25-6496

TO: Ed Hancock
Alice Simpson Louisville

FROM: P. M. Zakriski Brecksville R&D Center, D/8506 11/18/82

SUBJECT: Plant Review of VCM Sampling and Testing

Thank you very much for the courteous and helpful assistance provided during my September visit to your plant laboratory.

I found most operations were according to procedure. Those operations which deviated from procedure or good practice I will note below to provide you with details.

During my visit I promised to respond to you with a list of opportunities for improving operation, and here it is. Later on, January 1983, I intend to send out a revised version of the analysis procedure. You should be watching for this, promptly review it and return it to me.

Opportunities for Improvement

1. Analyze PMCC samplings within 24 hours of sampling.
2. Maintain a control chart of GC Calibration factor.
3. Record and chart the frequency of observed breakthrough.
4. Replace PMCC holder with plastic tubing.
5. Clean flasher tubes within 5 days of sampling.
6. Replace cracked PMCC caps.
7. Calibrate pump counters either every week or before each use if the pumps remain idle for longer than a one-week period.
8. Make a practice of regular thermal cleaning of the GC column.
9. Maintain the flasher block at 250°C.
10. Analyze a cleaned but unused PMCC with each cleaning operation.
11. Gas supply lines to your chromatograph should be protected with filters.
12. Maintain a log of repair work performed on your instruments.

Finally, I would recommend that the that the responsibility for the supervision of field sampling and sample analysis be with a single person.

Paul

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files

25-6495

TO: Gene Atkins Calvert City

FROM: P. M. Zakriski Brecksville R&D Center, D/8506 11/18/82

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Opportunities for Improvement

1. Make a practice of regular thermal cleaning of the GC column.
2. Monitor and chart the frequency of observed breakthrough.
3. Analyze all PMCC samples within 24 hours of collection.

It is always a pleasure to visit the Calvert City laboratory. How reassuring it is to find a staff that has the enthusiasm and opportunity to express concern for the details of sampling analysis.

Paul

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files.

25-6494

TO: Bob Bigner Plaquemine

FROM: P. M. Zakriski Brecksville R&D Center, D/8506 11/18/82

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Opportunities for Improvement

1. Begin to use the Bendix Flasher tube and Bendix flasher analysis.
2. Be certain to analyze all PMCC samplings within 24 hours.
3. Record and control chart your GC calibrations.
4. Institute a check for breakthrough. Then record and chart the frequency of observed breakthrough.
5. Thermally clean all flasher tubes at 250°C.
6. Calibrate all pumps before and after sampling.
7. Maintain at least a 6-month record of your analyses (complete with instrument recordings).
8. Maintain a maintenance log and schedule for all equipment.
9. Review the procedure (including the algebra) for calculating the results of analyses and the results of sampling.
10. Conduct a regular thermal cleaning of the GC column.

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files

25-6493

TO: Archie Hager LaPorte

FROM: P. M. Zakriski Brecksville R&D Center, D/8506 11/18/82

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Opportunities for Improvement

1. Conduct a regular thermal cleaning of the GC column.
2. Construct a control chart of your instrument calibration.
3. Use the PMCC within 5 days of thermal cleaning.
4. Replace the Bendix PMCC holder with plastic tubing.
5. Record and chart the frequency of observed breakthrough

Paul

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files

25-6492

TO: Cliff Miller Deer Park

FROM: P. M. Zakriski Brecksville R&D Center, D/8506 11/18/82

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Opportunities for Improvement

1. Refrigerate PMCC collections before analysis.
2. Carry out a regular thermal cleaning of the GC column.
3. Calculate and chart the frequency of observed breakthrough.
4. PMCC samplings should be made at flow rates less than 20 cc/min.
5. Pumps should be calibrated frequently (before and after use).
6. Establish a log and schedule for instrument maintenance.

Paul

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files

23-649/

TO: Vicki Marcus Henry

FROM: P. M. Zakriski Brecksville R&D Center, D/8506 11/18/82

SUBJECT: Plant Review of VCM Sampling and Testing

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Opportunities for Improvement

1. All chromatograms should be reviewed for assurances of adequate VCM separation from the other substance collected.
2. Carry out a regular thermal cleaning of the GC column.
3. Every chromatogram should be marked with a sample number.
4. Pumps should be calibrated before and after sampling and with the PMCC connected to the pump.
5. Chromatograms should retained for at least 6 months.
6. Occasionally analyze a cleaned PMCC to verify that your cleaning is effective.
7. Replace PMCC holder with plastic tubing.

Paul

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files

25-6490

TO: Bud Birch Long Beach

FROM: P. M. Zakriski Brecksville R&D Center, D/8506 11/18/82

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Opportunities for Improvement

1. Carry out a regular thermal cleaning of the GC column.
2. Prepare a control chart from your calibration (response factor).
3. Calculate and chart the frequency of observed breakthrough.
4. Prepare a schedule and log for equipment maintenance.
5. Replace PMCC holder with plastic tubing.

Your concern for a good sampling procedure is excellent. It is especially noted that you void a monitoring sample if the post shift flow rate check has substantially changed.

Paul

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files

25-6489

TO: Joan Burry Pedricktown

FROM: P. M. Zakriski Brecksville R&D Center, D/8506 11/18/82

SUBJECT: Plant Review of VCM Sampling and Testing

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Opportunities for Improvement

1. Thermally clean flasher tubes for at least two hours with both a constant N_2 flow through the tube and continous heating at or above 250°C.
2. Carry out a regular thermal cleaning of the GC column.
3. Chart the frequency of observed breakthrough.
4. Conduct an occasional analysis of cleaned flasher tubes to check the efficiency of your cleaning.
5. Replace PMCC holder with plastic tubing.

Paul

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files

25-6488

RETENTION CODE 801-001
PROJECT REPORT
PERMANENT RECORD COPY

TO: Carl Yocki — Avon Lake Chemical Center
R. D. Hardesty — Avon Lake Technical Center

FROM: P. M. Zakriski — Brecksville R&D Center, D/8506 — 11/18/82

SUBJECT: Plant Review of VCM Sampling and Testing

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Opportunities for Improvement

1. Thermally clean all flasher tubes at or above 250°C.
2. Retain GC charts for at least 6 months.
3. Conduct an occasional analysis of cleaned flasher tubes to verify good cleaning procedures.
4. Control chart the frequency of observed breakthrough.

Carl, your control charting of instrument calibration is outstanding. You show how a lab which uses operators to conduct routine testing can be assured work is proper and accurate.

RETENTION CODE 801-001
TECHNICAL CORRESPONDENCE
THREE YEARS

Paul

Paul M. Zakriski

PMZ/msj

cc: E. B. Katzenmeyer, Jr., Akron
J. W. Whitney, ALTC
R&D Files