CHAAP Data Verification

Laboratory and SDG#: TADenver 280-159130   **AECOM Chemist: Jared Grogan**
Date Verified: 3/23/2022   **AECOM ITR: April McLeod**
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
OS003-DP08-35	2/23/2022	2/25/2022	Water	Explosives (8330A)
OS003-DP08-45	2/23/2022	2/25/2022	Water	Explosives (8330A)
OS003-DP08-45 MS/MSD	2/23/2022	2/25/2022	Water	Explosives (8330A)
OS001-DP08-25	2/23/2022	2/25/2022	Water	Explosives (8330A)
OS5001-DP08-25	2/23/2022	2/25/2022	Water	Explosives (8330A)
OS001-DP08-35	2/23/2022	2/25/2022	Water	Explosives (8330A)
OS001-DP08-45	2/23/2022	2/25/2022	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	

The laboratory case narrative indicated that a surrogate was above evaluation criteria; however, all results were reported as nondetect and did not require qualification. Some analytes recovered outside evaluation criteria in an LCS and MSD. These issues are further discussed in the ADR report.

The case narrative indicated that the RPD between the primary and confirmation column for HMX was above evaluation criteria. This issue is discussed further in Section 7.0.

No other 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	

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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 ≤ 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 ≤ 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 ≤ 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:	**3/2/2022**		
	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 ≤ 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:	**3/3/2022**		
	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 ≤ 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 ± 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 ± 15% of the true value?	X		

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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 ± 15% of the true value?		X		

Method 8330A ICV Criteria (Filename)		280-567560/19		
Instrument:		CHHPLC_X5		
Date of Initial Calibration Verification:		3/3/2022		
		Yes	No	N/A
Was the ICV analyzed after each calibration?		X		
Was the ICV for all analytes within ± 15% of the true value?		X		

Method 8330A ICV Criteria (Filename)		280-567560/28		
Instrument:		CHHPLC_X5		
Date of Initial Calibration Verification:		3/3/2022		
		Yes	No	N/A
Was the ICV analyzed after each calibration?		X		
Was the ICV for all analytes within ± 15% of the true value?		X		

5.0   Continuing Calibration Verification (CCV)

Method 8330A CCV Criteria (Filename)		280-567371/41_2		
Instrument:		CHHPLC_X3		
Date of Calibration Verification:		3/2/2022		
		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 ± 15% of the true value?		X		

Method 8330A CCV Criteria (Filename)		280-567371/53_4		
Instrument:		CHHPLC_X3		
Date of Calibration Verification:		3/2/2022		
		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 ± 15% of the true value?		X		

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Applicable Analytical Methods: 8330A

Method 8330A CCV Criteria (Filename)		280-567371/65_6	
Instrument:		CHHPLC_X3	
Date of Calibration Verification:		3/2/2022	
	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 ± 15% of the true value?	X		

Method 8330A CCV Criteria (Filename)		280-567645/7_8	
Instrument:		CHHPLC_X5	
Date of Calibration Verification:		3/3/2022	
	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 ± 15% of the true value?	X		

Method 8330A CCV Criteria (Filename)		280-567645/20_1	
Instrument:		CHHPLC_X5	
Date of Calibration Verification:		3/3/2022	
	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 ± 15% of the true value?	X		

Method 8330A CCV Criteria (Filename)		280-567645/32_3	
Instrument:		CHHPLC_X5	
Date of Calibration Verification:		3/4/2022	
	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 ± 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		

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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		

The RPD between the primary and confirmation column for some explosives samples was above evaluation criteria. Qualification of data is shown in the table below; results were reported from primary column unless otherwise noted.

Sample ID	Analysis	Analyte	RPD	Qual
OS001-DP08-25	Explosives	HMX	75.9	**J**

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		