**DEPARTMENT OF ENERGY**

**Headspace Gas Workshop**

*Albuquerque, New Mexico*  
*March 22-23, 2000*

**Agenda**

**March 22, 2000**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>0800-0845</td>
<td>Opening Remarks</td>
</tr>
<tr>
<td></td>
<td>Setting the Stage</td>
</tr>
<tr>
<td></td>
<td>EPA Perspective</td>
</tr>
<tr>
<td></td>
<td>NMED Perspective</td>
</tr>
<tr>
<td></td>
<td>EEG Perspective</td>
</tr>
<tr>
<td>0845-0915</td>
<td>Introductions</td>
</tr>
<tr>
<td>0915-0930</td>
<td>The What and Why of HSG Data</td>
</tr>
<tr>
<td>0930-0945</td>
<td>Break</td>
</tr>
<tr>
<td>0945-1000</td>
<td>Los Alamos &quot;Screw&quot; Sampling Method/Status</td>
</tr>
<tr>
<td>1000-1020</td>
<td>INEEL Headspace Sampling and Analysis - Lessons Learned</td>
</tr>
<tr>
<td>1020-1040</td>
<td>Los Alamos HSG Experience</td>
</tr>
<tr>
<td>1040-1100</td>
<td>HP Chem Station Software WIPP Report Format</td>
</tr>
<tr>
<td>1100-1120</td>
<td>Hanford HSG Experience</td>
</tr>
<tr>
<td>1120-1230</td>
<td>Lunch</td>
</tr>
<tr>
<td>1230-1250</td>
<td>Rocky Flats HSG Experience</td>
</tr>
<tr>
<td>1250-1310</td>
<td>Drum Age Criteria Study</td>
</tr>
<tr>
<td>1310-1330</td>
<td>Savannah River HSG Experience</td>
</tr>
<tr>
<td>1330-1350</td>
<td>NFT/MCS HSG Experience</td>
</tr>
<tr>
<td>1350-1405</td>
<td>Break</td>
</tr>
<tr>
<td>1405-1425</td>
<td>TRUgas/TRUtech HSG Experience</td>
</tr>
<tr>
<td>1425-1445</td>
<td>INEEL FTIR System Experience</td>
</tr>
<tr>
<td>1445-1505</td>
<td>Status of EPA &quot;Performance Based Measurement Systems&quot;</td>
</tr>
<tr>
<td>1505-1600</td>
<td>Discussion</td>
</tr>
</tbody>
</table>

**Speakers**

- Russell Bisping, Hanford
- Dr. Inés Triay, DOE-CAO
- Barry Lesnik, EPA
- Steve Zappe, NMED
- Bob Neill, EEG
- Bob Kehrman, WID
- Chris Leibman, LANL
- Rodney Arbon, INEEL
- Rampur Viswanath, Hanford
- Dan Hillman, RFETS
- Mike Connolly, INEEL
- Jessie Melton, SRS
- David Joseffy, NFT
- Thomas Dunder, TRUgas
- John Jolley, INEEL
- Russell Bisping, Hanford
- All
DEPARTMENT OF ENERGY
Headspace Gas Workshop
Albuquerque, New Mexico
March 22-23, 2000

Agenda

HSG Issue Discussions

March 23, 2000

0730-0745  EPA Perspective on TICs  Barry Lesnik, EPA
0745-0800  NMED Perspective on TICs  Steve Zappe, NMED

TIC Identification and Reporting Session
0800-1000  Understanding Appropriate Methods for Identification and Reporting of TICs
  • Discussion of manufacturers software for TIC reporting
  • TIC reporting with Appendix VIII library search
  • Use of 10% of nearest internal standard rule
  • Establishing a Q value for evaluation of quality of spectral match
  • Discussion of establishment of criteria for addition and removal of TICs to/from target analyte list

Discussion  All
Development of Action Plan  All

1000-1015  Break
1015-1130  Discussion of Summa Canister and Sampling Issues
  • Necessity for calibration of Summa canister "leak indication" gauges
  • Usefulness of helium leak testing of Summa canisters
  • Limitations on configuration of Summa canisters
  • Elimination of requirement to utilize humidified gases

Discussion  All
Development of Action Plan  All

1130-1245  Lunch
1245-1400  Discussion of 100% Sampling and Analysis of HSG, How Useful Is It?
  • Thermally generated waste
  • Homogeneous waste shown to contain no significant VOC's
  • Other non-mixed waste

Discussion  All
Development of Action Plan  All

1400-1415  Break
1415-1530  Other Issues
1530-1600  Wrap Up and Action Item Review

1600  Adjourn
Performance Based Measurement Systems
"Back to the Future"

Russell L. Bisping
Fluor Hanford
Analytical Services Program

- What this approach is and it might mean to WIPP.
- Initiatives that are ongoing.
- How you can get involved.
What This Approach Is and What It Means to WIPP

• Back to the Future
  – Own methods
  – New techniques
  – Self implementing
  – Peer reviewed (published)

• Scientific Defensibility
  – Higher order than legal defensibility

What This Approach Is and What It Means to WIPP

EPA Language - Federal Register, October 6, 1997, Page 52098-52100

SUMMARY: The Environmental Protection Agency (EPA) plans to implement a Performance Based Measurement System (PBMS) for environmental monitoring in all of its media programs to the extent feasible. The Agency defines PBMS as a set of processes wherein the data quality needs, mandates or limitations of a program or project are specified, and serve as criteria for selecting appropriate methods to meet those needs in a cost-effective manner. Where PBMS is implemented, the regulated community would be able to select any appropriate analytical test method for use in complying with EPA’s regulations. It is EPA’s intent that implementation of PBMS have the overall effect of improving data quality and encouraging advancement of analytical technologies.
What This Approach Is and What It Means to WIPP

Legal Authority: 42 USC 6005; 42 USC 6012(b), 42 USC 6013 to 6017; 42 USC 6305; 42 USC 6014 to 6019; 42 USC 6014; 42 USC 6013; 42 USC 6012(b); 42 USC 6014

Citation: 40 CFR 238; 40 CFR 260; 40 CFR 264; 40 CFR 266; 40 CFR 270

Legal Deadline: None

Abstract: The EPA Office of Solid Waste (OSW) has been actively working to break down the barriers that the environmental monitoring community faces when trying to use new monitoring techniques. As a first step, OSW has accelerated its review process for new methods by eliminating several unnecessary internal review steps, and by streamlining the internal approval process for each new method. However, there are currently 35 citations in total 40 CFR parts of Federal Regulations where the use of SW-846 methods is required. As a second step for speeding up the approval process, OSW plans to remove the requirements to use SW-846 methods for other than method defined parameters (i.e., where the method defines the regulations, such as the Toxicity Characteristic Leaching Procedure) from 40 CFR. This will likely lead to an even more streamlined approval process since SW-846 will then be able to be handled strictly as guidance and not need the regulatory process for approval. This additional streamlining will permit new, more cost-effective methods to attain public and regulatory authority acceptance in much less time, allowing required monitoring to be done more cheaply, faster and, in some cases, more accurately.

Initiatives That Are Ongoing

- Global Institute of Environmental Scientists
  January 28, 2000

  - The status of EPA's PBMS implementation efforts
  - How PBMS can result in high quality, legally defensible data
  - Concepts of method verification, on-going quality control and documentation processes under PBMS
Initiatives That Are Ongoing

- How to audit laboratories who have implemented PBMS

- How PBMS will affect State regulatory agencies, the regulated community, and laboratories, and

- The cost of doing business under PBMS.

Initiatives That Are Ongoing

- ASTM-D34-PBQA

- Standard Guide for Performance-Based Quality Assurance and Quality Control in the Analysis of Waste Materials

- Set of Quality Control steps that will be used to self validate PBMS.
Initiatives That Are Ongoing

- ELAB Recommendations on Implementation of PBMS
  - USEPA should establish a consistent approach for PBMS.
  - Each USEPA Program Office should prepare a PBMS Implementation Plan.
  - Critical Elements of this plan are proposed.
  - ELAB supports NELAC's commitment to incorporate PBMS.

Initiatives That Are Ongoing

- Environmental Laboratory Advisor Board (ELAB)
  - Represents Waste Industry and MO/MI DOE Laboratory Contractors

- PBMS - Subcommittee

- ASTM-D34 Task Group
  - Supply the working draft for comments
  - Represent your ideas
How You Can Get Involved

Mark Marcus
mark_f_marcus@rl.gov
509-373-3026

Fluor Hanford
P.O. Box 1000, MSIN: G1-32
Richland, WA 99352