GB

VISTA VCM PLANT

TO: P. L. FETZER
FROM: H. L. Hackett
DATE: April 22, 1987
SUBJECT: T/A SAMPLING PROCEDURES

For Vessel Entry
VCM < 1 ppm
EDC < 5 ppm
Need two consecutive samples that meet the above.

COLLECTING GAS SAMPLES:

For pressured samples: collect in a clean steel sample cylinder supplied by the Laboratory. Connect to the sample port via the appropiate fittings. Close both valves on the sample cylinder then open the Sample Port valve, the cylinder inlet valve, and then the cylinder outlet valve to insure that the gas is completely replaced with sample(i.e. the bomb has been completely purged with sample). If it is not feasible or safe to open the outlet valve to purge then the sample cylinder should have been completely evacuated before using. This vacuuming must be done on one of the pumps like the one in the Manufacturing Lab and not by the Lab house vacuum system!

For non-pressurized vessels: most of these must be taken in a glass sample cylinder using a " pump-through" procedure. A rubber or clear Tygon hose on the inlet end (the inlet can be either one) of the sample cylinder is attached to the sample port or simply placed well inside the vessel. A Bendix pump is attached to the outlet end to draw sample through the cylinder until it is completely purged with sample. This takes at least 5 Minutes!

If you know the non-pressurized vessel contains less than 5 % VCM or ETCL or less than 1 % of others such as EDC and the sample gas temperature is less than ca. 125 deg. F then a super syringe may be used to collect the sample. Once a super syringe has been used for a high level sample it is almost impossible to get it clean enough to use at levels below 10-20 ppm. Use them only when you have to and then only when you expect more than a trace.

VVV 000019211

CLEANING SAMLE CONTAINERS:

Glass sample cylinders can usually be cleaned simply by repeated vacuuming while operating the stopcocks several times. If liquid and/or condensate has gotten into the cylinder then it might have to be taken apart and the glass put into a drying oven. CAUTION-even a drop of combustible liquid can give quite a bang if vaporized near a heat source in the presence of air. The stopcocks can probably be cleaned simply by blowing them with air or nitrogen. ALWAYS replace the septum after each use.

Metal sample cylinders may be cleaned by blowing air or nitrogn through them for extended periods or by steaming and drying. Be sure the valves are operated several times during the process to get rid of possible contaminates in them.

Super syringes (cost= $200 +) will be ruined if any liquid chlorinated hydrocarbons get in them, even as a fine mist.

About the only way to clean them is to repeatedly pull the piston out(draw it full of air) then pull it back in with a vacuum. CAUTION- super syringes can't take very much pressure, only a few psig, so using instrument air or plant nitrogen to push the piston back out can be dangerous.

MISCELLANEOUS SAMPLES:

Liquid samples are usually caught in 4 Oz or 32 Oz (= 1 Qt) glass bottles available in the warehouse.

Solid and semi-solid samples are usually caught in widemouth plastic bottles. Several sizes are available in the Laboratory.

Be sure you label all samples brought to the Lab. Include:

1) Identity - such as EDC, Water, Muck, etc.

2) Source - T-102, C-102 Wash, etc.

3) Date and Time

4) Submitted by or for whom

Gum labels and tags are available in the laboratory.

GAS ANALYSES:

High VCM and/or EDC Vents and Column Entry Samples (>20 ppm VCM or >100 ppm EDC) should be run first on the new PE 8400 GC in the Mfg Lab. The column is a large bore SPB-5 capillary. When levels are known to be below those given above then use the instrument below.

Low VCM and EDC samples - Use The Low VCM procedure and equipment in the No. 18 GC.

LIQUID ANALYSES:

Special samples such as column wash waters (NO organic phase) should normally be run on the HP Headspace GC.

ANALYSES OF MONITOR BADGES:

These will be run on the PE HS-100 as long as it is working. One Analyst should get the Badges and Data Sheets ready for each Leadman each shift as has been done in the last few turnarounds. It is planned to log the individual exposure result on a LOTUS Macro. This will make it easy to sort data in many different ways and to identifv overexposures and list them.

Homer L. Hackett

VVV 000019212

Homer L. Hackett
Manufacturing Chemist
hh
RAC-PEM-GEH-MLA-SRA-JRH-GB-SCR-S/S-HOA-CRH
Chief Operators and Leadmen

B13

VISTA VCM PLANT

TO: P. L. FETZER
FROM: H. L. Hackett
DATE: April 22, 1987
SUBJECT: T/A SAMPLING PROCEDURES

COLLECTING GAS SAMPLES:

For pressured samples: collect in a clean steel sample cylinder supplied by the Laboratory. Connect to the sample port via the appropiate fittings. Close both valves on the sample cylinder then open the Sample Port valve, the cylinder inlet valve, and then the cylinder outlet valve to insure that the gas is completely replaced with sample(i.e. the bomb has been completely purged with sample). If it is not feasible or safe to open the outlet valve to purge then the sample cylinder should have been completely evacuated before using. This vacuuming must be done on one of the pumps like the one in the Manufacturing Lab and not by the Lab house vacuum system!

For non-pressurized vessels: most of these must be taken in a glass sample cylinder using a " pump-through" procedure. A rubber or clear Tygon hose on the inlet end (the inlet can be either one) of the sample cylinder is attached to the sample port or simply placed well inside the vessel. A Bendix pump is attached to the outlet end to draw sample through the cylinder until it is completely purged with sample. This takes at least 5 Minutes!

If you know the non-pressurized vessel contains less than 5 % VCM or ETCL or less than 1 % of others such as EDC and the sample gas temperature is less than ca. 125 deg. F then a super syringe may be used to collect the sample. Once a super syringe has been used for a high level sample it is almost impossible to get it clean enough to use at levels below 10-20 ppm. Use them only when you have to and then only when you expect more than a trace.

VVV 000019213

CLEANING SAMLE CONTAINERS:

Glass sample cylinders can usually be cleaned simply by repeated vacuuming while operating the stopcocks several times. If liquid and/or condensate has gotten into the cylinder then it might have to be taken apart and the glass put into a drying oven. CAUTION-even a drop of combustible liquid can give quite a bang if vaporized near a heat source in the presence of air. The stopcocks can probably be cleaned simply by blowing them with air or nitrogen. ALWAYS replace the septum after each use.

Metal sample cylinders may be cleaned by blowing air or nitrogn through them for extended periods or by steaming and drying. Be sure the valves are operated several times during the process to get rid of possible contaminates in them.

Super syringes (cost= $200 +) will be ruined if any liquid chlorinated hydrocarbons get in them, even as a fine mist.

About the only way to clean them is to repeatedly pull the piston out(draw it full of air) then pull it back in with a vacuum. CAUTION- super syringes can't take very much pressure, only a few psig, so using instrument air or plant nitrogen to push the piston back out can be dangerous.

MISCELLANEOUS SAMPLES:

Liquid samples are usually caught in 4 0z or 32 Oz (= 1 Qt) glass bottles available in the warehouse.

Solid and semi-solid samples are usually caught in widemouth plastic bottles. Several sizes are available in the Laboratory.

Be sure you label all samples brought to the Lab. Include:

1) Identity - such as EDC, Water, Muck, etc.

2) Source - T-102, C-102 Wash, etc.

3) Date and Time

4) Submitted by or for whom

Gum labels and tags are available in the laboratory.

GAS ANALYSES:

High VCM and/or EDC Vents and Column Entry Samples (>20 ppm VCM or >100 ppm EDC) should be run first on the new PE 8400 GC in the Mfg Lab. The column is a large bore SPB-5 capillary. When levels are known to be below those given above then use the instrument below.

Low VCM and EDC samples - Use The Low VCM procedure and equipment in the No. 18 GC.

LIQUID ANALYSES:

Special samples such as column wash waters (NO organic phase) should normally be run on the HP Headspace GC.

ANALYSES OF MONITOR BADGES:

These will be run on the PE HS-100 as long as it is working. One Analyst should get the Badges and Data Sheets ready for each Leadman each shift as has been done in the last few turnarounds. It is planned to log the individual exposure result on a LOTUS Macro. This will make it easy to sort data in many different ways and to identifv overexposures and list them.

Homer L Hackett

Homer L. Hackett
Manufacturing Chemist
hh
RAC-PEM-GEH-MLA-SRA-JRH-GB-SCR-S/S-HOA-CRH
Chief Operators and Leadmen

VVV 000019214

RH

VISTA VCM PLANT

TO: P. L. FETZER
FROM: H. L. Hackett
DATE: April 22, 1987
SUBJECT: T/A SAMPLING PROCEDURES

COLLECTING GAS SAMPLES:

For pressured samples: collect in a clean steel sample cylinder supplied by the Laboratory. Connect to the sample port via the appropiate fittings. Close both valves on the sample cylinder then open the Sample Port valve, the cylinder inlet valve, and then the cylinder outlet valve to insure that the gas is completely replaced with sample(i.e. the bomb has been completely purged with sample). If it is not feasible or safe to open the outlet valve to purge then the sample cylinder should have been completely evacuated before using. This vacuuming must be done on one of the pumps like the one in the Manufacturing Lab and not by the Lab house vacuum system!

For non-pressurized vessels: most of these must be taken in a glass sample cylinder using a " pump-through" procedure. A rubber or clear Tygon hose on the inlet end (the inlet can be either one) of the sample cylinder is attached to the sample port or simply placed well inside the vessel. A Bendix pump is attached to the outlet end to draw sample through the cylinder until it is completely purged with sample. This takes at least 5 Minutes!

If you know the non-pressurized vessel contains less than 5 % VCM or ETCL or less than 1 % of others such as EDC and the sample gas temperature is less than ca. 125 deg. F then a super syringe may be used to collect the sample. Once a super syringe has been used for a high level sample it is almost impossible to get it clean enough to use at levels below 10-20 ppm. Use them only when you have to and then only when you expect more than a trace.

CLEANING SAMLE CONTAINERS:

VVV 000019215

Glass sample cylinders can usually be cleaned simply by repeated vacuuming while operating the stopcocks several times. If liquid and/or condensate has gotten into the cylinder then it might have to be taken apart and the glass put into a drying oven. CAUTION-even a drop of combustible liquid can give quite a bang if vaporized near a heat source in the presence of air. The stopcocks can probably be cleaned simply by blowing them with air or nitrogen. ALWAYS replace the septum after each use.

Metal sample cylinders may be cleaned by blowing air or nitrogn through them for extended periods or by steaming and drying. Be sure the valves are operated several times during the process to get rid of possible contaminates in them.

Super syringes (cost= $200 +) will be ruined if any liquid chlorinated hydrocarbons get in them, even as a fine mist.

About the only way to clean them is to repeatedly pull the piston out(draw it full of air) then pull it back in with a vacuum. CAUTION- super syringes can't take very much pressure, only a few psig, so using instrument air or plant nitrogen to push the piston back out can be dangerous.

MISCELLANEOUS SAMPLES:

Liquid samples are usually caught in 4 Oz or 32 Oz (= 1 Qt) glass bottles available in the warehouse.

Solid and semi-solid samples are usually caught in widemouth plastic bottles. Several sizes are available in the Laboratory.

Be sure you label all samples brought to the Lab. Include:

1) Identity - such as EDC, Water, Muck, etc.

2) Source - T-102, C-102 Wash, etc.

3) Date and Time

4) Submitted by or for whom

Gum labels and tags are available in the laboratory.

GAS ANALYSES:

High VCM and/or EDC Vents and Column Entry Samples (>20 ppm VCM or >100 ppm EDC) should be run first on the new PE 8400 GC in the Mfg Lab. The column is a large bore SPB-5 capillary. When levels are known to be below those given above then use the instrument below.

Low VCM and EDC samples - Use The Low VCM procedure and equipment in the No. 18 GC.

LIQUID ANALYSES:

Special samples such as column wash waters (NO organic phase) should normally be run on the HP Headspace GC.

ANALYSES OF MONITOR BADGES:

These will be run on the PE HS-100 as long as it is working. One Analyst should get the Badges and Data Sheets ready for each Leadman each shift as has been done in the last few turnarounds. It is planned to log the individual exposure result on a LOTUS Macro. This will make it easy to sort data in many different ways and to identifv overexposures and list them.

Homer L. Hackett

Homer L. Hackett
Manufacturing Chemist
hh
RAC-PEM-GEH-MLA-SRA-JRH-GB-SCR-S/S-HOA-CRH
Chief Operators and Leadmen

VVV 000019216

JC

VISTA VCM PLANT

TO: P. L. FETZER
FROM: H. L. Hackett
DATE: April 22, 1987
SUBJECT: T/A SAMPLING PROCEDURES

COLLECTING GAS SAMPLES:

For pressured samples: collect in a clean steel sample cylinder supplied by the Laboratory. Connect to the sample port via the appropiate fittings. Close both valves on the sample cylinder then open the Sample Port valve, the cylinder inlet valve, and then the cylinder outlet valve to insure that the gas is completely replaced with sample(i.e. the bomb has been completely purged with sample). If it is not feasible or safe to open the outlet valve to purge then the sample cylinder should have been completely evacuated before using. This vacuuming must be done on one of the pumps like the one in the Manufacturing Lab and not by the Lab house vacuum system!

For non-pressurized vessels: most of these must be taken in a glass sample cylinder using a " pump-through" procedure. A rubber or clear Tygon hose on the inlet end (the inlet can be either one) of the sample cylinder is attached to the sample port or simply placed well inside the vessel. A Bendix pump is attached to the outlet end to draw sample through the cylinder until it is completely purged with sample. This takes at least 5 Minutes!

If you know the non-pressurized vessel contains less than 5 % VCM or ETCL or less than 1 % of others such as EDC and the sample gas temperature is less than ca. 125 deg. F then a super syringe may be used to collect the sample. Once a super syringe has been used for a high level sample it is almost impossible to get it clean enough to use at levels below 10-20 ppm. Use them only when you have to and then only when you expect more than a trace.

CLEANING SAMLE CONTAINERS:

Glass sample cylinders can usually be cleaned simply by repeated vacuuming while operating the stopcocks several times. If liquid and/or condensate has gotten into the cylinder then it might have to be taken apart and the glass put into a drying oven. CAUTION-even a drop of combustible liquid can give quite a bang if vaporized near a heat source in the presence of air. The stopcocks can probably be cleaned simply by blowing them with air or nitrogen. ALWAYS replace the septum after each use.

Metal sample cylinders may be cleaned by blowing air or nitrogn through them for extended periods or by steaming and drying. Be sure the valves are operated several times during the process to get rid of possible contaminates in them.

Super syringes (cost= $200 +) will be ruined if any liquid chlorinated hydrocarbons get in them, even as a fine mist.

About the only way to clean them is to repeatedly pull the piston out(draw it full of air) then pull it back in with a vacuum. CAUTION- super syringes can't take very much pressure, only a few psig, so using instrument air or plant nitrogen to push the piston back out can be dangerous.

MISCELLANEOUS SAMPLES:

Liquid samples are usually caught in 4 Oz or 32 Oz (= 1 Qt) glass bottles available in the warehouse.

Solid and semi-solid samples are usually caught in widemouth plastic bottles. Several sizes are available in the Laboratory.

Be sure you label all samples brought to the Lab. Include:

1) Identity - such as EDC, Water, Muck, etc.

2) Source - T-102, C-102 Wash, etc.

3) Date and Time

4) Submitted by or for whom

Gum labels and tags are available in the laboratory.

GAS ANALYSES:

High VCM and/or EDC Vents and Column Entry Samples (>20 ppm VCM or >100 ppm EDC) should be run first on the new PE 8400 GC in the Mfg Lab. The column is a large bore SPB-5 capillary. When levels are known to be below those given above then use the instrument below.

Low VCM and EDC samples - Use The Low VCM procedure and equipment in the No. 18 GC.

LIQUID ANALYSES:

Special samples such as column wash waters (NO organic phase) should normally be run on the HP Headspace GC.

ANALYSES OF MONITOR BADGES:

These will be run on the PE HS-100 as long as it is working. One Analyst should get the Badges and Data Sheets ready for each Leadman each shift as has been done in the last few turnarounds. It is planned to log the individual exposure result on a LOTUS Macro. This will make it easy to sort data in many different ways and to identifv overexposures and list them.

Homer L. Hackett

Homer L. Hackett
Manufacturing Chemist
hh
RAC-PEM-GEH-MLA-SRA-JRH-GB-SCR-S/S-HOA-CRH
Chief Operators and Leadmen

VVV 000019218

To: Wayne Sorensen

From: S. V. Corkran
Date: June 19, 1987

Interoffice Communication

Subject: Oxychlorination Reactor Catalyst Samples
1987 Turnaround

VISTA

Enclosed are samples of spent catalyst from the Lake Charles VCM Plant Oxychlorination reactors taken during the 1987 turnaround. One tube near the center and one tube near the shell of each reactor were sampled. Four samples were taken from each tube, with the sample range measured as inches up from the bottom tubesheet. All samples are labeled with the reactor number and location from which the sample was taken. A number which can be referenced to the attached drawing has been assigned to each sample. Additional samples include the 2" Raschig rings in the top and bottom heads, catalyst fines which accumulated on the R-303 southwest quadrant top tubesheet, coke fines from H-308 (Ethylene Heater), and silica gel from the ethylene dryer upstream of H-308. For comparison purposes, fresh catalyst samples which were set aside during the 1985 catalyst loading are also included.

The shutdown/turnaround was not dictated by excessive pressure drop in R-301 as in past runs, but by other factors.

Observations made during the sampling and plant operating data for the past run are attached. Please analyze the enclosed samples per past work. If you have any questions or need additional information please call me at (318) 494-5026 or Bruce Farris at (318) 494-5076.

Sandra Corkran

S. V. Corkran
Process Engineer

br
cc: RAC-PEM-MLA-GEH-SCR-PLF-HLH-WPS-BF

VVV 000019219

Observations

1) Catalyst samples were obtained by directing a rod up through the bottom of the tube while catching the loosened catalyst in a sample bottle. Measurements up from the bottom were taken before and after each sample.

2) The 2" Raschig rings and 1/2" Intalox saddles on the top tubesheet and in the top of the tubes in R-301 were discolored (see samples 6, 10, 11), as usual. No pluggage of the rings or presence of coke fines or other dust-like material was observed.

   Some coke fines and dust were observed in the ethylene side of H-308, the ethylene preheater upstream of R-301.

3) The inner tube of R-301 was slightly more difficult to sample than the others; however, all the catalyst sampled was easier to remove than that of the previous turnaround (i.e., one or two "pokes" from the bottom would cause 30"-40" of catalyst to fall out).

4) The 2" Raschig rings on the bottom heads of R-302 and R-303 were partially covered with a brownish dust but were not plugged (see samples 22, 32, & 33). This dust turned green overnight. The dust fell easily from the rings.