

Subcommittee on Airports
March 2 & 3, 2021
Zoom Virtual Meeting

Day 1: March 2, 2021

Mr. Chris Oswald expressed hope that this would be the last remote meeting and thanked everyone for providing their input for the agenda. Important issues for discussions included new aircraft types, Urban Air Mobility (UAM), Noise Survey results, and looking at policy.

Mrs. Shelley Yak thanked Dr. Eric Neiderman for his acting role. She noted that the Fire Safety Team is busy researching Dry Ice to transport COVID vaccination. The focus is on tightening up collaboration partner in medical industry and other government agencies. Knowledge transfer is very important with industry, academic, and aviation STEM. FAA is identifying key areas and will be working on jointly such as data analytics, and composite. Landscape/drivers to develop FAA strategies and research & development portfolio. For discussions are FAA's roadmap for aircraft, human factors, impact of COVID and AI learning. Determine what is going on in industry and how is the FAA responding to these challenges. Are there trends being worked on that we should be more aware of or become more engaged? Work being performed or potential partners. Valuable feedback.

Mr. John Dermody commented that research is continuing during COVID and that is progressing appropriately. There was a change in the Office of Airports in Headquarters. In the process of hiring a new Branch Manager for AAS-110. Also hiring in the AAS-120 Airspace Data Branch manager. Harold Honey and Jeff D. Crislip are the new pavement engineers. In the future, HQ will be hiring a Civil Engineer and an Electrical Engineer. All research to develop standards are ever increasing are sent to ATR. There are 2 new entry positions in ATR. The budget for FY21 is at 40.7 million including 1.2 million for eVTOL research. For UAS Detection testing, John Dermody will announce in the next few days the 4 airports that have been selected to do test and evaluation.

Dr. Michel Hovan noted that Dr. Eric Neiderman was on detail for a year for the R&D Management Division. He thanked Mr. Mike Paglione for acting for Eric during that time and noted that research proceeded safely during COVID.

Dr. Eric Neiderman thought the detail was interesting and informative. There was a lot about coordination and communication, and that for Congress and DOT executives, plain language needs to be used. Three strategic initiatives include; communication and explaining the science; campus research labs and capabilities; and innovation in our processes, technical, and partnerships. Eric is considering a new branch on data science to

advance innovation and safety. It will lead to next level of advances. A program to understand the state of the art.

Dr. Michel Hovan noted that the budget was significant and meets the needs of ATR, that the portfolio is extensive. In the past, one main contractor was able to support ATR's needs but with a large and diversified portfolio, this has become challenging. Recently a move to having multi more customized contracts has been implemented. FY-2020 was supposed to be a transition year, but due to COVID, the transition is carried on to FY-21. ATR had some retirements and ATR managers are planning to backfill the vacancies. There 4 vacancies to fill. For research the use of Broad Agency Announcements (BAA's) has increased.

Mr. Chris Oswald discussed outstanding REDAC Recommendations. (Spring) Finding 1: UAS Emerging Vehicle Types, Finding 2: Emerging Pavement Materials and Additives, Finding 1: (Fall) COVID-19 Research Impacts, Finding 2: Emerging Pavement Additives, Finding 3: Airport Technology Research Program (UAS/AAM) Chris moved to close Finding 1 & 2 from Spring and they were closed. The 3 recommendations from the fall are reviewed.

Mr. John Dermody introduced Mr. Bob Craven.

Dr. Jimmy Kenyon from NASA discussed Advancing research in all flight regimes. High speed flight research. Vertical lift to High speed. Focus is on opening new markets and connecting people faster. Mr. Scott Marsh asked about the fuels for these aircraft. Mr. Chris Oswald mentioned looking at airport compatibility.

Mr. Akbar Sultan discussed Surface Management. The focus is global operations that are sustainable and transformative.

Mr. Davis Hackenberg talked about the Advance Air Mobility Mission, the Urban Air Mobility, and Maturity Levels. The Ecosystem partnership strategy and achieving "systems and architecture requirements".

Mrs. Nancy Mondonca discussed the Community Integration Status Education, Standard Development Organization, Community, Professional and Industry Organizations.

Marci Greenberger from ACRP was unable to attend. She sends her regrets. Mr. Matt Griffin discussed Airport Cooperative Research Program Projects in FY21 Program. Matt mentioned 3 recent publications. 1. Advanced Ground Vehicle Technologies for the Air side

2. Integrating UAS into Airport operations. 3. Airport Wildlife Hazard Management Programs.

Session on Possible Changes to Industry as a Result of COVID-19.

Dr. Eric Neiderman discussed the impacts and implementation of COVID in the Aviation Research Division, in terms of project delays, personnel and changes to the Research Landscape. For the most part, staff has performed very well under the maximum telework policies implemented by FAA.

The question of international Travel resumption was raised, and how this impacts the whole aviation industry. It seems that domestic travel has been improving, but this has not been seen with international destinations.

Dr. Michel Hovan discussed several potential impacts, due to COVID, to the Airports research portfolio in the future. Consideration of new Covid-related projects will be added in the future.

Mr. Scott Marsh noted that the aviation industry needs to ensure that customers feel safe at the airport and on the aircraft. Discussions followed about cleaning procedures already in place at airports. Possibility of having to develop new cleaning standards was discussed.

Mr. Shailesh Gongal discussed what should industry do when major events, like Covid, occur and the resulting financial and non-financial impacts to the whole aviation industry. The question was raised on how to generate revenue inside the crisis, and to reduce costs. Maybe more emphasis on technology and robotics.

Mr. Al Pollard talked about the GA side of COVID. He emphasized that TEAMS and Zoom were a huge unknown. People may decide to use high speed rail. He talked about mission priorities. He stressed community integration.

Mr. Gary Mitchel stated that he is not sure that airline traffic will bounce back to pre-covid status.

Mr. Chris Oswald noted reduced carbon footprints have been observed at airports.

Mr. Scott March talked about personal distancing and there may be a significant requirement for more terminal space, and touchless technologies. At this time, air traffic at

Teterboro is down by about 60%, and this consists mostly of leisure than business travel.

Mr. Bob Craven mentioned that we all have gotten good at online meetings. At what point will we be at our new normal? What were the Covid impact to airport? And when do we stop ignoring the impact for long term at airports.

Regular sessions resumed:

Mr. John Dermody announced the 4 Airport's approved for research for Section 383 UAS. They are in; Syracuse, New York; Columbus, Ohio; Huntsville, Alabama; and Seattle, Washington. There were 23 airport submissions. MR. Jim Patterson noted that they were looking for the best optimal test environment. The kick-off in ACY will be very soon. It is procurement sensitive that is not discussed with the other airports that applied.

Mr. Murphy Flynn gave an overview of Safety Projects under way. These include (RIM) Runway Incursion Mitigation Program; USDA Wildlife Hazard Abatement; (ARFF) Aircraft Rescue and Fire Fighting; (CAFS) Compressed Air Foam System Testing; Visual Guidance, and EMAS at the end of runway.

Mr. Keith Bagot discussed Alternative aircraft fire-fighting agent research. Fluorine Free Foam Research. He talked about MILSPEC Fire Test and ICAO Level C Fire Test. Halon replacement decision has not been made. Mr. Chris Oswald asked about the year-end deadline and how they were holding up. Mr. John Dermody noted that meeting the congressional deadline might be challenging.

Mr. Mike DiPilato discussed Unmanned Aircraft Systems. He participated in 3 SRM's while at home; Obstruction Analysis; Pavement Inspections; and Wildlife Hazard Management.

Mr. Jonathan Torres discussed Vertiport Design Standards for eVTOL/UAM vehicles. He talked about Vertiport Design goals.

Ms. Lauren Vitagliano discussed the Aircraft Noise Annoyance Survey Results and Airport Environmental Projects. Chris Oswald congratulated Lauren on finishing up on the results. Jim Mack asked if the project was based on coordinating information. Lauren noted that it was internal environmental review with the agency. Chris Oswald appreciates all the work over the years. Additional demands coming from environmental side, runway length requirements, floating and storm water management.

Meeting adjourned.

Day 2: March 3, 2021

- Mr. Ryan King discussed Evaluation of Solar Lighting System for Airports. He discussed objectives for compliance. The pandemic has impacted the schedule of his project primarily because of travel. The team used questionnaires, zoom, and satellite searches to get information. Mr. Al Pollard commented that he had people who couldn't follow directions and they put in guard lights. Al is waiting for results of this effort. Mr. Chris Oswald asked if they compared conventional solar panels to the testing sections. Ryan noted that they are not part of his project. The (NREL) National Renewable Energy Lab can probably help in the future. Murphy Flynn said that the infrastructure wasn't there to perform such analysis.
- Mr. Somil Shah discussed Aircraft braking friction research and gave an update. He talked about Trapezoidal grooving. Scott Marsh asked if the Aircraft Base Sensors are standardized. Somil noted that the existing sensors and data are sent to the company called AST. Michel mentioned that the Big Data approach is using existing data. The challenge is if there is enough information in that data. Jimmy Mack asked if the transverse groove would get contaminated faster and if there is any thoughts of the impact of grooving contamination. Murphy Flynn noted there is no research on groove directions. Gary Mitchel thought the Trapezoid Groove patent may have run out by now. He wanted to know when we would have an answer as to whether this is an option. There are a number of airports around the country asking about it. John Dermody said the Trapezoidal Groove is being done case by case. Harold Honey thought research is not a bad thing but not necessarily needed. Jackson Hole would be the first airport they approve.
- Mr. Jeff Gagnon gave an overview of all pavement research projects under way. He focused RPA Discussions-Airport Pavements. He noted that there are 8 pavement Research Program Areas (RPA's).
- Mr. Gary Mitchel noted they have a \$7 million from FY-20 in contract with 2 cooperative agreements. Asked if other \$6 million had been appropriated for FY-21. Jeff Gagnon says the funds will be obligated.
- Dr. Dave Brill gave presentation on FAARFIELD Update and 40-year pavement design life. Mr. Jim Mack asked if it would allow overlays of asphalt. Gary Mitchel complimented the updates to FAARFIELD, since they are more user friendly. He asked if instead of calling it 40-year life, it is "Extended Life ". Discussion followed with no resolution.
- Dr. Navneet Garg discussed HMA Fatigue Model in FAARFIELD. He noted that "fatigue" is a difficult process to model. Mr. Frank Fee pointed out that "thickness" matters. And

the variables depend on AC mixtures you use. ATR need to recognize those considerations. Mr. Brett Williams asked if there were any plans adjusting FAARFIELD pavement load, and that there is a lab resource guide on the NAPA website. Mr. Frank Fee wanted to make sure engineers understand difference between top down and bottom up. The key is for a pavement that can be repaired, not entirely redone. Gary Mitchel noted what is needed is needed is not failure of structure, but functional failure.

- Mr. Chris Oswald stated that the committee didn't have any real issues with the solar project, nor with the aircraft braking friction project. Dr. Michel Hovan asked for names and recommendations to help with the Aircraft Friction project. These can be sent to himself and Somil in an email. Michel also noted that there are regular trapezoidal groove research meetings with Rutgers University. Discussions are needed with HQ on the direction of the Trapezoidal research requirements.
- Mr. Chris Oswald mentioned that there were no necessary findings, recommendations, or issues regarding RPA Presentations.
- Mrs. Chinita Roundtree-Coleman noted that findings can be "acknowledged" and "observed".
- Mr. Chris Oswald stated that for UAS research activities, it is critical to ensure research is keeping up with industry. Jim Patterson discussed UAS research, and the five priorities set by HQ (Obstruction analysis, Pavement inspection, ARFF situational awareness, Wildlife, and perimeter security). FOD can be added in the future.
- The next REDAC meetings are scheduled for September 8, 9, 2021 and March 8 & 9, 2022.

Attendees

Susan Kaelin (minutes)	Chinita Roundtree-Coleman
Chris Oswald	Michel Hovan
Matthew Brynick	Murphy Flynn
Jeff Gagnon	Vicki Alstrom
Lauran Vitagliano	Brett Williams
Keith Bagot	Scott Marsh
Paul Tan	Jeffrey D. Crisp
Shelley Yak	John Dermody
David Brill	Jim Mack
Gary Mitchell	
Eric Neiderman	Shailes Gongal
LLC	Frank Fee
Jerermy Valcich	Evanicio Costa
Jim Mack (CEMEX)	Jeff Sedin-ALPHA
John W.	Jon Schleifer
Nanay Mendonca	Jim Patterson
Muharrem Marve	Nick Subbotin
Richard Ji	Qingge Jia
Stephanie P. Austin	Ryan King
Jimmy Kenyon- NASA	Dave Hackenberg
Adam Bouchard	Amy Anderson
Akbar Sultan	Benjamin D-INT WEBB
Jeff Sedin-AIPA	Al Pollard-Martin State Airport
Bob Craven	Jonathan Torres
Darian Byrd	Andrew Sousa (ALPA)
Sarah Hubbard	Harold Honey
Dave Atwood	Chris Bartone
Ryan King	Mike DiPilato
Davis Hackenberg	Wesley Major
Navneet Garg	Jeremy Valcich