



Monday, October 29, 2018

Karen Waters-Husted
CH2M HILL Plateau Remediation Company
825 Jadwin Avenue
Richland, WA 99352

Re: ALS Workorder: 1809581
Project Name: SURV, SEPTEMBER 2018
Project Number: S18-009

Dear Ms. Waters-Husted:

One water sample was received from CH2M HILL Plateau Remediation Company, on 9/27/2018. The sample was scheduled for the following analysis:

Technetium-99

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the method employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Katie M. O'Brien
Project Manager

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager (or designee) and the laboratory's client services representative as verified by their signatures on this report.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1809581

Client Name: CH2M HILL Plateau Remediation Company

Client Project Name: SURV, SEPTEMBER 2018

Client Project Number: S18-009

Client PO Number: BOA 54854

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B3KHM0	1809581-1		WATER	25-Sep-18	10:36

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C.# S18-009-499
WILLIAM COLLINS CHPRC		1809581		Page 1 of 2
Collector:	WILLIAM COLLINS CHPRC	Contact/Requester:	Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.:	S18-009	Sampling Origin:	Hanford Site	Purchase Order/Charge Code: 300071
Project Title:	SURV, SEPTEMBER 2018	Logbook No.:	HNF-N-506-105/11	Ice Chest No.: CWS-681
Shipped To (Lab):	ALS Environmental Ft. Collins	Method of Shipment:	Commercial Carrier	Bill of Lading/Air Bill No.: 73320990183
Protocol:	SURV	Priority:	30 Days	Offsite Property No.: 10030
POSSIBLE SAMPLE HAZARDS/REMARK		SPECIAL INSTRUCTIONS		
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		N/A		
Sample No.	Filter	Date	Time	No/Type Container
B3KHM0	N	SEP 25 2018	1036	1x500-mL G/P
TC99_SEP_ISC: COMMON		Sample Analysis		
Holding Time		Preservative		
6 Months		HCl to pH <2		

SEP 2 5 2018

SEP 2 5 2018

SEP 2 5 2018

Relinquished By: WILLIAM COLLINS CHPRC	Signature	Date/Time	Received By: CHRIS FULTON CHPRC	Signature	Date/Time	Matrix *
Relinquished By: CHRIS FULTON CHPRC	Signature	Date/Time	Received By: SSU-1	Signature	Date/Time	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By: SSU-1	Signature	Date/Time	Received By: Tim Callaway CHPRC	Signature	Date/Time	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By: Tim Callaway CHPRC	Signature	Date/Time	Received By: FEDEX	Signature	Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By:		Date/Time:

1809581

ORIGIN: DPSCA (509) 373-3580
JANELLE ZUNKER
CH2M
8269 LATAM ST.
RICHLAND, WA 98354
UNITED STATES US

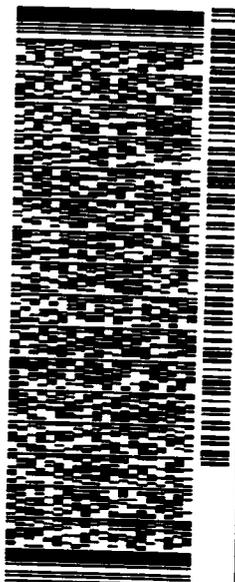
SHIP DATE: 26SEP18
ACTWGT: 54.00 LB
CAD: 107008057INET4040
BILL THIRD PARTY

TO JULIE ELLINGSON
ALS GLOBAL
225 COMMERCE DRIVE

9-2

FORT COLLINS CO 80524
(970) 490-1511
REF: 10030

PO DEPT:



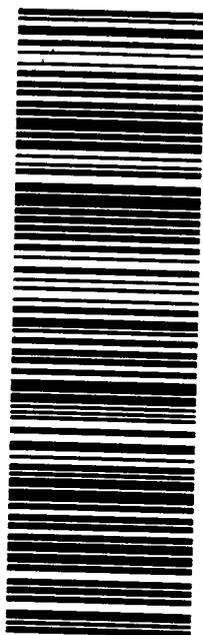
552J1F78C/DCA5

TRK# 0201 7733 2699 0153

THU - 27 SEP 10:30A
PRIORITY OVERNIGHT

XH FTCA

DSR 80524
CO-US DEN



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Technetium-99 Case Narrative

CH2M HILL Plateau Remediation Company

SURV, SEPTEMBER 2018 – S18-009

Work Order Number: 1809581

1. The sample was prepared according to the current revision of SOP 755, with procedure modifications outlined in QASS 378635 and 378636.
2. The sample was analyzed for the presence of ^{99}Tc according to the current revision of SOP 704. The analysis was completed on 10/25/2018.
3. The analysis results for the sample are reported in units of pCi/L. The sample was not filtered prior to analysis.
4. The duplicate of sample 1809370-2 is shared for this work order. The duplicate was performed on a CH2M HILL Plateau Remediation Company sample. The results can be found in the following report.
5. Sample volume was insufficient to allow preparation of a duplicate. A laboratory control sample duplicate (LCSD) was prepared in lieu of a client sample duplicate.
6. In accordance with project specific instructions, the evaluation threshold for Relative Percent Difference (RPD) has been set at 20%. RPD is defined as:

$$\text{RPD} = \frac{|S - D|}{(S + D)/2} * 100$$

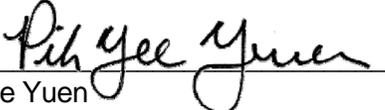
Where: S = sample activity result and D = duplicate activity result. RPD is not evaluated for sample/duplicate pairs where the reported activity for either is less than 5 times the sample specific MDC, as indicated with an "NC" on the Duplicate Sample Results (RPD) page.

7. The calculated yield, as determined by gamma spectrometric analysis of the $^{99\text{m}}\text{Tc}$ tracer, for shared QC sample 1809370-2 fell between 100% and 110%. To minimize the potential for low bias, results have been calculated conservatively assuming quantitative chemical yield (100%). The magnitude of the low bias is estimated to be less than 10% of the reported value and is acceptable according the ALS LQAP.



8. No anomalous situations were encountered during the preparation or analysis of this sample. All quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.



Pik Yee Yuen
Radiochemistry Primary Data Reviewer

10/25/18
Date



Radiochemistry Final Data Reviewer

10/29/18
Date

Technetium-99 by Liquid Scintillation

PAI 704_Tc99 Rev 11

Method Blank Results

Lab Name: ALS -- Fort Collins
 Work Order Number: 1809581
 Client Name: CH2M HILL Plateau Remediation Company
 ClientProject ID: SURV, SEPTEMBER 2018 S18-009

Lab ID: tc181017-2MB	Sample Matrix: WATER	Prep Batch: tc181017-2	Final Aliquot: 250 ml
	Prep SOP: PAI 755 Rev 12	QCBatchID: tc181017-2-1	Result Units: pCi/l
	Date Collected: 17-Oct-18	Run ID: TC181017-2A	File Name: B60_12_102501
	Date Prepared: 17-Oct-18	Count Time: 60 minutes	
	Date Analyzed: 25-Oct-18		

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
14133-76-7	Tc-99	3.00E-01 +/- 4.22E+00	7.04E+00	2.00E+01	NA	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Tc-99m	5.290E+03	5.09E+03	Pci	96.1	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.
 Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
 Y2 - Chemical Yield outside default limits.
 LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty
 MDC - Sample specific Minimum Detectable Concentration
 BDL - Below Detection Limit

M - Requested MDC not met.
 B - Analyte concentration greater than MDC.
 B3 - Analyte concentration greater than MDC but less than Requested MDC.
 DL - Decision Level

Data Package ID: TC1809581-1

Technetium-99 by Liquid Scintillation

PAI 704_Tc99 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS -- Fort Collins
Work Order Number: 1809581
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: SURV, SEPTEMBER 2018 S18-009

Lab ID: tc181017-2LCS	Sample Matrix: WATER	Prep Batch: tc181017-2	Final Aliquot: 250 ml
	Prep SOP: PAI 755 Rev 12	QCBatchID: tc181017-2-1	Result Units: pCi/l
	Date Collected: 17-Oct-18	Run ID: TC181017-2A	File Name: B60_12_102201
	Date Prepared: 17-Oct-18	Count Time: 30 minutes	
	Date Analyzed: 23-Oct-18		

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14133-76-7	Tc-99	9.10E+02 +/- 1.46E+02	1.03E+01	9.110E+02	99.9	75 - 125	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Tc-99m	5.290E+03	4.94E+03	Pci	93.3	40 - 110 %	

Comments:

Qualifiers/Flags:

- U - Result is less than the sample specific MDC.
- LT - Result is less than Requested MDC, greater than sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
- Y2 - Chemical Yield outside default limits.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS Recovery within control limits.
- M - The requested MDC was not met.
- M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

- TPU - Total Propagated Uncertainty
- MDC - Minimum Detectable Concentration

Data Package ID: TC1809581-1

Technetium-99 by Liquid Scintillation

PAI 704_Tc99 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS -- Fort Collins
 Work Order Number: 1809581
 Client Name: CH2M HILL Plateau Remediation Company
 ClientProject ID: SURV, SEPTEMBER 2018 S18-009

Field ID:	Shared QC
Lab ID:	1809370-2DUP

Sample Matrix: WATER	Prep Batch: tc181017-2	Final Aliquot: 250 ml
Prep SOP: PAI 755 Rev 12	QCBatchID: tc181017-2-1	Prep Basis: Unfiltered
Date Collected: 17-Sep-18	Run ID: TC181017-2A	Moisture(%): NA
Date Prepared: 17-Oct-18	Count Time: 30 minutes	Result Units: pCi/l
Date Analyzed: 23-Oct-18	Report Basis: Unfiltered	File Name: B60_12_102201

CASNO	Analyte	Sample				Duplicate				DER	DER Lim
		Result +/-	2 s TPU	MDC	Flags	Result +/-	2 s TPU	MDC	Flags		
14133-76-7	Tc-99	-1.73E+00 +/- 5.66E+00		9.62E+00	U	2.25E+00 +/- 5.94E+00		9.87E+00	U	0.97	3

Comments:

Duplicate Qualifiers/Flags:

- U - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- D - DER is greater than Control Limit of 3
- LT - Result is less than Request MDC, greater than sample specific MDC
- M - Requested MDC not met.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits

Abbreviations:

- TPU - Total Propagated Uncertainty
- DER - Duplicate Error Ratio
- BDL - Below Detection Limit
- NR - Not Reported

Data Package ID: TC1809581-1

Technetium-99 by Liquid Scintillation

PAI 704_Tc99 Rev 11

Duplicate Sample Results (RPD)

Lab Name: ALS -- Fort Collins
 Work Order Number: 1809581
 Client Name: CH2M HILL Plateau Remediation Company
 ClientProject ID: SURV, SEPTEMBER 2018 S18-009

Field ID:	Shared QC
Lab ID:	1809370-2DUP

Sample Matrix: WATER	Prep Batch: tc181017-2	Final Aliquot: 250 ml
Prep SOP: PAI 755 Rev 12	QCBatchID: tc181017-2-1	Prep Basis: Unfiltered
Date Collected: 17-Sep-18	Run ID: TC181017-2A	Moisture(%): NA
Date Prepared: 17-Oct-18	Count Time: 30 minutes	Result Units: pCi/l
Date Analyzed: 23-Oct-18	Report Basis: Unfiltered	File Name: B60_12_102201

CASNO	Analyte	Sample				Duplicate				RPD	RPD Lim
		Result +/-	2 s TPU	MDC	Flags	Result +/-	2 s TPU	MDC	Flags		
14133-76-7	Tc-99	-1.73E+00 +/-	5.66E+00	9.62E+00	U	2.25E+00 +/-	5.94E+00	9.87E+00	U	NC	20

Comments:

Qualifiers/Flags:

- + - Duplicate RPD not within limits.
- LT - Result is less than Request MDC, greater than sample specific MDC
- U - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- M - Requested MDC not met.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC

Abbreviations:

- TPU - Total Propagated Uncertainty
- BDL - Below Detection Limit
- NR - Not Reported

Data Package ID: TC1809581-1

Technetium-99 by Liquid Scintillation

PAI 704_Tc99 Rev 11

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1809581
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: SURV, SEPTEMBER 2018 S18-009

Field ID:	Shared QC
Lab ID:	1809370-2

Sample Matrix: WATER	Prep Batch: tc181017-2	Final Aliquot: 250 ml
Prep SOP: PAI 755 Rev 12	QCBatchID: tc181017-2-1	Prep Basis: Unfiltered
Date Collected: 17-Sep-18	Run ID: TC181017-2A	Moisture(%): NA
Date Prepared: 17-Oct-18	Count Time: 30 minutes	Result Units: pCi/l
Date Analyzed: 23-Oct-18	Report Basis: Unfiltered	File Name: B60_12_102201

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
14133-76-7	Tc-99	-1.73E+00 +/- 5.66E+00	9.62E+00	2E+01	NA	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Tc-99m	5.290E+03	5.36E+03	Pci	101	40 - 110 %	

Comments:

Qualifiers/Flags:

- U - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
- Y2 - Chemical Yield outside default limits.
- LT - Result is less than Requested MDC, greater than sample specific MDC.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- M - The requested MDC was not met.

Abbreviations:

- TPU - Total Propagated Uncertainty
- MDC - Sample specific Minimum Detectable Concentration
- BDL - Below Detection Limit
- DL - Decision Level

Data Package ID: TC1809581-1

Technetium-99 by Liquid Scintillation

PAI 704_Tc99 Rev 11

Sample Duplicate Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1809581
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: SURV, SEPTEMBER 2018 S18-009

Field ID:	Shared QC
Lab ID:	1809370-2DUP

Sample Matrix: WATER
Prep SOP: PAI 755 Rev 12
Date Collected: 17-Sep-18
Date Prepared: 17-Oct-18
Date Analyzed: 23-Oct-18

Prep Batch: tc181017-2
QCBatchID: tc181017-2-1
Run ID: TC181017-2A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 250 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: B60_12_102201

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
14133-76-7	Tc-99	2.25E+00 +/- 5.94E+00	9.87E+00	2E+01	NA	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Tc-99m	5.290E+03	5.16E+03	Pci	97.6	40 - 110 %	

Comments:

Qualifiers/Flags:

- U - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- LT - Result is less than Requested MDC, greater than sample specific MDC.
- M - The requested MDC was not met.
- M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

- D - DER is greater than Control Limit of 3

Abbreviations:

- TPU - Total Propagated Uncertainty
- MDC - Sample specific Minimum Detectable Concentration
- BDL - Below Detection Limit
- DL - Decision Level

Data Package ID: TC1809581-1

Date Printed:

Thursday, October 25, 2018

ALS -- Fort Collins

LIMS Version: 6.883

Page 1 of 1

Technetium-99 by Liquid Scintillation

PAI 704_Tc99 Rev 11

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1809581
Client Name: CH2M HILL Plateau Remediation Company
ClientProject ID: SURV, SEPTEMBER 2018 S18-009

Field ID:	B3KHM0
Lab ID:	1809581-1

Sample Matrix: WATER	Prep Batch: tc181017-2	Final Aliquot: 250 ml
Prep SOP: PAI 755 Rev 12	QCBatchID: tc181017-2-1	Prep Basis: Unfiltered
Date Collected: 25-Sep-18	Run ID: TC181017-2A	Moisture(%): NA
Date Prepared: 17-Oct-18	Count Time: 10.4 minutes	Result Units: pCi/l
Date Analyzed: 23-Oct-18	Report Basis: Unfiltered	File Name: B60_12_102201

Analysis ReqCode: TC99_SEP_LSC

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
14133-76-7	Tc-99	3.40E+03 +/- 5.45E+02	1.74E+01	2E+01	NA	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Tc-99m	5.290E+03	5.08E+03	Pci	95.9	40 - 110 %	

Comments:

Qualifiers/Flags:

- U - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
- Y2 - Chemical Yield outside default limits.
- LT - Result is less than Requested MDC, greater than sample specific MDC.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- M - The requested MDC was not met.

Abbreviations:

- TPU - Total Propagated Uncertainty
- MDC - Sample specific Minimum Detectable Concentration
- BDL - Below Detection Limit
- DL - Decision Level

Data Package ID: TC1809581-1

Prep Batch ID: tc181017-2

Start Date: 10/17/18	End Date: 10/17/18	Concentration Method: NONE	Batch Created By: trs
Start Time: 14:56	End Time: 14:56	Extract Method: PAI 75512	Date Created: 10/17/18
Prep Analyst: Tyler R. Secor		Initial Volume Units: ml	Time Created: 14:56
Comments:		Final Volume Units: ml	Validated By: trs
<div style="border: 1px solid black; height: 30px; width: 100%;"></div>			Date Validated: 10/18/18
			Time Validated: 13:56

QC Batch ID: tc181017-2-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
tc181017-2	MB	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809204
tc181017-2CB1	MB	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809204
tc181017-2CB2	MB	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809204
tc181017-2CB3	MB	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809204
tc181017-2	LCS	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809204
1809370-2	DUP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809370
1809204-1	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809204
1809204-2	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809204
1809269-7	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809269
1809370-2	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809370
1809396-2	SMP	XXXXXX	WATER	XXXXXX	125	125	NONE	1	1809396
1809403-11	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809403
1809403-2	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809403
1809461-2	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809461
1809536-1	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809536
1809537-1	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809537
1809581-1	SMP	B3KHM0	WATER	9/25/2018	250	250	NONE	1	1809581
1809582-6	SMP	XXXXXX	WATER	XXXXXX	250	250	NONE	1	1809582

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standar	SMP	Field Sample
SYS	Sample Yield Spike		

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH General
 TEST Tc99
 METHOD Prep
 SOP/REV (PREP) 755
 SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

CLS 8/12/09

Tc99^m 711.2613.17 was used as a tracer for this batch. It has a half-life of 6 hours and therefore must be delivered the day of prep and diluted to a working level solution. The procedure noted below is standard for all Tc99^m dilutions.

1. Open the Pb shielded container and carefully remove the vial containing the Tc99^m primary standard.
2. Withdraw a 1 mL aliquot of the Tc99^m primary standard from the vial using a 10 mL syringe fitted with a hypodermic needle. Dispense the aliquot into a disposable beaker that contains ~100 mL of DI water. Cap and mix well. This intermediate solution is a 1/100x dilution of the primary standard.
3. Using a 10 mL syringe, transfer 10 mL of the intermediate solution prepared in step 2 into a disposable beaker that contains ~70 mL of DI water. Cap and mix well. This working standard solution is a 1/800x dilution of the primary standard.

CLS 8/12/09

CLS 8/12/09

Attach vendor label on the right side of page →

CLS 8/12/09

Rx# 670410
 Date Ordered : 17Oct2018
 Date/Time Prepared : 18Oct2018 02:09 MT
ALS LABORATORY GROUP
 225 COMMERCE DR
 FORT COLLINS CO 80524 - 2762
 1 0359 Fort Collins



Patient : Per Physician Order
 Product : Tc-99m **Sodium Pertechnetate Unit Dose mCi (AP)**
 Disp Amt : 0.54 mCi
 Calibration: 18Oct2018 10:00 MT



Not for Human Use For Calibration Use Only
 Indication : **Calibration**
 Dispense Date : 18Oct2018 Lot# : E18291-0036 Price(est) : N/A
 Use By : 19Oct2018 02:09 MT Physician : Charles Orchard, RSO NPT :
 Notes NDC : RPh : B.Stoltz



Caution Federal law prohibits dispensing without a prescription - Rx only All Tc-99m drugs are below 0.15 uCi of Mo-99mCi of Tc-99m # B019

TECHNICIAN/ANALYST Crystal Sheaffer

DATE 8/12/09

DEPARTMENT MANAGER [Signature]

DATE 8/12/09

378636

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH Generic
TEST Te99
METHOD Prep
SOP/REV (PREP) 755
SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

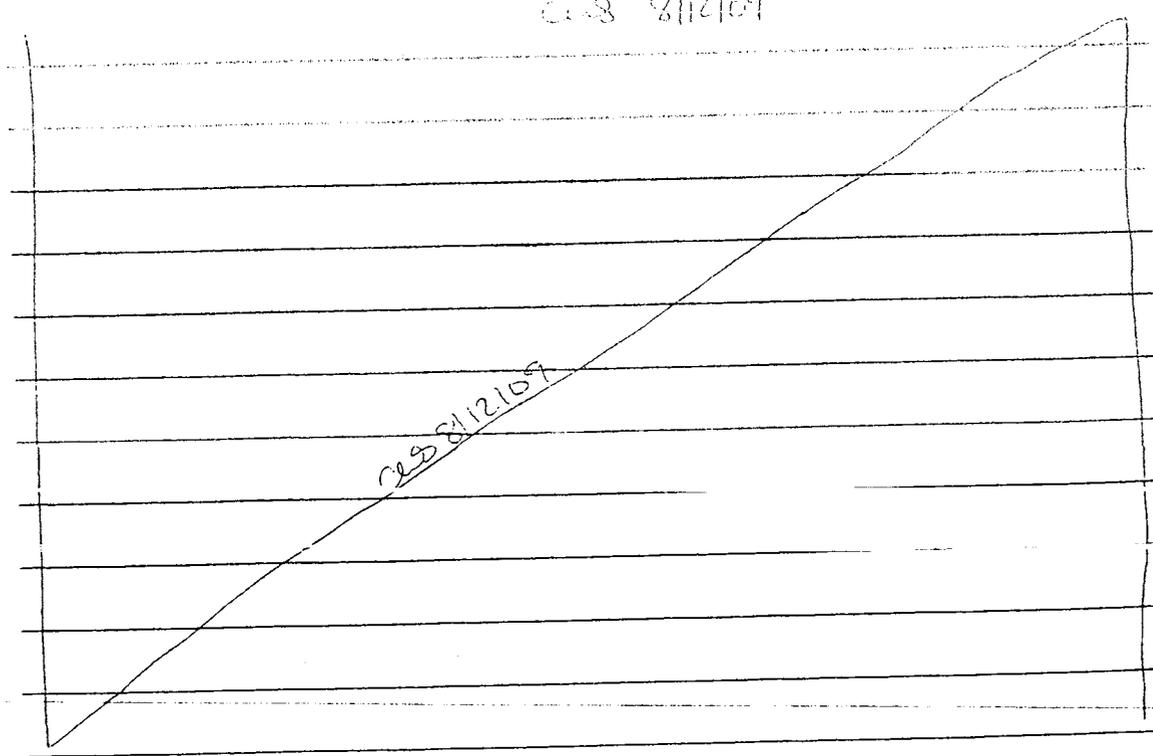
CEWS 8/12/09

Due to possible matrix interference, a ferric hydroxide precipitation was performed on all samples per SOP 755, section 8.2.10

CEWS 8/12/09

CEWS 8/12/09

CEWS 8/12/09



TECHNICIAN/ANALYST *Crystal Sheaffer*

DATE 8/12/09

DEPARTMENT MANAGER *[Signature]*

DATE 8/12/09

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