

# 2021 TENORM SURVEY

Revisiting the 2008 NORM Guidance Document

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# TECHNOLOGICALLY ENHANCED NATURALLY OCCURRING RADIOACTIVE MATERIALS (TENORM)

## IOGCC TIMELINE

- “Current Status of TENORM in Oil and Gas Industry.”
  - Industry’s management
    - Safety and environmental impacts
  - Regulatory status
    - No regulations
    - Existing rules considered sufficient
    - Identifying agency and jurisdictional issues
    - Developing TENORM guidelines or specific rules



# ENVIRONMENT AND SAFETY COMMITTEE ACTIONS

- “A Summary of State Regulations for NORM in Oil and Gas”
  - Published by the IOGCC in 1998
- Focused on:
  - Legislative status
  - Agencies assigned
  - Regulatory limits



1994

**1998**

2008

2021

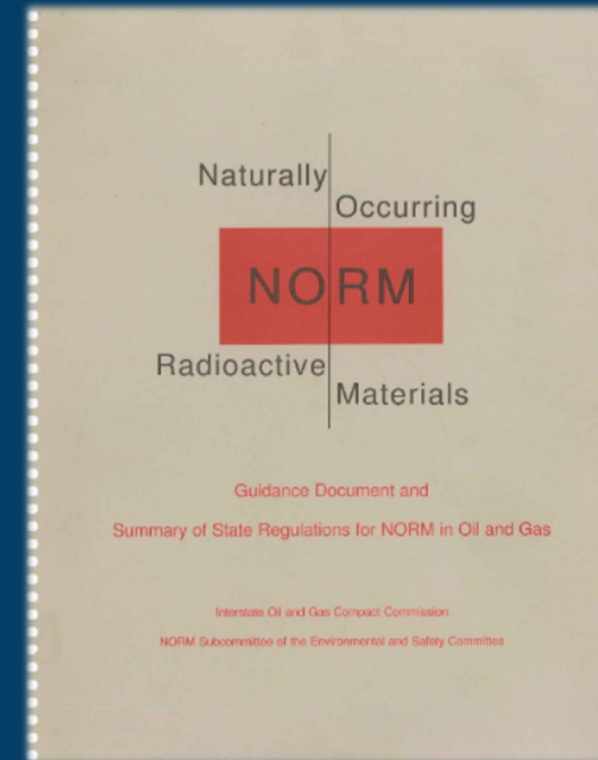
# NORM SUBCOMMITTEE

- Chairman: Thomas O. Bush, Ph.D.
  - Phillip N. Asprodites, Lori Wrotenbery, Roger Anderson, Edgar D. Bailey, Harold “Hal” Fitch, Richard Ginn, Robin Reade, Karen P. Smith, Scott J. Winters, Carroll Wascom, Deborah Blunt, John K. Ford, David Gooden, Kevin J. Grice, Jason Talbot, Steven J. Zrake and Steven Woods
- Member states were surveyed to identify needs
  - AR, LA, MI, MS, NM and TX responded
- NORM Guidance Document created based on feedback



# 2008 NORM GUIDANCE DOCUMENT

- Characterization of Oilfield NORM
- Potential health impacts from exposure to NORM
- Exemption levels
- Survey methodologies
- Disposal of oilfield NORM
- Summary of state regulations / guidelines



1994

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# 2021 - REVISITING THE NORM GUIDANCE DOCUMENT

- Topics of interest have likely evolved over the past decade
- TENORM Subcommittee assigned to investigate and report
- A new survey will be distributed to each member state
  - Only 2 questions!



# QUESTION #1

## UNDERSTANDING NEEDS

Please check all items that would benefit your agency:

- Health risk (exposures)
- Environmental impacts (e.g., contamination of land, equipment, etc.)
- TE-NORM generated via conventional versus unconventional operations
- Science behind exempt levels



# QUESTION #1

## UNDERSTANDING NEEDS (Continued)

- Remediation technologies
- Final disposition or disposal options
- Regulatory / Legislative development or implementation
- Jurisdiction and enforcement with other agencies (intra-state)



# QUESTION #1

## UNDERSTANDING NEEDS (Continued)

- Safety training:

- PPE

- Data collection – field surveys and sampling methodologies

- Data analysis – field and lab reports

- Other: \_\_\_\_\_

- Industry perspective on managing TE-NORM

Other items / suggestions: \_\_\_\_\_

# QUESTION #2

## IDENTIFYING RESOURCES

Would you or someone you know be interested in participating in the effort to support the IOGCC research, develop and publish a future TE-NORM guidance document?



# TENORM SUBCOMMITTEE PLANS

- Review topics of interest identified in survey
- Identify TE-NORM sub-committee members
- Develop scope of work

# VALUABLE RESOURCES

- Subject matter experts
  - Agency and Industry
- Professional organizations
  - Health Physics Society (HPS)
  - Conference of Radiation Control Program Directors (CRCPD)
- Research studies and publications
  - Applicability of older research
  - Recent events and reports



# 2021 TE-NORM SURVEY

Questions / Comments?