



# Portable Nuclear Gauge Newsletter

Volume I, Issue I

Spring 2009

## Go to [apnga.com](http://apnga.com) to:

- Sign up for the free “Portable Nuclear Gauge Newsletter”
- To become a member and receive free training classes including Gauge Certification, USDOT HAZMAT Refresher, RSO/RSO Refresher and Annual Employee Refresher.
- Members have access to the Q&A Forum, 24/7/365 resources and references, and links to every regulatory and DOT agency.
- Members receive free tutorials including the “Annual Audit How-To Tutorial”, the “Gauge User Daily Step by Step Tutorial”, the “Gauge Operator’s Photo Tutorial” and the “Shipping How-To Tutorial”.
- View or print Emergency Contact information
- Print information sheets for reporters or other media outlets.

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## Welcome to the American Portable Nuclear Gauge Association

Welcome! The APNGA was created to serve the moisture density gauge licensee with 24/7/365 resources, references, news, training and communications.

One quick visit to the new [apnga.com](http://apnga.com) website will convince you that this is the resource that gauge operators, and especially RSO’s, have been waiting for.

The website is loaded with features such as FAQ’s, a Q&A Discussion Forum and training classes, including Gauge Certification, USDOT HAZMAT, RSO/RSO Refresher and Employee Annual Refresher. It also includes self-help Annual Audits and Shipping “How To” courses as well



as Gauge User Daily Step-by-Step and Gauge User Photo Tutorials.

And it’s all dedicated to users of moisture density gauges.

Come join us—APNGA will make a difference in your radiation safety program and in the moisture density gauge industry. It will also save you a lot of time and money.

## Improperly Secured Gauges Remain A Leading Cause of Theft and a Top Reason for Violations and Fines

Gauges are most vulnerable to theft while stored in a vehicle. Improper storage can also lead to gauges bouncing out of the back of pick-up vehicles.

Remember, gauges must

not only have two locked deterrents attaching the gauge to the vehicle, but also two locked deterrents that prevent opening the lid.

Use blocking, bracing and concealment to further

secure the gauge.



## Industry News

# New Agreement States and InstroTek/CPN Merge

In the Spring/2008 Pennsylvania became the newest Agreement State.



Virginia is scheduled to follow suit on April 1, 2009.



New Jersey will follow on October 1, 2009.



Licensees in those states will receive notices and instructions as to their requirements. Gauge licensees outside of these states that conduct operations in those states must now receive reciprocity from the new state agencies.

In August, 2008 InstroTek completed an acquisition of CPN International. InstroTek is headquartered in Raleigh, NC and has offices in Las Vegas, NV, Grand Rapids, MI and the San Francisco, CA area.

InstroTek also announced an upgrade to the MC3 gauge. Full details can be viewed on their website at [instrotek.com](http://instrotek.com).

Do you have industry news? Please send an email to:

[gmarshall@apnga.com](mailto:gmarshall@apnga.com)

## Regulatory Agencies—They're on Your Side

Many licensees have the feeling that their regulatory agency is forever playing a game of "gotcha", ready to assess a violation at a moments notice. This manifests itself in a reluctance to contact the agency with questions or for clarification about rules and regulations.

In fact, asking questions is one way for the agency to know that you are

conscientious about maintaining an effective radiation safety program.

You should become familiar with your agency website and use the available tools and resources, such as an annual audit worksheet. This will better prepare you for the eventual inspection and provide you "peace of mind".

Regulatory agencies are tasked with

protecting the public, property and the environment from any potential harmful effects of radiation. They do this best by working **with** you to ensure that your program is compliant.

Visit their website and never hesitate to contact them—they're there for you. Go ahead—Give 'em a call—They Know Best.

## We Need Your Help, Your Input—and Your Photos

You can be a part of the Portable Nuclear Gauge Newsletter by submitting articles, news, photos, advice, etc. for consideration for publication. It won't make you rich (Hey, it's a free newsletter—there are no bucks) but it may help out the thousands of users of moisture



density gauges.

Your information may end up in or as part of a future article and may even end up on the [apnga.com](http://apnga.com) website.

We are especially interested in photos of damaged gauges. These photos are used to

educate licensees and emergency responders as to the procedures that should be taken in the event of damage (we promise not to tell anyone whose gauge it is).

You can submit your info or photos to [gmarshall@apnga.com](mailto:gmarshall@apnga.com). Thanks in advance for your help!

# Are Non-Nuclear Gauges Dangerous?

For years researchers have been trying to determine if the small amount of electromagnetic radiation released by cell phones could cause brain tumors and/or cancer. Recently, the University of Pittsburgh Cancer Center issued a warning to its faculty to limit cell phone use because of the possible risk of cancer.

In another study, the Cleveland Clinic Infertility Clinic found that extended cell phone use (more than 4 hours per day) may cause lower sperm counts and/or abnormal sperm. Other studies have found that electromagnetic frequency (EMF) waves have caused disturbances in sleep, caused headaches, impacted reaction times, raised blood pressure and decreased melatonin. It gets worse – studies have found links to Alzheimer's, leukemia, ALS, breast cancer, heart disease, miscarriage, joint pain, migraines, fatigue, and concentration difficulties.

It appears that the frequency of the electromagnetic waves has the potential to interfere with the electrical pulses emitted by the brain.

So what does this have to do with non-nuclear density gauges?

Non-nuclear gauges have always been marketed as a safe alternative to the nuclear variety. The inference is that nuclear density gauges are risky and harmful. But the record shows that nuclear gauges have a virtually immaculate record. Tens of thousands of these gauges have been manufactured, and millions of tests performed, but there has never been a case of an individual being contaminated by the source material or an incident where medical attention was required. Likewise there has not been

a case where an individual has received a dosage in excess of the annual allowable level. Typical annual exposure levels from a nuclear gauge are on average about 1/10 of the natural annual background level (360mrem) and less than 1% of the allowable level (5000mrem). To put it in perspective, you will receive, on average, more radiation from one x-ray or from living in Colorado for one year (increased cosmic radiation) than from the radiation received working around a gauge for a year.

There are also claims that nuclear gauges pose a risk to national security. There has never been a case where the source material from a gauge has been used for nefarious activities.

The reason nuclear gauges have such an impressive safety record are the safety and security measures required of the gauge owner. It is a testament to the nuclear gauge owner and the safety regulations that the gauge has such a safe record.

Like cell phones, non-nuclear gauges use electromagnetic radiation in determining changes in the density of a material (they don't really measure density, they just indicate that the physical properties of the material have changed and they are not very good at tracking the changing density without a recalibration). The electromagnetic radiation released from the non-nuclear gauge creates a field of radiation around the gauge, both above and below, similar to the radiation field around a cell phone.

The FCC measures and limits the amount of radiofrequency energy that can be absorbed by an individual. It's called the specific absorption rate (SAR) and is limited to

1.6W/kg (watts per kilogram) for cell phones. It is measured in the vicinity where the phone meets the ear.

A review of the non-nuclear gauge manufacturer's specification sheets and brochures does not list levels of electromagnetic radiation or frequency outputs or any safety precautions, such as the need to turn off the device while moving it from one site to another or to maintain your distance while the gauge is taking a measurement. Walking with an active gauge will position the active sensor in the waist-to-knee (groin) area. Likewise, standing around an active gauge while it is taking a test will also subject you to its radiation field.

There have been no known studies as to the effect of non-nuclear gauge radiation on humans. It's not known how much radiation is being emitted by a non-nuclear gauge but it is likely that the level is much higher than that of a cell phone.

Safety precautions have led to an excellent safety record for nuclear gauge users. If it is determined that the radiation released by a non-nuclear gauge can be harmful to humans it would be wise for the manufacturers of non-nuclear gauges to likewise institute safety precautions. You may want to contact the manufacturer for safety guidance. If they say it is safe they should be willing to put it in writing and/or provide safety studies that have focused on the effects of non-nuclear gauge radiation on humans, preferably one that has been conducted by a professional group.

The full version of this article, along with links to reference materials, can be viewed at [apnga.com](http://apnga.com).



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*Bulk rate Postage*

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 Regulatory and  
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## Industry Alert—Mobile Gauge Service and Calibration Providers

You've just received a mailer stating that a gauge service provider will visit your facility and calibrate your gauge at an incredible discount? Sounds too good to pass up? Maybe you should.

Third party service providers that visit your facility to perform gauge service and calibration must produce a valid license that allows them to take possession and work on the exact brand and model of gauge you possess. If they cannot produce one **do not** allow them near your gauges. Even if they are only removing a gauge to their vehicle you must follow sign-out procedures, escort them and/or prepare transfer documentation.

These service providers typically use a marginal *verification* device

that does not qualify as an ASTM/3 Block Calibration/NIST Traceable calibration (although they will pass it off as such). If the calibration of your gauge is called into question during a dispute you may need to produce documentation that the gauge was calibrated on a 3 block calibration system..

They likewise will bypass many important service functions, such as source rod inspection. They bypass these functions because in all likelihood they are **not licensed** to do so. This leaves you with a gauge that has not been adequately serviced. If the deal sounds too good to be true it probably is!

Likewise they cannot be left alone with your gauges in the gauge storage areas. The service individual is

not employed by your company and therefore not authorized by your license. Also, if you are in possession of numerous gauges the service provider may have to produce regulatory background clearance documentation.

If you are caught turning your gauge over to an improperly licensed or unlicensed service provider you will be subject to violations and fines. Incredibly, the service provider will probably not be subject to violations or fines. While they may have nothing to lose, **You do!**

View the NRC "Regulatory Issue Summary 2008-24" at [www.nrc.gov](http://www.nrc.gov) or view the full article and notice at [apnga.com](http://apnga.com).

# The American Portable Nuclear Gauge Association

## Why Join APNGA Now



Your membership includes ALL of the following:

- ✓ 24/7/365 access to references and resources of the APNGA Website
- ✓ Access to the interactive Q & A Forum
- ✓ Available in 7 Languages
- ✓ One free Gauge Safety Certification Class with certificate
- ✓ One free USDOT Hazardous Material Refresher Class with certificate
- ✓ One free RSO/RSO Refresher Class with certificate
- ✓ One free Annual Employee Refresher Class with certificate
- ✓ Free Annual Audit "How To" Tutorial
- ✓ Free "Gauge User Daily Step-by-Step" Tutorial
- ✓ Free APNGA Gauge Newsletter
- ✓ Free Moisture Density Gauge Photo Tutorial

### Membership FAQ's

- How much is APNGA Membership?
- Is there an additional charge for the training classes?
- How do I pay for membership? How do I get a receipt?
- What is the duration of a membership?
- After I become a member, how soon can I take the classes?
- Do I have to take the classes immediately?
- Is there a time limit on when I have to take the classes? Tests?
- What forms of payment do you take?

#### How much is APNGA Membership?

APNGA annual dues are only \$49.00 per person. That includes all training classes and tutorials.

#### Is there an additional charge for the training classes?

No. They are all included.

#### After I become a member, how soon can I take the classes?

Once you receive your confirmation email and access code and create your user name and password you will be able to take the courses and tests.

Go to [www.apnga.com](http://www.apnga.com) for answers to all of the above questions and to join.  
Click on "Join APNGA."



## Benefits of APNGA Membership

RSO's have immediate access to regulatory and industry references and resources 24/7/365 on a website dedicated only to moisture density gauge users.

Gauge users have immediate 24/7/365 access to educational and training materials for regulations, safety and gauge use.

Every member receives over \$1,000.00 worth of free training, including Gauge Safety Certification (where accepted), USDOT HAZMAT Initial and Refresher Training, RSO/RSO Refresher Training, Annual Employee Refresher Training, as well as numerous tutorials and "How To" courses.

All members have 24/7/365 use of the APNGA Discussion Q&A Forum.

Members can take advantage of money saving tips on purchasing gauges, personnel dosimeters (film badges), survey meters (hand-held Geiger counters), gauge service, calibration and repair, disposal options, leak test services and other accessories.

FAQ's

Direct links to all gauge related regulatory agencies including the NRC, USDOT and Agreement States.

Members will also find direct links to other gauge related regulatory, informational and industry websites.

Members will receive the "APNGA Portable Nuclear Gauge Newsletter" and have the opportunity to have their input published.

APNGA offers the most in-depth and comprehensive moisture density gauge information and training.

**And there's so much more to come!**

**All for only \$49.00 (Annual Dues)**