



Federal Aviation Administration

Memorandum

Date: September 9, 2016

To: FAA Lines of Business and Managers with NEPA Responsibilities

From: Rhonda Solomon, Acting Manager Environment and Policy Operations, Office of Environment and Energy, AEE-400
Rhonda Solomon

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Subject: Guidance on Aviation Environmental Design Tool (AEDT) version determination for project use

This memo is provided to clarify existing policies on AEDT version selection for project use. Effective September 12, 2016, the Aviation Environmental Design Tool 2c (AEDT 2c) is required for purposes of all noise, fuel burn and emissions modeling for FAA actions. AEDT 2c replaces AEDT 2b.

Background and Existing Regulatory Requirements

On May 29, 2015, the Aviation Environmental Design Tool version 2b (AEDT 2b) replaces the legacy AEDT 2a, Integrated Noise Model (INM) and Emissions and Dispersion Modeling System (EDMS) environmental modeling tools for purposes of all noise, fuel burn and emissions modeling for FAA actions initiated after this date and prior to the release date of any subsequent version of AEDT.

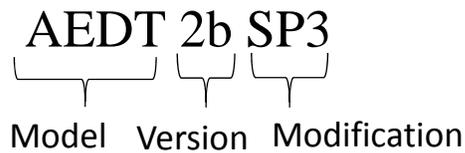
***Federal Register (80 FR 27853):** Effective May 29, 2015, AEDT 2b replaces AEDT 2a, INM, and EDMS as the required tool for noise, fuel burn, and emissions modeling of FAA actions. Consistent with current FAA policy and practice, the use of AEDT 2b is not required for projects whose analysis began before the effective date of this policy. In the event AEDT 2b is updated after the environmental analysis process is underway, the updated version may, but need not, be used to provide additional disclosure concerning noise, fuel burn, and emissions.*

This requirement extends to all noise, fuel burn and emissions modeling for FAA actions including studies conducted under the National Environmental Protection Act (NEPA) as well as all other FAA approved studies such as under Part 150 or Part 161.

Definition of AEDT Versions and Modifications

Releases of AEDT are characterized by a version code comprised of a numeric and lettered designation; following this version code may then be a sequentially numbered service or feature pack modification code. The required initial release of a new version will therefore increment

the version code, but contain no modification code. As modifications are released, a modification code will then be appended to the version code.



Following the release of AEDT 2b, three additional modifications were released:

- Feature Pack 1 (FP1) on July 29, 2015
- Service Pack 2 (SP2) on December 22, 2015
- Service Pack 3 (SP3) on June 13, 2016

Each of these modifications provided bug fixes and/or introduced additional features, but should not be considered as a new version of the model for purposes of project requirement. Only the initial release of a version and not any of the subsequently released modifications are required for project use, however subsequent modifications may optionally be used up until the following AEDT version release.

Note that while not required, the most current modification available is always recommended and as stated in FAA Order 1050.1F *Environmental Impacts: Policy and Procedures*, subsequent approved modifications or updates to a model may be used without need for additional AEE approval:

FAA Order 1050.1F, Paragraph 4-2.b FAA-Approved Models: *The latest FAA-approved model must be used for both air quality and noise analysis. A list of approved models for each type of analysis is available in the 1050.1F Desk Reference. Prior approval from AEE is required to use other models or methodologies. At the completion of the NEPA process, all input files used in the analysis and corresponding output files must be provided to AEE. Details on requirements for noise analysis are located in Appendix B. In the event a model is updated or replaced after the environmental analysis process is underway, the updated or replacement model may be used to provide additional disclosure concerning noise or air quality impacts, but use of the updated or replacement model is not required.*

Additionally, under FAA Part 150 – Airport Noise Compatibility Planning, the requirement exist to use the current approved modeling methodologies and computer programs; which for AEDT should always be considered the most current version of the model.

14 CFR Part 150 Section A150.103(a) Use of Computer prediction model: *The airport operator shall acquire the aviation operations data necessary to develop noise exposure contours using an FAA approved methodology or computer program, such as the Integrated Noise Model (INM) for airports or the Heliport Noise Model (HNM) for heliports. In considering approval of a methodology or computer program, key factors include the demonstrated capability to produce the required output and the public availability of the program or methodology to provide interested parties the opportunity to substantiate the results.*

Future AEDT Development and Release Cycle Frequency

The structure of AEDT has been specifically designed to efficiently incorporate new tools and techniques on development timescales not feasible with the older legacy tool software platforms. This allows for the inclusion of methodologies derived from active research and policy requirements to more efficiently be added to the model. In an effort to make these new methodologies and options available as quickly as possible, a more frequent (3-6month) release cycle of model modifications has been established. Once a number of modifications have been released or advances in the underlying calculations necessitate, a new required version will be released on a less frequent (1-2 year) time scale. The frequency of these releases may vary subject to research definitions, program needs and resources. As described earlier, only the initial release of a version is required however the most current modification is always recommended.

Office of Environment and Energy Requirements and Recommendations

The latest AEDT version is required for all noise, fuel burn and emissions modeling for FAA actions where the environmental analysis is initiated on or after the version release date. For projects where the environmental analysis process was initiated after May 29, 2015, but before September 12, 2016, AEDT 2b was required; however, any of the released AEDT 2b modifications may be used without further review. For projects where the environmental analysis is initiated on or after September 12, 2016, AEDT 2c is now the required version superseding AEDT 2b and all of its modifications.

As stated above and noted in the *Federal Register* and FAA Order 1050.1F, the most current model version at the time the “*environmental analysis process is underway*” must be used; however, flexibility to use subsequent versions and modifications always exists.

It is AEE’s recommendation that for all FAA actions, sponsoring FAA lines of business also recommend the most currently released modification to the required AEDT version at the time any new, updated or restarted environmental analysis is initiated. It is further recommended that should a considerable pause or delay occur in a project, that the project be reviewed to consider whether the project should be modeled with the most recent version regardless of the amount of environmental modeling that has been completed. In this way any enhancements and features available in the most current model version and modification would be made available. This recommendation also extends to projects started prior to the release of AEDT and for which legacy modeling tools were originally planned, but where there have been delays.

For Further Information:

If you have questions regarding this memorandum please contact Rhonda Solomon, Acting Manager Environment and Policy Operations, Office of Environment and Energy, AEE-400 at 202-267-3021. For questions regarding AEDT including the support for multiple versions, please contact Joe DiPardo at 202-267-4746 or Mohammed Majeed at 202-267-3703.