

# GRANITE COUNTERTOPS RADIATION AND RADON

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WHAT IS THE FUSS  
AND WHY NOW?

# The Players

Natural Stone

MIA

Marble

Institute

of

America

Manufactured

Stone

BUILD

CLEAN

# LETS LET KHOW TV OF HOUSTON DO THE INTRODUCTIONS

[http://www.khou.com/topstories/stories/khou080507\\_jj\\_countertopdangers.da1f6698.html](http://www.khou.com/topstories/stories/khou080507_jj_countertopdangers.da1f6698.html)

Are granite countertops bad for your health?  
May 9, 2008

# NEXT THE NEW YORK TIMES WEIGHS IN

<http://www.nytimes.com/2008/07/24/garden/24granite.html>

New York Times: What's Lurking in  
Your Countertop? July 24, 2008

# FOLLOWED BY CBS

<http://www.cbsnews.com/stories/2008/07/25/earlyshow/health/main4292754.shtml>

CBS News: Granite  
Countertops A Health Threat?  
July 25, 2008

# AND ABC

[http://abcnews.go.com/health/  
story?id=5466066&page=1](http://abcnews.go.com/health/story?id=5466066&page=1)

**Cause for Worry? Granite Fears  
Grip Homeowners July 29, 2008**

**Radiation Fears Lead  
Homeowners to Request  
Inspection; Most Cite Little  
Cause for Concern**

# And MSNBC Today Show

- ▣ <http://today.msnbc.msn.com/id/26184891/vp/26542074#26542074>
- ▣ [How Safe Are Your Countertops](#)

# RESULTING IN.....

Concerned calls to Dept of Public  
Health

Concerned calls to Dept of  
Environmental Protection

# SEARCH FOR ANSWERS

Field Surveys by DEP

# First a Granite Fabricator



# With lots of slabs



We did direct measurements  
only-No radon measurements



# Results

## Surveyed Samples:

Brown Pearl      6" by 6" sample 1" thick

4 urem/hr background      11 urem/hr on contact

30 CPM background      140 CPM on contact

Giallo California      6" by 6" sample 1" thick

4 urem/hr background      12 urem/hr on contact

30 CPM background      140 CPM on contact

# Results

## Surveyed Slabs

Costa Esmeralda Rose: eight sheets 1" thick,  
stacked

15 uR/hr background    30-35 uR/hr on contact

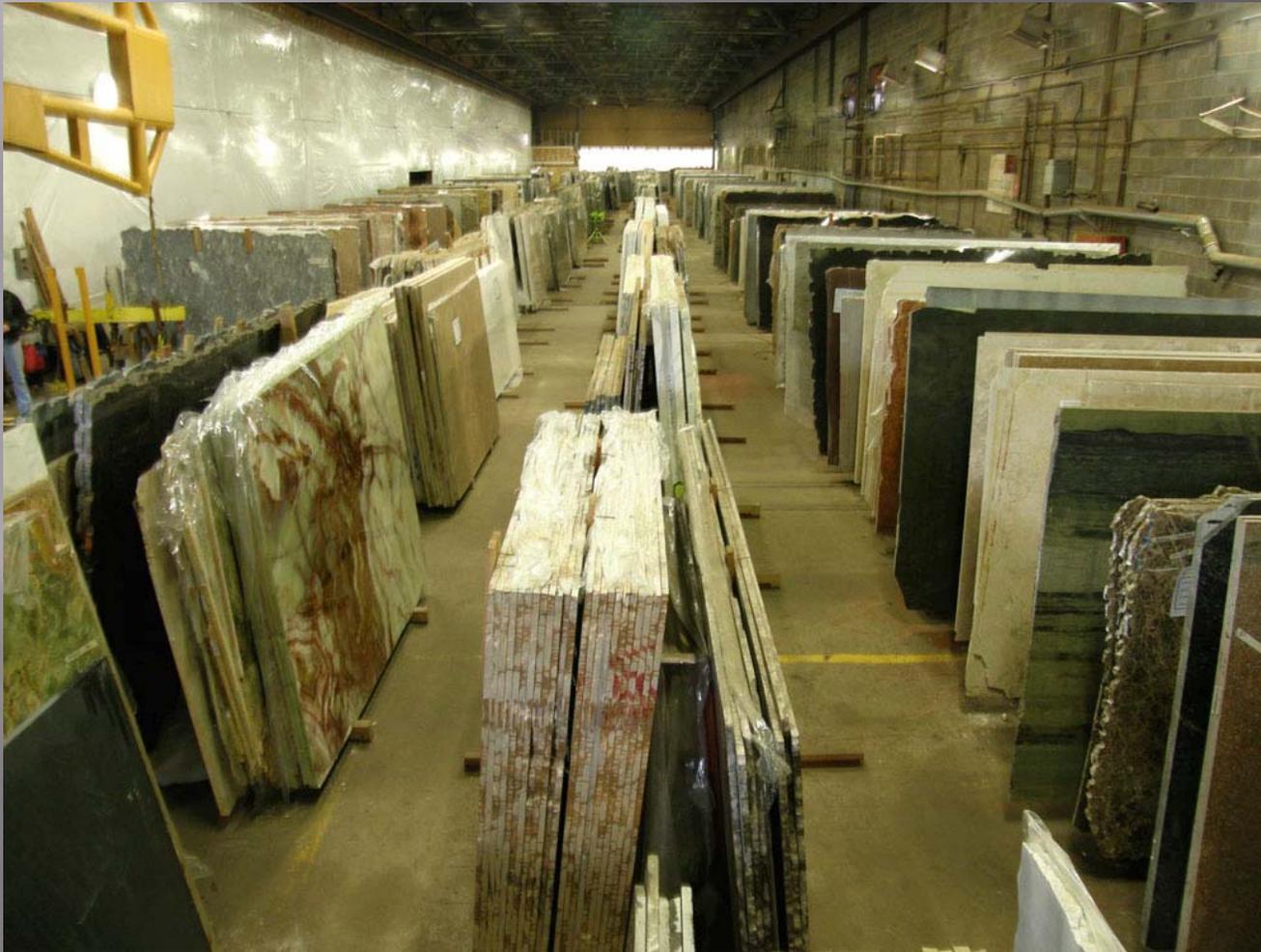
50 CPM background    120-150 CPM on contact

Guana Berra Blue single sheet 1" thick, 6' by 12'

15 uR/hr background    45 uR/hr on contact

50 CPM background    200-240 CPM on contact

We also surveyed slabs at a large distributor



# Results

Iberian Bordeaux/Brazil 50-60 uR/hr

Ivory Fantasy/India 50-60 uR/hr

Vyara Gold/India 50-60 uR/hr

And a “hot spot” of 85 uR/hr

Stony Creek Pink/CT-USA 40-50 uR/hr

And a “hot spot” of 70 uR/hhr

# Research 2005

- ▣ Kitto -New York State Dept Health
- ▣ Green-Univ of New York
- ▣ 8 samples and five in home surveys
- ▣ Flux Chambers, Pylon AB-5, Lucas Cells.
- ▣ Not likely to be a concern in most cases
- ▣ 1 method est. 1 case 2.3pCi/L added

# Research May 2008

W. L. Llope Rice University

## Radiation and Radon from Natural Stone

95 Stones researched      Mean 0.28 pCi/L,

90 samples below 1 pCi/L

2 samples between 1.5 and 2 pCi/L

2 samples between 3 and 3.5 pCi/L

1 sample 4.2pCi/L

# Research May 2008

- ▣ L. L. Chi University of Akron
- ▣ 13 samples
- ▣ Each placed in sealed 5 gallon bucket with an electronic radon meter giving hourly readings
- ▣ Highest reading 292 pCi/l after 15 days
- ▣ Contribution to a 2000 square foot house, 8 foot ceilings, no ventilation 0.27 pCi/l

# Research Nov 2008

- ▣ Environmental Health and Engineering, Inc  
Needham Mass
- ▣ Over 400 samples-115 varieties evaluated
- ▣ Represents approx 80% of U.S. Market
- ▣ All slabs less than 30 mrem/year
- ▣ Average slab contributes less than 0.01 pCi/l to indoor air
- ▣ Highest slab contributes .25 pCi/l to indoor air
- ▣ Survey funded by MIA

# EPA

- ▣ At this time, however, EPA does not believe sufficient data exist to conclude that the types of granite commonly used in countertops are significantly increasing indoor radon levels. Some granite may emit gamma radiation above typical background levels. While radiation levels are not typically high, measurement of specific samples may reveal higher than expected levels on a case-by-case basis. The key to reducing risk is to test your home for radon and then make decisions as appropriate.

# AARST

- ▣ American Association of Radon Scientists and Technologists
- ▣ While natural rocks such as granite may emit some radon gas, the subsequent levels of radon in the building that are attributable to such sources are not typically high.
- ▣ The US Surgeon General, US EPA, AARST and the American Lung Association recommend that all homes be tested for radon gas.

# Lawyersandsettlements.com

- ▣ A number of horror stories of health effects never known to be caused by radon
- ▣ Offers for your complaint to be reviewed by an attorney
- ▣ No cases mentioned, or settlements...so far!

# Questions

# CT-DEP

▣ [www.ct.gov/dep/radiation](http://www.ct.gov/dep/radiation)

# Radiation Primer

- ▣ 1000 micro rem equals 1 millirem
- ▣ Meters measure dose rate example : 20 micro rem per hour
- ▣ Multiply the dose rate by the number of hours exposed to calculate the dose
- ▣  $20 \text{ micro rem/hr} \times 4 \text{ hours} = 80 \text{ micro rem}$
- ▣  $20 \text{ micro rem per hour} \times 4 \text{ hours} \times 365 \text{ days} = 29,200 \text{ micro rem per year, or } 29 \text{ millirem/year}$