

Oak Ridge National Laboratory Oak Ridge, TN

SUBJECT:	Report on Foreign Travel to <destination></destination>
DATE:	May 2023
TO:	Dr. Angela Chambers, Nuclear Criticality Safety Program Manager, National Nuclear
	Security Administration / NA-511
FROM:	Douglas G. Bowen

MEETING TITLE: ISO Technical Committee (TC) 85, Subcommittee (SC) 5 Plenary and ISO TC85/SC5/WG8 Working Group 8, "Nuclear Criticality Safety" working group meetings.

MEETING LOCATION: Tsukuba, Japan at the International Congress Center from May 29-June 1, 2023.

MEETING DATES: Meeting held from May 29-June 1, 2023; ISO convenor meetings held on May 29th and June 1st. ISO TC85/SC5/WG8 meetings held on May 30-31, 2023.

ATTENDEES ON BEHALF OF NCSP: [Only 1 report from the institution for ALL attendees] Doug Bowen. Alex Lang and Calvin Hopper participated via MS Teams.

MEETING PURPOSE: To discuss ISO Nuclear Criticality Safety Standards in development or in revision. See the attached agenda and report.

MEETING BENEFITS TO THE NCSP: These meetings allow for the United States and the NCSP to be in the loop on international standards developments that tend to influence US standards and regulations. For example, the TEX low temperature experiments were first discussed during ISO WG8 meetings and in meetings involving ISO transportation regulations. ISO standards directly influence the discussions and, eventually, the content, of ANSI/ANS NCS standards. The NRC is now endorsing ISO standards in its regulatory guidance to licensees. Many of the WG8 participants are also direct collaborators with the NCSP (IRSN, AWE, NNL, OECD/NEA, CEA, etc.), which is in the purview of NCSP MOUs and other collaboration activities. The WG8 agenda and final meeting resolutions are provided here.

PURPOSE OF TRAVEL: To attend the TC85/SC5 Plenary. This is the first SC5 plenary in since 2019.

Persons Contacted at the virtual meeting

See the final page of the attached report.

Presentations, Chair Responsibilities, Etc.:

I am convenor of TC85/SC5/WG8 and ISO Nuclear Technical Advisory Group Deputy Overall Advisor for ISO TC85/SC5/WG8. In this role, I support a neutral position to lead the development of all international Nuclear Criticality Safety Standards. I also lead the development of all domestic Nuclear Criticality Safety standards as the ANS-8 Subcommittee Chairman and my ISO position helps be perform my ANS-8 position. I prepare and lead the group through an annual agenda (attached) for systematic review, revision, and development of all NCS ISO standards. Work is co-managed with project leaders for each standard (led by a particular country) and work is tracked until a standard is issued or withdrawn. Project work is tracked via a resolution or action list that provides discussion points for each meeting. I



also work as an NTAG member to provide guidance to US ISO and help to provide the US position within my expertise on ISO standards in development.

Distribution:

Angela Chambers, <u>angela.chambers@nnsa.doe.gov</u> Doug Bowen, <u>bowendg@ornl.gov</u> Marsha Henley, <u>henleym@ornl.gov</u>



CONVENOR	Douglas G. BOWEN (US)
CO- CONVENOR	Gregory CAPLIN (FR)
NUMBER OF PARTICIPANTS:	19 Total representing 7 ISO Member Countries (see attached attendance list)
COUNTRIES REPRESENTED:	3-CA, 3-FR, 1-SE, 3-UK, 4-US, 1-JP, 4-IN
DOCUMENTS DISTRIBUTED	See attached agenda, ISO TC85/SC5/WG8 Final Meeting Agenda
DOCUMENTS DISCUSSED	See attached agenda, ISO TC85/SC5/WG8 Final Meeting Agenda
WG MEETINGS SINCE THE LAST PLENARY (DATES AND PLACES)	WG8 meetings were held virtually via MS Teams December 12-13, 2022.
WORK ITEMS IN PROGRESS	 Work Item #1 – WG8 Business Work Item #2 – 2-Column Guidance N-document Work Item #3 – Proposed Risk Assessment Standard Work Item #4 – Proposed Revision to ISO 7753 Work Item #5 – Terms and Definitions N-document Work Item #6 – Proposed revision to ISO 16117 "Estimation of the Number of Fissions of a Postulated Criticality Accident" Work Item #7 – Future Revision to ISO 1709 Work Item #8 – ISO Standard Summary Documents (Brochures) Work Item #9 – Proposed ISO Standard for Validation of Computational Methods Work Item #10 – Amendment to ISO 11311 Work Item #11 – Other Business
DIFFICULTIES MET	WG8 discussed the value of in-person rather than virtual/hybrid ISO meetings. Virtual meetings have affected WG8 productivity since 2020.



	Work Item #1 – WG8 Business
	 Dec2022 Resolution #1: Create a WG8 agenda item at the next WG8 meeting to discuss finalized WG8 internal business NDOCS (Role Definitions, Internal Processes, Transportation Position and Brochures) for potential updates based on work since the last meeting. BOWEN (US)/CAPLIN (FR) – April 2023 Work Item #2 – 2-Column Guidance N-document Dec2022 Resolution #2: Share the three 2-column NDOCS (1.
	Prevention/procedures, 2. Prevention/applications, and 3. Accident) based on discussions with SE, UK, and CA WG8 members to reduce the scope of the terms to simplify and make the 2-column guidance simpler and more effective to WG8. Eliminate overlap with NDOC for Terms and Definitions and recently published WG8 standards. PRIGNIAU (FR) – Jan. 2023
	 Dec2022 Resolution #3: Conduct a virtual meeting with UK, SE, and CA participants on 16 FEB 2023. PRIGNIAU (FR) – Feb. 2023 Dec2022 Resolution #4: Update the three 2-column NDOCS based on discussions with SE, UK, and CA WG8 members. PRIGNIAU (FR) – May. 2023 May2022 Resolution #5: Create a WG8 agenda item at the next WG8
	meeting to discuss progress on Resolution #6. BOWEN (US) – May. 2023
DECEMBER 2022	Work Item #3 – Proposed Risk Assessment Standard
VIRTUAL MEETING RESOLUTIONS	 Dec2022 Resolution #6: Generate a Preliminary Work Item (PWI) draft of the proposed Risk Assessment Standard for distribution 2-weeks before the next WG8 meeting. KHOTYLEV/MCNALLY (CA) – Apr. 2023 Dec2022 Resolution #7: Include a general discussion in the next WG8
	meeting. BOWEN (US)/KHOTYLEV (CA)/MCNALLY (CA) – May. 2023
	Work Item #4 – Proposed Revision to ISO 7753
	 Dec2022 Resolution #8: Conduct a virtual meeting with UK, US, and CA participants on 24 JAN 2023 to solve maint comments from DIS ballot. PRIGNIAU (FR) – Jan. 2023
	 Dec2022 Resolution #9: Consider DIS Ballot comments from CA not received with the ballot results. LAGET (FR) – Feb. 2023
	 Dec2022 Resolution #10: Submit a FDIS draft to ISO. LAGET (FR) – March 2023
	Work Item #5 – Terms and Definitions N-document
	 Dec2022 Resolution #11: Neil HARRIS (UK) to send to WG8 for final review. BOWEN (US) – Apr. 2023
	 Dec2022 Resolution #12: Publish final Terms and Definitions NDOC on ISOLINK. BOWEN (US) – May 2023
	Work Item #6 – Proposed revision to ISO 16117 "Estimation of the Number of
	Fissions of a Postulated Criticality Accident"
	 Dec2022 Resolution #13: WG8 to review Yuichi YAMAME's proposal for a minor revision to ISO 16117. WG8 – Jan. 2023
	 Dec2022 Resolution #14: Generate a PWI draft for WG8 to review prior to the May 2023 WG8 meeting. YAMANE – Apr. 2023



 Dec2022 Resolution #15: Create an agenda item for the May 2023 WG8 masting to discuss DW/ for IGO 16117, DOW/FN - May 2023
meeting to discuss PWI for ISO 16117. BOWEN – May 2023
Work Item #7 – Future Revision to ISO 1709
 Dec2022 Resolution #16: WG8 to review draft revision of ISO 1709 and
provide comments to Lauren FLINT (UK). WG8 – Feb. 2023
 Dec2022 Resolution #17: Create an agenda item for the May 2023 WG8
meeting to discuss revision proposal for ISO 1709. BOWEN – May 2023
Work Item #8 – Brochures
• Dec2022 Resolution #18: Lauren FLINT (UK) will update the brochure of
ISO 1709 to include the recently published amendment. FLINT (UK) – May
2023
• Dec2022 Resolution #19: Gregory CAPLIN (FR) will update the brochure of
ISO 11311 to include the recently published amendment. CAPLIN (FR) –
May 2023
Work Item #9 – Proposed ISO Standard for Validation of Computational Methods
 Dec2022 Resolution #20: Jeremy MUNSON (US) will share an update of
the "Status and Items to Discuss List" with WG8 for the proposed
Validation standard for discussion at the next WG8 meeting. MUNSON
(US) – Apr. 2023
 Dec2022 Resolution #21: Create an agenda item for the May 2023 WG8
meeting to discuss the proposed validation standard. BOWEN – May 2023
Work Item #11 – Other Business
 Dec2022 Resolution #22: Doug BOWEN (US) to request access to ISOLINK
WG8 project folders by project leaders. BOWEN – Dec. 2022
 Dec2022 Resolution #23: Send a request to WG8 asking for feedback on
Neil HARRIS' proposal for possible new WG8 standards related to:
"Principles in Developing a Case for Omission of CAAS Systems (CAAS
Needs Assessment), "Minimum Subcritical Margins," and "Criticality
Safety for Decommissioning." BOWEN – Jan. 2023
 Dec2022 Resolution #24: Neil HARRIS to present results of WG8 feedback for the "CAAS Needs Assessment" proposed standard and a possible
for the "CAAS Needs Assessment" proposed standard and a possible
structure for this standard. HARRIS – May 2023



	May2022 Resolution #1: ISO TC85/SC5/WG8 welcomes Andy SUTTON and Jacky
	DUNCAN as the new SC5 Chairman and SC5 Secretary, respectively.
	May2022 Resolution #2: ISO TC85/SC5/WG8 thanks Mark DENTON and Steven LLOYD
	for their support and service as the SC5 Chair and SC5 Secretary, respectively.
	Work Item #1 – WG8 Business
	 May2022 Resolution #3: Send the updated WG8 Roadmap to WG8 for
	review and comment. BOWEN (US) – May 2022 COMPLETE
	 May2022 Resolution #4: Finalize the WG8 Roadmap and create an agenda
	item at the next WG8 meeting to discuss the Roadmap and potential
	work items. BOWEN (US) – May 2022 COMPLETE
	 May2022 Resolution #5: Create a WG8 agenda item at the next WG8
	meeting to discuss finalized WG8 internal business NDOCS (Role
	Definitions, Internal Processes, Transportation Position and Brochures)
	for potential updates based on work since the last meeting. BOWEN
	(US)/CAPLIN (FR) – May2022 DEFER TO NEXT WG8 MEETING
	Work Item #2 – 2-Column Guidance N-document
MAY 2022	• May2022 Resolution #6: Share the three 2-column NDOCS (1.
VIRTUAL	Prevention/procedures, 2. Prevention/applications, and 3. Accident)
MEETING	based on discussions with SE, UK, and CA WG8 members to reduce the
RESOLUTIONS	scope of the terms to simplify and make the 2-column guidance simpler
	and more effective to WG8. Eliminate overlap with NDOC for Terms and
(STATUS	Definitions and recently published WG8 standards. PRIGNIAU (FR) – Sept.
COMMENTS AT	2022 NEW DOCUMENT CREATED AND UNDER FR REVIEW. SEND DRAFT
DEC. 2022	TO UK, SE, AND CA TEAM MEMBERS FOR REVIEW – PRIGNIAU (FR) – DEC
	2022
RED)	 May2022 Resolution #7: Update the three 2-column NDOCS based on
	discussions with SE, UK, and CA WG8 members. PRIGNIAU (FR) – Nov.
	2022 NOT COMPLETE; ADD NEW RESOLUTION FOR A MEETING TO BE LED
	BY FR WITH UK, SE, AND CA ON 16 FEB 2023 – PRIGNIAU (FR)
	 May2022 Resolution #8: Create a WG8 agenda item at the next WG8
	meeting to discuss progress on Resolution #6. BOWEN (US) – Nov. 2022
	DEFER TO NEXT WG8 MEETING
	Work Item #3 – Proposed Risk Assessment Standard
	May2022 Resolution #9: Generate a Preliminary Work Item (PWI) draft of
	the proposed Risk Assessment Standard for distribution 2-weeks before
	the next WG8 meeting. KHOTYLEV/MCNALLY (CA) – Nov. 2022 DEFER TO
	NEXT WG8 MEETING
	 May2022 Resolution #10: Include a general discussion in the next WG8
	,
	meeting. BOWEN (US)/KHOTYLEV (CA)/MCNALLY (CA) – Nov. 2022 DEFER TO NEXT WG8 MEETING
	Work Item #4 – Proposed Revision to ISO 7753
	May2022 Resolution #11: Michael LAGET (FR) to submit the draft ISO 7752 for a DIS ballet LAGET (FR) / DOM(EN (LIS) _ hum 2022 COMPLETE
	7753 for a DIS ballot. LAGET (FR)/ BOWEN (US) – Jun. 2022 COMPLETE
	Work Item #5 – Terms and Definitions N-document



 May2022 Resolution #12: Neil HARRIS (UK) to send to WG8 for final
review. BOWEN (US) – Nov. 2022 DEFER TO NEXT MEETING
 May2022 Resolution #13: Publish final Terms and Definitions NDOC on
ISOLINK. BOWEN (US) – Nov. 2022 DEFER TO NEXT MEETING
Work Item #6 – Proposed revision to ISO 16117 "Estimation of the Number of
Fissions of a Postulated Criticality Accident"
 May2022 Resolution #14: Provide WG8 with details about a proposed,
minor, revision to ISO 16117, "Estimation of the Number of Fissions of a
Postulated Criticality Accident." YAMANE (JP) – Sept. 2022 COMPLETE
Work Item #7 – Future Revision to ISO 1709
 May2022 Resolution #15: Lauren FLINT (UK) and Neil HARRIS (UK) to
resolve feeback from the virtual meeting with WG8 on 09FEB2022
regarding the ISO 1709 general revision scope and plan. FLINT
(UK)/HARRIS (UK) – Jun. 2022 <mark>COMPLETE</mark>
 May2022 Resolution #16: Include a general revision discussion in the next
WG8 meeting agenda. BOWEN (US)/FLINT (UK)/HARRIS (UK) – Nov. 2022
COMPLETE
Work Item #8 – ISO Standard Summary Documents (Brochures)
 May2022 Resolution #17: BOWEN (US) to post the new brochure about
the recently published ISO 23133 on the ISOLINK and the DOE/NNSA
Nuclear Criticality Safety Website (<u>http://ncsp.llnl.gov</u>) for public access.
BOWEN (US) – May 2022 <mark>COMPLETE</mark>
Work Item #9 – Proposed ISO Standard for Validation of Computational Methods
 May2022 Resolution #18: Jeremy MUNSON (US) will share an update of
the "Status and Items to Discuss List" with WG8 for the proposed
Validation standard for discussion at the next WG8 meeting. MUNSON
(US) – Nov. 2022 DEFER TO NEXT MEETING
Work Item #10 – Amendment to ISO 11311
May2022 Resolution #19: Gregory CAPLIN to resolve DIS ballot comments
on ISO 11311 amendment and submit a document for FDIS ballot. CAPLIN
(FR)/ BOWEN (US) – Oct. 2022 COMPLETE
Work Item #11 – Other Business
 May2022 Resolution #20: Doug BOWEN (US) to create an agenda item in
the next WG8 meeting to discuss the use of Preliminary Work Items
(PWIs) for future WG8 standards work (Risk Assessment, Validation, CAAS
need, etc.). BOWEN (US) – Nov. 2022 <mark>COMPLETE</mark>
• May2022 Resolution #21: Doug BOWEN (US) to update ISOLINK with 2021
and 2022 WG8 Project Files. BOWEN – Nov. 2022 COMPLETE – ALSO
REQUESTED SC5 PROVIDE ACCESS TO ISOLINK WG8 PROJECT FILES BY
PROJECT LEADERS IN ADDITION TO CONVENOR/CO-CONVENOR. NOT
POSSIBLE FOR GENERAL MEMBERS.



	MONDAY 12 DEC 2022 – 0600 AM – 0900 AM Eastern Time	
Time (Duration in Min.) {Cumulative)	Topic of Discussion	Lead
(30) {30}	Introductory remarks-Status report of the WG8 Meeting on 23-24 MAY 2022-Summary of WG8 resolutions-Current ballots / Status of WG8 standards-Membership report / SC5 leadership changes-Feedback from the last TC85 plenary (June 2022)-Feedback from the last SC5/CAG meeting (Nov./Dec. 2022)-Attendance to the next SC5 plenary in Japan	BOWEN (US) CAPLIN (FR)
(25) {55}	 Work Item 1: WG8 Business MAY 2022 Resolutions Resolution #3: Send the updated WG8 Roadmap to WG8 for review and comment. BOWEN (US) – May 2022 Resolution #4: Finalize the WG8 Roadmap and create an agenda item at the next WG8 meeting to discuss the roadmap and potential work items. BOWEN (US) – May 2022 Resolution #5: Create a WG8 agenda item at the next WG8 meeting to discuss finalized WG8 internal business NDOCS (Role Definitions, Internal Processes, Transportation Position and Brochures) for potential updates based on work since the last meeting. BOWEN (US)/CAPLIN (FR) – May2022 	BOWEN (US)
(20) {75}	 Work Item #2 - 2-Column Guidance N-document MAY 2022 Resolutions: Resolution #6: Share the three 2-column NDOCS (1. Prevention/procedures, 2. Prevention/applications, and 3. Accident) based on discussions with SE, UK, and CA WG8 members to reduce the scope of the terms to simplify and make the 2-column guidance simpler and more effective to WG8. Eliminate overlap with NDOC for Terms and Definitions and recently published WG8 standards. PRIGNIAU (FR) – Sept. 2022 Resolution #7: Update the three 2-column NDOCS based on discussions with SE, UK, and CA WG8 members. PRIGNIAU (FR) – Nov. 2022 Resolution #8: Create a WG8 agenda item at the next WG8 meeting to discuss progress on Resolution #6. BOWEN (US) – Nov. 2022 	PRIGNIAU (FR)



	MONDAY 12 DEC 2022 – 0600 AM – 0900 AM Eastern Time	
Time (Duration in Min.) {Cumulative)	Topic of Discussion	Lead
(5) {80}	 Work Item #3 – Proposed Risk Assessment Standard MAY 2022 Resolutions Resolution #9: Generate a Preliminary Work Item (PWI) draft of the proposed Risk Assessment Standard for distribution 2-weeks before the next WG8 meeting. KHOTYLEV/MCNALLY (CA) – Nov. 2022 Resolution #10: Include a general discussion in the next WG8 meeting. BOWEN (US)/KHOTYLEV (CA)/MCNALLY (CA) – Nov. 2022 	McNALLY (CA)
(15) {95}	Break	
(55) {150}	 Work Item #4 – Proposed Revision to ISO 7753 MAY 2022 Resolutions Resolution #11: Michael LAGET (FR) to submit the draft ISO 7753 for a DIS ballot. LAGET (FR)/ BOWEN (US) – Jun. 2022 	LAGET (FR)
(15) {165}	 Work Item #5 – Terms and Definitions N-document MAY 2022 Resolutions Resolution #12: Neil HARRIS (UK) to send to WG8 for final review. BOWEN (US) – Nov. 2022 Resolution #13: Publish final Terms and Definitions NDOC on ISOLINK. BOWEN (US) – Nov. 2022 	HARRIS (UK)
(5) {170}	 Work Item #8 – ISO Standard Summary Documents (Brochures) MAY 2022 Resolutions Resolution #17: BOWEN (US) to post the new brochure about the recently published ISO 23133 on the ISOLINK and the DOE/NNSA Nuclear Criticality Safety Website (<u>http://ncsp.llnl.gov</u>) for public access. BOWEN (US) – May 2022 Complete	BOWEN (US)
(10) {180}	Day 1 Meeting discussion	WG8
	Day 1 Adjourn	

	TUESDAY 13 DEC 2022 – 0600 AM – 0900 AM Eastern Time	
Time (Duration in Min.) {Cumulative)	Topic of Discussion	Lead
(5) {5}	Day 1 Summary and Discussion of Day 2 agenda	WG8



	TUESDAY 13 DEC 2022 – 0600 AM – 0900 AM Eastern Time	
Time (Duration in Min.) {Cumulative)	Topic of Discussion	Lead
(10) {15}	 Work Item #5 – Terms and Definitions N-document MAY 2022 Resolutions Resolution #12: Neil HARRIS (UK) to send to WG8 for final review. BOWEN (US) – Nov. 2022 Resolution #13: Publish final Terms and Definitions NDOC on ISOLINK. BOWEN (US) – Nov. 2022 	HARRIS (UK)
(10) {25}	 Work Item #6 – Proposed revision to ISO 16117 "Estimation of the Number of Fissions of a Postulated Criticality Accident" MAY 2022 Resolutions Resolution #14: Provide WG8 with details about a proposed, minor, revision to ISO 16117, "Estimation of the Number of Fissions of a Postulated Criticality Accident." YAMANE (JP) – Sept. 2022 	YAMANE (JP)
(5) {30}	 Work Item #9 – Proposed ISO Standard for Validation of Computational Methods MAY 2022 Resolutions Resolution #18: Jeremy MUNSON (US) will share an update of the "Status and Items to Discuss List" with WG8 for the proposed Validation standard for discussion at the next WG8 meeting. MUNSON (US) – Nov. 2022 	MUNSON (US)
(10) {40}	 Work Item #10 - Amendment to ISO 11311 MAY 2022 Resolutions Resolution #19: Gregory CAPLIN to resolve DIS ballot comments on ISO 11311 amendment and submit a document for FDIS ballot. CAPLIN (FR)/ BOWEN (US) - Oct. 2022 	CAPLIN (FR) BOWEN (US)
(75) {115}	 Work Item #7 – Future Revision to ISO 1709 MAY 2022 Resolutions Resolution #15: Lauren FLINT (UK) and Neil HARRIS (UK) to resolve feedback from the virtual meeting with WG8 on 09FEB2022 regarding the ISO 1709 general revision scope and plan. FLINT (UK)/HARRIS (UK) – Jun. 2022 Resolution #16: Include a general revision discussion in the next WG8 meeting agenda. BOWEN (US)/FLINT (UK)/HARRIS (UK) – Nov. 2022 	FLINT (UK)
(10) {125}	Break	



 Topic of Discussion Vork Item #11 - Other Business MAY 2022 Resolutions Resolution #20: Doug BOWEN (US) to create an agenda item in the next WG8 meeting to discuss the use of Preliminary Work Items (PWIs) for future WG8 standards work (Risk Assessment, Validation, CAAS need, etc.). BOWEN (US) – Nov. 2022 Resolution #21: Doug BOWEN (US) to update ISOLINK with 2021 and 2022 WG8 Project Files. BOWEN – Nov. 2022 	Lead BOWEN (US) CAPLIN (FR)
 MAY 2022 Resolutions Resolution #20: Doug BOWEN (US) to create an agenda item in the next WG8 meeting to discuss the use of Preliminary Work Items (PWIs) for future WG8 standards work (Risk Assessment, Validation, CAAS need, etc.). BOWEN (US) – Nov. 2022 Resolution #21: Doug BOWEN (US) to update ISOLINK with 2021 and 2022 WG8 Project Files. BOWEN – Nov. 2022 	(US)
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 Standards and regulations status – country reports US (BOWEN), UK (HARRIS) ISO TMB news Feedback from attendees about meeting conditions (in person, hybrid, virtual) to improve ISO guidance A Task Force, gathering several TCs, is working on the concept of risk (and associated terms) in standards (SC5 chair request to address) ISO TC85/SC6/WG1 activities (BOWEN) Possible New Standards CAAS Needs Analysis and Safety Margins Resolution discussion Next WG8 meeting 	WG8
Da	 US (BOWEN), UK (HARRIS) ISO TMB news Feedback from attendees about meeting conditions (in person, hybrid, virtual) to improve ISO guidance A Task Force, gathering several TCs, is working on the concept of risk (and associated terms) in standards (SC5 chair request to address) ISO TC85/SC6/WG1 activities (BOWEN) Possible New Standards CAAS Needs Analysis and Safety Margins

ISO TC85/SC5/WG8 Attendence List for Meetings December 12-13, 2022, Meetings

D. BOWEN (US) – convenor G. CAPLIN (FR) – co-convenor M. PRIGNIAU (FR) M. LAGET (FR) V. KHOTYLEV (CA) C. MCNALLY (CA) J. WANG (CA) T. CHUGH (IN) * V. HARI (IN) * M. KAUSHAL (IN) * S. MISHRA (IN) * R.M. TRIPATHI (IN) * L. FLINT (UK)



N. HARRIS (UK) B. WEBBORN (UK)* A. LANG (US) C. HOPPER (US) L. PAULSON (US) D. MENNERDAHL (SE) Y. YAMANE (JP)

*Partially attended the WG8 meetings on Dec 12-13, 2022.