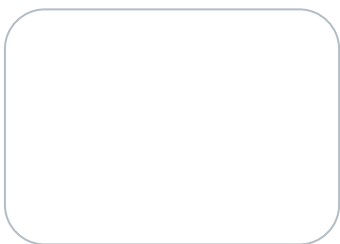




# Method 1631 Implementation Laboratory Perspective

Leaders in Environmental Testing



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DEP/FIPA WORKSHOP  
FEBRUARY 17, 2005  
LOW LEVEL DATA COLLECTION,  
ANALYSIS AND REPORTING



## Low Level Hg Beginning

Leaders in Environmental Testing



- Perkin Elmer AS 90 w/UV Detector
- Amalgam Unit – Single Gold Trap
- MDL – 1.3 ng/L \* RL – 5.0 ng/L
- 50 ml Requirement – Used 60 ml Vials
- Manual Loading
- No Moisture Knockout



## Leeman - Hydra AF Gold+

Leaders in Environmental Testing

- Driver - Revision E of Method 1631
- Fluorescence Detector, 3 Gold Traps
- MDL – 0.2 ng/L \* RL – 0.5 ng/L
- Auto Sampler, 40 ml Vials
- 2 Moisture Filters
- Software specifically designed for 1631
- Mercury Waste is Less





## Bottle Prep Ship & Receive

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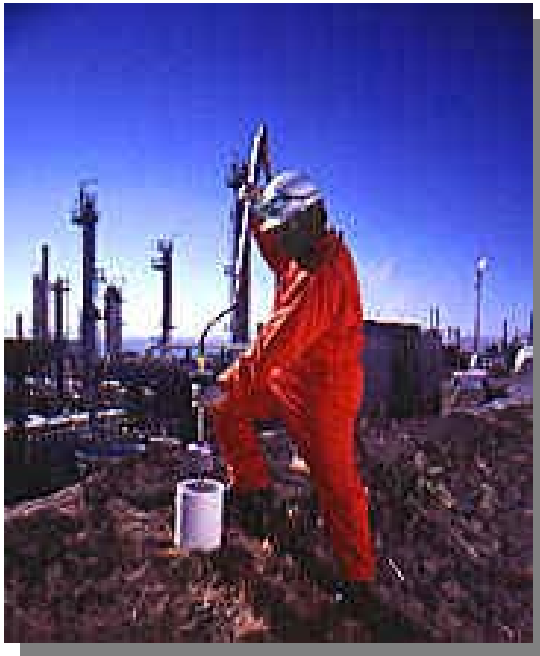


- Check 40 ml Vials per Lot
- Test DI Water Used for Blanks
- No Problems with Media Contamination So Far
- Ship Unpreserved – EPA (No Ice), FDEP (FS8200)
- Hold Time – 2 days → 28 days



# Sampling

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- Getting Client to Follow “Clean Hands – Dirty Hands”
  - Two People
- Bringing QED on Board
- Extra QC Required
  - Field Blank – Water From the Lab
  - Equipment Blank – Water Can Be Supplied
  - Duplicate





# Field Sampling Hazard

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## Sample Analysis

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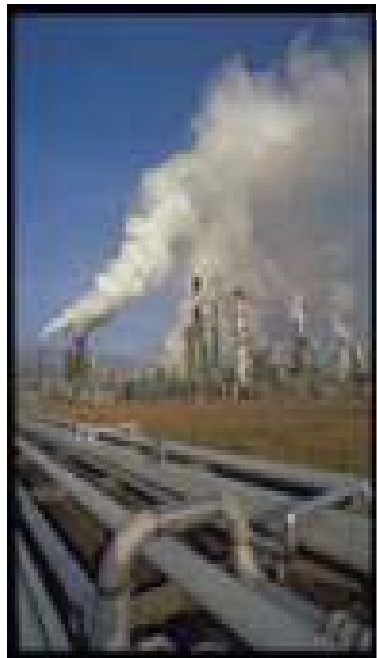


- Rarely Screen plastic HNO<sub>3</sub> Preserved Bottle
- BrCl – Oxidizer & Preservative
  - Introduced - Requires 12 Hr Oxidation Step
  - Creating Reagent Produces Free Halogens
- 2 Waste Lines
  - Actual Hg Waste - Less
  - Rinse Water – Slightly More



## Performance Based Mod.

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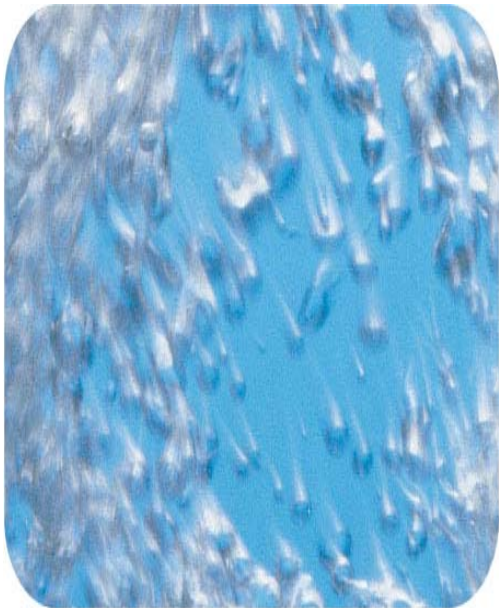


- MS/MSD – Concentration is the Same Batch to Batch
- Calibration Concentration
  - Method – 100 ng/L
  - Lowered to 25 ng/L to Avoid Carryover



## Lab Contamination

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- Non-Issue at This Time
- Hood with In-Flow Filter
- Use Same Apparatus for LL Hg Only
- Tubes are Disposable
- Class A Pipettes are Segregated
- 40 ml Vials Keep Sample Self-Contained
- No Iodide Interference Noted



# Summary

Leaders in Environmental Testing

