

TITLE: LONG-TERM ARCHIVING OF PM ONLY TEFLON FILTERS

Effective Date: _____

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Annual Review			
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1.0 Scope and Application

This standard operating procedure (SOP) describes the archiving of Gravimetric Mass samples by the Filter Shipping and Handling Unit (FiSH) under the U.S. Environmental Protection Agency (EPA) laboratory support contract for Chemical Speciation of Particulate Matter (PM) Filter Samples.

1.1 Summary of Method

The following procedures will describe the archiving process for Teflon filters used to measure Particulate Matter within the Chemical Speciation Network.

1.2 Definitions

CSN	EPA PM 2.5 Chemical Speciation Network
FiSH	Filter Shipping and Handling Unit, Newberry, FL
PM	Particulate Matter

1.3 Health & Safety Warnings

Not Applicable

1.4 Cautions

Unique identifiers should be double checked prior to release of filters from archive. Filters must be assigned to Analysis Batch prior to COC creation.

1.5 Interferences

Not Applicable

1.6 Personnel Qualifications/Responsibilities

Personnel should be certified for these procedures by a qualified person following standards set forth in GLO3110-001 Training Chemical Speciation Network Filter Shipping and Handling Personnel. Certification shall be documented on the FiSH demonstration of capability form.

2.0 Archiving Conditions

2.1 Teflon Filters

Teflon filters will be archived for 5 years in petri-slide holders, sorted by analysis ID and set number into petri-slide trays, and sorted by sampling date within a tray. Full trays of Teflon filters will be placed in heavy-duty plastic zippered bags and placed in a refrigerator or cold room maintained at or below 4°C (but not below freezing). Individual filters will be located by Archive Box ID, Tray ID, and Filter Analysis ID.

3.0 Procedure for Archiving Teflon Gravimetric Only Filters

3.1 Identifying filters

1. Open QA Database Dashboard, then select Lab COC Report (Figure 1).
2. Select Analysis Request ID and Filter type, select "Print Only GravMass COC?"
3. Click Print COC Form, and print.

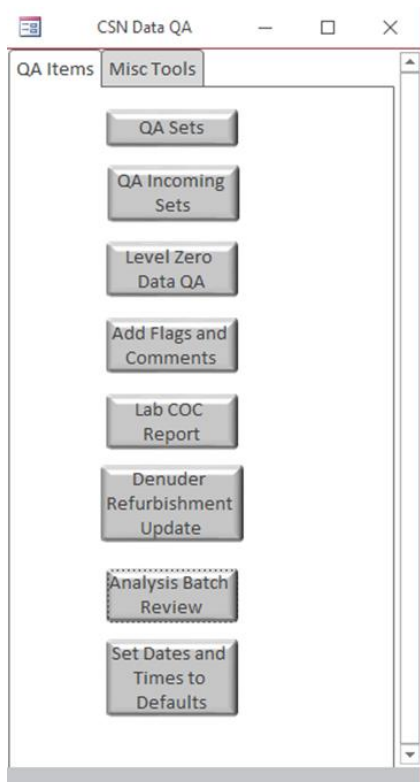
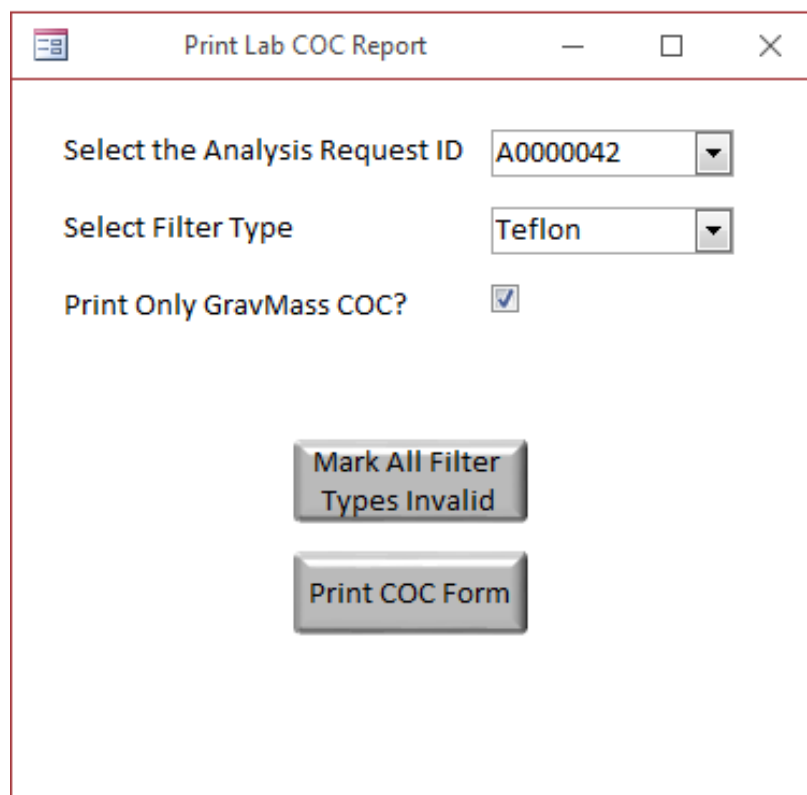


Figure 1. CSN QA Database Dashboard



Print Lab COC Report

Select the Analysis Request ID A0000042

Select Filter Type Teflon

Print Only GravMass COC?

Mark All Filter Types Invalid

Print COC Form

Figure 2. Laboratory COC Report Selection

3.2 Filter Sorting

1. Following the Archive COC sequence (shown in Figure 4), sort the filters for shipment, working from top to bottom and starting on page 1 proceeding to end of final page of Archive COC (see Figure 3 for filter sorting guidance).
2. The exposed filters in petri slides are arranged in petri trays in groups of 50 (two rows of 25), with 2 trays to a box. After locating and loading each filter/petri slide into a tray, a checkmark in ink is added next to the Filter Analysis ID on the Archive COC to certify that the filter/petri slide has been accounted for.
3. Boxes are identified using permanent marker labeled by Filter Type and order of Filter Analysis IDs within Archive COC (e.g., the first 100 filters on the Archive COC would be in Box 1).
4. If filters are missing during this process, a space is left in the tray to accommodate the filter when it is located.
5. If there are additional filters not listed on Archive COC, they will be inserted in sequence, and investigated.
6. Record missing or additional filters, in ink on the Archive COC and mark their location on both the Archive COC and the petri tray with tape flag and report them to the Program Manager, who will investigate and attempt to locate any missing filters. Archive COC shall be stored with Program Manager.

Orientation of the Petri Slides

Use the AMEC set number as the starting point for the orientation of the Petri slide tray. The AMEC set numbers will be on the “front left hand corner” of the Petri slide tray.

When viewed from the top, the first (1st) sample will be in the upper left-hand corner of the petri tray, the 25th sample will be in the bottom left-hand side of the petri tray. The 26th sample will be located on the upper right side of the petri tray and the last (50th) will be in the bottom right side of the petri tray (See picture 1 below). Fill the tray with the petri slides with the long side of the slide pointing to the right (See picture 2 below).

Filling the Petri trays

The Petri trays are filled as listed in the CSN Chain of Custody (COC) forms. The 1st sample in the first tray will also be the first sample in page one of the COC. Continue following COC until all 50 positions have been filled. The 51st sample on the COC will become the 1st sample in the next tray until all samples have been placed in Petri trays.

Barcode ID labels

Barcode ID labels: in the most recent batch some of the barcodes were ran outside the label. We need the entire barcode because we scan the barcode ID into the software of our instruments (see picture 2 below). Please ensure the entire barcode is contained on the petri slide labels.

Picture 1: Top view- petri slide tray with CSN samples in preferred orientation.
Please note all the Petri slides are oriented so filters are on the right.

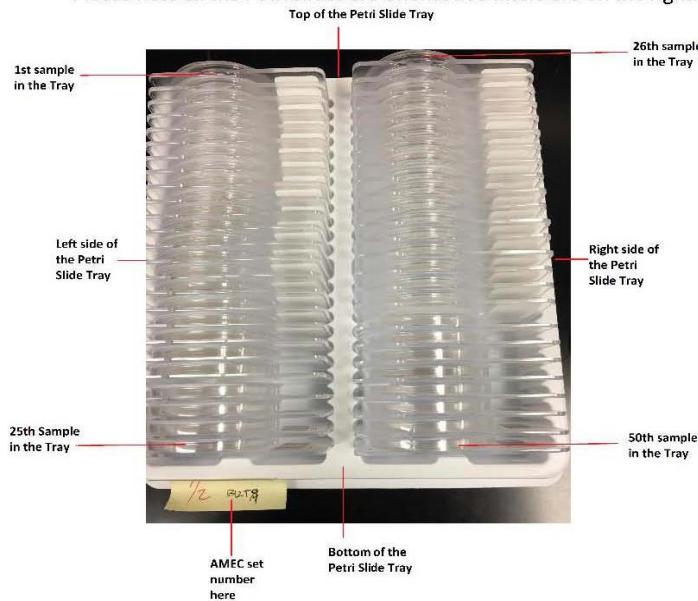


Figure 3. Petri Slide Orientation

CSN Laboratory Chain of Custody Form

Ship Date and Name: 10/20/2016 Knoll

Receive Date and Name: [Empty]

Analysis Request ID: A0000013

Intended Sample Date: 7/11/2016

Set #: 4

Barcode/Filter Analysis ID	Filter Type	Analysis Requested	Invalid?
Filter Analysis ID F025957	Teflon 220360499	XRF	<input type="checkbox"/>
Filter Analysis ID F025960	Teflon 220360000	XRF	<input type="checkbox"/>
Filter Analysis ID F025963	Teflon 220361710	XRF	<input type="checkbox"/>
Filter Analysis ID F025966	Teflon 220361712	XRF	<input type="checkbox"/>
Filter Analysis ID F025969	Teflon 220361711	XRF	<input type="checkbox"/>
Filter Analysis ID F026011	Teflon 220361713	XRF	<input type="checkbox"/>
Filter Analysis ID F026347	Teflon 220359975	XRF	<input checked="" type="checkbox"/>
Filter Analysis ID F026350	Teflon 220359976	XRF	<input type="checkbox"/>

1 | No Filter

Figure 4. Archive COC

4.0 Procedure for Removing Samples from Archiving

4.1 Identify Samples

Use the information supplied by the requestor (e.g. sample id# and sampling date) to identify the designated Filter Analysis IDs of the filters to be found.

4.2 Locate Samples

- Locate the archive box(es) containing the sample(s).
- Within the archive box, locate the tray containing the sample(s).
- Within the tray, locate and remove the individual samples.

4.3 Log Out Samples

Change the status of the sample in the database from archived to returned, transferred or destroyed, by adding comment in CSN Tracking Database explaining why and where the filter was sent.

4.4 Final Transfer

Change the status of all remaining samples at the end of the contract from Archived to Returned when they are transferred to EPA.