

## AAFM Professional Development Series with Dr. David Stumpf

The week of 22-28 August 2021 was an eventful one for AAFM and the Airmen of the 90<sup>th</sup>, 91<sup>st</sup>, 341<sup>st</sup> Missile Wings and HQ 20<sup>th</sup> Air Force. Dr. Stumpf, along with AAFM Executive Director (Jim Warner) and AAFM Board Member (Monte Watts) traveled to FE Warren, Malmstrom and Minot to share the story of the development and deployment of the Minuteman weapon system in all of its variations, as detailed in Dr. Stumpf's 2021 book *Minuteman – A Technical History of the Missile that Defined American Nuclear Warfare*. The tour was part of AAFM's commitment to bringing professional development opportunities to the current generation of operators, maintainers, defenders and support personnel serving at the three ICBM wings, as well as meeting local AAFM members.

The tour started on Sunday, with a drive to Cheyenne and a visit to the Q01 Wyoming State Historical Site where David got to set foot in the Peacekeeper Missile Alert Facility (MAF), Launch Control Center (LCC) and Launch Control Equipment Building (LCEB) for the first time. The day ended with a working dinner with Dr. Jeremy Prichard (20 AF Historian) and AAFM member Colonel (ret) Todd Sauls and a stay at the Crow Creek Inn on FE Warren AFB in historic Quarters 21...no ghost sightings were reported.



Dr. Stumpf at the Q01 Missile Alert Facility – Wyoming State Historic Site

On Monday (23 Aug), Jim, David and Monte started the day with a discussion of crew professional development with Lt Col Rob Mack (319 MS/CC) and Lt Col Aaron Linton (320 MS/DO) including the current state of operations crew alert activities (7 day deployments to the MAF). The team met with Colonel Cathy Barrington (90 MW/CC) and Colonel Deane Konowicz (90 MW/CV) to discuss AAFMs commitments to advocacy for the nuclear deterrence mission and potential improvements in the way we connect with the active-duty force. The team's escort, Captain Alex Quattrin then took the team back to the 90 OG Loftis Conference Room where David presented the story of his journey to write the technical history of the Minuteman weapon system titled "From Plant Biochemist to Nuclear Weapons Historian". David took many questions and signed pre-purchased copies of his book before being readied to perform his first keyturn!



*Dr. Stumpf speaks to members of the 90<sup>th</sup> Missile Wing, FE Warren AFB, WY*

An unclassified tour of the Missile Procedures Trainers (MPTs) was provided by Capt Alex Quattrin, Capt Luke Preslar and Lt Col Mike Hartfield (90 OG/CD) where David learned about the operation of the Rapid Execution and Combat Targeting (REACT) command and control element, participating in running Secure Command Network Test (SCNTs), commanded an Enable and Execute Launch Command with Monte as his compliant Deputy Missile Combat Crew Commander.

1Lt Christopher Drake, TSgt Jason Boardman, and SrA Hunter Burbage provided a detailed tour of the 90th Maintenance Group major vehicles, including maintenance vans, Payload Transporter and Transporter Erector where David had many questions and was able to see these systems firsthand for the first time.



*Inspecting MMIII Payload Transporter and Transporter Erector with 1Lt Christopher Drake, TSgt Jason Boardman, and SrA Hunter Burbage (90 MXG)*

The day at FE Warren AFB wrapped up at an office call with Colonel Barry Little (20 AF/CV) and a late afternoon drive to Denver International Airport and evening flight to Great Falls, MT.

Day 2 of the tour started with a greeting from the Project Officer, Maj. John Erb (10 MS) and the 341 MW/PA team (Mike Whetston, 1Lt Daniel Lindstrom and MSgt Larry Carpenter, Jr). The team then received a personal Wing Mission Brief from Colonel Anita "F-15" Feugate-Opperman (341 MW/CC), Colonel Dan Voorhies (341 MW/CV), Curtis Hunt (341 MW/DS), and Capt James Kegyes (341 MW/CCE) where David gained an even bigger appreciation for the challenges associated with the vast distances associated with Minuteman Wing I.



*Dr. Stumpf, Jim Warner and Monte Watts meet for wing mission with Col. Anita Feugate-Opperman (341 MW/CC) and Col. Dan Voorhies (341 MW/CV)*

After loading vehicles and making the trip past Belt, MT (driven by Mr. John Turner (341 MW/PA) and SrA Edward Siqueiros (341 LRS)) the team arrived at the very first Minuteman MAF, A-01, where David remarked "This is a bucket list item for me...I never thought I would actually step foot on the ground and be in the control center where Minuteman all started." After touring the topside facilities with TSgt Cody Salisbury (490 MS/FM), the FSC (SrA Christian Luna, 741 MSFS), the missile tradition of ordering lunch and consuming a healthy quantity of tater tots (cooked to perfection by A1C Brielee Lucero of the 341 FSS) prepared he team for the elevator ride to the LCC to view the infrastructure of the capsule and see day-to-

day operations of the on-alert Missile Combat Crew from the 490 MS, 1Lt Mark Hazzard and 1Lt Carter Lee (operations squadrons deploy to the entire wing for a 7-day alert rotation).



*Driving to A01 MAF with Maj. John Erb (10 MS). 1Lt Hazzard explains the 7-day alert schedule*

A tour of the 341 MW museum with Mr. Rob Turnbow (341 MW/HO) ended the afternoon on base with a great history of the Malmstrom mission prior to the arrival of Minuteman and viewing of the extensive missile artifacts on display.



*Dr. Stumpf views MMIII Missile Guidance Set and other museum artifacts with Jim Warner and Rob Turnbow*

The evening of Day 2 ended with more great traditions in Big Sky Country by visiting Rainbow Falls over the Missouri River, seeing sites once explored by Lewis & Clark and a nightcap of Diet Coke and seeing mermaids at the Sip & Dip Lounge, in Great Falls.

Day 3 started back at the HQ 341 MW for a tour of the impressive and innovative Wing Operations Center with Capt Joshua Williams (WOC Director) and Missile Security Controllers, SSgt Carley Richardson and SrA Cade Finlayson. The pioneering effort of the Wing Operations Center showcased the synergy and efficiency brought to bear by operations, planning, scheduling, maintenance, helicopter operations, intelligence, security and communications disciplines working together in an electronically and physically connected, collaborative

workspace to execute all aspects of the Missile Wing mission enhanced by the use of the Remote Visual Assessment (RVA) system.

A tour of the above-ground, half-hole Launch Facility trainer T-41 followed where the team was allowed to witness a Missile Maintenance Team being evaluated in removing the Minuteman III shroud from the Re-Entry System and lifting into the Payload Transporter. This unexpected opportunity was another highlight and provided insight into the precise teamwork and communications required for large-scale maintenance activities.



*Observing RE-Entry System de-mate at T-41 trainer (Malmstrom AFB, MT)*

A tour of the T-41 trainer Launch Tube and Launcher Equipment Room by TSgt Luke Langenderfer and SSgt Justin Dagsen allowed David to provide the team with detailed history of development of nearly every item in the LER area and initiated an on-going dialogue sparked about “Why did they do it that way when they build this?” that may still be going on via follow-up emails.



*Observing Missile Guidance Set to Re-Entry Systems mating surface at T-41 trainer  
Discussing Launcher Equipment Room functions with TSgt Luke Langenderfer*

A second round of presentation and book signing took place back at the dining facility Montana Room where those who missed the first opportunity got a chance to meet David face-to-face and talk more about the abundant history of the Minuteman program in a “Lunch & Learn” professional development setting.



*Signing books with members of the 341 MW (Malmstrom AFB, MT)*

Following lunch, the team was greeted on the flight line by the 40<sup>th</sup> Helicopter Squadron Commander, Lt Col Weaver who provided a personal tour and details on how the UH-1 is integrated into the wing's security mission. David was enthusiastic to learn of how helicopters now carry surveillance, targeting and armament systems to deter attacks and defend weapons convoys and are completely integrated with the Security Forces Tactical Response Force (TRF) for security contingencies.



*Dr. Stumpf discusses capabilities of the UH-1N supporting missile field security with Lt Col Kevin Weaver (40 HS/CC), Malmstrom AFB, MT*

The next stop (for which there are no photographs - AAFM members understand why) was of the 341st Operations Support Squadron Codes section. David was briefed on the Minuteman codes and cryptography architecture by Capt Kerri Kegyes, Capt Jacob Seabury, Capt Levi Griffin, TSgt Seth Rutt and SSgt Andrew Garcia. He got to see Wing Codes Processing System in an upgraded secure enclosure and marveled at the legacy interfaces to 9 track tapes that were replaced by Compact Discs and soon to be replaced by secure, solid state memory systems. A notable highlight was getting to hold a training Mechanical Code Unit (MCU) he had researched and written about but had never seen in person.

Day 4 kicked off with a full tank of gas and a plan to head east through plenty of road construction but highlighted with a stop for sticky buns at the Bi-Way Café in Stanford, MT, a curious look at the proximity of Eddie's Corner to M-07 and an attempt to point out every 10<sup>th</sup> and 490<sup>th</sup> MAF and LF along the route to Minot. 9.5 hours later, after the team's rental car front end managed to find every flying insect in Montana and North Dakota the team arrived at Minot AFB and were greeted at the Sakakewea Inn by the 91<sup>st</sup> Missile Wing Vice-Commander, Colonel Johnny Galbert and wing Project Officer, Captain Tyler Carr.

Our last tour day started with the first of two well-attended presentations and book signing events in the Rough Rider Ready Room. The base librarian provided display and handouts to the attendees making it a double-down on missile history and Minot's role in the nuclear deterrence mission.



*Dr. Stumpf speaks to members of the 91 MW in the Rough Rider Ready Room (Minot AFB, ND)*

The team received a trainer ride instructed by Capt Dylan Dewoina and also got to see an unclassified look at the Minuteman Minimum Emergency Essential Communications Network (MEECN) Program Upgrade hardware for EHF and VLF radios in the trainer and walk-through crew procedures and responsibilities for the nuclear command & control mission.

After the MPT session, the team met with 90<sup>th</sup> Operations Group Commander, Colonel Kristen Nemish for personal introductions and overview of the ops mission at Minot. Lt. Taylor Tonnies (a second generation Missileer and daughter of AAFM members Keith and Linda Tonnies) surprised the team with her visit and discussion about second generation Airmen are serving in the missile mission.

The team finished the week by attending an AFGSC Family Day picnic at Bud Ebert Park that afforded tours of the on-base Training LF, major maintenance vehicles, Security Forces vehicles, equipment, weapons, and displays from all support agencies available to all Rough Riders of the 91<sup>st</sup>.



*Dr. Stumpf and Jim Warner discuss use of drones and weapons employment with members of the 91 Missile Security Operations Squadron (Minot AFB, ND)*

AAFM is indebted to the men and women of our ICBM force who open their doors to the group and treated David like a rock star. An experience he will never forget!

If you have not yet purchased a copy, there has been a second printing of *Minuteman – A Technical History of the Missile that Defined American Nuclear* available via Amazon at <https://www.amazon.com/Minuteman-Technical-History-Missile-American/dp/1682261549>

or through the University of Arkansas Press at <https://www.uapress.com/product/minuteman/>

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