted some users and manufacturers prefer to prohibit stacking of IBCs even when the stacking test load indicates they may be stacked. *Based on the discussion, Germany indicated they would return at a future session with a formal proposal to address the issue.*

INF35 – New packaging tests in Chapters 6.1 and 6.6 – The UK requested feedback on packaging tests that may show no hazardous effects can be seen outside the package. This work is similar to the efforts conducted by the SAE G-27 Working Group on lithium battery packaging by air. Austria supported the effort, but felt a general approach may be very difficult to achieve. France also supported the effort and questioned whether the effort would be limited to just batteries or whether it could be applied to other articles. They drew attention to P911. MDBTC drew further attention to the efforts at the G-27 group suggesting the same questions being raised by this paper are also being reviewed by the G-27 efforts. The also questioned whether all the contents of the package should be “activated” if the contents are packed to prevent propagation between batteries. RECHARGE provided some background on the basis of the G-27 work, and identified similarities between the two groups. They offered to share that work with the Subcommittee. ICAO further explained the efforts of G-27 have evolved from a packaging standard to a package standard. They welcomed the expansion of the concept as proposed in paragraph 7 of the UK paper as these are critical issues to consider in air transport. The US pointed out the types of materials being discussed in INF35 would be prohibited for transport as they could lead to a dangerous evolution of heat, fire, flame, etc. Therefore, this work should be considered for emergency work, but not in the context of the Model Regulations. Germany agreed with the comments from the US. The Model Regulations, with limited exceptions, do not require accident-proof packaging. Austria defended testing with the intent of initiation, particularly with Class 1. OICA voiced strong concern that the effort may result

in packaging currently authorized for damaged/defective batteries would be required for all batteries, and reiterated proper classification was the first step. *The UK thanked the Subcommittee for their comments and indicated they would return with a developed proposal at a future session.*

WP21/INF4/INF29 – Proposal of amendment to section 5.5.3 – The Russian Federation proposed extending the marking and handling provisions for asphyxiate gases in 5.5.3 to materials that contained in the cargo transport unit for protection purposes or as a protective agent. INF4 provided updated amendments. In INF29, Austria agreed with the concerns voiced by the Russian Federation. But they proposed a simpler approach by eliminating the words "for coolant" or "for conditioning" from the mark. Germany, UK, Belgium, and Spain supported the proposal as modified by Austria. Sweden agreed with the Austrian proposal but felt the additional comments in the Russian Federation proposal should also be adopted. The US, Switzerland and Norway felt the scenario presented in the paper would be covered under "conditioning". After Austria clarified their revision applied only to the mark, the UK realigned their position that of the US, Switzerland, and Norway. The Russian Federation reiterated their concern that "conditioner" did not cover the situation they described in WP21. The Netherlands preferred to understand the full scope of the problem before making the modification (is it only a problem for 1 or 2 UN numbers in certain regions). The US suggested a note could be added to clarify what was covered by the term "conditioner". Austria felt conditioner and protective agent were two different descriptions. Switzerland questioned whether the UN number is appropriate on the mark. *Based on the discussion, the Russian Federation indicated they would prepare a revised proposal for the December session.*

End of Day 3

UNSCOE TDG 51st Session – Day 4 Summary

WP26 – Competency Based Training – DGTA requested the Subcommittee discuss the concept of competency based training currently being evaluated by ICAO. The effort highlights the importance of the employer to ensure employees are trained and prepared to perform any job functions assigned. ICAO shared that the concept of competency based training has not received final approval from the Dangerous Goods Panel, but it is expected to be adopted in some form in 2017. Comments received to date on the program has been very positive. Germany was not convinced the competency based program is much different than the current requirements in the Model Regulations. Where differences are clear (i.e. no exam required in the Model Regulations), it may not be appropriate to make any changes. Canada experience is that there is a wide variety of training levels provided to employees and believe it can be implemented in a multi-modal setting. Poland agreed with Canada and suggested the competency based training is permissible even under the current training requirements in Model Regulations. However, they felt additional guidance or framework for such a program would be beneficial. They also encouraged the discussions to be held at the modal bodies. Spain voiced concern that a complicated system may be difficult to impose on a small company with one (1) driver and few packers. The US agreed with others that a competency based training program is consistent with the current training requirements. Showing

competency in job functions that an employee may perform is more important than simply completing a course that isn't specific to the company's operations. The US stated they did not believe such a program would limit public courses or general overview courses. Instead, it gave employers more options to meet their obligation to training employees. Argentina noted the current requirements for training under the IMDG Code provides a clear obligation for training and was not convinced further defining the requirements is necessary. CEFIC thought the idea was still in the early stages and the steps to implement such a program were not clear. They reiterated the modes are different and may require different approaches. The Netherlands agreed with Spain, Argentina and CEFIC that it should remain with the modes to decide how to address training. The UK also felt the work should be done at the modes instead of the Subcommittee. They voiced interest in the Canadian approach and requested Canada provide updates on their progress. IATA explained that even in the air mode, there is not a "one size fits all" training course. Instead each employee must be trained to perform the function they are responsible to perform. The competency based approach does not change the responsibility for the employer to prepare employees to perform a job function. Instead it provides a framework to train employees effectively. SAAMI agreed with IATA and reiterated the importance of the UN to provide guidance to the modes in this area. France voiced confusion over the intent of the paper and of the discussion. The current Model Regulations recommend training be conducted but as the Model Regulations are recommendations, there is no enforceable requirement. Instead, that legal responsibility is handled by the modes. Clarification could be given as to what areas training programs should cover and how it could be presented, but France was not in favor of a broad discussion on how to implement an effective training program. IMO aligned their comments with Germany and Argentina, but welcomed the continued discussion and evaluation of the approach. Switzerland felt strongly the issue being discussed is the responsibility of the competent authority, not the modes or the Subcommittee. They were concerned that if the Subcommittee endorsed a single method could make the problem worse. Austria agreed with Switzerland stating that training might not be the only problem. The structure of the Model Regulations may not be clear and logical, and rearranging could help competency. But they were not in favor of limiting approaches to the responsibility. Portugal agreed with others that the discussion should be had at the modes. DGAC supported the discussion and pointed out if modes and competent authorities have different schemes or approaches to training, all programs are less effective. RPMSA noted the lack of availability of competent training in South Africa and poor awareness of multi-modal requirements. While shippers or manufacturers may be educated in air or vessel transport, there is a lack of understanding in road or rail. They welcomed additional guidance and support from the UN on the topic. The Chairman reminded the Subcommittee that ICAO isn't replacing the current training requirements or system, but instead is offering a method to augment or improve the requirements. DGTA noted the competency based system being evaluated by ICAO clearly and effectively puts the responsibility on the employer, a responsibility that already stands in the Model Regulations. So it is a means to an end, and perhaps a more effective means, but it is not a limiting approach. *No proposal was discussed.*

INF14 – Name and description of UN3363 – Germany proposed providing a 3rd proper shipping name option for UN3363 – DANGEROUS GOODS IN DEVICES. The Netherlands preferred a simpler approach and remove the reference to devices with relation to UN3363. Sweden, the UK and the US agreed with

the Netherlands. Sweden proposed removing “or devices” in 2.0.5.1. Spain shared the difficulty to translate the word “device” into Spanish. They suggested either the term “device” should be added to all the applicable UN numbers or it should be removed from current UN numbers that include the term. Belgium opposed the proposal. Switzerland felt a competent authority could not issue approvals under the last sentence under SP301 if the German proposal was not adopted. Based on the discussion, Germany withdrew their proposal but requested a decision on the deletion of “or devices” in 2.0.5.1. *After further discussion and a lack of consensus, Germany indicated they would withdraw the request and return in December with a formal proposal.*

INF21 – Assignment of special provision 238 to battery-powered equipment and vehicles – IATA questioned whether SP238 should be assigned to UN3171 BATTERY POWERED VEHICLE suggesting that if a battery is not subject to the regulations, the vehicle should also not be subject to the regulations. PRBA and COSTHA supported the proposal. The UK indicated there may be consequential amendments that are necessary. Switzerland questioned why the provision was needed. IATA explained that if the only dangerous good in the vehicle (such as a battery in a wheelchair) is a non-spillable battery, and the battery is exempted from regulation per SP238, then the vehicle would not be subject to regulation as UN3171. The US was sympathetic to the request and supported developing a solution. *IATA indicated they would return at a future session with a formal proposal.*

INF18 – Harmonization of RID/ADR/ADN with the 20th revised edition of the United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations – During the process of harmonizing the RID/ADR/ADN with the Model Regulations, the Secretariat identified a number of irregularities or omitted consequential amendments. These items were identified and proposed for modification in INF18.

- Proposal to add note to 2.9.4 referencing UN3536 – *The proposal was adopted.*
- Proposal to amend SP188(c) – *Subcommittee agreed to add reference to 2.9.4 (a), (e), (f) if applicable, and (g) as applicable to SP188(c*).
- Proposal to amend table in Special Provision 392 (a) and add SP392 to UN1972. *The Subcommittee agreed to adopt the title change in SP972 but not to include SP392 to UN1972.*
- Proposal to add note to SP188(a) and (b) regarding hybrid lithium batteries – *The proposal was not adopted.*
- Proposal to refer to “classification” instead of “transport” in 2.0.5 – *The proposal was adopted.*
- Proposal to reorder the sentences in LP903, LP904, LP905, and LP906 – *The proposal was adopted with minor amendments.*
- Proposal to clarify the need for a lithium battery placard (Model 9A) – *The proposal was not adopted.*
- Proposal to amend SP301 to remove ISO standard and refer to 5.2.1.7.1 – *The proposal was adopted.*

INF37 – Outcome of the twenty-seventh session of the Editorial and Technical Group – IMO presented the changes to the IMDG Code that will be incorporated into the 39th Amendment. The Annex to INF37 include amendments related to the UN Model Regulations. *The Subcommittee reviewed the proposed changes and adopted changes where appropriate.*

WP27/INF25/INF42 – Lithium battery test summary – MDBTC presented the results of the lunchtime working group on lithium batteries. The paper provided 3 proposals:

- Proposal 1 – provide a grandfather clause for cells/batteries manufactured prior to July 1, 2003. The proposal also recommended the Report of Subcommittee provide an additional 1 year extension on the requirement of the test report to January 1, 2020. *The proposal was adopted.*
- Proposal 2 - clarify the mass in the report is the mass of the cell or battery, not any product that might be related. *The proposal was adopted.*
- Proposal 3 – clarify the test summary must include the model number of the cell or battery number. But if a device manufacturer decides to create a test summary for products that contain lithium cells or batteries, the model number of the product must be included. The Subcommittee discussed the meaning and implication of this modification. The revised proposed text would read "2.9.4 f v Cell or battery model number. Alternatively, if the test summary is being established for a product containing a cell or battery then the product model number shall be indicated." *The proposal was adopted as amended.*

WP25/INF11/INF40/INF43 – Classification and packaging for infectious waste of Category A – Canada and the UK presented a revised proposal to transport infectious waste of Category A. Canada explained they address all the comments included in the Swiss INF11 paper. They also addressed the concerns voiced by FAO and others. The US requested that if the text was adopted, that it be included in square brackets to permit the vetting of the text by other health experts. Belgium, Austria. and Germany were still not comfortable with the proposed text as it might be interpreted to mean that inner or intermediate packaging "could" leak. Therefore, they preferred the paper not be adopted at this session. Others felt the text was mature enough for adoption. *By majority vote, the paper was adopted and placed in square brackets.*

End of Day 4

UNSCOE TDG 51st Session – Day 5 Summary

WP28 – Tests for oxidizing liquids (UN Test 0.2) and oxidizing solids (UN Tests 0.1 and 0.3), Consequential amendments of cellulose replacement to test descriptions – France presented the program of work for addressing consequential amendments to the oxidizing tests as a follow up of the replacement of cellulose. INF12 provided issues to be addressed in the work for each of the tests. CEFIC noted IGUS will be meeting later in 2017 and France will be presenting their approach to them as well.

The Subcommittee supported the effort. *France requested any interested groups to contact them to provide ideas or comments. No proposals were reviewed.*

WP7 – Assessing the potential development of a global list of chemicals classified in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals – Canada reported on an effort by the GHS Subcommittee and the OECD sponsored by ECHA, the US, and Russian Federation to develop a global list of chemical classifications under the GHS criteria. A pilot project revealed that classifications can be achieved, but that the classifications may impact other regulatory bodies, such as IMO or the TDG Subcommittee. Further, it showed that significant resources would be needed, resources that are not currently available. At this point, the GHS Subcommittee has not decided to move forward. But they requested input from other competent authorities, particularly with regards to potential resources. Austria supported the effort and suggested less controversial groups of chemicals could be reviewed first and identified by comparing existing lists, and focus resources to where the inconsistences are identified. The Netherlands noted difficulties with explaining to the public why different classifications were derived from different regulating bodies. They strongly supported the work and noted it is a long-term effort. CGA and SAAMI echoed many of the comments made by the Netherlands. SAAMI noted there are as many as 10 national lists of chemicals that determine classifications and these lists are not in agreement. Further, they pointed out there are no limits on the number of classifications a chemical may meet under GHS (whereas there is a primary and up to two (2) sub hazards in transport), and data for many of these chemicals is not directly measured or reviewable, instead being classified as bridging principles or professional judgement. A global list would provide a clear classification for any given chemical that would lead to harmonized handling. The US noted it is a difficult task, but the effort would be beneficial. They commented the pilot study and the challenges faced by the effort highlight the strength of the system used in the Model Regulations. The encouraged the GHS Subcommittee to continue the effort and offered support and feedback as they complete their review of the pilot study results. *No proposals were reviewed.*

INF38 – Report of the Working Group on Explosives – The Netherlands detailed the report of efforts of the EWG during the session. Summaries of these papers, with the exception of INF15 discussed below, have been provided by IME and have been included in the Daily Summaries for Days 1-3. Plenary comments provided during the review of the report are noted below:

- INF6 – Amendment of section 10.3.3.4 of the MTC of Tests and Criteria - *No comments from the Subcommittee.*
- INF19 – Improvement of the 8(c) Koenen Test – *No comments from the Subcommittee.*
- INF28 – Standard detonators – *No comments from the Subcommittee.*
- WP14/INF33 – New entries for electronic detonators – *No comments from the Subcommittee.*
- WP3/INF9/INF24 – Proposal to require stability tests for industrial nitrocellulose – *No comments from the Subcommittee.*
- INF10 – Classification of desensitized explosives – *Germany supported an intercessional working group to develop a firm proposal for a future session.*
- WP19/WP20 – Security provisions for explosives – SAAMI reiterated the approach would expand the security provisions just in Division 1.4 from 8 current UN numbers to more than 60, including many materials which are readily available to the public today. Germany noted 38 entries that would be included cover military materials that may impact or even hinder the ability to move the materials. *The UK indicated they would review the comments and return with a proposal at a future session.*
- INF15 – Review of Chapter 2.1 of the GHS – *No comments from the Subcommittee.*
- WP23/INF34 – Transporting fireworks in small quantities – The US suggested the Subcommittee could look at how novelty products could be excluded from classification as a Class 1. *No additional comments from the Subcommittee.*
- WP28/INF12 – Tests for oxidizing liquids or solids – *No comments from the Subcommittee.*

Agenda Item 2: Explosives and related matters

- **UN/SCETDG/51/INF.15 (UN/SCEGHS/33/INF.07) - (Sweden)** Status of the work of the informal correspondence group on the revision of GHS Chapter 2.1
    - Plenary: Discussion as to when requested EWG review might take place. EWG Chairman advised that it would most likely be Wednesday afternoon and/or Thursday during the informal portion of the EWG meeting.
      Action: Referred to the EWG.

- EWG: Problems with Chapter 2.1 were identified. The working group endorsed the USA suggestion to classify (for GHS purposes) explosives in Categories (1, 2, 3) as is done throughout the rest of the GHS rather than by transport Divisions (1.1, 1.2, 1.3, 1.4, etc.). However, some (Germany in particular) are still insistent on retaining references to the Divisions. This will have to be worked out at a future session. Also, a work plan was devised and agreed to during this informal session. It's expected that issues will be worked out and an INF paper submitted for the next session. The goal is to complete the review during this biennium, although some believe the project will take longer to complete.
- Plenary: The Netherlands indicated they would continue the process of review (preparation of INF document and review during EWG sessions). Once the work is completed, a formal document would be presented to the Subcommittee. *No comments from the Subcommittee.*

INF15/INF44 – Updated draft Programme of Work for the revision of GHS Chapter 2.1 – Sweden presented a draft plan of work for determining how to adopt classification determinations for Class 1 based on transport into GHS that is applicable to other sectors. *No proposals were considered.*

WP16/INF3/INF26/INF45 – Classification of Lithium Batteries - France presented the results of the 2nd lunchtime working group on lithium battery classification. The next session of the Lithium Battery Working Group will be held following the 52nd session of the UN TDG Subcommittee December 6-8, 2017 in at the UN in Geneva, Switzerland. A smaller group of parties who have data to present will meeting earlier in Fall 2017 to collect compare and organize data submitted. Collection activities were also discussed.

This completes the review of the papers for the 51st UN TDG Session.

End of Day 5