

## Radioxenon Emissions Pledge

The signatories to this pledge have agreed to work voluntarily to minimize, mitigate, and resolve, where possible, interference of medical isotope radioxenon emissions with monitoring for nuclear explosions.

- Recognizing the efforts of the International Community supporting the establishment of an effective verification system for the Comprehensive Nuclear-Test-Ban Treaty (CTBT);
- Recognizing the role of the Provisional Technical Secretariat of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO/PTS) to supervise, coordinate and ensure the operations of the International Monitoring System (IMS), a worldwide network of stations supported by an International Data Centre (IDC) in Vienna to monitor for signatures of nuclear explosions, using, inter alia, a radioactive noble gas component to detect the presence of radioxenon isotopes;
- Recognizing the importance of radioisotopes to medical treatment of people worldwide and the urgent need for continued medical isotope production;
- Recognizing that the IMS can detect even trace amounts of radioactive xenon; and that radioactive xenon emissions from fission-based medical and industrial isotope production are detected and reported by the IMS on a daily basis;
- Recognizing that efforts to detect nuclear explosions are hindered by other emissions of radioxenon;

The producer of isotopes for use in medicine and industry recognizes and voluntarily agrees to:

- Minimize isotopic releases so that the monitoring efforts of the international CTBT community are minimally impacted. Whenever feasible, they will pursue radioxenon emissions at or below the levels recommended by the CTBTO/PTS;
- Explore means to share xenon monitoring (i.e., "stack" or facility monitoring) data with the CTBTO/PTS for use in screening out xenon detections from the IMS that result from isotope production, the modalities of this communication will address the timing, the processing of the data and confidentiality issues; and,
- Further support the CTBTO/PTS, upon request, with information regarding radioxenon emissions in order to improve the interpretation or clarification of IMS radioxenon data.

The Provisional Technical Secretariat of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization agrees to:

- Assist producers in clarifying any concerns due to elevated IMS readings of radioxenon isotopes;
- Recognize and cooperate with producers who are taking steps to mitigate the effects of emissions on the IMS; and
- This collaboration offered by the CTBTO will aim at direct support in expertise, technological development and possible financial support.

Date: 25 June 2014

  
Lassina Zerbo  
Executive Secretary, CTBTO

Date: 25 June 2014

  
George P. Messina  
Chief Executive Officer  
NorthStar Medical Radioisotopes, LLC