

12-91
M.S.

5605-005.SOP
QUALITY ASSURANCE PROGRAM

THIS SOP IS IN THE FORM OF AN INTERNAL CONTRACT BETWEEN THE MAIN LAB AND VCM-II.

VCM II Responsibilities:

1. SAMPLE EACH BULLET AND ANALYZE BY GAS CHROMATOGRAPH (GC), AND FOR WATER, IRON AND PH.
2. ENTER BULLET ONTO BULLET CLEARANCE SHEET.
 - a. File the completed bullet clearance sheet with the VCM foreman. This is the historical record of all bullets and is to be maintained.
 - b. With the analytical procedure currently in use, the lower level of detection for Fe is 0.1 ppm. Record all values greater than or equal to 0.10 ppm to two decimal places.
3. SAMPLE THE GRAVEYARD BULLET ON MONDAY, WEDNESDAY AND FRIDAY MORNING IN DUPLICATE.
Deliver one to the QC lab for a pH check.
4. MAINTAIN A CONTROL CHART ON THE DIFFERENCE BETWEEN THE pH OF THE GRAVEYARD BULLET AS DETERMINED BY THE TWO LABORATORIES.
 - a. Notify the Instrument Repair Group when assistance is required in assigning a cause to an out-of-control point.
 - b. Record data from any extra analyses on the control chart. Note resolution of out-of-control points, whether cause was found in either laboratory, on the control chart.
5. SAMPLE EACH BULK STORAGE TANK IN DUPLICATE, ACCORDING TO THE STANDARD OPERATING PROCEDURE.

RUN A QA SAMPLE BY GC AND FOR WATER ON EACH GRAVEYARD SHIFT.
 - a. Maintain control charts on water, 1,3-butadiene, methyl chloride, ethyl chloride, and monovinyl acetylene with data obtained from analyzing the control sample.
 - b. Notify the Instrument Repair Group when assistance is required in assigning a cause to an out-of-control point. Record data from any extra analyses on the control chart. Note resolution of out-of-control points on the control chart.
7. NOTIFY THE TECHNICAL SUPPORT GROUP WHEN CONTROL SAMPLE BOMB IS EMPTY. Fill control sample bomb when requested.
8. CLEAN ALL SAMPLE COILS WEEKLY ACCORDING TO SOP 5605-021.SOP. Clean immediately any coil whose contents is analyzed to be greater than half the specification.

CONFIDENTIAL:

Subject to Protective Order
of 14th Judicial District Court
No. 91-1145

SL 004138

QC Laboratory Responsibilities:

Analyze the pH coil delivered on Monday, Wednesday, and Friday using the same procedure as the VCM-II lab. Report the results to the VCM-II vinyl lead operator by noon.

Analyze the control sample by gas chromatograph and for water twice each week, or when an out-of-control condition is encountered on a control chart for the control sample or a range control chart for bulk samples.

Maintain two sets of control charts, one based on individual values of the analyses of the control sample, the other based on the average and range of duplicate analyses of bulk storage samples. Each set will chart water, 1,3-butadiene, methyl chloride, ethyl chloride, and monovinyl acetylene. Iron will not be charted as long as the preponderance of analyses are below the lower level of detection for the method.

Analyze all bulk storage tanks in duplicate by GC and for water and pH. Report average values in all instances. On back shifts and weekends, verbal clearance can be given to Operations. Enter data into LABX as soon as second coil is analyzed.

When a range chart for duplicate bulk storage analyses indicates an out-of-control point, the suspect coil should be analyzed again for the analyte in question. If the range between this second analyses and the analysis of the other coil is in control, average them and report the mean. If the range between this second analyses and the analysis of the other coil is beyond the control limit, request resamples of both coils and analyze each. Only when in-control analyses are obtained can their average be reported. Every effort must be made to determine the cause of the out-of-control data.

The only exception is the Fe analyses. Analyze one coil for Fe. If the result indicates a value less than the lower level of detection (0.10 ppm) report "<0.1" where possible, and "0.05" where only a number can be used, such as the LABX system. It should be noted that this is not a value, but a statement that any iron present is below the level of detection. Record all values greater than or equal to 0.10 ppm to two decimal places. If the result is >0.10, analyze the other coil and report the average.

Notify supervision of any partially filled coils so they can be checked for leaks.

Supervision will examine control charts regularly.

Supervision and the analysts will work together to determine the cause of all out-of-control points. Note these causes along with other pertinent information on the control charts.

Analyze each new control sample bomb in triplicate for water and by GC.

On Monday, Wednesday, and Friday, as well as when problems develop, analyze the graveyard bullet for pH, using the procedure used in the VCM-II lab. Notify supervision immediately if sample is not received. Report result to the Vinyl Lead Operator. If determination cannot be completed by noon, ask the Vinyl Lead

SL 004139

CONFIDENTIAL:
Subject to Protective Order
of 11th Judicial District Court
No. 91-1145

Operator for a determination of priorities.

Technical Support Group Responsibilities:

Provide 5 gallon cylinders of standard VCM for QA analyses.

Inform all Instrument Repair personnel as well as the current Duty Chemist of location of back-up control samples.

Maintain a current Plant Lab Procedure Manual.

Have new control sample bombs analyzed several times by the QC lab by GC and for water. Average the data from the replicate analyses, record data in the Quality Assurance Standard Book, attach to each bomb.

Set the mean of the analyses as the center line on the control charts in each lab.

Report any maintenance on the VCM-II GC or change in response factors to the Vinyl Lead Operator. Also log any work done on the VCM-II GC in the GC logbook located in the VCM-II lab.

Each time repairs are made or maintenance done on the VCM II GC, analyze the control sample. Analyze the control sample in duplicate if the repairs have an effect on calibration. Report these control sample analyses to the Vinyl Lead Operator who will plot them on the control charts.

Record comments about causes and repairs or maintenance on the control charts. Report comments about causes of out-of-control points concerning the pH difference, and repairs or maintenance on the pH meter in either laboratory to the Vinyl Lead Operator to be reported on the pH control chart.

Issued 30 Dec 87 Revised - 3/15/88, 7/10/89, 9/90

Copies to: VCM-II Vinyl SOP Manual
 Laboratory Quality Assurance Procedures Manual

CONTRACT PERIOD: ONGOING CONTRACT REVIEW DATE: September, 1991

LABORATORY AND VCM-II REPRESENTATIVES

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

SL 004140

CONFIDENTIAL
Subject to Protective Order
of 14th Judicial District Court
No. 91-1145