

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
Request for Special Temporary Authority (E010011)

1. Applicant

<b>Name:</b>	Deere & Company	<b>Phone Number:</b>	310-381-2000
<b>DBA Name:</b>		<b>Fax Number:</b>	310-381-2001
<b>Street:</b>	20780 Madrona Ave.	<b>E-Mail:</b>	lewellenmarkn@johndeere.com
<b>City:</b>	Torrance	<b>State:</b>	CA
<b>Country:</b>	USA	<b>Zipcode:</b>	90503 -3777
<b>Attention:</b>	Mr. Mark Lewellen		



File # SES-STA-20160317-00261  
Call Sign: E010011 Grant Date: 3-18-16  
(or other identifier)  
Term Dates From: 3-22-16 To: 5-20-16  
Approved: *Paul E. Alder*

Deere & Company

File No.: SES-STA-20160317-00261

Call Sign: E010011

Special Temporary Authority (STA)

- All antennas must operate with authorized emission limits in current authorizations
- Operations shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference.
- Grant of this STA is without prejudice to any determination that the Commission may make regarding other pending or future applications.
- Grant of this STA does not constitute market access for any other U.S. earth station.
- If the underlying application is dismissed or denied this authorization becomes invalid and operations must cease immediately.
- Any action taken or expense incurred as a result of operations pursuant to this STA is solely at the applicant's risk.
- This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. §0.261, and is effective immediately.



File # SES-STA-20160317-00261  
Call Sign E010011 Grant Date 3-18-16  
(or other identifier)  
Term Dates  
From: 3-21-16 To: 5-20-16  
Approved: Paul E. Hales

**2. Contact**

**Name:** Catherine Wang      **Phone Number:** 202-373-6037  
**Company:** Morgan, Lewis & Bockius LLP      **Fax Number:** 202-373-6001  
**Street:** 2020 K St., N.W.      **E-Mail:** catherine.wang@morganlewis.com

**City:** Washington      **State:** DC  
**Country:** USA      **Zipcode:** 20006      **Relationship:** Legal Counsel

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)

3. Reference File Number SESMOD2014103000835 or Submission ID

4a. Is a fee submitted with this application?

If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).

Governmental Entity       Noncommercial educational licensee

Other (please explain):

4b. Fee Classification      CGB – Mobile Satellite Earth Stations

5. Type Request

Use Prior to Grant       Change Station Location       Other

6. Requested Use Prior Date

03/22/2016



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7. City/Contiguous U.S., Alaska & Hawaii	8. Latitude (dd mm ss.s h) 0 0 0.0
9. State	10. Longitude (dd mm ss.s h) 0 0 0.0
11. Please supply any need attachments. Attachment 1: Reason for STA Attachment 2: Attachment 3:	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Deere &amp; Company seeks special temporary authority to operate StarFire terminals with modified receive-only frequencies during the pendency of license modification application to Call Sign E010011. Please see Exhibit A for STA justification.</div>	
13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. <p style="text-align: right;">Yes <input checked="" type="radio"/> No <input type="radio"/></p>	
14. Name of Person Signing Mark Lewellen	15. Title of Person Signing Spectrum Manager
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	



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**EXHIBIT A – REASON FOR SPECIAL TEMPORARY AUTHORITY**

Deere & Company (“Deere”), pursuant to Section 25.120(b)(3) of the Commission’s Rules, 47 C.F.R. § 25.120(b)(3), hereby requests special temporary authority (“STA”) for a period of 60 days to operate receive-only, non-common carrier, mobile earth stations operating in the L-band to downlink transmissions from Inmarsat geostationary satellites at 98° west longitude and 143.5° east longitude (collectively “Inmarsat Satellites”).<sup>1</sup> Deere requests the instant authority to begin no later than March 22, 2016. Specifically, Deere requests STA for its existing network of mobile earth terminals (“METs”) operating under Call Sign E010011 to receive 2.5 kHz space-to-earth emissions (designator 2K50D1D) from the Inmarsat Satellites at the following center frequencies.<sup>2</sup>

**Table 1.0 - Amended StarFire L-band Frequencies**

<b>Geostationary Arc Position</b>	<b>Center Frequency (MHz/Space-to-Earth)</b>
98 west longitude	1545.9675
143.5 east longitude	1545.9775

Since 2001, Deere has been enabling domestic agricultural equipment with its StarFire precision farming system. The StarFire system employs receive-only vehicle mounted mobile earth stations. These earth stations receive L-band space-to-earth emissions from Inmarsat geostationary satellites that provide correctional data. This data augments the navigational information the StarFire terminals receive simultaneously from Global Positioning System (“GPS”) satellites. This augmented system enables the operators of domestic farming equipment to pinpoint their location to within +/- 2.5 centimeters.<sup>3</sup> This precise positioning capability developed originally to assist farmers in comparing the crop yields from various fields to determine, among other things, the amount of fertilizer and seed appropriate for a particular field and crop, has now found additional important uses to improve farming efficiency, including enabling farmers to manually record observations such as weed patches, crop appearance, and other field variables with remarkable precision. In addition, among other benefits, when coupled to the vehicle steering system through the Deere AutoTrack system it aids the operator to steer a more precise path when making repeated passes over the same track, thus greatly reducing crop and soil damage.

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<sup>1</sup> All involved Inmarsat spacecraft have been approved to serve the United States, and are reflected on the Commission ISAT list.

<sup>2</sup> Deere was previously granted authority to receive space-to-earth emissions from additional Inmarsat satellites. See IBFS File No. SES-MOD-20141030-00835 (granted Jan. 29, 2016). Deere has filed an application to modify Call Sign E010011 to receive the additional frequencies referenced in Table 1.0. See IBFS File No. SES-MOD-20160226-00184 (filed Mar. 1, 2016).

<sup>3</sup> Navigational accuracy depends on several variables, including visibility to overhead satellites and other supplemental transmitters providing correctional data.

Grant of STA will serve the public interest by ensuring continuity of service for existing Deere StarFire customers during the pendency of Deere's concurrently filed permanent application to modify Call Sign E010011 to receive the above-referenced frequencies.<sup>4</sup> Pursuant to Section 25.120(b)(3) of the rules, Deere requests a 60-day STA without the need for prior public notice. As discussed above, grant of authority is requested on or before close of business on March 22, 2016 so that Deere can continue to provide service to customers without any loss of service.

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<sup>4</sup> See IBFS File No. SES-MOD-20160226-00184.