DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
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Silver Spring, MD 20993-0002

Medtronic Sofamor Danek USA, Incorporated
Mr. Tejas Patel
Regulatory Affairs Specialist
1800 Pyramid Place
Memphis, Tennessee 38132

February 12, 2015

Re: K143628
Trade/Device Name: Navigated VERTEX SELECT® Instruments
Regulation Number: 21 CFR 882.4560
Regulation Name: Stereotaxic instrument
Regulatory Class: Class II
Product Code: OLO
Dated: December 19, 2014
Received: December 22, 2014

Dear Mr. Patel:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set

forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

Mark N. Melkerson -S

Mark N. Melkerson
Director
Division of Orthopedic Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: January 31, 2017
See PRA Statement below.

510(k) Number *(if known)* K143628

Device Name
Navigated VERTEX SELECT® Instruments

Indications for Use *(Describe)*
Medtronic Navigated Instruments are intended to be used during the preparation and placement of Medtronic screws during spinal surgery to assist the surgeon in precisely locating anatomical structures in either open or minimally invasive procedures. Medtronic Navigated Instruments are specifically designed for use with the StealthStation® System, which is indicated for any medical condition in which the use of stereotactic surgery may be appropriate, and where reference to a rigid anatomical structure, such as a skull, a long bone, or vertebra, can be identified relative to a CT or MR based model, fluoroscopy images, or digitized landmarks of the anatomy. Medtronic Navigated Instruments are also compatible with the IPC® POWEREASE™ System.

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

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510(k) Summary

December 19, 2014

I. Company: Medtronic Sofamor Danek, USA Inc.
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Memphis, TN 38132
Telephone Number: (901) 396-3133

Contact: Tejas Patel
Regulatory Affairs Specialist
Telephone number: (901) 396-3133
Email: tejaskumar.r.patel@medtronic.com

II. Proprietary Trade Name: Navigated VERTEX SELECT® Instruments

Common Name: Stereotaxic Instrument, Navigated Screwdriver, Navigated Tap, Navigated Drill Bit

Classification Name: Stereotaxic Instrument (21 CFR 882.4560)

Classification: Class II

Product Code: OLO

III. Predicate Device:

Navigated CD HORIZON® SOLERA® Screwdrivers and Taps (K140454, S.E. 05/22/2014)
This predicate has not been subject to a design-related recall. This predicate is the primary predicate for this submission.

No reference devices were used in this submission.

IV. Device Description:

The Navigated VERTEX SELECT® Instruments are both non-sterile, reusable and sterile, single use instruments that can be operated manually or under power. These instruments are intended to be used when implanting components of the VERTEX® Reconstruction System. The Navigated VERTEX SELECT® Instruments are also compatible with the StealthStation® and IPC® POWEREASE® Systems.

V. Indications for Use:

Medtronic Navigated Instruments are intended to be used during the preparation and placement of Medtronic screws during spinal surgery to assist the surgeon in precisely

locating anatomical structures in either open or minimally invasive procedures. Medtronic Navigated Instruments are specifically designed for use with the StealthStation® System, which is indicated for any medical condition in which the use of stereotactic surgery may be appropriate, and where reference to a rigid anatomical structure, such as a skull, a long bone, or vertebra, can be identified relative to a CT or MR based model, fluoroscopy images, or digitized landmarks of the anatomy. Medtronic Navigated Instruments are also compatible with the IPC® POWEREASE® System.

VI. Comparison of the Technological Characteristics with the Predicate Device:

The Navigated VERTEX SELECT® Instruments are intended to be used during the preparation and placement of Medtronic screws during spinal surgery and are specifically designed for use with the StealthStation® System. Identical to the predicates, the Navigated VERTEX SELECT® Instruments attach to the NavLock™ Tracker, which allows for optical navigation of the surgical instruments. These devices have similar designs as the predicate devices and incorporate the same design features to enable navigation and use with the IPC® POWEREASE® System, when desired. Like the predicate devices, the subject Navigated VERTEX SELECT® Instruments are also made from stainless steel.

The following technological differences exist between the subject and predicate devices:

- The Navigated VERTEX SELECT® Instruments are intended to be used with VERTEX ® Reconstruction System screws whereas the predicate Navigated CD HORIZON® SOLERA® instruments are intended to be used with the CD HORIZON® SOLERA® screws.

- The subject devices include a sterile drill bit while the predicate devices do not.

- The subject Navigated Taps & Drill Bits have a single lead threadform as compared to the dual lead threadform of the predicate Navigated Taps.

The instrument modifications detailed in this submission have no impact on the technological characteristics of either the existing instruments or the StealthStation® and IPC® POWEREASE® Systems.

VII. Performance Data:

Testing was completed to ensure the functionality and compatibility with the identified Medtronic products. The following table summarizes the performance testing completed:

Test	Description
Navigation Accuracy Analysis	Confirmed navigated instrument accuracy
Anatomical Simulated Use	Confirmed instrument functionality under expected use conditions

Navigation Simulated Use	Confirmed navigation system functionality under expected use conditions
CAD Model Evaluation	Verified that the CAD models are accurately reflected in the application software
Implant/Instrument Mating Conditions	Verified that the instruments can be assembled with the appropriate devices according to their intended use
Spine Tools Package Functional Testing	Verified that the Spine Tools package has met the required interface needs of the spine application software

VIII. Conclusions

The Navigated VERTEX SELECT® Instruments have been shown through comparison and testing to be substantially equivalent to the identified predicate devices.