

**Petition for Exemption concerning operation of San Diego Gas & Electric Company
Unmanned Aircraft System in accordance with Section 333 of the FAA Modernization and
Reform Act of 2012**

Registered Owner Name: <i>San Diego Gas & Electric Company</i>	Aircraft Builder: <i>Physical Sciences Inc.</i>
Registered Owner Address: <i>101 Ash Street San Diego CA 92101</i>	Year Manufactured: 2013
Aircraft Description: <i>Vertical Take Off and Landing (VTOL) sUAS</i>	Aircraft Model Designation: <i>InstantEye Mk-2 Gen2</i>
Aircraft Registration/Serial Number: N500VD/ MK2GEN2-00005 N544L/ MK2GEN2-00004	Engine Model: Mk-2 Gen Brushless Motor
	Propeller Model: PSI 7 x 5 Pusher

1. Overview.

San Diego Gas & Electric Company (SDG&E) is a regulated public utility that provides safe and reliable energy service to 3.4 million consumers through 1.4 million electric meters and 861,000 natural gas meters in San Diego and southern Orange counties. SDG&E's service area spans 4,100 square miles. SDG&E is committed to providing safe, reliable infrastructure and services that allow our communities to grow and prosper. Key areas of focus for SDG&E are public safety, restoring outages in a safe and timely manner and creating new methods enabling our customers to save energy every day.

SDG&E's electric transmission system delivers energy to both San Diego and Orange Counties in California, which provides electricity to 3.4 million SDG&E customers. The electric transmission system is regulated by the Federal Energy Regulatory Commission. Presidential Policy Directive 21 identifies the Energy Sector as uniquely critical because it provides an "enabling function" across all critical infrastructure sectors.

On June 25, 2014, the Federal Aviation Administration (FAA) granted SDG&E a Special Airworthiness Certificate in the Experimental category, for the InstantEye small Unmanned Aircraft System (sUAS). This will allow SDG&E to perform research, development, and training in a sparsely populated area in Eastern San Diego County. SDG&E is the first utility in the nation to be granted FAA approval for this technology. To further the SUAS program, provide benefits of this new technology to our customers, and increase the safe operation of its electric grid, SDGE is requesting an exemption under Section 333 of the FAA Modernization and Reform Act.

Enclosure (1) will include proprietary information/confidential material for this exemption and will be sent via a separate correspondence.

2. Approved Exemptions.

- a. **§ 91.9 (b)(2) and 91.203 (a) and (b).** *FAA letter dated April 1, 2014, exemption No. 10968, Regulatory Docket No. FAA-2013-1127, grants an exemption to allow SDG&E to operate the InstantEye without carrying and displaying an airworthiness certificate, registration flight manual, and any other required documentation onboard the aircraft. All required paperwork will be located at the ground control station. (See page 1 of approved exemption, below. The full exemption will be submitted as an Enclosure (2) with this request.)*



U.S. Department
of Transportation
Federal Aviation
Administration

April 1, 2014

800 Independence Ave., S.W.
Washington, D.C. 20591

Exemption No. 10968
Regulatory Docket No. FAA-2013-1127

Mr. Dallas Cormier, SD1173
San Diego Gas & Electric, Semptra Energy
101 Ash Street
San Diego, CA 92101

Dear Mr. Cormier:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

The Basis for Our Decision

By letters dated December 20, 2013 and January 14, 2014, you petitioned the Federal Aviation Administration (FAA) on behalf of San Diego Gas & Electric (SDGE) for an exemption from §§ 91.9(b)(2) and 91.203(a) and (b) of Title 14, Code of Federal Regulations (14 CFR). That exemption would allow SDGE to operate the InstantEye MK-2 N544L and N500VD unmanned aerial vehicles (UAVs) without carrying and displaying the airworthiness certificate, registration, flight manual, and any other required documentation onboard the aircraft. You requested that all required paperwork be located at the ground control station or within close proximity to the pilot in command.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to SDGE.

The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grant of Exemption No. 8607 (copy enclosed), the FAA found it unnecessary to carry and display the airworthiness, certification, and registration documents in unmanned aircraft systems (UASs) and UAVs for the operations described by the petitioner. The original intent of the subject regulation was to display the airworthiness,

AFS-14-084-E

September 12, 2014

- b. § 91.9(c) exemption. FAA letter dated Jan 07, 2014, from AIR-230, grants an exemption for alternative markings per Title 14 of the Code of Federal Regulation 45. See below, this exemption will be submitted as Enclosure (3) with this request.



U.S. Department
of Transportation
Federal Aviation
Administration

800 Independence Ave. SW
Washington, DC 20591

JAN 07 2014

Mr. Dallas Cormier
San Diego Gas & Electric
Semptra Energy
101 Ash St.
San Diego, CA 92101

Dear Mr. Cormier:

Thank you for your letter dated December 28, 2013, requesting approval for a different marking procedure for San Diego Gas and Electric's InstantEye Mk-2 Gen 2 unmanned aircraft. Title 14 of the Code of Federal Regulations 45.22(d), Exhibition, antique, and other aircraft: Special rules, permits persons to apply to the Administrator for a different marking procedure if it is impossible to mark an aircraft per §§ 45.21 and 45.23 through 45.33.

Your request for alternative marking has been reviewed. You are hereby authorized to identify your InstantEye Mk-2 Gen 2 unmanned aircraft with the following marking. Place the word "EXPERIMENTAL" on the top of the main body of the aircraft in lettering at least ½ inches high.

This marking procedure applies to all San Diego Gas and Electric InstantEye Mk-2 Gen 2 unmanned aircraft of the same configuration for which future certification may be requested.

The following must be kept with the airworthiness certificate:

- A copy of your original request letter; and
- A copy of this response letter.

If you have any questions, please contact the Airworthiness Certification Branch, AIR-230, at (202) 385-6346.

Sincerely,

James D. Seipel

James D. Seipel
Manager, Production and Airworthiness Division

- b. **§ 91.109 (a) Flight Instruction:** No person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls. *The InstantEye does not have dual controls; instead the InstantEye has a fully functioning Ground Control Station (GCS). (See figure 2.) When flight instruction is performed, no pilots will be on the aircraft and the GCS will be a safe distance from the InstantEye and the public, causing no safety hazard.*

Furthermore, as per SDG&E Standard Practice #0002, small Unmanned Aircraft System Training Procedures, all future operators will complete a thorough 2 day training course to show proficient knowledge of the InstantEye before they take control of the GCS without supervision. Enclosure (1) will include proprietary information/confidential material for this exemption and will be sent via a separate correspondence.

- c. **§ 91.113 See and Avoid: Method for See-and-Avoid (§ 91.113).** When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. *The sUAS is strictly line of sight and will always be in constant contact with the operator and visual observer. See and Avoid will be conducted by the operator and vigilance shall be maintained by each operator so as to "see and avoid" any other aircraft.*

As per SDG&E Standard Practice #0002, small Unmanned Aircraft System Training Procedures, visual observers will be qualified and understand the rules and responsibilities described in § 91.111 (Operating near other aircraft), § 91.113 (Right-of-way rules: Except water operations), and § 91.155 (Basic VFR weather minimums). There will be no adverse impact to the public because each visual observer will be fully qualified.

- d. **§ 91.119 Minimum Safe Altitudes,** no person may operate an aircraft below the following altitudes: Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. *Due to the height of SDG&E assets, powerlines, poles, towers, equipment, the sUAS will fly in restricted airspace designated by 14 CFR 91.119, which is not normal operating airspace for civilian and commercial aircraft.*

This will pose no risk to the public because aircraft are not operating in these restricted areas.

Enclosure (1) will include proprietary information/confidential material for this exemption and will be sent via a separate correspondence.

- e. **§ 91.121 Altimeter settings:** Each person operating an aircraft shall maintain the cruising altitude or flight level of that aircraft, as the case may be, by reference to an altimeter that is set to the appropriate station. *The InstantEye sUAS uses baralt pressure but does not program in an altimeter setting. The altitude is monitored by the Pilot In Command and constantly watched by the visual observer.*

This exemption will benefit the public because the visual observer and operator are visual line of sight at all times, and will not pose any risk to the public.

- f. **§ 91.151 (b) Fuel requirements for flight in VFR conditions:** No person may begin a flight in a rotorcraft under VFR conditions unless there is enough fuel to fly to the first point on intended landing and, assuming normal cruising speed, to fly that for at least 20 minutes. *The sUAS is battery operated with a maximum flying time of 20 to 30 minutes. However, this poses no safety risk because the take-off point is also located at the landing point and will cause no safety hazard to the public.*

SDG&&E flights will be limited to inspecting our assets. In general, SDG&E will be operating over our Right of Ways and not over the public or commercial/industrial buildings and residential housing.

- g. **§ 91.207 Emergency Locator Transmitters:** No person may operate a U.S.-registered civil airplane unless there is attached to the airplane an approved automatic type emergency locator transmitter. *The sUAS does not use an ELT, all operations are VFR and in line of sight with a visual observer.*

This exemption will benefit the public because the visual observer and operator are line of sight at all times with the sUAS. In addition if the sUAS needed to be located on the ground, the GCS will point to the sUAS to locate it and show range to the sUAS.

September 12, 2014

4. **Inspection and Maintenance. (14 C.F.R § 91.405, 91.407, 91.409).** *All pilots will follow San Diego Gas & Electric Standard Practice #0004 Approved small Unmanned Aircraft System InstantEye Maintenance program and SDG&E Standard Practice #0006, Approved small Unmanned Aircraft System InstantEye Inspection below Program. (See below the approved letter from Western-Pacific Region Flight Standard District Office, this exemption will be submitted as Enclosure (5) with this request.*



U.S. Department
of Transportation
Federal Aviation
Administration

Western-Pacific Region
Flight Standards District Office

8525 Gibbs Drive, Suite 120
San Diego, CA 92123
858-502-9882 x286
Fax: 858-502-9985

May 08, 2014

SDG&E
P.O. Box 129831
San Diego, CA. 92112

Dear [REDACTED]

I have completed reviewed and approved of your Inspection Manual dated May 01, 2014 Revision original, and find no regulatory conflict with Title 14 of the Code of Federal Regulations.

Please ensure that management, supervisory, and inspection personnel are familiar with the newly implemented Maintenance Manual policies and procedures.

The Federal Aviation Administration reserves the right to require such changes, additions, or clarifications as may prove necessary, as a result of subsequent inspections and evaluations, to ensure continued compliance with the appropriate regulations.

Sincerely,

Kevin B. Johnson
Principal Maintenance Inspector

5. Aircraft Configuration. InstantEye's performance characteristics: *Figure 1 shows a complete description of the aircraft.*

a. Three- view drawings or three-view dimensioned:

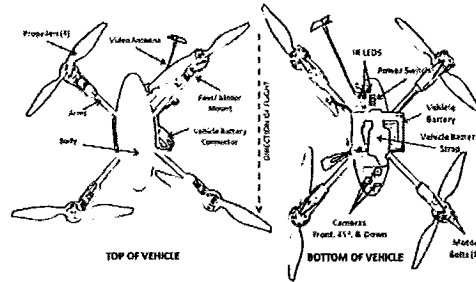


Figure 1 - InstantEye Mk-2 Components

- b. Wing span. 22.5 cm (8.9 inches) (frame); 37.5 cm (14.8 inches) (frame + props)*
- c. Length. 22.5 cm (8.9 inches) (frame); 37.5 cm (14.8 inches) (frame + props)*
- d. Maximum gross takeoff weight. 453 g (<1 lb)*
- e. Fuel capacity. N/A*
- f. Payload capacity. 120 g (4.2 ounces)*
- g. Maximum altitude. 12,000 ft MSL*
- h. Endurance. 20 min of battery life*
- i. Maximum airspeed. 60 mph*
- j. Description of ground support equipment. InstantEye Mk-2 uses 2000 mAh Li-poly batteries and supplied charger.*
- k. Description of launch and recovery equipment. N/A*

6. Ground Control Station System (GCS) Configuration. Description and a diagram (Figure 2), of the GCS.

Ground Control Station (GCS) Control Interface

The GCS control interface can be broken into three main groups, 2 joysticks, 8 primary control buttons, and 4 menu buttons, see Figure 2.

1. Joysticks

The joysticks are used to reposition the aircraft once it is airborne. Pushing the right joystick up and down causes the aircraft to climb and descend. Pushing it left and right rotates its heading (yaw). Pushing the left joystick up and down moves the aircraft forward and back. Pushing it left and right moves the aircraft left and right.

2. Primary Control Buttons

ALT, NAV, CAM, MOTOR, HOME, UTIL1, and UTIL2 / IR

3. Menu Buttons

The menu buttons are just below the screen and are configurable based on context. The context menu can be brought up by pressing the menu button on the left. The other three buttons then perform the function described just above them on the screen. Pressing the left menu button a second time will bring up a second context menu again defining the function of the other three buttons.

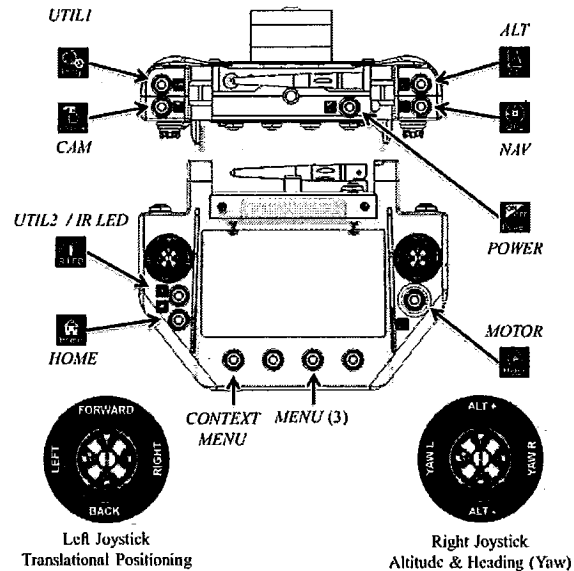


Figure 2: GCS Button and Joystick Configuration

7. **Description of past flight history.** *There are in excess of 1500 hrs of test and evaluation time on the InstantEye Mk-2 systems and more than 2000 hrs of test and evaluation time on the systems it is derived from. Physical Science Inc. has already proven Airworthiness and has an Airworthiness Certification with US Army Special Operations Command. (AWR# IEMK220130521, attached.) In addition, As of June 25, 2014, after the FAA granted SDG&E a Special Airworthiness Certificate in the Experimental category, it has flown numerous sorties in support of operations and is always operated in a safe manner.*
8. **Flight Recovery and Lost Link Procedures.** *Aircraft lost link and emergency recovery questions/procedures.*
 - a. How is it determined that the UA is experiencing lost link and how is this displayed to the pilot? *Signal strength or quality is determined by error rate or number of lost data packets which are monitored during communications. When a threshold percent of data packets are lost the aircraft first switches frequency and if this is not better, the aircraft goes into "lost comms" mode.*
 - b. Operational procedures in the event of a lost link: *During a lost link event the operator monitors the data and video until communications are restored, then control is regained. If for some reason communications are not restored the operator should wait by the last know location of good communications. The aircraft will return there and auto land.*
 - c. Describe how the aircraft will react during takeoff, climb, cruise, descent, and landing in the event of a lost link. *During startup each InstantEye air vehicle is "tethered" to a ground control station through its command and control communication system. After tethering has been achieved the air vehicle will respond to commands from that ground station only. In operation, due to radio interference or flight beyond communication range, the aircraft can lose command and control lock with the ground control station. In this event the aircraft will enter into its "lost comm" mode and will execute the following procedure:*

- i. Vehicle will immediately climb/descend to an altitude 300' Above Ground Level (AGL) above its launch altitude;
 - ii. Vehicle will home toward last known location of ground control station (GPS position of ground control station is uploaded to air vehicle during flight);
 - iii. If command and control communication is reestablished, vehicle will stop and hover at current location. If command and control communication is not reestablished, vehicle will hover over last known location of ground control station ("home position") and land immediately.
 - iv. If vehicle is at home position and command and control communication has not been reestablished, vehicle will autonomously descend and land.
- d. How is it determined that the lost link functionality of the system is operational? The lost link functionality has been extensively tested and is used operationally, please refer to Airworthiness Release: AWR# IEMK220130521.
- e. How does the UA navigate when in the lost link mode? The InstantEye Mk-2 is continuously updated with the GCSs GPS location. When the aircraft goes into "lost comms" mode it then uses the last location of the GCS as its next waypoint.
- f. What parameters are used to define the lost link or return home point? How is this point selected? How is this point entered? What happens when the UA reaches this point? The InstantEye vehicle will enter its lost communication control mode if the error rate increases above 18.75 failed transmissions per successful transmission or after receiving no data from the ground station for 7.5 seconds. Logic exists to prevent the vehicle from oscillating in and out of lost communication control. When the aircraft enters it "lost comms mode" the aircraft ascends or descends to 300 ft. AGL and then begins to navigate to the last known home position. If at any point communications are regained the operator can begin controlling again.
- g. Under what conditions is a return home mode both manually and automatically activated? The InstantEye Mk-2 either enters its return home mode in "lost comms mode" after the aircraft climbs/descends to an altitude 300' AGL above its launch altitude or when the "Home" button is pressed on the GCS.
- h. What do the control station displays indicate during lost link? Is it clear that the data is stale or invalid? Lost link is known by the operator when the on-screen data stops updating and the "Home" mode is automatically highlighted on the GCS screen.
- i. Lost link emergency procedures:
 - i. Weak Command and Control (C2) Link

Indicator: "Warning: Weak C2 link" is displayed on-screen. Aircraft OSD data, such as the heading and altitude graphics, have stopped updating. Often video reception is poor or non-existent as well.

Response action: In less than 10 seconds, the vehicle will enter lost communications mode. It will climb to an altitude of approximately 300 ft. AGL and then begin to fly back to the home location. If control communications are regained en route to the home location (indicated by the

disappearance of the "Weak C2 link" warning and resumption of aircraft OSD data updates) the operator may resume controlling the aircraft and redirect it by using the joysticks.

ii. *Loss of aircraft GPS fix*

Indicator: As GPS quality degrades, the color quality bar will shrink and change color and position hold will become less and less accurate. These effects are amplified when operating in windy conditions, or with very heavy payloads. When the quality bar underneath GPS coordinate is empty (completely gray) for 4 continuous seconds, the vehicle has lost operational GPS and an indicator is displayed: "Warning: Vehicle lost GPS; NAV mode disabled" NAV mode is automatically exited without operator action. Aircraft ceases to automatically hold position. The last known GPS is displayed in the GPS Coordinate graphic.

Response action: Ensure that ALT mode is engaged. The aircraft will maintain altitude while the operator can focus on controlling the lateral motion of the vehicle manually. When aircraft position has stabilized, climb to a safe height (above obstructions) and fly the aircraft towards the home location. Use the range/bearing graphic and video feed to assist in this. When over an optimal landing location, slowly decrease the aircraft's altitude while focusing on maintaining lateral position. At any point, if the GPS quality bar shows a signal quality of medium (yellow) or high (green), it is likely safe to re-enter NAV mode.

9. Pilot Qualifications (14 CFR 61.3, Requirement for certificates, ratings, and authorizations, and 14 CFR 61.5, Certificates and ratings issued under this part).

- a. Pilot Qualifications: *All pilots will be current rated pilots with current medical.*
- b. Pilot Training. *All pilots will be qualified in accordance with 14 CFR 61.3 and 61.5 and will complete an internal training program. All pilots will follow SDG&E Standard Practice #0002, San Diego Gas & Electric Unmanned Aircraft System Training Procedure. As per Standard Practice #0002, any person operating the InstantEye will complete a 2-day operator training program that includes ground school and flight training. This training has been used in the past by Physical Sciences Inc. and approved by Army Special Operations Aviation Command. At the completion of the course the operator will be required to complete a verbal evaluation, written test, and hands on performance test. After passing all 3 evaluations, the operator will receive a completion certificate authorizing them to operate the SDG&E InstantEye.*
- c. Qualification and Training of Observers. *If observers are not qualified pilots, observers will attend a ground school to understand the proper roles of an observer, communication procedures, proper visual scan techniques, operations at non-towered airports, and appropriate sections of the Aeronautical Information Manual. They will also understand the rules and responsibilities described in §§ 91.111 (Operating near other aircraft), 91.113 (Right-of-way rules: Except water operations), and 91.155 (Basic VFR weather minimums).*

10. Flight areas

San Diego Gas & Electric is requesting inspection Flights throughout SDG&E service

territory. SDG&E flights will always be conducted under VFR conditions and within line of sight 400 feet and below. *This exemption will be submitted as Enclosure (6) with this request.*

11. Specifications and Operations for SDG&E

- a. The sUAS weighs 16 oz., much less than the weight of a Canada goose, and will operate under 400 ft. AGL. The aircraft internal software regulates the sUAS so that it will not fly above 400 AGL. The aircraft ground speed will be less than 25 mph. Impact to the public will be minimal.
- b. sUAS will operate in Class G, C & D airspace. Due to the height of SDG&E assets, the sUAS will fly in restricted airspace designated by 14 CFR 91.119. In general, SDG&E will operate in 14 CFR 91.119, airspace that requires civilian and commercial aircraft to have an exemption, and which is not normal operating airspace for civilian and commercial aircraft.
- c. Air Traffic Control Provisions. When operating in areas other than Class 'G' Airspace SDG&E will contact Los Angeles ARTCC MOS a minimum of one hour prior to operations. In addition, SDG&E will coordinate with the controlling agency of the appropriate airspace and always provide the planned operating details, NOTAM information, and cell phone number for the PIC. SDG&E will also monitor the required frequencies of the airspace we are operating in, so we can maintain direct two-way communications with the appropriate authority.

12. Granting the exemption would be in the public interest and benefit the public as a whole.

Enclosure (1) will include proprietary information/confidential material for this exemption and will be sent via a separate correspondence. and will be sent via a separate correspondence.

13. Standard Operating Procedures

Ground program folder will include all operating procedures. This information is proprietary/confidential and will be sent via a separate correspondence.

14. FAA Order 8130.34C

Approved Appendix C program letter for Unmanned Aircraft Systems; Experimental Certificate and Appendix D Safety Checklist. This information is proprietary/confidential and will be sent via a separate correspondence.

Petition for exemption SDG&E Enclosure (1) sent via separate correspondence.



U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

April 1, 2014

Exemption No. 10968
Regulatory Docket No. FAA-2013-1127

Mr. Dallas Cormier, SD1173
San Diego Gas & Electric, Sempra Energy
101 Ash Street
San Diego, CA 92101

Dear Mr. Cormier:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

The Basis for Our Decision

By letters dated December 20, 2013 and January 14, 2014, you petitioned the Federal Aviation Administration (FAA) on behalf of San Diego Gas & Electric (SDGE) for an exemption from §§ 91.9(b)(2) and 91.203(a) and (b) of Title 14, Code of Federal Regulations (14 CFR). That exemption would allow SDGE to operate the InstantEye MK-2 N544L and N500VD unmanned aerial vehicles (UAVs) without carrying and displaying the airworthiness certificate, registration, flight manual, and any other required documentation onboard the aircraft. You requested that all required paperwork be located at the ground control station or within close proximity to the pilot in command.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to SDGE.

The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grant of Exemption No. 8607 (copy enclosed), the FAA found it unnecessary to carry and display the airworthiness, certification, and registration documents in unmanned aircraft systems (UASs) and UAVs for the operations described by the petitioner. The original intent of the subject regulation was to display the airworthiness,

AFS-14-084-E

certification, and registration documents so they would be easily available to inspectors and passengers.

Having reviewed your reasons for requesting an exemption, I find that—

- they are similar in all material respects to relief previously requested in the enclosed Grant of Exemption No. 8607;
- the reasons stated by the FAA for granting the enclosed Grant of Exemption No. 8607 also apply to the situation you present; and
- a grant of exemption is in the public interest.

Our Decision

Under the authority contained in 49 U.S.C. §§ 106(f), 40113, and 44701, which the FAA Administrator has delegated to me, San Diego Gas & Electric is granted an exemption from 14 CFR §§ 91.9(b)(2) and 91.203(a) and (b) that allows SDGE to operate the InstantEye MK-2 N544L and N500VD UAVs without carrying and displaying the airworthiness certificate, registration, flight manual, and any other required documentation onboard the aircraft, subject to the following conditions and limitations described below.

Conditions and Limitations

1. Compliance with the conditions and limitations stipulated in the Certificate of Waiver or Authorization (COA) for San Diego & Gas Electric UAS operations.

Exemption No. 8607 was issued as a permanent exemption. The FAA, however, finds it in the best interest of safety to review this exemption every 2 years. This allows the FAA to ensure that there has been no change in circumstances or regulations from which the exemption is granted.

This exemption terminates on April 30, 2016, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan
Director, Flight Standards Service

Enclosure



U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave. SW
Washington, DC 20591

JAN 07 2014

Mr. Dallas Cormier
San Diego Gas & Electric
Sempra Energy
101 Ash St.
San Diego, CA 92101

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Thank you for your letter dated December 28, 2013, requesting approval for a different marking procedure for San Diego Gas and Electric's InstantEye Mk-2 Gen 2 unmanned aircraft. Title 14 of the Code of Federal Regulations 45.22(d), Exhibition, antique, and other aircraft: Special rules, permits persons to apply to the Administrator for a different marking procedure if it is impossible to mark an aircraft per §§ 45.21 and 45.23 through 45.33.

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This marking procedure applies to all San Diego Gas and Electric InstantEye Mk-2 Gen 2 unmanned aircraft of the same configuration for which future certification may be requested.

The following must be kept with the airworthiness certificate:

- A copy of your original request letter; and
- A copy of this response letter.

If you have any questions, please contact the Airworthiness Certification Branch, AIR-230, at (202) 385-6346.

Sincerely,

James D. Seipel

James D. Seipel
Manager, Production and Airworthiness Division

Petition for exemption SDG&E Enclosure (4) sent via separate correspondence.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Flight Standards District Office

8525 Gibbs Drive, Suite 120
San Diego, CA 92123
858-502-9882 x286
Fax: 858-502-9985

May 08, 2014

[REDACTED]
SDG&E
P.O. Box 129831
San Diego, CA 92112

Dear [REDACTED]:

I have completed reviewed and approved of your Maintenance Manual dated March 31, 2014 Revision original, and find no regulatory conflict with Title 14 of the Code of Federal Regulations.

Please ensure that management, supervisory, and inspection personnel are familiar with the newly implemented Maintenance Manual policies and procedures.

The Federal Aviation Administration reserves the right to require such changes, additions, or clarifications as may prove necessary, as a result of subsequent inspections and evaluations, to ensure continued compliance with the appropriate regulations.

Sincerely,

Kevin B. Johnson
Principal Maintenance Inspector



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Flight Standards District Office

8525 Gibbs Drive, Suite 120
San Diego, CA 92123
858-502-9882 x286
Fax: 858-502-9985

May 08, 2014

[REDACTED]
SDG&E
P.O. Box 129831
San Diego, CA 92112

Dear [REDACTED]

I have completed reviewed and approved of your Inspection Manual dated May 01, 2014 Revision original, and find no regulatory conflict with Title 14 of the Code of Federal Regulations.

Please ensure that management, supervisory, and inspection personnel are familiar with the newly implemented Maintenance Manual policies and procedures.

The Federal Aviation Administration reserves the right to require such changes, additions, or clarifications as may prove necessary, as a result of subsequent inspections and evaluations, to ensure continued compliance with the appropriate regulations.

Sincerely,

Kevin B. Johnson
Principal Maintenance Inspector

