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TECHNICAL BULLETIN 404-2

R&P Model 2025 PM2.5 SAMPLER May 2007

Issue

To standardize the handling of field blanks by air monitoring staff, the AQSB has modified its field blank handling procedure. The new procedure utilizes the field blank sample function of the R&P 2025 sampler. Field blanks are now transferred through the entire sampling system. **Field blanks must be programmed into the sampler using the following procedure to ensure that field blanks are not sampled as normal filters.**

Solution

The procedure for handling of field blanks by air monitoring staff is described below. The procedure can also be found in AQSB SOP 404.

R&P 2025 Field Blank Procedure

Field blank filters are loaded into the sampler but no air is drawn through the filters. The following steps describe field blank filter loading and programming procedures.

1. Field blanks are loaded and programmed in the same manner as normal filters. Press <ESC> to return to the main menu. Press <F3:FiltSet> to set the start date for the next run. The sampling program will repeat at the interval specified in the Setup menu.
2. Prepare a supply canister. Load the filters in the order they are to be sampled, with the first filter to be sampled on the top. Place the field blank(s) in the supply canister in the appropriate position. Field blank filters are exchanged through the sampler immediately after the preceding sample filter completes sampling. Therefore, the blank filter will have a sample date one day later than the sample filter immediately preceding the blank. This should be kept in mind when loading the supply canister. Note the Cassette ID number and LIMS Sample ID for each filter in the order that they are inserted in the canister, going from top to bottom. Record the date on which the field blank was loaded into the R&P 2025 in the "Sample Load" field on the PM2.5 Field Sample Report Form.

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- In the "Filter Setup" menu press <F4:FilterLst>. Enter the LIMS sample ID (sample barcode number) in the "Filt ID" field. Enter Cassette ID Number in the "Cassette ID" field. These values will be attached as a header to all data files pertaining to the associated sampling run. Press <ENTER> to accept information. Repeat for all the filters in the sampler. The entries should be done with the top filter in position 1 and the following filters in 2, 3, etc. **(Note: The LIMS Number will need to be entered for each sampler run.)** Change the Blank Field to "Yes" for the field blank filter(s). The Filter Setup Menu with a field blank entry is illustrated below.

Type	Filt ID	Cassette ID	Blank	
1: p	41551	PF000001	No	/ \
2: p	41551	PF000002	No	
3: p	41551	PF000003	Yes	
X: p	41551	PF000004	No	
X: p	41551	PF000005	No	
16: p	41551	PF000006	No	\ /
	FiltSet	Copy	Insert	Delete
Function Keys In Browse Mode				
	FiltSet	Copy	Insert	Delete
Function Keys In Copy Mode				
-List	+List	Bksp		

- When the sampler encounters a filter that is labeled as a blank, the filter will move through the filter exchange mechanism into the take-up magazine. The exchange takes approximately one minute.
- When the sampled field blank is removed from the R&P 2025 sampler record the date in the "Sample Removal" field on the ARB 24-hour Field Sample Report. Press <F4:Data> in the main menu to access the sample report summaries. Press <F1:-Rec> or <F2:+Rec> until the field blank report is onscreen. Record the date in the "Actual Sample Start Time" field in the "Start Date / Time" field on the ARB 24-hour Field Sample Report form. Verify that the elapsed run time and the flow were both zero and record the values in the Total Elapsed Time and Volume fields. If either shows a value other than zero, the field blank may have been exposed to flow and should be noted on the ARB 24-hour Field Sample Report. An example of the field blank ARB 24-hour Field Sample Report is attached.

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ARB 24 Hour – FIELD SAMPLE REPORT
Delrin Cassette (FRM) PM 2.5 Samplers

Bar Code:
LIMS Sample ID:

Site Name: Sacramento 13th St
 AIRS Site Number: 34305
 Field Technician: Station Operator
 Agency: CARB

Cassette I. D. Number: R505
 Scheduled Sampling Date: 3/15/07
 Sampler Property #: 20015460

Start Date / Time: 3/15/07 0:00:00
 Total Elapsed Time: 0:00 Hr:min
 Volume: 0 M³
 Flow CV: 0 %

	MIN	AVG	MAX
Ambient Temp(°C):	0	0	0
Filter Temp (°C):	0	0	0
Pressure (mmHg):	0	0	0

Local Condition Codes: _____

Sampler Flag Codes: _____

- | | |
|----------------------------|-------------------------|
| A. High Winds | E. Forest Fire |
| K. Farming Nearby | J. Construction Nearby |
| N. Sanding/Salting Streets | L. Highway Construction |
| P. Roofing Operations | Q. Prescribe Burn |

- | |
|--|
| F. Flowrate 5-min average, out of spec |
| T. Filter Temp differential, 30 minutes interval out of spec |
| E. Elapsed sample time, out of spec |

Operator Comments: _____

ACTION	DATE	TIME	FILTER TEMP °C	NAME
Sample Load	3/13/07	13:52		SO
Sample Removal	3/16/07	10:11		SO
Sample placed in freezer	“	“		SO
Sample shipped to Lab				
Sample received at Lab				
Start post-conditioning				

FOR LABORATORY USE ONLY

Postweigh by: _____

	Mass:	Dup Mass:	Date:	Analyst:
Preweight				
Postweight				

Lab Comments:	