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|-----------------------------|----------------------------|---|-------------------------------|
|                             |                            | ASN   | 2007-AHQ-1-COA                |
|                             |                            | Case Status   | EXPIRED                       |
|                             |                            | Date Created  | 12/05/2006                    |
|                             |                            | Date Submitted  | 02/14/2007                    |
| Proponent Organization      |                            | Sponsor   | NASA JPL                      |
|                             |                            | Attn Of   | (b) (6)                       |
|                             |                            | Address   | Mail Stop 82-105              |
|                             |                            | Address2  | 4800 Oak Grove Dr.            |
|                             |                            | City  | Pasadena                      |
|                             |                            | State   | CA                            |
|                             |                            | Postal Code   | 91109                         |
|                             |                            | Telephone   | (818)354-1531                 |
|                             |                            | Email   | (b) (6)                       |
| Declaration                 |                            | Declaration(a)  | Yes                           |
|                             |                            | Declaration(b)  | Yes                           |
| Point of Contact            |                            | Representative  | (b) (6)                       |
|                             |                            | Address   | Mail Stop 82-105              |
|                             |                            | Address2  | 4800 Oak Grove DR             |
|                             |                            | City  | Pasadena                      |
|                             |                            | State   | CA                            |
|                             |                            | Postal Code   | 91109                         |
|                             |                            | Telephone   | (818)354-1531                 |
|                             |                            | Email   | (b) (6)                       |
| Operational Description     | Requested Effective Period | Beginning   |                               |
|                             |                            | End   |                               |
|                             |                            | Light out operation                                     | No                            |
|                             |                            | VFR operation   | Yes                           |
|                             |                            | IFR operation   | No                            |
|                             |                            | Day operation   | Yes                           |
|                             |                            | Night operation   | No                            |
|                             |                            | Program Executive Summary                               |                               |
|                             |                            | Operational Summary                                     |                               |
|                             | Location                   | State   | CA                            |
|                             |                            | County  | San Bernardino                |
|                             |                            | Nearest Airport   | SOUTHERN CALIFORNIA LOGISTICS |
|                             |                            | AOR   | California - Southern         |
|                             | Class Of Airspace          | Class-A   |                               |
|                             |                            | Class-B   |                               |
|                             |                            | Class-C   |                               |
|                             |                            | Class-D   |                               |
|                             |                            | Class-E   |                               |
|                             |                            | Class-G   |                               |
| System Description          |                            | Aircraft Type   |                               |
|                             |                            | Aircraft Type And Model Description Attachment          | 1                             |
|                             |                            | Control Station Attachment                              | 1                             |
|                             |                            | Communications System Attachment                        | 1                             |
|                             |                            | List Certified Components (TSO) Attachment              | 1                             |
|                             |                            | Other Attachment  | 0                             |
| Performance Characteristics |                            | Climb Rate (feet/Minute)                                | 600                           |
|                             |                            | Descent Rate (feet/Minute)                              | 600                           |
|                             |                            | Turn Rate (Degrees/Second)                              | 15                            |
|                             | Cruise Speed               | Maximum   | 15                            |
|                             |                            | Minimum   | 0                             |
|                             |                            | Approach Speed  | 0                             |
|                             | Operating Attributes       | Maximum MSL   | 4400                          |
|                             |                            | Minimum MSL   | 2900                          |
|                             |                            | Gross Takeoff Wt  | 75.0                          |
|                             |                            | Launch/Recovery Attachment                              | 1                             |
| Airworthiness               |                            | FAA Type Certificate                                    |                               |
|                             |                            | If No FAA Certificate (Public Aircraft Only) Attachment | 1                             |

|                            |  |  |     |
|----------------------------|--|--|-----|
| Procedures                 |  | Lost Link/Mission Procedures Attachment  | 1   |
|                            |  | Lost Communications Procedures Attachment  | 1   |
|                            |  | Emergency Procedures Attachment  | 1   |
| Avionics/Equipment         |  | Equipment Suffix Type  | X   |
|                            |  | GPS  | Yes |
|                            |  | Moving map indicator (Command Station)   | Yes |
|                            |  | Tracking capability  | No  |
|                            |  | TCA/MCAS   | No  |
|                            |  | ELT  | No  |
|                            | Transponder                            | Transponder  | No  |
|                            |  | On   |     |
|                            |  | Off  |     |
|                            |  | Standby  |     |
|                            |  | Ident  |     |
|                            |  | Mode S   |     |
|                            |  | Mode C   |     |
|                            |  | Transponder Retuneable in Flight   |     |
| Lights                     |  | Landing  | No  |
|                            |  | Position/Navigation  | No  |
|                            |  | Anti-collision   | No  |
|                            |  | Infrared (IR)  | No  |
| Spectrum Analysis Approval |  | Data Link  | Yes |
|                            |  | Data Link Attachment   | 0   |
|                            |  | Control Link(s)  | Yes |
|                            |  | Control Link Attachment  | 0   |
|                            |  | Operations utilizing Radio Control (R/C) frequencies as described in Title 47 CFR 95 | Yes |
|                            |  | NTIA/FCC Authorization Attachment  | 0   |
| ATC Communications         | Transmitter VHF Band                   | VHF Band   | Yes |
|                            |  | Quantity   | 1   |
|                            |  | In-Flight Retunable  | No  |
|                            | Transmitter UHF Band                   | UHF Band   | No  |
|                            |  | Quantity   |     |
|                            |  | In-Flight Retunable  | No  |
|                            | Transmitter HF band                    | HF Band  | No  |
|                            |  | Quantity   |     |
|                            |  | In-Flight Retunable  | No  |
|                            | Receiver VHF Band                      | VHF Band   | Yes |
|                            |  | Quantity   | 1   |
|                            |  | In-Flight Retunable  | No  |
|                            | Receiver UHF Band                      | UHF Band   | No  |
|                            |  | Quantity   |     |
|                            |  | In-Flight Retunable  | No  |
|                            | Receiver HF band                       | HF Band  | No  |
|                            |  | Quantity   |     |
|                            |  | In-Flight Retunable  | No  |
|                            | Guard (Emergency) Frequencies VHF Band | VHF Band   | No  |
|                            |  | Quantity   |     |
|                            | Guard (Emergency) Frequencies UHF Band | UHF Band   | No  |
|                            |  | Quantity   |     |
|                            | Instantaneous Two-Way Voice            | Direct to pilot  | Yes |
|                            |  | SATCOM   | No  |
|                            |  | Relay via aircraft   | No  |

|  |                          |   |  |
|--|--------------------------|---|--|
| Electronic Surveillance/<br>Detection Capability |                          | EO/IR   | No   |
|  |                          | Terrain detection                                   | No   |
|  |                          | Weather/icing detection                             | No   |
|  |                          | Radar   | No   |
|  |                          | Other Attachment                                    | 0  |
|  |                          | Electronic detection systems                        | No   |
|  |                          | Electronic detection systems attachment             | 0  |
|  |                          | Radar observation                                   | No   |
|  |                          | NAS Operational Capability Attachment               | 0  |
| Visual Surveillance/<br>Detection Capability     | Maximum Distance from UA | Vertical  | 1500 Feet  |
|  |                          | Horizontal  | 0.6 Nautical Miles   |
|  |                          | Airborne based (Chase Aircraft)                     | No   |
|  |                          | Ground based  | Yes  |
|  |                          | Visual observation from one or more ground sites    | Yes  |
|  |                          | Forward or side looking cameras                     | No   |
|  |                          | Attachment for All                                  | 1  |
| Aircraft Performance Recording                   |                          | Flight data recording                               | Yes  |
|  |                          | Control station recording                           | Yes  |
|  |                          | Voice Recording                                     | No   |
| Flight Aircrew Qualifications                    | Pilots                   | Private (Written)                                   | No   |
|  |                          | Private (Certified)                                 | No   |
|  |                          | Instrument  | No   |
|  |                          | Commercial  | No   |
|  |                          | Air Transport                                       | No   |
|  |                          | Unique Trained Pilot                                | Yes  |
|  |                          | Unique Trained Pilot Description                    | Our pilot has 30 years experience flying RC model aircraft and he has multiple flights with the JPL blimp. |
|  |                          | DOD certified/trained                               | No   |
|  |                          | Other Certified Training                            | No   |
|  |                          | Trained on FAR Part 91 Requirement                  | No   |
|  |                          | Medical Certification Class (FAA or DOD equivalent) | 3  |
|  |                          | Currency Status                                     | Our pilot averages 2-3 RC aircraft flights per month.  |
|  |                          | Duty Time Restrictions                              | None   |
|  |                          | Single UAS Control                                  | Yes  |
|  |                          | UAS Description                                     | Air space at the flight location is controlled by the SCLA   |
|  |                          | Total Numbers of UAS Controlled                     | 1  |
|  | Observers                | Private (Written)                                   | No   |
|  |                          | Private (Certified)                                 | No   |
|  |                          | Instrument  | No   |
|  |                          | Commercial  | No   |
|  |                          | Air Transport                                       | No   |
|  |                          | Unique Trained Pilot                                | Yes  |
|  |                          | Unique Trained Pilot Description                    | Our ground obsrvrs have operated the JPL blimp for over 3 years covering approximately 30 flights.         |
|  |                          | DOD certified/trained                               | No   |
|  |                          | Other Certified Training                            | No   |
|  |                          | Trained on FAR Part 91 Requirement                  | No   |
|  |                          | DOD Certified Training Attachment                   | 0  |
|  |                          | Medical Certification Class (FAA or DOD equivalent) | 3  |
|  |                          | Currency Status                                     | N/A  |
|  |                          | Duty Time Restrictions                              | None   |
|  |                          | Single UAS Control                                  | Yes  |
|  |                          | UAS Description                                     | Air space at the flight location is controlled by the SCLA   |
|  |                          | Total Numbers of UAS Controlled                     | 1  |

|                       |  |                       |   |
|-----------------------|--|-----------------------|---|
| Special Circumstances |  | Special Circumstances | <p>1. Our point of contact at the Southern California Logistics Airport (SCLA) is (b) (6), the airport director. He can be reached at (b) (6) is cognizant and supportive of this CoA application and the kind of blimp test flights that we plan to do.</p> <p>2. All flight operations planned at SCLA are done under the cognizance and monitoring of the SCLA air traffic control.</p> <p>3. The pilot is able to toggle back and forth between teleoperation mode and autonomous flight mode at all times. Therefore, if problems develop with the autonomous control, he is able to switch back to teleoperation control immediately.</p> |
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