

# **Why Should QA/QC Be Important To You?**

**William Scruton  
QA Coordinator**

**Petroleum Remediation Program  
Consultants Day  
September 25, 2008**



Minnesota  
Pollution  
Control  
Agency



**"This cooking session is being monitored for quality-assurance purposes."**

# **Why Should QA/QC Be Important To You?**

# Reasons

- **It's the right thing to do!**
- **Because someone said it was important to do QA/QC!**
- **It will make you feel better!**

# **It's a Program Requirement**

- **Both the EPA and the MPCA require QA/QC activities to assure data quality.**
- **To help:**
  - **The MPCA has developed a generic quality assurance program plan.**
  - **The Petroleum Remediation Guidance Documents have been revised.**

# Money

- **Over \$400 Mil has been reimbursed since the Petrofund Program started.**
- **If you want to be reimbursed, the project data must be of acceptable quality.**

# Insurance

- **QC is like insurance. You may not need it all the time, but when you do need it, it had better be there.**
- **If data are challenged, proper QA systems (Chain-of-Custody, Standard Operating Procedures, documented training, etc.) will allow for the introduction and interpretation of the analytical data.**

# Insurance (Continued)

- **If data are challenged, results of the QC analyses can help answer questions.**
- **There is a positive cost benefit to the project because any additional charge for the QC analyses is overshadowed by the cost of any project delay (consultants' time, daily rate for heavy equipment, waste disposal, re-mobilization, etc.).**

# **The Ultimate Responsibility for Data Quality Belongs to the Data Owner**

- **Are the correct methods being used?**
- **Are the analyte lists appropriate for the Program?**
- **Do the report levels meet the needs of the Program?**

# **New or Updated Guidance**

- **Target analyte lists for VOCs, PAHs, and PCBs have been added to the Guidance Documents.**
- **Use the expanded list if PAH analytes for new projects.**
- **Guidance on calculating the BaP equivalents is given in the PAH factsheet on the Quality Webpage.**

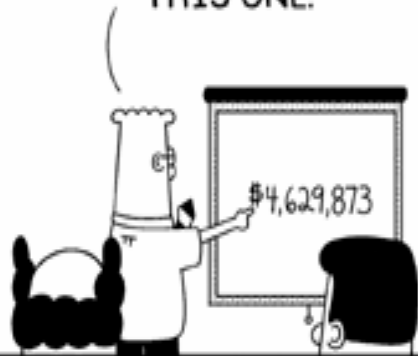
# **New or Updated Guidance (Continued)**

- **VOC analyte list available for vapor intrusion projects.**
- **Certification for the TO-15 analysis is available today while certification for the TO-14 analysis will be added in January, 2009.**
- **The addition of ethanol to the VOC analyte list for aqueous analyses is coming.**

# Field Audit Program

- **Results of audits will allow improvements in data quality and more confidence in decisions.**
- **Results of audits will identify current field practices and allow for changes to the MPCA Guidance.**

I DIDN'T HAVE ANY  
ACCURATE NUMBERS  
SO I JUST MADE UP  
THIS ONE.



www.dilbert.com  
scottadams@aol.com

STUDIES HAVE SHOWN  
THAT ACCURATE  
NUMBERS AREN'T ANY  
MORE USEFUL THAN THE  
ONES YOU MAKE UP.



HOW  
MANY  
STUDIES  
SHOWED  
THAT?

EIGHTY-  
SEVEN.



© Scott Adams, Inc./Dist. by UFS, Inc.

5/8/08 © 2008 Scott Adams, Inc./Dist. by UFS, Inc.

# **Field Audit Program**

**- Andrew Eddy**

**Petroleum Remediation Program**

**Consultants Day**

**September 25, 2008**



Minnesota  
Pollution  
Control  
Agency

<http://www.pca.state.mn.us/programs/prp-fieldwork.html>

# Field Audit Program

## Project Staff

- Sandeep Burman – Supervisor
- Chris McLain – Project Coordinator
  - David Oakes – Auditor (North)
- Andrew Eddy – Auditor (South & Metro)

# Purpose of the Audit Program

- **To provide a level of assurance that quality data is being collected.**
- **Achieved by:**
  - **Documenting the current process, to allow for future improvements**
  - **Provide QA/QC to strengthen the validity of the data collected**

# Process

- **Online Notification System**
- **Consultants notify MPCA 48 hours prior to conducting field work**
- **PRP staff verify the submitted info is correct**
- **Information is saved into the database**

# Process

- **Audit is selected from the database**
  - **Selected based on schedule of auditor, location, time, type of work, company**
- **Audit is completed using checklists created from MPCA Guidance Documents**
- **On-site feedback is provided**

# Audit Results

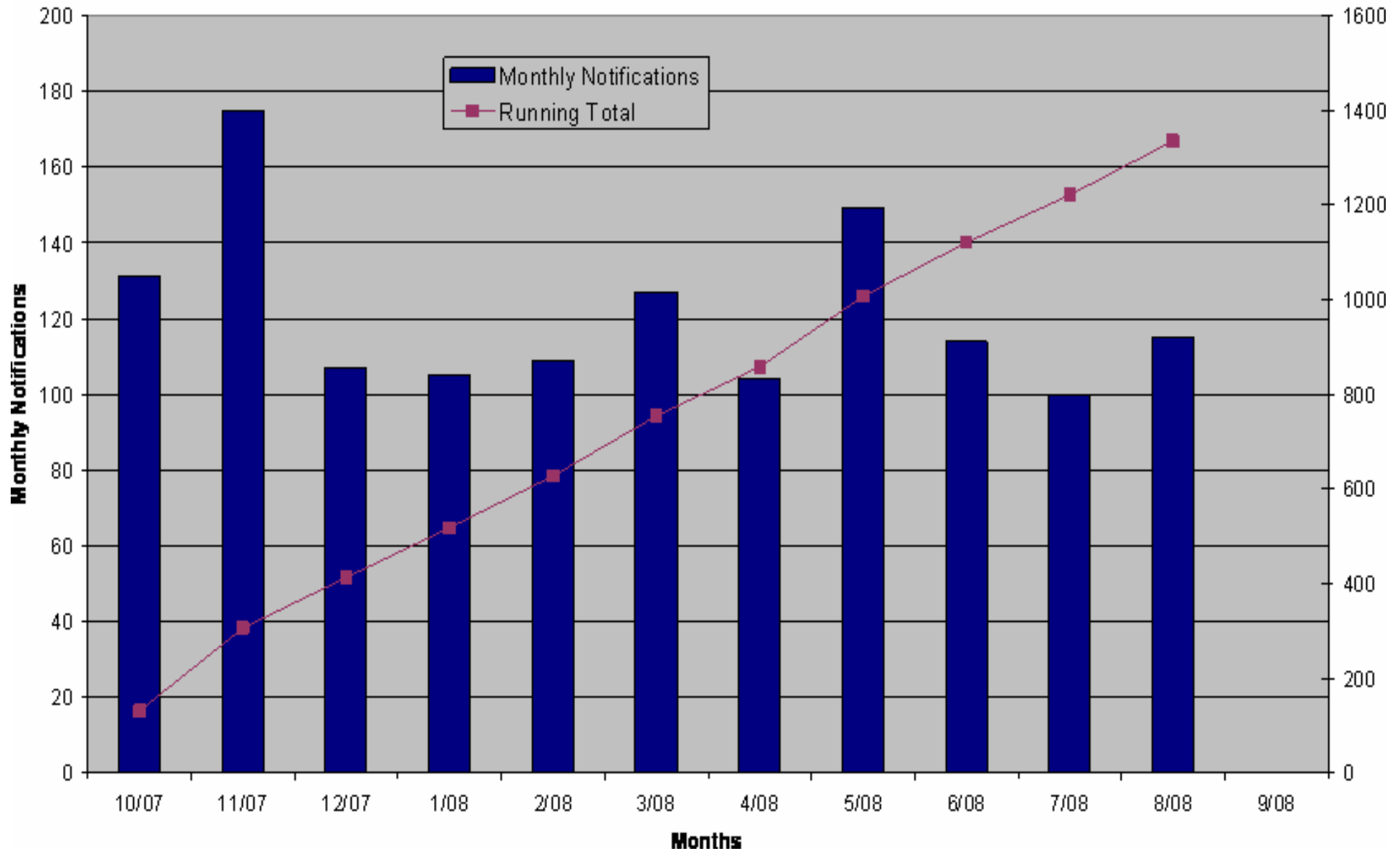
- **2 Auditors, hoping to add more in the next year**
- **Audits completed = 36**
- **Total audits attempted = 42**
- **Sites with errors observed = 17**
  - **Errors include any work completed not according to MPCA Guidance**

# Audit Results (cont.)

- **Sites with no errors observed = 19**
- **Companies audited = 26**
- **Notifications received = 126/month  
(avg.)**
- **Notification compliance rate for reports  
received = 50%**

# Notifications Received Per Month

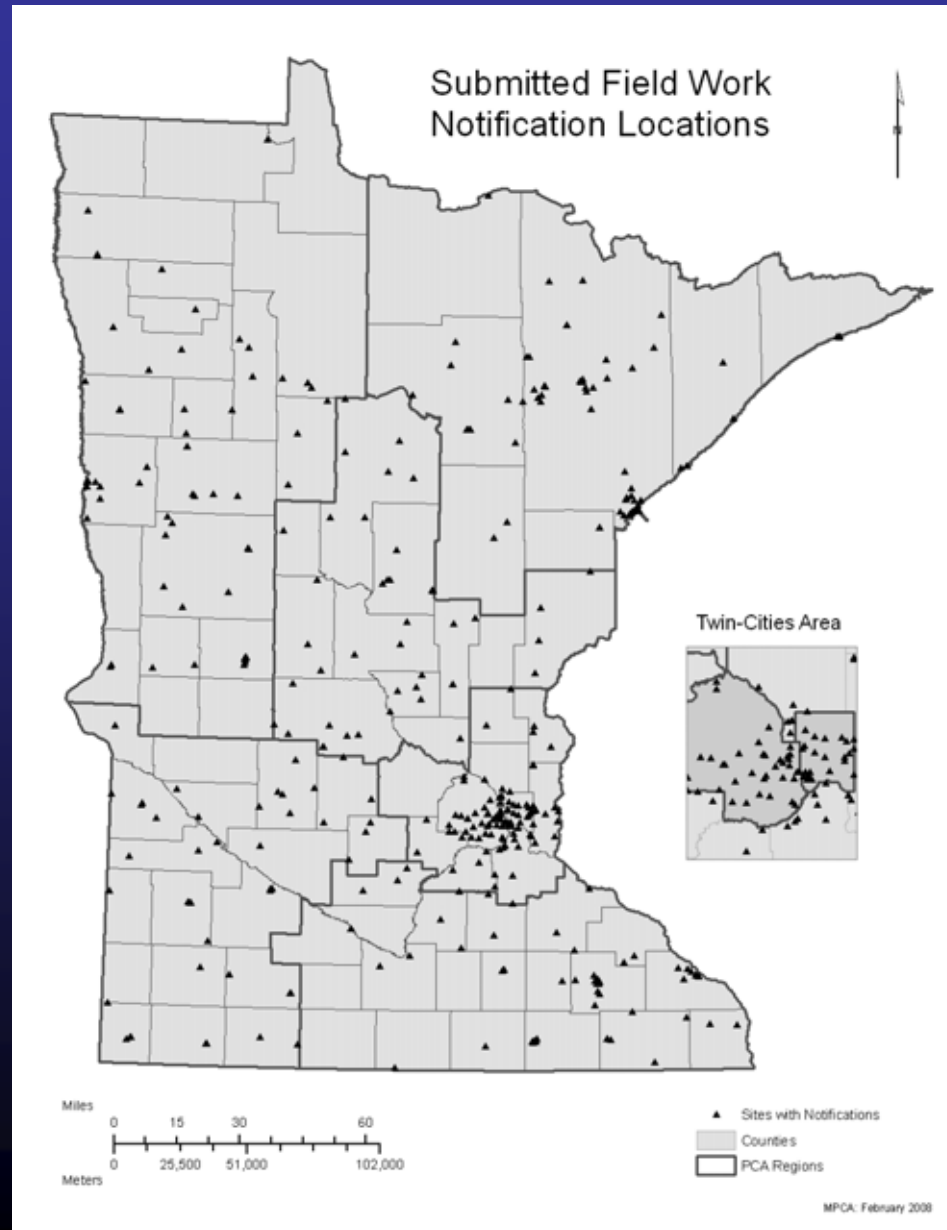
## Field Work Notifications



# Notification Reminders

- **Need an actual start time**
  - Morning, Afternoon, A.M., P.M. will not be accepted
- **Cancel notifications by phone or e-mail**
- **Required for work completed on any site with an assigned leak #, including PBP**
  - **Exceptions: System O&M, site meeting, well abandonment**

# Submitted Notifications



# Compliance Rate

- **Field work notifications are stored in a database.**
- **Reports submitted are logged into the same database**
- **MPCA staff will be comparing reports received to notifications received.**
- **Hoping to improve on the 50% rate**

# Most Common Errors

- **Calibration problems:**
  - **Expired gas**
  - **No calibration records kept**
  - **Calibration gas is empty**
- **Sample collected from the headspace screening bag**

# Most Common Errors (cont.)

- **Cross-contamination issues**
  - **Gloves used repeatedly**
  - **Sampling equipment reused**
  
- **Soil-gas sampling issues**
  - **No surface seal**
  - **No moisture trap used**
  - **Fittings not properly attached**

# Overall Goal

- **The goal of the audit program is to collect data, then assess where potential problems can be addressed.**

# Potential Solutions

- **Training opportunities**
- **Enforcement against companies making repeated errors**
  - **Will work with Petrofund on this enforcement**
- **Guidance documents changes**
  - **Policy and data improvements**

**Please help by submitting the  
required notifications**

**?',s**

## Contact info

**William Scruton - Quality Assurance Coordinator  
Environmental Analysis & Outcomes Division**

**bill.scruton@state.mn.us**

**651/296-8445**

**Andrew Eddy - Project Manager  
Petroleum Remediation Program**

**andrew.eddy@state.mn.us**

**651-297-8594**