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**June 20, 2011**

Ms. Billie Blanchard  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

**Subject: Sunrise Powerlink Project: CPUC Memo Regarding Skycrane Incidents in Imperial County**

Ms. Blanchard:

SDG&E is in receipt of your memorandum dated June 15, 2011, with the subject of “Violation of Communications Protocol – Sunrise Powerlink Project: Skycrane Incidents in Imperial County.” The purpose of this letter is to provide responses to assertions made in the document, and respond to the three (3) additional information requests included in the sections titled “Steps for Moving Forward” at the end of the document.

### **Communications**

In the first sentence of the second paragraph under the title “Description of Incident Events” the statement is made that, “...no immediate notification of the serious incident was provided by SDG&E to the CPUC or BLM...” As referenced in the memo, SDG&E has been following the Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) developed by the California Public Utilities Commission (CPUC) and the Bureau of Land Management (BLM) prior to the start of Sunrise Powerlink construction. Section 3.3 of the MMCRP specifically addresses communication protocols to be utilized on the project during construction. Bullet item number 6, under Section 3.3, states the following:

- The resource agencies will be notified immediately by SDG&E of any issues (*e.g.*, non-compliance events, special status specie sightings, etc.) regarding their respective resources. In addition, the CPUC EM will also receive immediate notification. Subsequent to immediate agency notification, SDG&E will develop a plan to handle the situation and will follow up with the respective agencies to explain their strategy and receive agency approval.

For purposes of definition, in Section 2.1.2, “California Public Utilities Commission,” the MMCRP identifies the CPUC EM as CPUC Third-Party Monitors and later identified as monitors from the Aspen Environmental consulting firm.

In compliance with this communication protocol, the first incident was reported to have occurred at 8:43 a.m. Tuesday, June 7, 2011. In this situation the resource agency would be considered the Federal Aviation Administration (FAA). SDG&E notified the FAA of the incident shortly after it occurred at approximately 8:45 a.m. and a second call was made to the FAA at approximately 9:30 a.m. to ensure they had all the information. In addition, SDG&E's Compliance Project Manager received notification of the incident at approximately 9:20 a.m., shortly after the incident occurred. Immediately after hearing of the incident, SDG&E's Compliance Project Manager immediately notified the CPUC EM via cell phone (a conversation did take place) of the incident. SDG&E's Compliance Project Manager and the Compliance team had additional phone calls with the CPUC EMs throughout Tuesday, June 7, 2011, to discuss the incident site cleanup and provide new and updated information as was appropriate. In addition to the phone calls, members of the Compliance Monitoring Team and Aspen met multiple times that day at the site of the incident.

After discussions occurred with the FAA and further information was gathered, SDG&E's Manager of Environmental Services placed calls to the CPUC and BLM Project Managers. The call to the CPUC Project Manager was placed at approximately 1:15 p.m. (-PDT) June 7, the day of the incident, and a voice message was left. At approximately 4:00 p.m. Tuesday, June 7, 2011, a return call was made from the CPUC PM to the SDG&E Manager of Environmental Services during which conversation additional details were provided. In addition, the CPUC Project Manager acknowledged receipt of email notification of the event from the CPUC EM. The call to the BLM Project Manager was placed at approximately 1:30 p.m. (PDT) and a voice message was left. At approximately 2:40 p.m. June 7 a return call was received from the BLM Project Manager acknowledging receipt of the previous phone call. In addition, the BLM Project Manager had received email notification from the CPUC EM regarding the incident.

Although you do not mention the second incident with regard to communications concerns, it is noteworthy to discuss the timing of events and notifications for the second incident. SDG&E's conduct was consistent with its reporting of the first incident. The second incident was reported to have occurred at approximately 7:51 a.m. (PDT) Friday, June 10, 2011. SDG&E's Compliance Manager and Manager of Environmental Services were notified of the event at approximately 8:05 a.m. SDG&E's Compliance Project Manager notified the CPUC EM at approximately 8:10 a.m. (PDT) Friday, June 10, 2011, via direct communication on the phone, and SDG&E's Manager of Environmental Services contacted the CPUC Project Manager at approximately 8:10 via direct communication on the phone. Immediately after this call, SDG&E's Manager of Environmental Services called and left a voice message with the BLM Project Manager about the incident. The FAA was notified via a phone call at approximately 8:20 a.m.

Based on the information provided above, SDG&E's communications on this incident were immediate and in full conformance with the stated communications protocols detailed in the MMCRP. Phone records are being obtained to substantiate the information above and will be provided as required.

### **SDG&E Responses to Steps for Moving Forward**

The remainder of this letter is focused on responding to the items detailed in the section of the CPUC memo titled, "Steps for Moving Forward." This section states that, "The agencies must receive a satisfactory response to this request from SDG&E before a replacement Skycrane is

used on the Sunrise Powerlink project, and before the original Skycrane is returned to service on project construction.” .

### **Additional Information Request #1**

*Review the Preliminary Incident Report No.1 provided separately by the CUC and confirm its accuracy.*

### **Response to question #1**

#### **The following corrections and clarifications should be made:**

##### **1) Tuesday June 7, 2011 – First Incident**

###### *Page 1*

Bullet #8: “About five to ten seconds later, when the payload was approximately 150 feet above the ground, all four hooks securing the payload made an uncommanded release of the payload. The tower section landed about 20-30 feet north of the Evan Hughes Highway on BLM land.”

Correction: “Approximately five seconds later, when the payload was approximately 150 feet above the ground, there was an uncommanded release of the lower hook system – the payload free of the helicopter landed an estimated 20-30 feet north of Evan Hughes Highway on BLM land.”

###### *Page 2*

Bullet #1: “The air crane circled and radio communications were established with the safety officer, who headed to the site. At the same time, the pilots checked to be sure no pilot error had occurred causing the release.”

Correction: The sequence is inaccurate. Immediately after the flight crew realized the load was released and the aircraft was stable (seconds), the pilot-in-command announced over the general communications channel that the aircraft was returning to Plaster City. Seconds later the PIC requested feedback from the flight crew in an attempt to identify the problem –meaning that that PIC was asking whether there was pilot error or whether something was wrong with the aircraft systems. Meanwhile, on the ground, the Safety Officer, who was close by, responded to the downed tower section to access and secure the scene.

Bullet #11: “SDG&E released the aircraft to begin flying again Friday morning and they let the FAA know this.”

Correction: SDG&E consulted with the FAA on the test plan. The FAA suggested that only after a successful test could SDG&E consider releasing the aircraft. After a successful test of the lower hook release system, SDG&E’s helicopter manager conferred with EAC’s flight crew and crew chief. After agreement between EAC and SDG&E, the aircraft was released to resume operations.

##### **2) Friday, June 10, 2011 – Second Incident**

Bullet #4: "After confirming the airworthiness of the helicopter, the crew lowered the tower section to the ground using the fourth hook, which took about 20 seconds. With the two legs on the ground, the pilot attempted to set the tower section upright. During this part of the operation, the fourth hook made an uncommanded release and the tower section toppled".

Correction: After confirming the airworthiness of the helicopter, the pilot quickly lowered the helicopter and payload so that two of the four tower section legs were on the ground, taking approximately five seconds. With two legs on the ground, the pilot attempted to right the tower section and was within one foot of breaking point when the fourth hook released uncommanded. The tower section toppled.

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Bullet #4: "At Erickson, the control mechanism is to be taken apart and inspected in order to identify the reason(s) for the releases. The FAA will be involved in the inspection. No information is available from the FAA until a final report is made, at which time the incident report will be available through the Freedom of Information Act (FOIA) request."

Correction: At Erickson the aircraft will go through a systematic trouble shooting process to determine the cause of these events. The FAA will be involved in the inspection. No information is available from the FAA until a final report is made, at which time the incident report will be available through a Freedom of Information Act (FOIA) request.

Bullet #5: "A replacement Erickson Air Crane is being ferried to Southern California from North Carolina. It is the same type of helicopter as the first one, but has hook controls that predate the new digital hook controls installed in the SDG&E helicopter".

Correction: Erickson Air Crane is providing SDG&E a replacement aircraft. The replacement is a 64 F model, similar to SDG&E's F-model aircraft. The replacement aircraft has a proven track record with over 280,000 lifts without an incident. The aircraft has an older lower hook release system than does SDG&E's aircraft.

## **Additional Information Request #2**

*Provide a detailed written description of the replacement helicopter, and explain the differences between this helicopter and the one used in the two incidents that occurred last week. Explain why the replacement helicopter is considered to be safe for use, given the incidents occurring with the original Skycrane.*

## **Response to question #2**

Erickson Air- Crane N158AC has been delivered to San Diego to replace N237AC. The replacement aircraft is an Erickson Air-Crane S-64 F, certified by the Federal Aviation Administration in 1992 as a Standard Category aircraft. N158AC was designed and manufactured by Erickson Air-Crane, Inc., and approved by the FAA, meeting all FAA requirements.

Both N237AC and N158AC are safe, proven performers. N158AC was approved as a Standard Category aircraft by the FAA in 1992. N237AC was approved as a Standard category aircraft by the FAA in 2009. In comparison, N237AC is an aircraft that has recently been rebuilt with

new technology, including a glass cockpit and digital Automated Flight Control System (AFCS). N237AC has experienced an anomaly that has resulted in two uncommanded hook releases, one on June 7, 2011, and the second on June 10, 2011. Currently, Erickson Air-Crane is inspecting N237AC at its manufacturing facility. A thorough analysis of the aircraft and its hook release system will be completed to positively identify the root cause of the problem which resulted in the two hook releases. Erickson Air-Crane will then provide a permanent solution to SDG&E to prevent future occurrences of these incidents.

Since FAA certification in 1992, N158AC has been working in three major fields of aerial activities: firefighting, logging and construction work. The construction work is similar to the work required on the Sunrise PowerLink Transmission Project.

During work in these three fields since 1992, N158AC has completed a total of over 290,000 recorded lift cycles without incident. This record of success and safety is verified by official Erickson records.

There are six other S-64 F models, like N158AC, operating worldwide in Europe, Australia, Greece, Malaysia, Canada and the US. None of these helicopters have experienced problems similar to the ones experienced by N237AC. The S-64 F is a proven and safe performer in aerial firefighting, logging and construction, as demonstrated by its safety record over the years. The uncommanded hook releases experienced by N237AC are unprecedented.

Erickson Air-Crane has developed an extensive engineering test plan to prove that no faults or anomalies exist with N158AC. These tests will be conducted in the same environment, conditions, and location in which N237AC was operating to prove that N158AC is safe and ready to conduct heavy lift operations without further incident. Once the tests are completed and it is verified that no anomalies exist, EAC, in conjunction with the FAA, will give its approval to continue operations on the project. SDG&E will then make the decision to resume operations.

### **Additional Information Request #3**

Describe in detail the testing procedures to be used prior to the replacement Skycrane helicopter being put in service for project activities. Describe the role of the Federal Aviation Administration (FAA) in this process.

### **Response to question #3**

See attached test plan for the replacement aircraft N158AC (Attachment A).

The San Diego FSDO's role in N158AC in-servicing:

1. They are reviewing all submitted reports.
2. The FAA is requiring daily communications on the troubleshooting progress of N237AC. Additionally, it requires progress reporting on N158AC readiness for flight testing.
3. An FAA maintenance inspector will be observing N158AC maintenance readiness activities in the hangar prior to flight testing.
4. The FAA will observe field testing prior to N158AC being released for lift operations.

5. The FAA will approve N158AC to fly under the Congested Area Plans previously approved under SDG&E's 133, once it is provided with updated weight and balance sheets for N158AC.
6. The FAA has NOT suspended any other helicopter operation including lift operations with medium type aircraft used to lift smaller sections of towers.

See Attachment B for FAA approval of N158AC.

See Attachment C for FAA test observation acknowledgment letter.

We hope this information is helpful and satisfactory to your decision-making process. Please do not hesitate to contact me if you have any questions or require any additional information.

Sincerely,



Alan Colton  
Sunrise Powerlink Environmental Manager

cc: Julie Fitch, CPUC  
Mary Jo Borak, CPUC  
Tom Zale, BLM  
Bob Hawkins, USFS  
Brian Paul, USFS  
Susan Lee, Aspen Environmental  
Vida Strong, Aspen Environmental  
Anne Coronado, Aspen Environmental  
Fritz Golden, Aspen Environmental  
Larry Davis, SDG&E  
Greg Barnes, SDG&E  
Mike Manry, SDG&E  
Jonathan Woldemariam, SDG&E  
Laura McDonald, SDG&E

Attachments:

- Attachment A – Test Plan for the replacement aircraft N158AC
- Attachment B – FAA approval of N158AC

# **Attachment A**

Test Plan for the replacement aircraft  
N158AC




**ERICKSON AIR-CRANE**  
INCORPORATED

FAA TYPE CERTIFICATE NO. H6EA TC TYPE CERTIFICATE NO. H-91


**DOCUMENT NO. EAC2041**

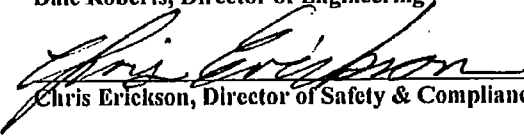
**TITLE: N158AC FLIGHT TEST PLAN FOR CARGO HOOK VALIDATION**

**PREPARED BY:**  06/14/2011  
Doane Buksar, Systems Project Engineer Date

**REVIEWED BY:**  06/14/2011  
Dale Farr, Aviation Safety Manager Date

**APPROVED BY:**  6/14/11  
Ian Gibson, Manager of Systems Engineering Date

**APPROVED BY:**  6/14/11  
Dale Roberts, Director of Engineering Date

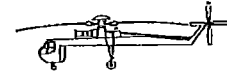
**APPROVED BY:**  14 June 11  
Chris Erickson, Director of Safety & Compliance Date

**REV:** IR

**DATE:** 6.14.11


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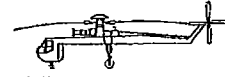




# N 158AC FLIGHT TEST PLAN FOR CARGO HOOK VALIDATION

Table of Revisions

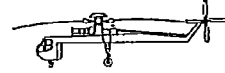
REV	DESCRIPTION	BY	APPROVED	DATE
IR	Initial Release	D. Buksar		6/14/11



# N 158AC FLIGHT TEST PLAN FOR CARGO HOOK VALIDATION

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## N 158AC FLIGHT TEST PLAN FOR CARGO HOOK VALIDATION

### References

1. 14 CFR 29                      Airworthiness Standards: Transport Category Rotorcraft
2. EAC006                         Maintenance Manual for S64F Helicopter
3. SK11560                        WIRING INSTL DC HOOK DATA ACQUISITION

## **1.0 INTRODUCTION**

The cargo carried on the cargo hook can be release at any operable cable length electrically or manually. For electrical release, the lower hook system contains a push-button release switch on each of the right and left pilot collective sticks and the remote (Aft) control stick.

Erickson Air-Crane Inc. has received two reports of un-commanded cargo hook releases during operations with external loads. Both incidents were experienced by helicopter N237AC, S/N 64095. A replacement helicopter, N158AC, is being flown in so that operations may continue while the cause of the incident is investigated.

## **2.0 TEST OBJECTIVE**

The purpose of the flight test plan is to establish that N158AC can be safely operated in the same conditions and geographic location in which the original failures occurred. The following steps will be taken to achieve this:

1. Demonstrate proper hook operation on the ground prior to flight.
2. Demonstrate proper hook operation during flight operations without a load.
3. Demonstrate proper hook operation during flight operations lifting concrete blocks.
4. Demonstrate proper hook operation during flight operations lifting tower assembly.
5. Record hook voltages during hover while in the vicinity of a high RF environment.

## **3.0 INSTALLATION INSPECTIONS**

Appropriately qualified EAC personnel will ensure the aircraft, test instrumentation and the installation will comply with the approved drawings. The drawings and sketches used for this test will include a description of the fabrication, assembly, and installation of the instrumentation.

## **4.0 FLIGHT TEST AIRCRAFT/EQUIPMENT**

### **4.1 Test Aircraft**

The test aircraft shall be N158AC, S/N 64081 which includes the installation of a lower DC hook system.

### **4.2 Test Equipment**

- NI USB-6210 data acquisition unit (DAU).
- Laptop loaded with LabVIEW.
- Associated wiring in accordance with drawing SK11560.

### 4.3 Test Parameters to be Measured

The following parameters will be observed and recorded during the Cargo Hook Validation Testing:

<u>Parameter Name</u>	<u>Expected Signal when Actuated</u>
Upper Hook Control Relay Voltage	+28 VDC
Upper Hook Relay Output Voltage	+28 VDC
Lower Hook Control Relay Voltage	+28 VDC
Lower Hook Relay Output Voltage	+28 VDC

## 5.0 PROCEDURES

### 5.1 Equipment Installation

#### 5.1.1 Cargo Hook Validation Testing

The following steps will be taken to perform the Cargo Hook Validation Testing:

1. Install the SK11560 test wiring per Figure 1.

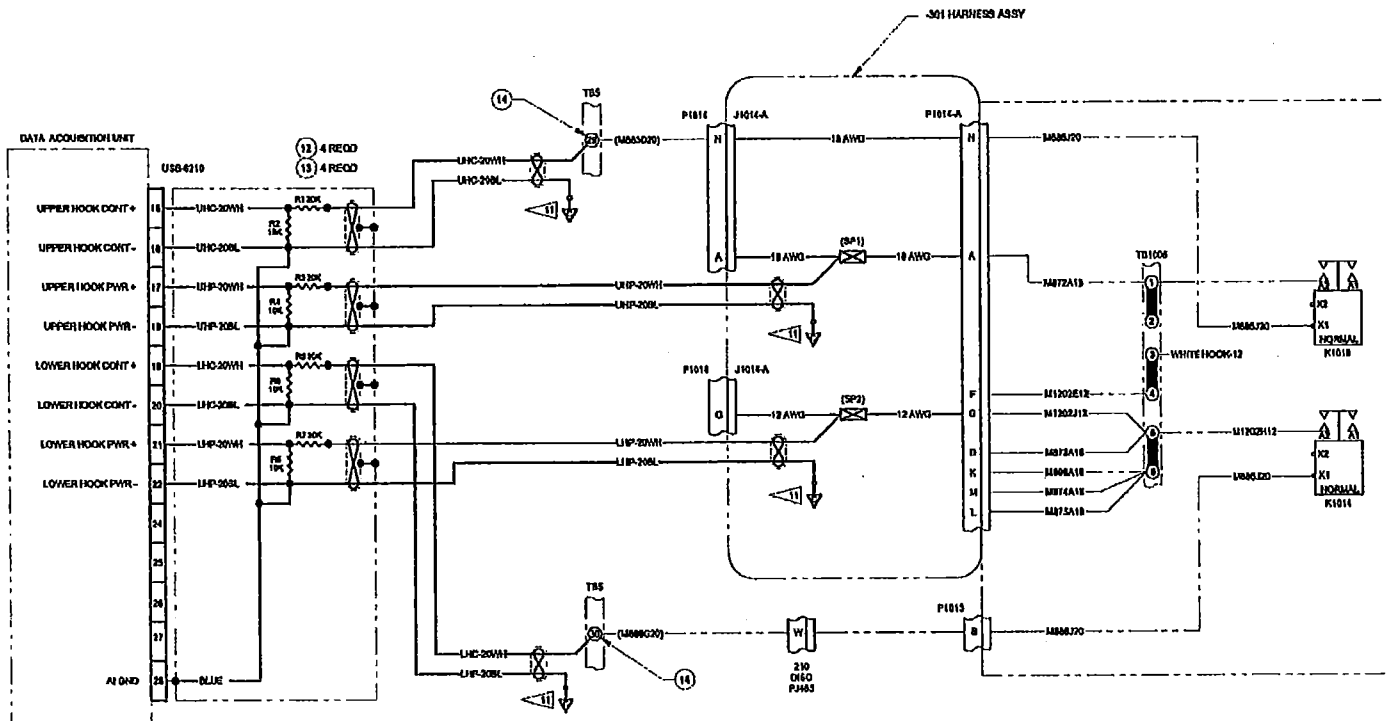


Figure 1. Installation of SK11560 test harness.

2. Connect the wiring harness to the USB NI data logger. The USB data logger should be plugged into a laptop PC which can be carried on a crew member's lap.

## 5.2 Hook Operation Validation

Testing will consist of ground and flight tests (with and without a load). See test matrix, Appendix A. Full crew safety briefings are to be conducted by the test director prior to each test. The pilot will fill in the test card parameters as required. These parameters will include lift weights, fuel quantities, weather conditions, and wind speed. The electrical hook command (voltage) will be recorded from beginning to end of flight with sequential data records corresponding to each maneuver for the aft, right, and left pilot stations. Additionally, each maneuver will have video recorded for later analysis.

### 5.2.1 Ground Testing

1. Begin video recording of test.
2. Start engines and run up to 100% N<sub>r</sub>.
3. Start laptop and initiate data acquisition instrumentation.
4. Increment the next record in the data acquisition system and log the record number in the test card.
5. Actuate the Hook Release from the Aft Seat and verify proper hook operation by both observing the physical hook movement and signal waveforms on the laptop.
6. Repeat steps four and five for the aft seat pilot two additional times.
7. Repeat steps four through six for both the left and right pilot stations. A new record will be recorded and verified for each pilot station for a total of nine records.
8. Shutdown the helicopter -or- continue with the next successive test.

Data will be reviewed during the test by EAC Engineering. The data collected will be examined and validity determined so that it can be analyzed at a later date.

### 5.2.3 Flight Test with Concrete Blocks

1. Begin video recording of test.
2. Start engines and run up to 100%  $N_r$  (Unless already running).
3. Start laptop and initiate data acquisition instrumentation.
4. Pickup load.
5. Transit to the test area and initiate a hover.
6. Increment the next record in the data acquisition system and log the record number in the test card.
7. Perform a simulated tower set with the concrete block and actuate the hook release from the aft seat after setting the load. Verify proper hook operation by both observing load release and signal waveforms on the laptop.
8. Repeat steps four through seven for the aft seat pilot two additional times.
9. Repeat steps four through eight for both the left and right pilot stations. A new record will be recorded and verified for each pilot station for a total of nine records.
10. Return to landing site / base and shutdown the helicopter -or- continue with the next successive test.

Data will be reviewed during the test by EAC Engineering. The data collected will be examined and validity determined so that it can be analyzed at a later date.

#### 5.2.4 Flight Test with Tower Sections

1. Begin video recording of test.
2. Start engines and run up to 100%  $N_r$  (Unless already running).
3. Start laptop and initiate data acquisition instrumentation.
4. Pickup tower section.
5. Transit to the test area and initiate a hover.
6. Increment the next record in the data acquisition system and log the record number in the test card.
7. Perform a simulated tower set and actuate the hook release from the aft seat after setting the load. Verify proper hook operation by both observing load release and signal waveforms on the laptop.
8. Repeat steps three through seven for the aft seat pilot two additional times.
9. Repeat steps three through eight for both the left and right pilot stations. A new record will be recorded and verified for each pilot station for a total of nine records.
10. Return to landing site / base and shutdown the helicopter -or- continue with the next successive test.

Data will be reviewed during the test by EAC Engineering. The data collected will be examined and validity determined so that it can be analyzed at a later date.



### 5.2.5 Flight Test in a High RF Environment

1. Begin video recording of test.
2. Start engines and run up to 100%  $N_r$  (Unless already running).
3. Start laptop and initiate data acquisition instrumentation.
4. Log the record number in the test card.
5. Pickup tower section.
6. Transit to the test area and initiate a hover perpendicular to the source of high RF energy.
7. Hover for the prescribed period of time while recording voltages on the data acquisition instrumentation.
8. Transit to the test area and initiate a hover parallel to the source of high RF energy.
9. Hover for the prescribed period of time while recording voltages on the data acquisition instrumentation.
10. Return to landing site / base and shutdown the helicopter.

Data will be reviewed during the test by EAC Engineering. The data collected will be examined and validity determined so that it can be analyzed at a later date.

## 6.0 POST TEST

Upon completion of the testing, remove the SK11560 wiring.

### 6.1 Post Flight Processing of Data

1. Data plots of the hook voltages will be post processed and archived. The plots will be used to identify both the presence of hook actuation voltages and (if present) any stray signals with their corresponding magnitudes and frequencies.

# APPENDIX A – FLIGHT TEST CARDS

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**FLIGHT INFORMATION (RECORD FOR EACH FLIGHT)**

<b>Model: S64-F</b>	<b>Reg: N158AC</b>	<b>S/N: 64081</b>	<b>Start Time:</b>
<b>Date:</b>	<b>Start Fuel:</b>	<b>Start CG:</b>	<b>Stop Time:</b>
<b>Ground Temperature:</b>	<b>End Fuel:</b>	<b>Start OAT:</b>	<b>Start PA:</b>
<b>Wind Speed:</b>	<b>Flight:</b>	<b>Stop OAT:</b>	<b>Stop PA:</b>
<b>Wind Direction:</b>	<b>Weather Conditions (Overcast, Rain, Sunny):</b>		

**GROUND TESTING**

<b>Test #</b>	<b>Pilot Station</b>	<b>Data Record #</b>	<b>Results / Description / Comments</b>
1	AFT		
2	AFT		
3	AFT		
4	LEFT		
5	LEFT		
6	LEFT		
7	RIGHT		
8	RIGHT		
9.	RIGHT		

**FLIGHT INFORMATION (RECORD FOR EACH FLIGHT)**

Model: S64-F	Reg: N158AC	S/N: 64081	Start Time:
Date:	Start Fuel:	Start CG:	Stop Time:
Ground Temperature:	End Fuel:	Start OAT:	Start PA:
Wind Speed:	Flight:	Stop OAT:	Stop PA:
Wind Direction:	Weather Conditions (Overcast, Rain, Sunny):		

**FLIGHT TESTING WITHOUT A LOAD**

Test #	Pilot Station	Data Record #	Results / Description / Comments
1	AFT		
2	AFT		
3	AFT		
4	LEFT		
5	LEFT		
6	LEFT		
7	RIGHT		
8	RIGHT		
9.	RIGHT		

**FLIGHT INFORMATION (RECORD FOR EACH FLIGHT)**

<b>Model: S64-F</b>	<b>Reg: N158AC</b>	<b>S/N: 64081</b>	<b>Start Time:</b>
<b>Date:</b>	<b>Start Fuel:</b>	<b>Start CG:</b>	<b>Stop Time:</b>
<b>Ground Temperature:</b>	<b>End Fuel:</b>	<b>Start OAT:</b>	<b>Start PA:</b>
<b>Wind Speed:</b>	<b>Flight:</b>	<b>Stop OAT:</b>	<b>Stop PA:</b>
<b>Wind Direction:</b>	<b>Weather Conditions (Overcast, Rain, Sunny):</b>		
	<b>Load Weight (Concrete Block):</b>		

**FLIGHT TEST WITH CONCRETE BLOCKS**

<b>Test #</b>	<b>Pilot Station</b>	<b>Data Record #</b>	<b>Results / Description / Comments</b>
1	AFT		
2	AFT		
3	AFT		
4	LEFT		
5	LEFT		
6	LEFT		
7	RIGHT		
8	RIGHT		
9.	RIGHT		

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**FLIGHT INFORMATION (RECORD FOR EACH FLIGHT)**

Model: S64-F	Reg: N158AC	S/N: 64081	Start Time:
Date:	Start Fuel:	Start CG:	Stop Time:
Ground Temperature:	End Fuel:	Start OAT:	Start PA:
Wind Speed:	Flight:	Stop OAT:	Stop PA:
Wind Direction:	Weather Conditions (Overcast, Rain, Sunny):		
	Load Weight (Tower Section):		

**FLIGHT TESTS WITH TOWER SECTION**

Test #	Pilot Station	Data Record #	Results / Description / Comments
1	AFT		
2	AFT		
3	AFT		
4	LEFT		
5	LEFT		
6	LEFT		
7	RIGHT		
8	RIGHT		
9.	RIGHT		

**FLIGHT INFORMATION (RECORD FOR EACH FLIGHT)**

<b>Model: S64-F</b>	<b>Reg: N158AC</b>	<b>S/N: 64081</b>	<b>Start Time:</b>
<b>Date:</b>	<b>Start Fuel:</b>	<b>Start CG:</b>	<b>Stop Time:</b>
<b>Ground Temperature:</b>	<b>End Fuel:</b>	<b>Start OAT:</b>	<b>Start PA:</b>
<b>Wind Speed:</b>	<b>Flight:</b>	<b>Stop OAT:</b>	<b>Stop PA:</b>
<b>Wind Direction:</b>	<b>Weather Conditions (Overcast, Rain, Sunny):</b>		
	<b>Load Weight (Tower Section):</b>		

**FLIGHT TEST IN HIGH RF ENVIRONMENT**

<b>Test #</b>	<b>Pilot Station</b>	<b>Data Record #</b>	<b>Results / Description / Comments</b>
1	N/A		
2	N/A		

## **Attachment B**

FAA approval of N158AC





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

San Diego Flight Standards District Office  
8525 Gibbs Drive  
Suite 120  
San Diego, California 92123  
858-502-9882, Fax: 858-502-9985

June 14, 2011

Samantha Connally, CPA  
SDG&E  
Engineering & Procurement  
Sunrise Powerlink  
1010 Tavern Road, SD1116  
Alpine, CA 91901

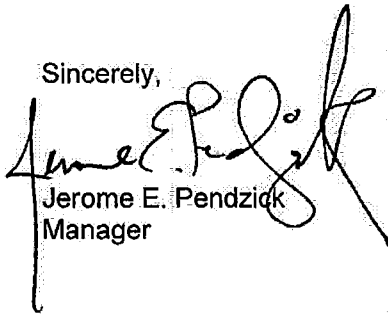
Dear Ms. Connally:

I have received the SDG&E action plan addressing the steps to be taken to determine the reason for the recent successive malfunctions of the external load hooks on Erickson Skycrane N237AC. It is noted a "back-up" Erickson Skycrane, N158AC, will be repositioned to San Diego during the period N237AC undergoes testing in Oregon.

You have indicated N158AC will perform test lifts in the desert on Friday, June 17<sup>th</sup>. Please confirm the time and location of these tests, as Aviation Safety Inspectors from this office will be present to observe. Following a successful series of tests, you may anticipate approval to commence operational lifts under the Congested Area Plans previously approved.

Upon successful completion of the Phase 1 tests for N237AC, Aviation Safety Inspectors will observe the Phase 2 tests to be scheduled in Imperial Valley.

Sincerely,



Jerome E. Pendzick  
Manager

# **Attachment C**

## **FAA Test Observation Acknowledgment**



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

San Diego Flight Standards District Office  
8525 Gibbs Drive  
Suite 120  
San Diego, California 92123  
858-502-9882, Fax: 858-502-9985

June 20, 2011

Michael Manry  
Sunrise Helicopter Manager  
San Diego Gas & Electric  
1850 Joe Crosson Drive  
El Cajon, CA 92020

Dear Mr. Manry:

On Monday, June 20, 2011, Aviation Safety Inspectors from this office observed a series of functional electrical tests of the external load rigging equipment on Erickson Air-Crane N158AC, followed by 18 separate lifts of external loads up to 16,000lbs. All such tests, conducted at the Plaster City site, were performed successfully as prescribed by Federal Aviation Regulation Part 133, Section 133.41.

SDG&E may resume operational lifts on the Sunrise Power Link Project with N158AC, utilizing the approved Congested Area Plans submitted under SDG&E External Load Operating Certificate, No. 85DL967M

Sincerely,

A handwritten signature in black ink, appearing to read "Jerome E. Pendziok".

Jerome E. Pendziok  
Manager