(Secs. 313(a), 603, and 611(b), Federal Aviation Act of 1958 as amended (49 U.S.C. 1354(a), 1423, and 1431(b)); sec. 6(c), Department of Transportation Act (49 U.S.C. 1655 (c)); Title I, National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*); E. O. 11514, March 5, 1970 and 14 CFR 11.45).

[Amdt. 36–16, 53 FR 47400, Nov. 22, 1988; 53 FR 50157, Dec. 13, 1988, as amended by Amdt. 36–22, 64 FR 55602, Oct. 13, 1999; Amdt. 36–54, 67 FR 45236, July 8, 2002; Amdt. 36–27, 70 FR 45504, Aug. 5, 2005; Amdt. 36–28, 71 FR 532, Jan. 4, 2006; FAA Doc. No. FAA–2015–3782, Amdt. No. 36–31, 82 FR 46131, Oct. 4, 2017]

APPENDIX H TO PART 36—NOISE REQUIREMENTS FOR HELICOPTERS UNDER SUBPART H

PART A—REFERENCE CONDITIONS

Sec.

PART B—NOISE MEASUREMENT UNDER § 36.801

PART C—NOISE EVALUATION AND CALCULATION UNDER § 36.803

PART D—NOISE LIMITS UNDER § 36.805

PART A—REFERENCE CONDITIONS

Section H36.1 General. This appendix prescribes noise requirements for helicopters specified under § 36.1, including:

(a) The conditions under which helicopter noise certification tests under Part H must be conducted and the measurement procedures that must be used under § 36.801 to measure helicopter noise during each test;

(b) The procedures which must be used under § 36.803 to correct the measured data to the reference conditions and to calculate the noise evaluation quantity designated as Effective Perceived Noise Level (EPNL); and

(c) The noise limits for which compliance must be shown under § 36.805.

Section H36.3 Reference Test Conditions.

(a) *Meteorological conditions.* Aircraft position, performance data and noise measurements must be corrected to the following noise certification reference atmospheric conditions which shall be assumed to exist from the surface to the aircraft altitude:

(1) Sea level pressure of 2,116 psf (1,013.25 hPa).

(2) Ambient temperature of 77 degrees F (25 degrees C).

(3) Relative humidity of 70 percent.

(4) Zero wind.

(b) *Reference test site.* The reference test site is flat and without line-of-sight obstructions across the flight path that encompasses the 10 dB down points.

(c) *Takeoff reference profile.* (1) Figure H1 illustrates a typical takeoff profile, including reference conditions.

(2) The reference flight path is defined as a straight line segment inclined from the starting point (1,640 feet (500 meters) from the center microphone location and 65 feet (20 meters) above ground level) at a constant climb angle β defined by the certificated best rate of climb and V_y for minimum engine performance. The constant climb angle β is derived from the manufacturer's data (approved by the FAA) to define the flight profile for the reference conditions. The constant climb angle β is drawn through C_r and continues, crossing over station A, to the position corresponding to the end of the type certification takeoff path represented by position I_r.

(d) *Level flyover reference profile.* The beginning of the level flyover reference profile is represented by helicopter position D_r (Figure H2). The helicopter approaches position D_r in level flight 492 feet above ground level as measured at Station A. Reference airspeed must be either $0.9V_H$; $0.9V_{NE}$; $0.45V_H$ + 65 kts ($0.45V_H$ + 120km/h); or $0.45V_{NE}$ + 65kts ($0.45V_{NE}$ + 120 km/h), whichever of the four speeds is least. The helicopter crosses directly overhead station A in level flight and proceeds to position J_r.

(e) For noise certification purposes, V_H is defined as the airspeed in level flight obtained using the minimum specified engine torque corresponding to maximum continuous power available for sea level pressure of 2,116 psf (1,013.25 hPa) at 77 °F (25 °C) ambient conditions at the relevant maximum certificated weight. The value of V_{NE} is the never-exceed airspeed. The values of V_H and V_{NE} that are used for noise certification must be listed in the approved Rotorcraft Flight Manual.

(f) *Approach reference profile.* (1) Figure H3 illustrates approach profile, including reference conditions.