State Regulator Perspectives on Long-Term Stewardship

Results of an ITRC State Regulators Survey

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LTS Technology and Implementation: State Perspectives and Federal Initiatives

ITRC Fall 2002 Meeting –

November 2002

Radionuclide Team

Facilitate the cleanup of radioactively contaminated federal facilities by fostering dialogue between states, stakeholders and federal agencies in order to increase awareness of issues and procedures at sites in other states, encourage regulatory cooperation and share technological successes and approaches.

CO, OH, ID, NV, SC, NM, TN, WA

Products and Activities

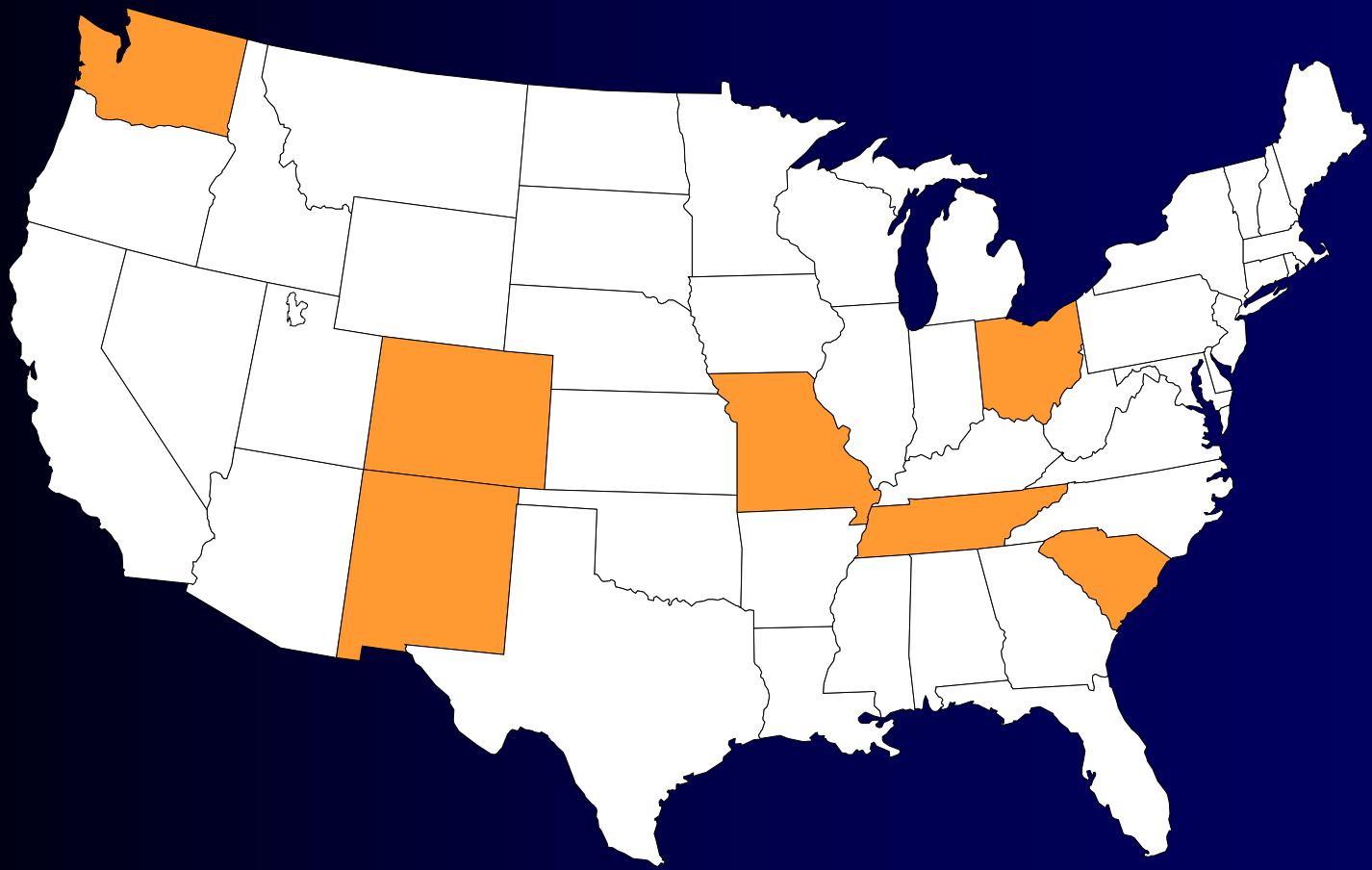
- Radiation Reference Guide: Relevant Organizations and Regulatory Terms
- Determining Cleanup Goals at Radioactively Contaminated Sites: Case Studies - Final
- Survey of State Regulators Regarding LTS Technologies.
- Radiation Risk Assessment Training

State Regulator Survey

- Focus on state regulators' perspectives on LTS technology needs and implementation challenges
- Target participants were regulators from states with major DOE sites and were knowledgeable on LTS issues
- 7 Sections, 165 questions, multiple choice and write-in.

Survey Respondents by State

CO, MO, NM, OH, SC, TN, WA



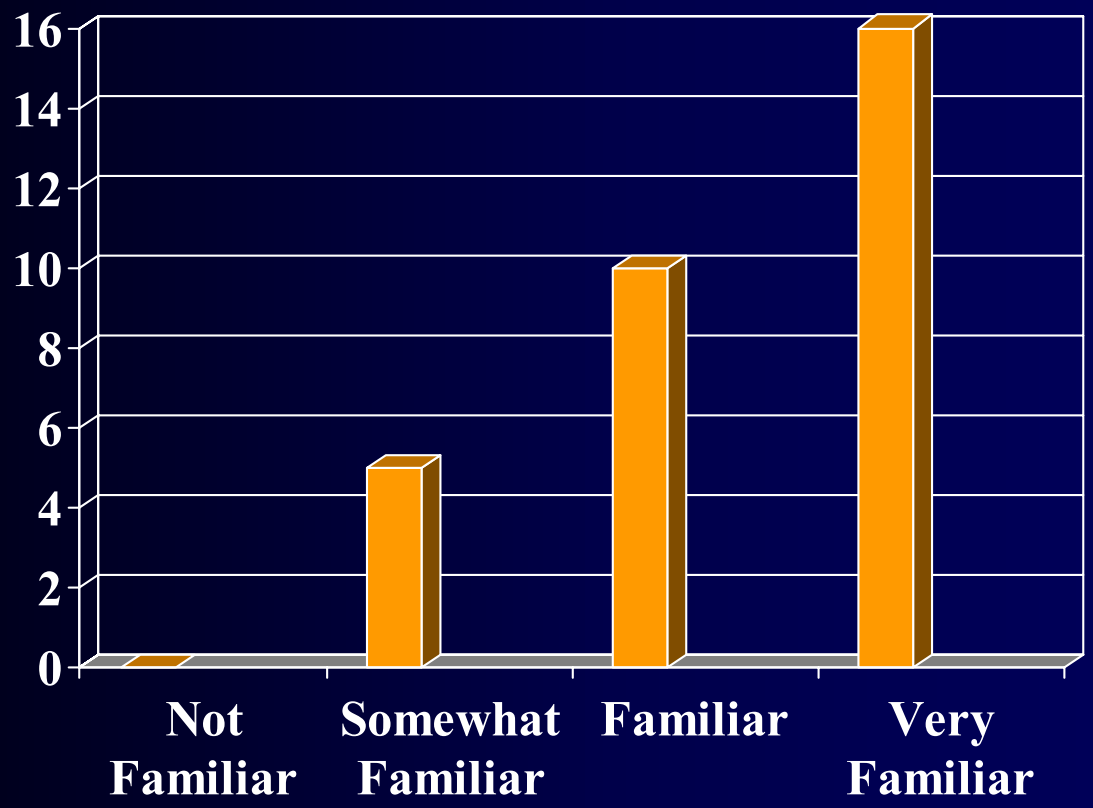
State Regulator Survey

Sections of the survey:

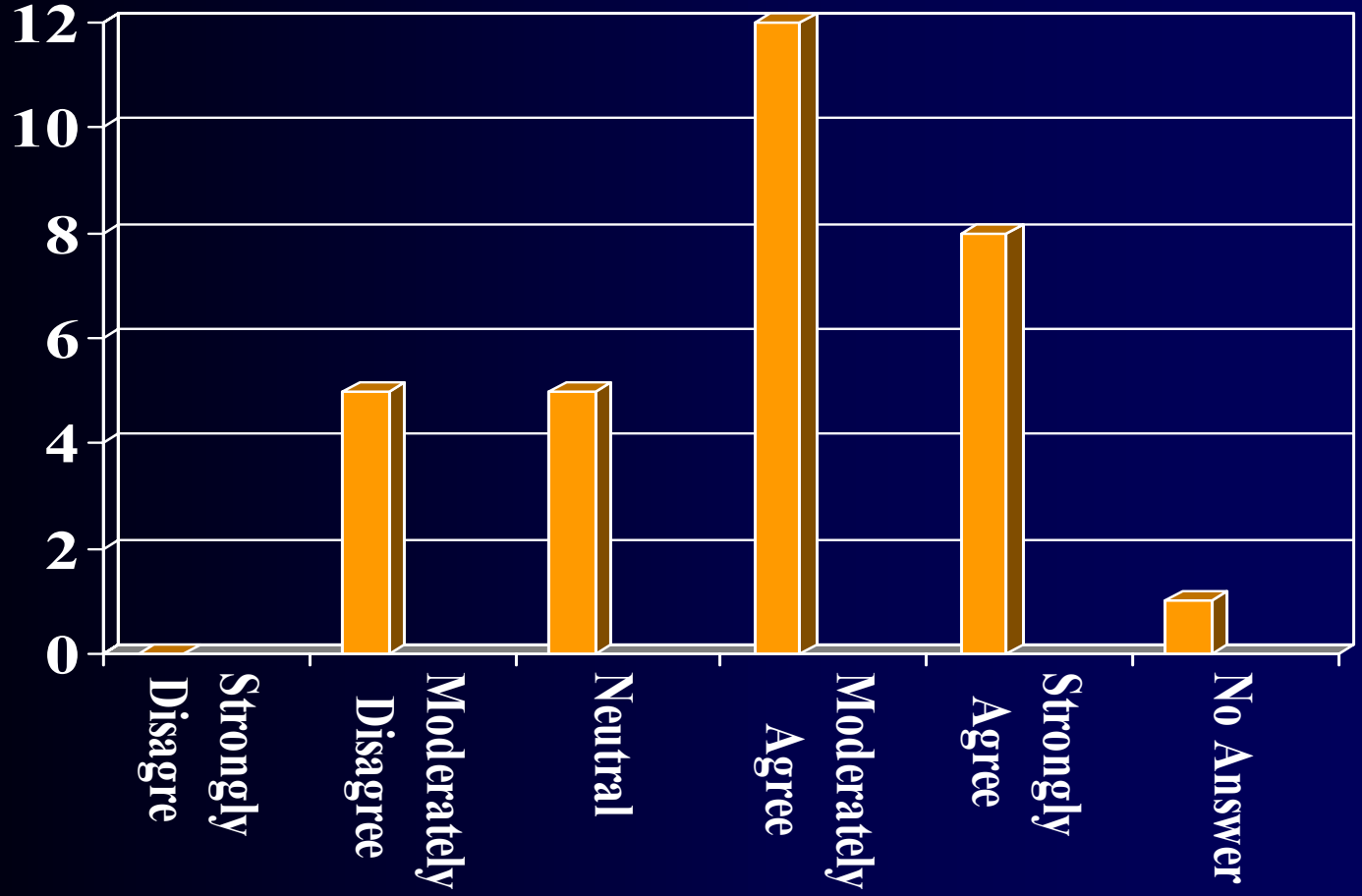
- General
- Treatment
- Monitoring
- Information Access and Use
- Land-use and Institutional Controls
- Decision-making
- Path Forward

Question #10:

How familiar do you feel you are with long term stewardship issues?



Question #29: There are technology limitations affecting the ability of sites to successfully implement LTS.

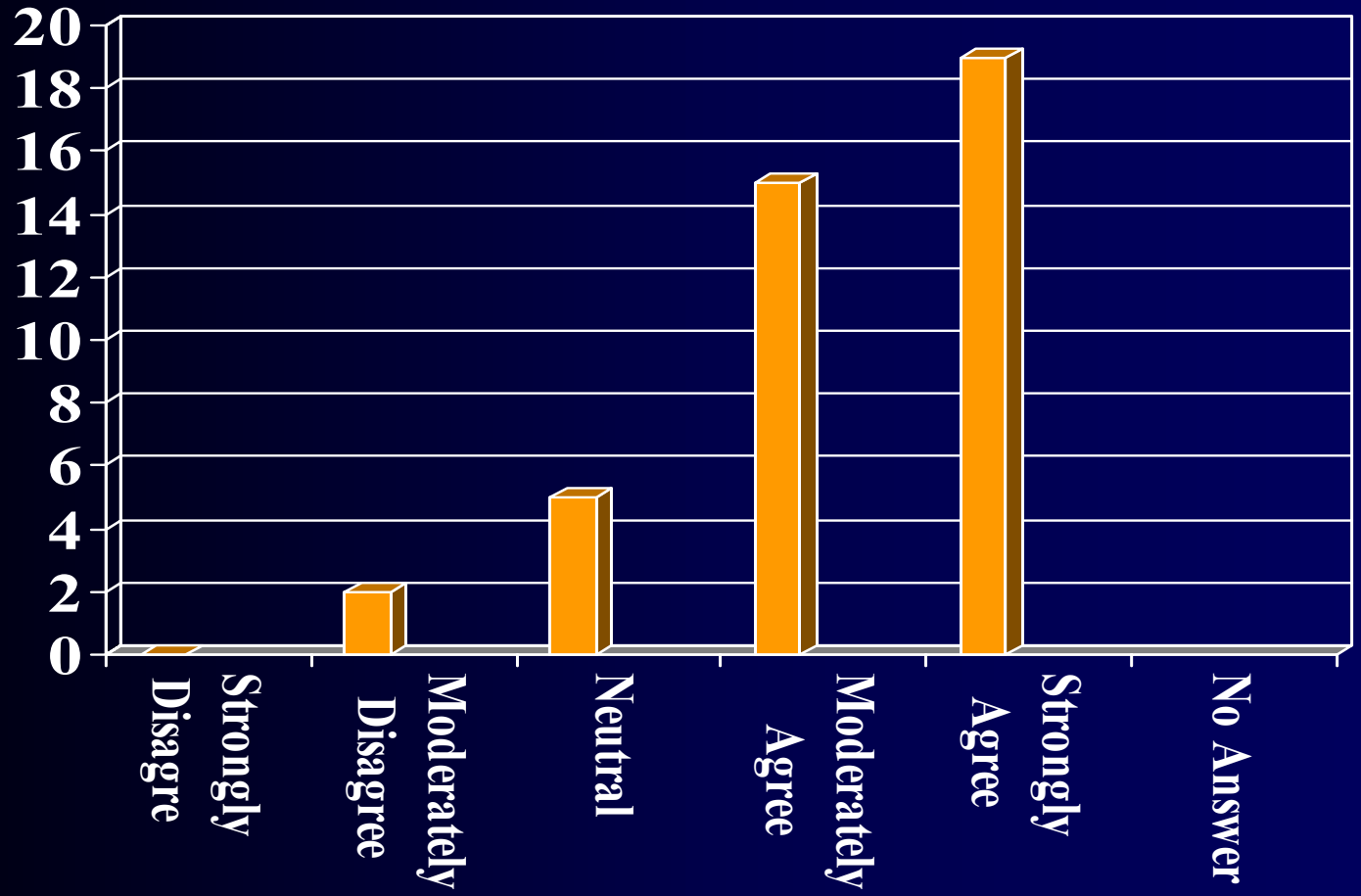


Question #30: **If you have observed technology limitations, please give examples of some major limitations.**

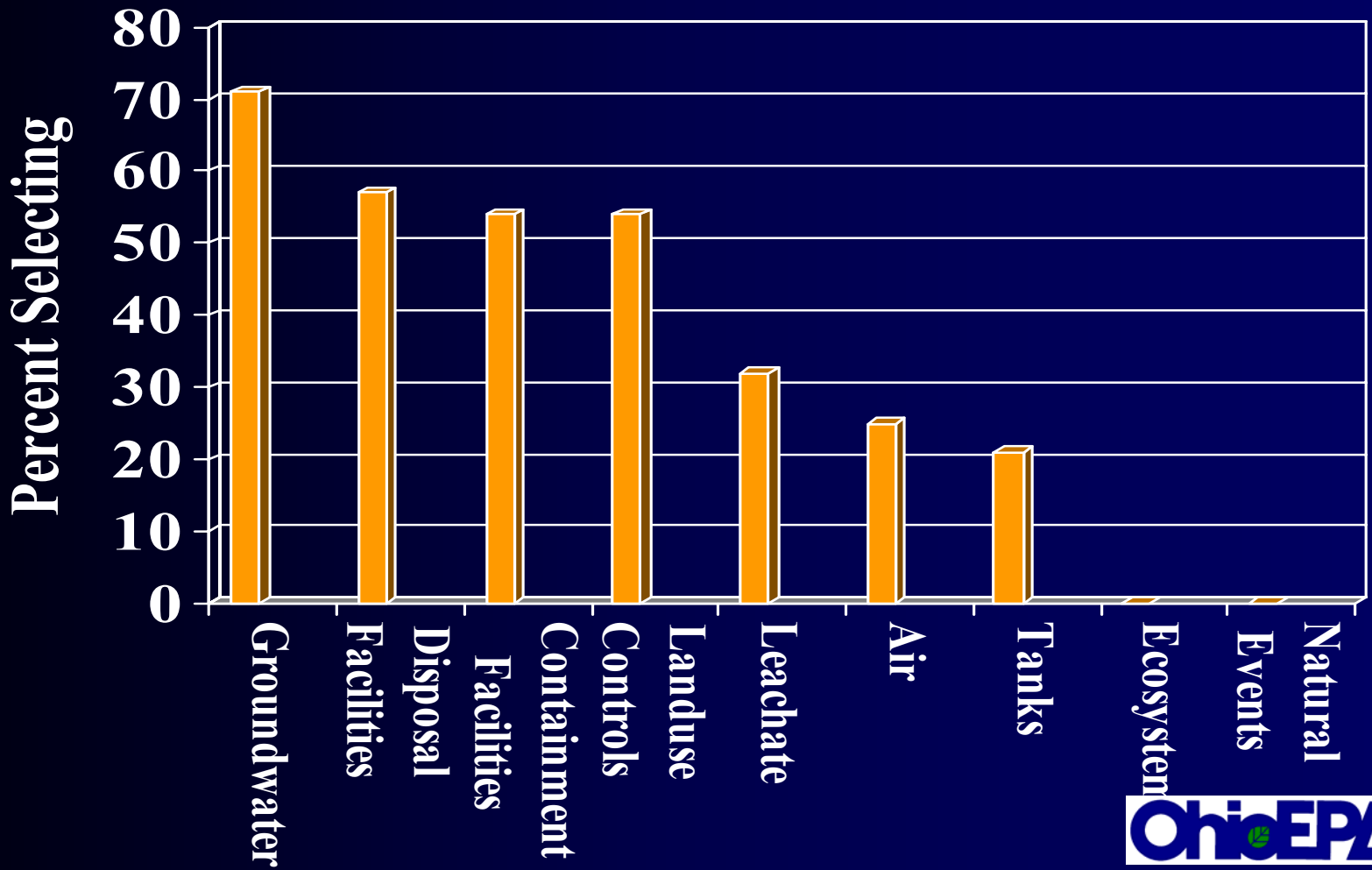
- "The cost of implementing the technology appears to be limitation for facilities more than the effectiveness of the technology"

- "Most technologies that will be used or needed for LTS have no proven track record over the long-term. This is especially true in the areas of treatment and monitoring"

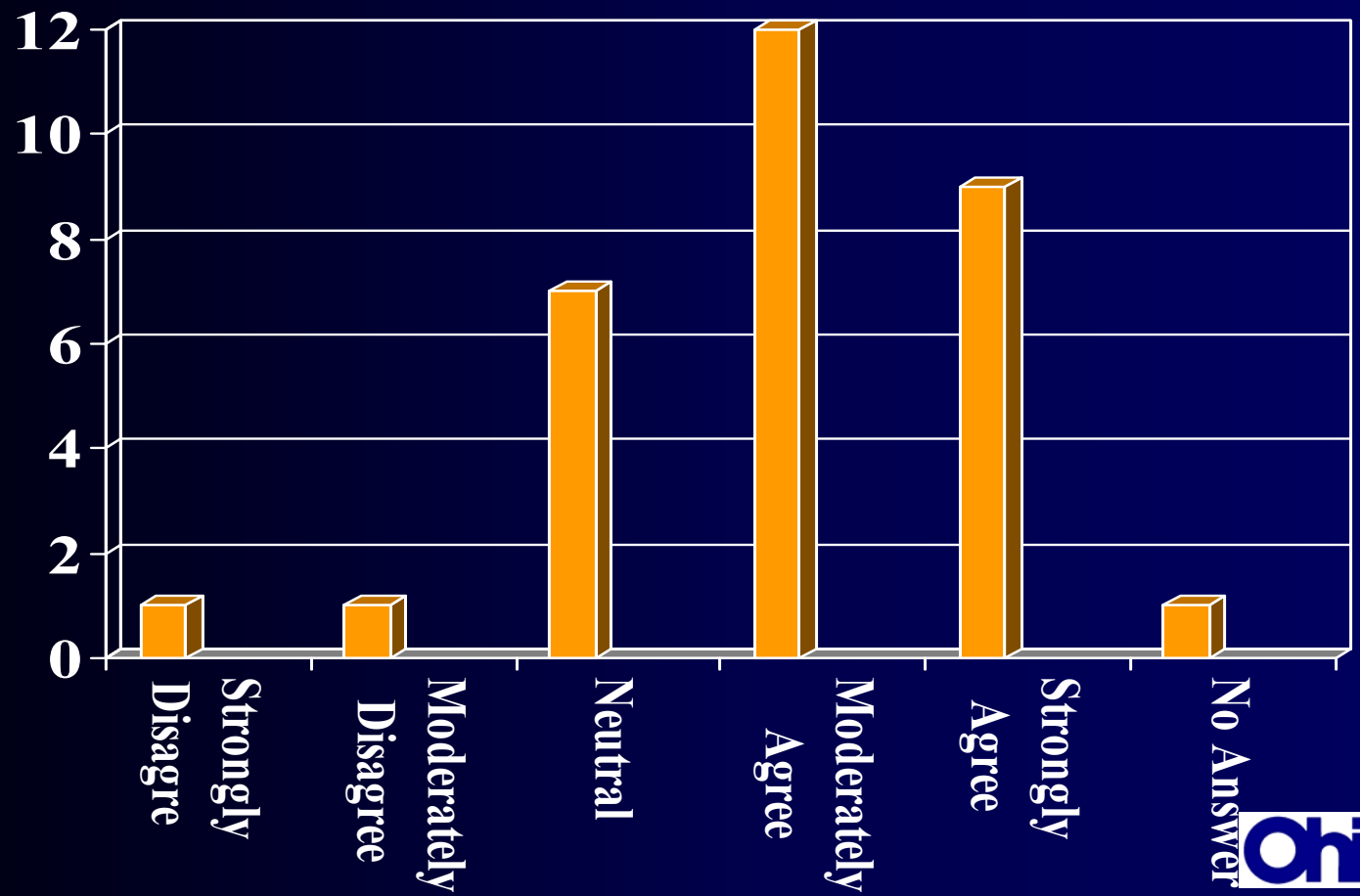
Question #31: Investments in technology development should be a high priority in addressing LTS issues.



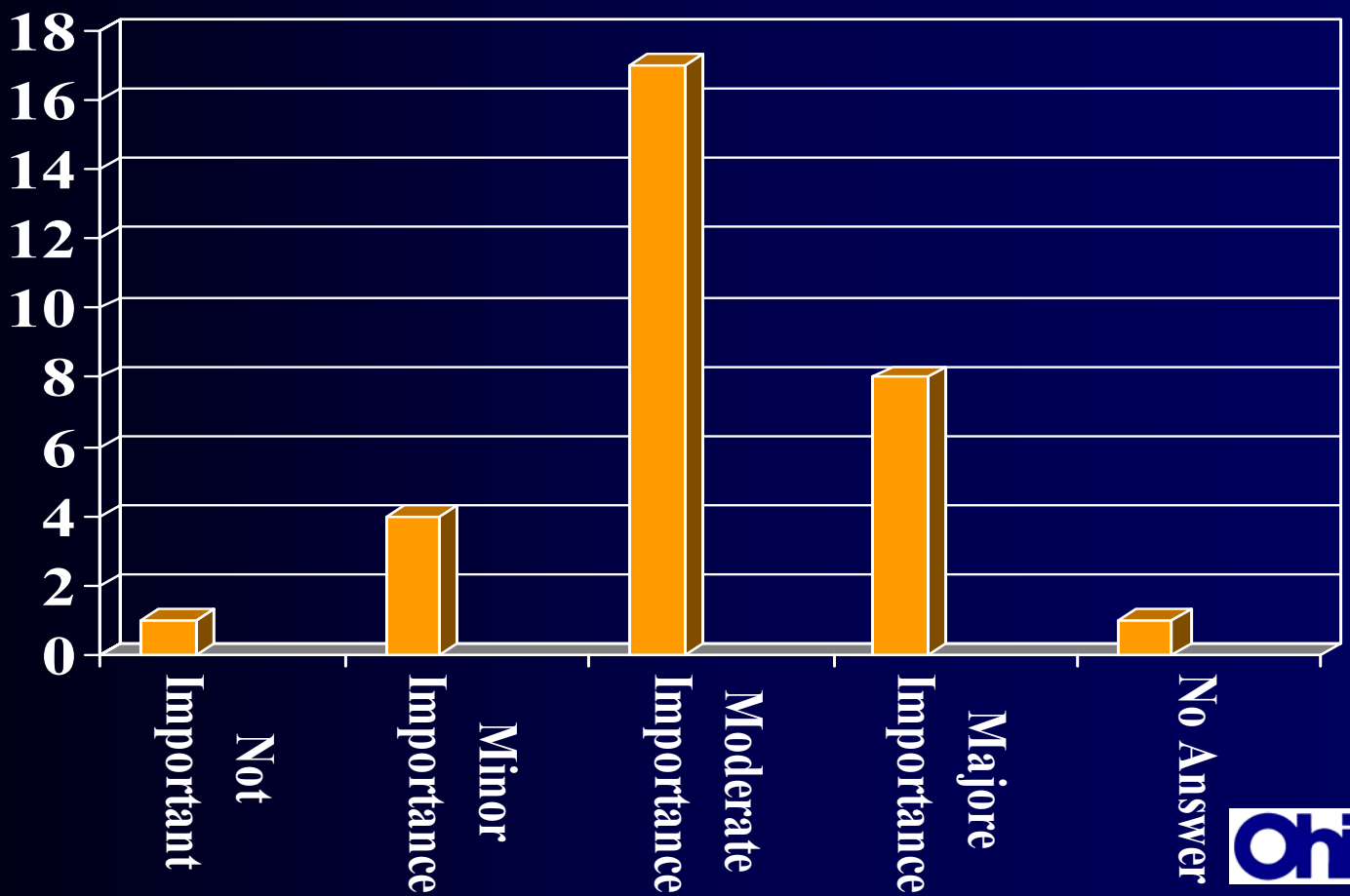
Question #39: Which of the following areas need development of additional monitoring technology (please check all that apply)?



Question #40: Redundancy (for verification and compliance) in monitoring is important for LTS success.



Question #49: To what extent is remote sensing and data transmission important to effectively monitor LTS systems and structures?



Survey Conclusions cont'd

#11. For making the social science studies a useful tool in decisions, there seems to be a need for further work in knowing how to integrate the results of these studies into decision-making. (50% had experience, while only 43% found them effective).

#12. Respondents were very supportive of future ITRC LTS projects including a case study of landfill long-term monitoring technologies; a workshop on data retention technologies; and training on LTS technologies and decision-making.

Preliminary Survey Conclusions

#1. Investments in technology development should be a high priority in addressing LTS issues and that there are technology limitations affecting the ability of sites to successfully implement LTS.

#2. Groundwater and disposal/containment facilities were of major importance for monitoring during LTS. They also felt that these areas were in need of additional technology development for monitoring.

#3. Redundancy in monitoring is important for LTS success. They also agreed that real-time data and remote sensing, and data transmission are important to effectively monitor LTS systems and structures.

Survey Conclusions cont'd

#4. For human surveillance of a site, activity at the site was viewed as more important than the location of the site relative to populations, for LTS.

#5. There are certain aspects of cap monitoring that cannot currently be handled with instrumentation, thereby requiring human monitoring of caps.

#6. Technology is essential to the successful utilization of land-use and institutional controls. These respondents also had highly variable experiences (positive and negative) with the use of signs, monuments, deed restrictions, zoning, building codes, and lease restrictions.

Survey Conclusions cont'd

#7. Records and information management is a very important concern of regulators with regards to effectively and efficiently conducting LTS.

#8. Following elements should be included in a comprehensive program to ensure long-term awareness of land-use and institutional controls:

1) Computer/database links for deed restrictions;
2) On-site museum/educational facility;
3) Continued government use of the site; and
4) Community education classes.

Survey Conclusions cont'd

#9. Citizens Advisory Boards were effective communication methods for getting local community, tribal and state values factored into LTS decision-making processes.

#10. The communication tools to enhance public participation in LTS decision-making requires mechanisms that foster person-to-person interactions and relationships over time as opposed to "information dumping".

Path Forward

- Build on these findings and work on products in collaboration with federal agencies.

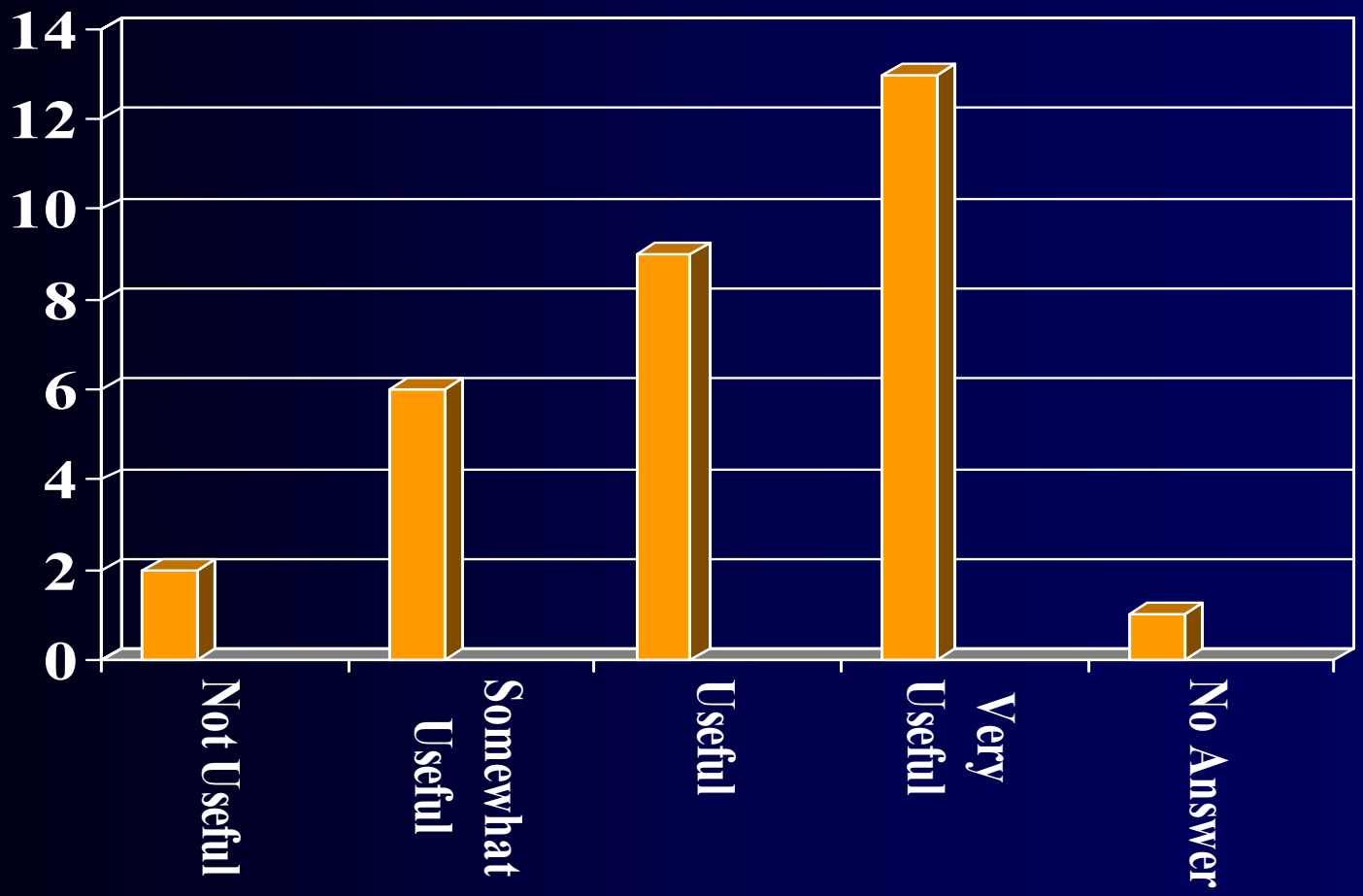
- Potential products to address the State Regulators' concerns include:
  - LTS Technologies Guidance
  - LTS Technologies and Decision-Making Training
  - Disposal Cell Monitoring Technologies Guide
  - Characterization Technologies Guide

Further Information

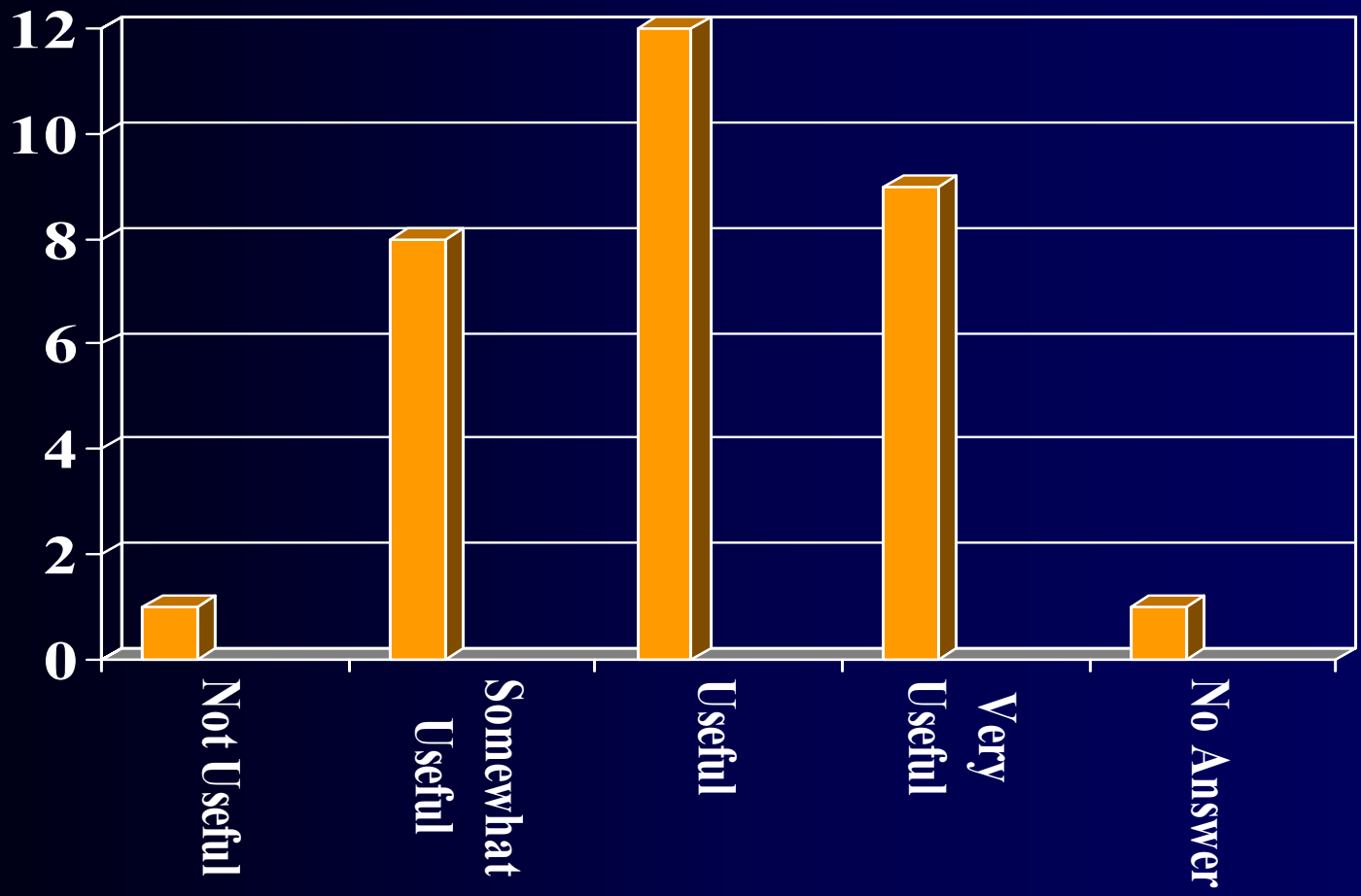
www.itrcweb.org/

http://offo2.epa.state.oh.us/

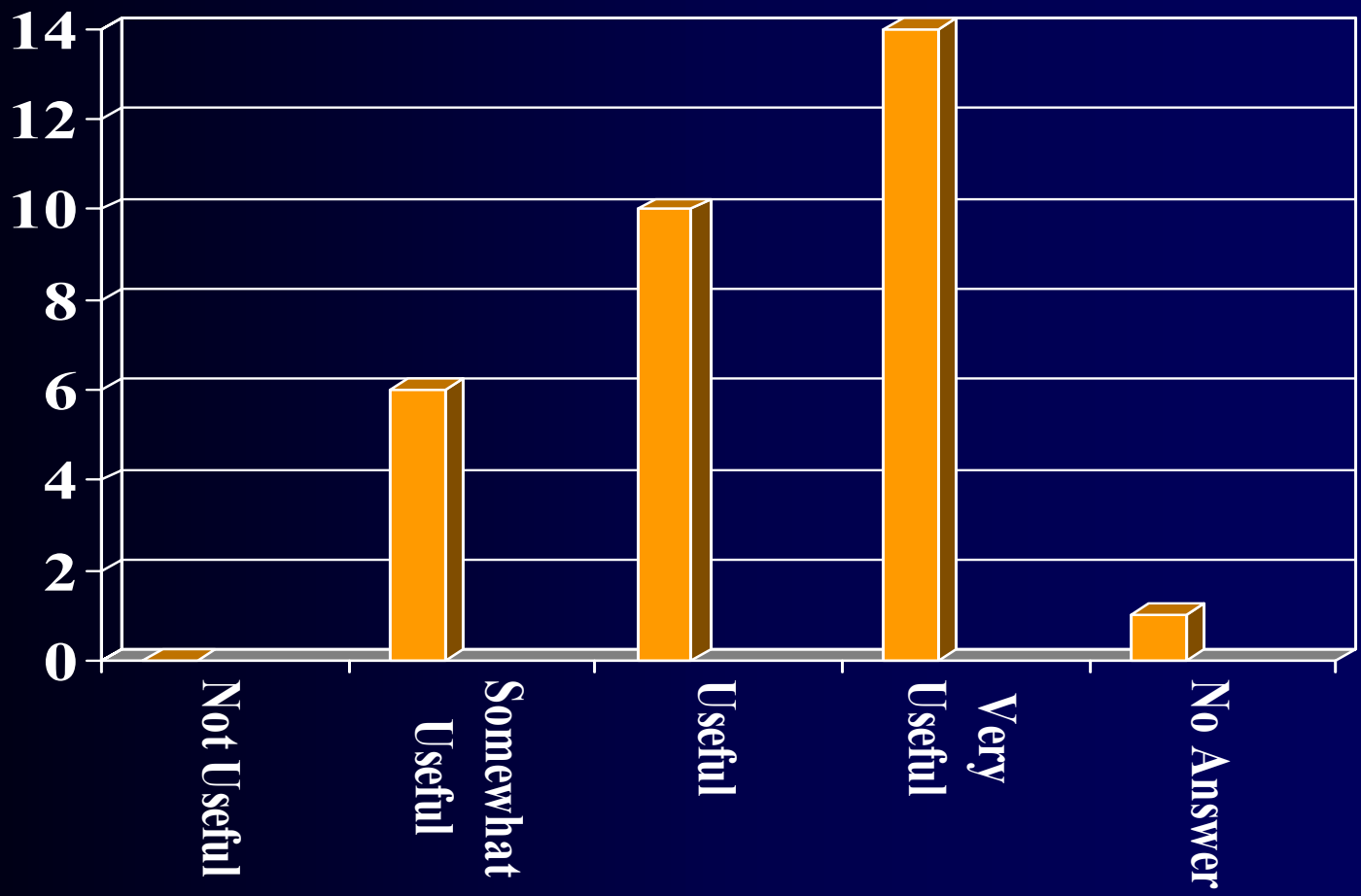
Question #125: Case Study/Guidance document on landfill and disposal facility long term monitoring technologies



Question #126: Case Study/Guidance document on real-time in-situ radiological contamination characterization technologies.



Question #127: Workshop on data retention technologies for LTS.



Question #128: Training on LTS technologies and decision making.