

CHAAP Data Verification

Laboratory and SDG#: TADenver 280-159056

AECOM Chemist: Jared Grogan

Date Verified: 3/23/2022

AECOM ITR:

Guidance: DoD QSM Version 5.1 (January 2017)

Applicable QAPP: Cornhusker Army Ammunition Plant QAPP (Brice and AECOM, October 2018)

Applicable Analytical Methods: 8330A

Sample Identification #	Date Collected	Date Received	Matrix	Analysis
NW050R-DP08-20	2/22/2022	2/24/2022	Water	Explosives (8330A)
NW050R-DP08-35	2/22/2022	2/24/2022	Water	Explosives (8330A)
NW050R-DP08-60	2/22/2022	2/24/2022	Water	Explosives (8330A)
OS003-DP08-25	2/22/2022	2/24/2022	Water	Explosives (8330A)

1.0 Laboratory Case Narrative \ Cooler Receipt Form

Verification Criteria	Yes	No	N/A
Were any DoD QSM deviations noted in the laboratory case narrative?		X	
Were DoD QSM corrective actions followed if deviations were noted?			X
Were any issues noted in the cooler receipt form?		X	

No issues were noted in the case narrative or cooler receipt form.

2.0 Sample Documentation

Verification Criteria	Yes	No
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X	
Were all sample identifications (IDs) documented correctly on sample labels?	X	
Did samples listed on COCs match the sample labels?	X	
Were samples relinquished properly on the COC?	X	

3.0 Initial Calibration

Method 8330A Initial Calibration Criteria			
Instrument:	CHHPLC X3		
Date of Calibration:	1/4/2022		
	Yes	No	N/A
Was at least a five point calibration completed for all analytes prior to sample analysis and one option below?	X		
Option 1: RSD for each analyte $\leq 20\%$?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

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Method 8330A Initial Calibration Criteria			
Instrument:	CHHPLC_X3		
Date of Calibration:	1/5/2022		
	Yes	No	N/A
Was at least a five point calibration completed for all analytes prior to sample analysis and one option below?	X		
Option 1: RSD for each analyte $\leq 20\%$?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 8330A Initial Calibration Criteria			
Instrument:	CHHPLC_X3		
Date of Calibration:	1/5/2022		
	Yes	No	N/A
Was at least a five point calibration completed for all analytes prior to sample analysis and one option below?	X		
Option 1: RSD for each analyte $\leq 20\%$?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 8330A Initial Calibration Criteria			
Instrument:	CHHPLC_X5		
Date of Calibration:	1/21/2022		
	Yes	No	N/A
Was at least a five point calibration completed for all analytes prior to sample analysis and one option below?	X		
Option 1: RSD for each analyte $\leq 20\%$?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

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Method 8330A Initial Calibration Criteria			
Instrument:	CHHPLC X5		
Date of Calibration:	1/22/2022		
	Yes	No	N/A
Was at least a five point calibration completed for all analytes prior to sample analysis and one option below?	X		
Option 1: RSD for each analyte \leq 20%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

4.0 Initial Calibration Verification [(ICV) Second Source]

Method 8330A ICV Criteria (Filename)		280-562503/20	
Instrument:		CHHPLC X3	
Date of Initial Calibration Verification:		1/4/2022	
	Yes	No	N/A
Was the ICV analyzed after each calibration?	X		
Was the ICV for all analytes within \pm 15% of the true value?	X		

Method 8330A ICV Criteria (Filename)		280-562503/29	
Instrument:		CHHPLC X3	
Date of Initial Calibration Verification:		1/5/2022	
	Yes	No	N/A
Was the ICV analyzed after each calibration?	X		
Was the ICV for all analytes within \pm 15% of the true value?	X		

Method 8330A ICV Criteria (Filename)		280-562503/38	
Instrument:		CHHPLC X3	
Date of Initial Calibration Verification:		1/5/2022	
	Yes	No	N/A
Was the ICV analyzed after each calibration?	X		
Was the ICV for all analytes within \pm 15% of the true value?	X		

Method 8330A ICV Criteria (Filename)		280-564056/19	
Instrument:		CHHPLC X5	
Date of Initial Calibration Verification:		1/21/2022	
	Yes	No	N/A
Was the ICV analyzed after each calibration?	X		
Was the ICV for all analytes within \pm 15% of the true value?	X		

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Method 8330A ICV Criteria (Filename)	280-564056/28		
Instrument:	CHHPLC_X5		
Date of Initial Calibration Verification:	1/22/2022		
	Yes	No	N/A
Was the ICV analyzed after each calibration?	X		
Was the ICV for all analytes within $\pm 15\%$ of the true value?	X		

5.0 Continuing Calibration Verification (CCV)

Method 8330A CCV Criteria (Filename)	280-567370/7_9		
Instrument:	CHHPLC_X3		
Date of Calibration Verification:	3/1/2022		
	Yes	No	N/A
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Was the CCV for all analytes within $\pm 15\%$ of the true value?	X		

Method 8330A CCV Criteria (Filename)	280-567370/21_2		
Instrument:	CHHPLC_X3		
Date of Calibration Verification:	3/1/2022		
	Yes	No	N/A
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Was the CCV for all analytes within $\pm 15\%$ of the true value?	X		

Method 8330A CCV Criteria (Filename)	280-567372/7_8		
Instrument:	CHHPLC_X5		
Date of Calibration Verification:	3/1/2022		
	Yes	No	N/A
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Was the CCV for all analytes within $\pm 15\%$ of the true value?	X		

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Applicable Analytical Methods: 8330A

Method 8330A CCV Criteria (Filename)	280-567372/20_1		
Instrument:	CHHPLC X5		
Date of Calibration Verification:	3/1/2022		
	Yes	No	N/A
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Was the CCV for all analytes within $\pm 15\%$ of the true value?	X		

6.0 Sensitivity

Sensitivity Criteria	Yes	No	N/A
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		

7.0 Additional Qualifications

Additional Qualification Criteria	Yes	No	N/A
Were common laboratory contaminants detected?		X	
Was professional judgment used to qualify data (if yes, list below)?			X

8.0 Completeness

Completeness Criteria	Yes	No	N/A
Were any data rejected during the verification process?		X	
Were any samples lost, broken, or in any other manner in not verified?		X	
Were requested sample analyses performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		