U.S. Department of Transportation
Volpe National Transportation Systems Center

*Please select dataset operation type.

[SELECT]

Certification Validation Dataset Identification

For helicopter data.*

APPLICANT _____

TEST DATE (MM/DD/YY) _____

AIRCRAFT DESIGNATION_____

Validation Package Reference Number		Data Set	Description	File Name		
				Centerline Mic	Right Sideline Mic	Left Sideline Mic
2		Flow Diagram	A flow diagram and/or description of measurement, analysis and adjustment systems, including system characteristics. Please identify which software modules perform each individual portion of the process.			
3		Raw Test-Day Noise Data	An uncorrected, contiguous, one-third octave SPL time-history for each event (ANSI/ISO bands 17-40, nominal center frequencies of 50 Hz to 10 kHz, inclusive, with records fully-encompassing the EPNL noise duration, the limits of which are defined as the 10 dB-down points in the PNLT time-history).			
4		Pre-detection background noise	A one-third octave spectrum of SPLs representing the average pre-detection noise, including the ambient noise conditions at the test site, and active electronic instrumentation noise floor (one for each event and site combination submitted).			
5		Post-detection background noise	A one-third octave spectrum of SPLs representing the post-detection noise at the sensitivity settings at which the individual event was processed (one for each event/site/system combination submitted). Note that post-detection noise is non-additive, and represents minimum levels below which measured values should be considered to be not valid.			
6		Meteorological Data	Meteorological data (i.e., temperature and relative humidity) versus altitude and time (per event) as used in processing for determining average test day speed of sound, atmospheric absorption, etc. A description of the meteorological data should be supplied, specifying any post-processing that was performed (such as smoothing, layering, time interpolation or altitude extrapolation) on the measured data prior to reporting. At a minimum, the temperature and humidity measured at 10 meters and at aircraft height should be supplied for each event.			
7		Aircraft Position Data	Aircraft position and performance data (TSPI - Time Space Position Information) for each event, including XYZ coordinates referenced to the centerline microphone location. A description of the tracking data should be supplied, specifying any post-processing that was performed (such as smoothing, curve-fitting, straight-line approximation, etc.) on the measured data prior to reporting.			
8	a	System response corrs	System corrections for deviation from flat frequency response (based on pink noise, swept-sine, or discrete-sine tone testing).			
	b	Pressure-response and free-field sensitivity	Microphone pressure-response and free-field sensitivity corrections (including incidence-dependent corrections over a range of angles, if applicable).			
	c	Windscreen insertion leffects	Microphone wind screen insertion-effects corrections.			
	d	Calibration Drift	Field calibration "drift" corrections.			
	e	Environmental calibrator corrections	Environmental corrections to Calibrator output level, such as those for pressure, temperature, humidity, and coupler volume.			
	f	System gain-change	System gain-change correction, for intentional differences in system sensitivity between calibration and aircraft noise measurement.			
	g	Other corrections	Other corrections, including source noise adjustments such as the high-altitude site jet source noise adjustment.			

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11		Processed aircraft noise geometry data	If reconstruction is performed using time and/or frequency extrapolation, or if the "Integrated" Procedure is used for adjustment to reference conditions, a time-history of processed aircraft noise geometry (TXYZ emission coordinates, sound emission angle, and sound propagation distance relative to the microphone, at time of emission for each spectrum record within the noise duration) should be provided. Otherwise, such noise geometry information should be provided for at least the PNLTM record.			
12		Layered atmospheric absorption	If atmospheric layering is performed, a table of atmospheric absorption coefficients (“alphas”) for each layer, in dB per 100 meters or dB per 1000 feet should be provided for each event.			
13		Cumulative test-day alphas	A spectrum (or series of spectra) for each event of cumulative test-day atmospheric absorption coefficients, in dB per 100 meters or dB per 1000 feet, should be provided.			
15		Adjusted, as-measured 1/3 OB SPL time-history	For each event, provide a time-history of test-day "adjusted, as-measured", contiguous, one-third-octave-band data records along with calculated PNL, and PNLT values, and frequency band for maximum tone correction for each spectrum. Additionally, the test-day EPNL, band-sharing adjustment, and timestamp of PNLTM record should be included. The PNLTM record, the first and last 10 dB-down records, and any secondary peaks within 2 dB of PNLTM should also be identified.			
17		Reference atmospheric absorption coefficients	The values used for reference condition atmospheric absorption coefficients in dB per 100 Meters or dB per 1000 feet, should be provided.			
19	g - ii	Contiguous, reference 1/3 OB SPL time-history	For the **Simplified Procedure;** for PNLTM and any records within 2 dB of PNLTM, a time-history of reference condition one-third-octave-band data records with calculated reference condition PNL_R, $PNLT_R$, and maximum tone correction frequency band.			
20	c	Contiguous, reference 1/3 OB SPL time-history	For the **Integrated Procedure;** a time-history of reference condition SPL_Rs, (one-third-octave-band data) with calculated PNL_R, $PNLT_R$, maximum tone correction frequency, and the calculated effective duration time for each record.			
	d	Reference noise geometry time-history	For the **Integrated Procedure;** a time-history of reference noise geometry (i.e., reference slant range [SR_R]; and reference TXYZ emission coordinates).			