

## Marine Seismic Surveys and Munitions & Toxic Waste Storage

The United States has an 80-year history of uncovering critical scientific data from marine seismic surveying. Seismic surveying, which began in 1937 in the Gulf of Mexico, offers a detailed analysis of underwater structures, like a CAT scan of the ocean. To date, there is no scientific data indicating that there have been any adverse effects to marine life or the marine environment from sound from seismic exploration activities.

Some anti-oil and gas groups have claimed that seismic surveys along the U.S. Atlantic Outer Continental Shelf (OCS) would pose a threat or risk of activating unexploded ordnance or compromising the integrity of containers of toxic waste that have been disposed of in the past off the East Coast.

These groups have acknowledged their aim is to [stop selected geophysical surveys](#) by any means in order to halt or delay oil and gas development even though the surveys and decisions about oil and gas exploration and development are two discrete and separate regulatory decision processes. The concerns they have expressed are neither genuine nor founded on scientific evidence, but are obvious attempts to misinform, confuse and erroneously alarm the public.

The geophysical industry takes pride in being safe, accurate and above-board. Geophysical surveys are in fact used to reduce the risk of unexploded ordnance and leaking toxic waste containers for all ocean users by identifying their locations, including near proposed renewable energy sites.

### Unexploded Ordnance & Toxic Waste Storage

Assertions claiming geophysical survey technology poses a risk of triggering the release of chemical or radioactive waste are patently false. This issue has never been a concern for geophysical survey technology anywhere in the world. Modern seismic surveys have been conducted extensively around the world for more than 50 years with no scientific documentation of any sound impacts causing the initiation of explosions or the compromise of storage containers containing chemical or radiological waste.

- Seismic surveys use compressed air sound sources that only release compressed air at pressure levels far below the energy required to activate explosive materials or structurally damage waste containers.
- The compressed air is released at about 20-30 feet (6-10 meters) beneath the water surface, not on the bottom of the sea.
- Even when surveys are located directly over abandoned ordnance or waste disposal areas, the energy from the sound source is insufficient to present a risk of cracking or damaging containers or activating explosive materials.
- On the U.S. Atlantic OCS, where there is special concern, seismic surveys have been taking place for many years.

- Scientific research seismic surveys have been conducted on the Atlantic Outer Continental Shelf (OCS) regularly over the past 50 years, with the most recent surveys occurring in 2014, 2015, and 2017.
- The September - October 2014 survey collected data along 3,000 miles of trackline in the area of the Outer Banks, North Carolina and used the same technology that is used for oil and gas exploration.
- The July 2015 scientific research seismic survey was conducted off the coast of New Jersey to generate much-needed information about sea level rise and its consequences for the New Jersey coastline.
- There are currently ongoing geophysical surveys on the Atlantic OCS, permitted by BOEM and authorized by NOAA Fisheries to support the site characterization of offshore wind facilities in New York (2017 - ongoing), New Jersey (2017 – ongoing), and Massachusetts (2016-2017), among others.
- It is important to note that during this four-year span (2014-2018) of various seismic surveys being conducted on the U.S. Atlantic OCS, there have been no reports of seismic survey activity triggering the release of toxic chemical agents or radioactive waste from official and unofficial ocean dump sites in the U.S. Atlantic. Nor has there been any reports of these seismic surveys detonating unexploded ordnance.

### Key Facts

- Geophysical survey technology is a proven, safe method for exploring oil and natural gas resources used for decades with no occurrences of setting off munitions. There is no evidence to support the claim that geophysical surveys would in any way affect these materials.
- Geophysical survey technology is in fact used to detect unexploded ordnance and containers of toxic material in the marine environment.
- Geophysical surveys enable the prevention of accidental explosions and safe removal of toxic containers.

### Conclusion

The IAGC and its member companies are committed to ensuring the production of safe, environmentally responsible geophysical data acquisition and results. Through research and more than eight decades of activity around the world, we have found no reason to believe seismic surveying is anything less than the safest, cleanest, most energy efficient technology for generating geological imagery.

### Resources

<http://www.dtic.mil/dtic/tr/fulltext/u2/a512824.pdf>

<http://www.gardline.com/activities/service/uxo-surveys/>

[https://www.oceanologyinternational.com/\\_novadocuments/230221?v=635950439534000000](https://www.oceanologyinternational.com/_novadocuments/230221?v=635950439534000000)

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