

QUALIFICATIONS

HISTORICAL HIGHLIGHTS

Ludlum Measurements, Inc. is recognized as a world leader in the developing and manufacturing of <u>Radiation Portal Monitors</u> (RPMs). Stringently engineered, independently tested, and field proven, Ludlum systems deliver world class performance. Vertically integrated manufacturing offers unparalleled quality for off-the-shelf gamma, gamma/neutron systems, and custom-engineered solutions.

- 1962 Ludlum Measurements, Inc., founded by Don Ludlum, incorporates. Today, Ludlum is a premier provider of radiation detection instruments and systems
- 1964 Ludlum's first patent, #3,122,635, issued on February 25th
- 1975 Governor's Industrial Expansion Award, presented by the Honorable Dolph Briscoe, Governor of Texas, in recognition of a significant contribution to the economy of the State of Texas
- 1975 Larry Ludlum begins working with Ludlum Measurements, Inc. as an instrument designer
- 1983 Ludlum enters the vehicle monitoring business after the accidental melting of a Co-60 source at a steel mill in Mexico.
- 1996 Ludlum purchases ADIT, a manufacturer of photomultiplier tubes, to guarantee a
 consistent and high quality supply of these critical electronic components.
- 1997 Ludlum forms the subsidiary ELJEN Technology, to design and manufacture world class scintillation detectors, thereby guaranteeing the highest consistency and quality of this major detector component.
- 2002 LMI is awarded the first major contract from the US Government for more than 300 gamma/neutron portal systems. The systems have been operating with less than 0.5% (2 days is approximately 8,500 MTBF) down-time per system per year. LMI continues to work with the US government to upgrade and maintain these systems.
- 2006 Ludlum installs radiation portals in China, to date approximately **25 systems** have been installed along the borders and ports in China.
- 2007 Ludlum acquires Electron Tubes Limited, a photomultiplier tube manufacturer located in the United Kingdom.
- 2010 Supply of Helium-3 that is used in neutron detection becomes expensive and scarce.
 Ludlum develops a new neutron-capable RPM series that are more cost-effective than RPMs that are based on Helium-3 detectors.

INDUSTRY REGULATORY PARTICIPATION

Ludlum Measurements, Inc. not only understands and meets the requirements of American National Standards Institute (ANSI) but also participates in the development and approval of those standards.

ANSI N42.32:

ANSI N42.32 is the American National Standard Performance Criteria for Alarming Personal Radiation Detectors for Homeland Security. Ludlum Measurements Inc's' Dru Carson was a member of the subcommittee N42.RPI (Radiation Protection Instrumentation).

ANSI N42.33:

ANSI N42.33 is the American National Standard for Portable Radiation Detection Instrumentation for Homeland Security. Ludlum Measurements Inc's' Dru Carson was a member of the subcommittee N42.RPI (Radiation Protection Instrumentation) and a member of the ANSI 42.33 Working Group.

ANSI N42.34:

ANSI N42.32 is the American National Standard Performance Criteria for Hand-held Instruments for the Detection and Identification for Radionuclides. . Ludlum Measurements Inc's' Dru Carson was a member of the subcommittee N42.RPI (Radiation Protection Instrumentation).

ANSI N42.35:

ANSI N42.35 is the American National Standard for Evaluation and Performance of Radiation Detection Portal Monitors. Bill Huckabee and Mitchell (Mick) Truitt of Ludlum Measurements, Inc. were members of the ANSI 42.35 Working Group. Ludlum Measurements Inc's' Dru Carson was a member of the subcommittee N42.RPI (Radiation Protection Instrumentation).

ANSI N323:

N323 is the America National Standard Radiation Protection Instrumentation Test and Calibration standard establishes specific requirements for portable radiation protection instruments used for detection and measurement of levels of ionizing radiation fields or levels of radioactive surface contamination. Dru Carson is an active member of the committee responsible for the writing and revision of this standard.

LICENSING, MEMBERSHIP AND INVOLVEMENT

- Licensed by the Nuclear Regulatory Commission of the United States
- Licensed by the State of Texas
- Health Physics Society (HPS)
- Institute Of Scrap Recycling Industries, Inc. (ISRI)
- International Nuclear Material Managers (INMM)
- Individual Ludlum Employee Participation IEEE

CUSTOMER REFERENCE LETTER

Yes we have had a Ludlum detector for years. About 3 years ago we installed a two panel Model 4525. I own a scrap metal processing yard and we receive scrap from a variety of customers and on all types of vehicles. For this reason we did not put a three panel system in. I strongly believe having one overhead panel would be beneficial if you have a consistent size truck coming in. In a mill I suspect you would. We have been Ludlum customers for years and they are across the board a good group of people. Strong technical knowledge and very quick to help in any way. I can tell you that based on the tonnage we ship each year and the number of rejections we have had at the steel mill that the Ludlum system is accurate 99.5% or more. You will be very happy to have their system. ~ Brian E.