

Please explain why an STA is necessary:

Vesper Marine has developed a range of AIS Aid to Navigation (AtoN) products used to electronically mark hazards and points of interest on the water. Its latest product offering, the VAB1252 is a Type 3 AIS AtoN.

The USCG has reviewed the VAB1252 technical file as per Rule 33 CFR Part 66, and approved it as meeting the technical requirements as outlined in IEC 62320-2. USCG letter 2015-3421 dated Aug 18, 2015 is enclosed.

Normally AIS equipment must also meet FCC Rule 47 CFR Part 80. Class A and Class B AIS equipment is covered by this rule. However, there is currently no reference to AIS AtoNs in Part 80 and the international standard for AtoNs IEC 62320-2 is also not incorporated into the rule.

A KDB enquiry through TUV SUD BABT (tracking number 470228) and subsequent correspondence with Rashmi Doshi of the FCC Wireless Telecommunications Bureau confirmed the above and recommended we request a waiver of Rule 47 CFR Part 80 to permit equipment certification and 47 CFR Part 80.17(b), Administrative Classes of Stations, to permit licensing.

There is already FCC authorization of AIS AtoN equipment. Vesper Marine received FCC authorization for its AtoN OEM product, FCC ID: 2AEYIVAIS1 in August 2015. A list of all the AIS AtoN products currently authorized by the FCC is enclosed.

It is important to note there is no functional difference between the VAB1252 and any of the Type 3 products listed as they all conform to the same IEC standard for AIS AtoN equipment.

The use of AIS AtoNs to mark hazards and areas of interest provides a significant contribution to both safety of life at sea and protection of the marine environment. The first installation of the VAB1252 in the US will be used to simultaneously protect both the commercial assets of New York Power Authority and the marine environment. By transmitting virtual marks to make the oil filled high voltage power cables crossing Long Island Sound electronically visible to vessels in the area, environmental damage and power outages caused by anchor strikes may be avoided. A detailed description of this project is enclosed.

Furthermore, AtoN equipment must comply to IEC 62320-2 for it to perform its intended function and since it operates on the dedicated marine VHF channels (AIS1 and AIS2), already in use by the AIS network, there is no additional risk to it causing interference to other users of the radio spectrum.

Because of the above an FCC waiver request was filed in November 2015. This is FCC filing #16-6 and the request for public comments can be found here:

<http://apps.fcc.gov/ecfs/proceeding/view?name=16-6>.

There were no public comments received and we have subsequently been told by Scot Stone (Scot.Stone@fcc.gov) that at least an additional 2 months or more may be required for further discussion. Meanwhile the New York Power Authority would like to proceed as soon as possible with the project as outlined here and in the attachments on a temporary basis until the waiver process has been completed.

We therefore request an STA be granted to Vesper Marine and New York Power Authority as to operate this station as soon as possible until the waiver described above has been issued.

Please explain the purpose of the operation:

New York Power Authority

Environmental and operational impacts being addressed by virtual AIS AtoN's

The New York Power Authority wishes to use the Vesper Marine Virtual AIS AtoN to transmit AIS message 21 identifying the location of the subsea cables described below. Further, when a vessel is determined to pose an anchoring hazard which may cause substantial disruption and environmental damage an AIS message 12 is to be transmitted. Please note that the Vesper Marine Virtual AIS equipment has been approved by the USCG as meeting all the technical requirements as outlined in IEC 62320-2. Further, the Vesper Marine AIS equipment is functionally the same as any of the Type 3 AtoN products which are currently licensed by the FCC and it conforms to the same IEC standard for AIS AtoN equipment.

Background on the project (and attached):

Transmission circuit Y-49 is owned by the New York Power Authority and operated at 345KV with load averaging 600 MW providing critical power to Long Island. The cable system is comprised of 4 independent Self Contained Fluid Filled (SCFF) cables buried an average of 10 feet in the seabed crossing Long Island Sound between New Rochelle at the north end and Hempstead Bay at the south end on Long Island. The four cables are separated by approximately 600 feet in the middle of the Sound, but come together as you approach shore. Each cable is connected to a pressurizing plant that maintains a cable fluid pressure of 160 PSI to provide the cable insulation capability for operating at the 345KV level. Loss of pressure would cause the cable to fault and breach the protection barriers on the cable causing fluid loss into the Sound. The cables are terminated at the North Transition Station and the South Transition Station. The cable system operates utilizing three of the four cables with the fourth cable considered a spare in case one cable is damaged. In the event of cable damage or a failure, the cable is switched out of the circuit and the spare cable is switched in and the system can then be brought back on-line. The switch operation can be performed in approximately 2-3 days limiting the loss of transmission capability. In the event of two cables being damaged, the transmission system could be off line for up to 9 months with significant impact to customers on Long Island.

Damage history includes two anchor strikes, one in 2003 and a second in 2014. In both instances, the cable was damaged causing a fault and fluid loss of over 6000 gallons of cable oil. Since the cable has to maintain pressure and fluid flow through the damaged section to prevent sea water from entering the cable, the pressure and flow rate are controlled to maintain the condition of the cable. This control is monitored and adjusted as required until the cable can be cut and capped prior to repairs. Once the cable is capped, the loss of cable fluid into the Sound is mitigated. This process usually will take about 2 months and is a 24/7 operation. During the period that the cable is leaking oil, measures are taken to prevent any serious environmental impact that includes having on site an

environmental group to collect the oil, provide containment and shore clean-up. Once the damage point is located, and dependent on the extent of damage, other containment measures are applied.

Benefits from the installation of the Vesper Marine Virtual AIS Beacon are to track vessels in the area of the cable and provide an enhanced level of protection to eliminate anchor strikes and environmental impact through virtual buoys and safety alert notification to prevent anchoring within the cable field.

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TECHNICAL DATA

Antenna #1 location: 41 1 58 N, 73 46 10 W, 123 Main Street, White Plains, NY

Antenna #2 location: 40 50 20 N, 73 39 52 W, 137 W Shore Rd, Port Washington, NY

Frequencies: 161.975, 162.025

12.5W, ERP: 24.8W, Mean, .003%

Emissions: G2X, FM GMSK, 15.4 KHZ