GW – 028

Annual DP Report (Part 6 of 16)

2015

Table 7 - Summary of Groundwator Sampting Analytical Results Fourth Quarty 2013 Final Report - RO Report Unionable Revia Remark Samage Concurry All-stal Stad State Analytical

			20100010 20100010 20100010	1 1 1 1 1 1 1 1 1 1 1 1 1 1		at Beru
	e c c c c c	- -	ELE			15757/012
	2 7	6 00000			51.5 L	8 1001 F
	0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0532 0.0532 0.0532 0.05532 0.05532				ANTE STREET
	2000 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000000 000000 0000 000 0	0.0001 0.0001 0.0001 0.0001 0.0001	ececceccccade .	(550 - 1	Strictors
	M 0.46 U 0.50 4 6 0.46 U 0.50 4 6 0.46 U 0.50 4 6 0.46 U 0.50 4 6 0.46 U 0.50 0 0.46 U 0.50 0 0.46 U 0.50 0 0.5	0.00252 0.00252 0.00254 0.00254 0.00254 0.00254 0.00255 0.0025 0.002555 0.002555 0.002555 0.002555 0.002555 0.002555 0.002555 0.0025555 0.0025555 0.0025555 0.0025555 0.0025555 0.0025555 0.0025555 0.0025555 0.00255555 0.0025555 0.0025555 0.0025555 0.00255555 0.0025555 0.0025555 0.00255555 0.00255555 0.00255555 0.0025555555555555555555555555555555555		eveloperetereteretereteretereteretereteretere	Saul 6	Handi Gual Rt
	1990 1990 1990 1990 1990 1990 1990 1990	6'59 15000 15000 15000 11100 1100 110000 11000000	U 0,0002 U 0,0002 U 0,0002		v 3.75	Renall Quer Ru Route and
	0.05 0.05	0.0025 0.0025	11 0.205		101	Rout Qui 94
	2012 2012 2012 2012 2012 2012 2012 2012		1: 0.005 U 0.005 U 0.005		1.1.2.2	Ar suit Cause R.
	-	6.55 6.15	205 MA 0 0001 205 J 0 0001 205 J 0 0001 205 J 0 0001			a and
TANK I I	0001 50 51 51 51 51 51 51 51 51 51 51 51 51 51	0.000 0.0000 0.0000	100 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Perce Pi

	a state of the second se
	······································
the state way a state of the st	
╘╴┊╴┊╴┧┑┝┥╴┥╴╎┝╌┟┑╎┍╕┪╸┟╸╈┑┥┥┍┱╸┥╋┑┥┯┱╴╸╋╸	
25.55 25	
10000 100000 100000 100000 10000 10000 10000 10000 10000 100000	2 (10)
2000 1 20	
la, d., d. Maran, daga da Ali Salitako kirista da	

15.00 15.000	0.112 0.122 0.222 0.		
0.05 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	2010 2010	10000000000000000000000000000000000000	SALEA MODE

spenders were used to an and the second strategies of the Hull Sciences.

Now. CONCL, 4 for even all the to taken y success inversion of the total sector and taken y success in no used in the concern and taken y success the term of 20 a for even of VL and version in no used in the concern and taken y success the term of 20 a for even of VL and version the concern and taken y support of and taken y success the term of the VL is the VL and VL and

ችላይ ቅዱክሪ አለባ የሥራክል ላ **የሀገር 20 6 ጊ ሽባጋ መገኘውም አውሮ ታካራ ጥር** የሚሰጥ አካቢያምስተያያለው። ላቅም ካኒስ እና አቅም የሚሰ ዓይላዊ አስተዋ ያርስቲካስ ብር የተ ችሮይኔ ውስት (ውስሮ የኒቨርሲክ custocians nut been reported for a Methy Supervised of Methy Analog Alexan problem on the result was at the Suce Media Supervises to

No. 2005; S. L. A. J. Market, C. M. S. M.

Alternational Altern



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

May 13, 2015

Scott Denton Navajo Refining Company P.O. Box 159 Artesia, NM 88211-0159 TEL: (575) 748-3311 FAX

RE: Monthly RO Reject

OrderNo.: 1504C24

Dear Scott Denton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/29/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1504C24

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1504C24 Date Reported: 5/13/2015

CLIENT: Navajo Refining CompanyProject: Monthly RO RejectLab ID: 1504C24-001	Matrix:	AQUEOUS			Date: 4/2). 8/2015 8:45:00 AM 9/2015 9:15:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB						Analyst:	JME
1,2-Dibromoethane	ND	0.010		µg/L	1	4/30/2015 5:33:16 PM	18974
EPA METHOD 8082: PCB'S						Analyst:	SCC
Aroclor 1016	ND	1.0		µg/L	1	5/5/2015 3:50:42 PM	18997
Aroclor 1221	ND	1.0		μg/L	1	5/5/2015 3:50:42 PM	18997
Aroclor 1232	ND	1.0		μg/L	1	5/5/2015 3:50:42 PM	18997
Aroclor 1242	ND	1.0		µg/L	1	5/5/2015 3:50:42 PM	18997
Aroclor 1248	ND	1.0		µg/L	1	5/5/2015 3:50:42 PM	18997
Aroclor 1254	ND	1.0		µg/L	1	5/5/2015 3:50:42 PM	18997
Aroclor 1260	ND	1.0		µg/L	1	5/5/2015 3:50:42 PM	18997
Surr: Decachlorobiphenyl	115	44.5-110	S	%REC	1	5/5/2015 3:50:42 PM	18997
Surr: Tetrachloro-m-xylene	126	31.8-95.7	S	%REC	1	5/5/2015 3:50:42 PM	18997
EPA METHOD 8015D: DIESEL RANGE						Analyst:	KJH
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	4/29/2015 4:57:42 PM	18947
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	4/29/2015 4:57:42 PM	18947
Surr: DNOP	113	76.5-150		%REC	1	4/29/2015 4:57:42 PM	18947
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/4/2015 4:01:53 PM	R25939
Surr: BFB	87.5	80-120		%REC	1	5/4/2015 4:01:53 PM	R25939
EPA METHOD 8310: PAHS						Analyst:	SCC
Naphthalene	ND	2.0		µg/L	1	5/5/2015 11:32:18 AM	18998
1-Methylnaphthalene	ND	2.0		µg/L	1	5/5/2015 11:32:18 AM	18998
2-Methylnaphthalene	ND	2.0		µg/L	1	5/5/2015 11:32:18 AM	18998
Benzo(a)pyrene	ND	0.070		µg/L	1	5/5/2015 11:32:18 AM	18998
Surr: Benzo(e)pyrene	81.0	30.8-125		%REC	1	5/5/2015 11:32:18 AM	18998
EPA METHOD 300.0: ANIONS						Analyst:	LGT
Fluoride	2.2	0.10		mg/L	1	4/29/2015 3:25:23 PM	R25872
Chloride	37	10		mg/L	20	4/29/2015 4:02:38 PM	R25872
Nitrogen, Nitrate (As N)	1.1	0.10		mg/L	1	4/29/2015 3:25:23 PM	R25872
Sulfate	1100	25		mg/L	50	5/6/2015 12:59:46 AM	R25994
EPA METHOD 200.7: DISSOLVED METAL	S					Analyst:	JLF
Aluminum	ND	0.020		mg/L	1	4/29/2015 6:14:42 PM	R25851
Barium	0.041	0.0020		mg/L	1	4/29/2015 6:14:42 PM	R25851
Boron	0.089	0.040		mg/L	1	4/29/2015 6:14:42 PM	R25851
Cadmium	ND	0.0020		mg/L	1	4/30/2015 1:05:27 PM	R25881
Chromium	ND	0.0060		mg/L	1	4/29/2015 6:14:42 PM	R25851
Cobalt	ND	0.0060		mg/L	1	4/29/2015 6:14:42 PM	R25851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers: * Value exceeds Maximum Contaminant Level.

- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit

Analytical Report Lab Order 1504C24

Date Reported: 5/13/2015

Analyst: SCC

CLIENT: Navajo Refining CompanyProject: Monthly RO RejectLab ID: 1504C24-001	Matrix:	AQUEOUS		Date: 4/2	D. 28/2015 8:45:00 AM 29/2015 9:15:00 AM	
Analyses	Result		ual Units	and the formation	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED ME	TALS				Analyst	JLF
Copper	ND	0.0060	mg/L	1	4/29/2015 6:14:42 PM	R25851
Iron	ND	0.020	mg/L	1	4/29/2015 6:14:42 PM	R25851
Manganese	ND	0.0020	mg/L	1	4/29/2015 6:14:42 PM	R2585
Molybdenum	ND	0.0080	mg/L	1	4/30/2015 1:05:27 PM	R2588
Nickel	ND	0.010	mg/L	1	4/29/2015 6:14:42 PM	R2585
Silver	ND	0.0050	mg/L	1	4/30/2015 1:05:27 PM	R25881
Zinc	0.075	0.010	mg/L	1	4/29/2015 6:14:42 PM	R25851
EPA 200.8: DISSOLVED METALS			····9· –		Analyst	
Arsenic	ND	0.0050	mg/L	5	5/7/2015 2:35:40 PM	R26042
Lead	ND	0.0010	mg/L	1	5/5/2015 11:04:05 AM	R25950
Selenium	0.0053	0.0010	mg/L	1	5/5/2015 11:04:05 AM	R25950
Uranium	0.0042	0.0010	mg/L	1	5/5/2015 11:04:05 AM	R25950
EPA METHOD 245.1: MERCURY	0.0042	0.0010	ing/L		Analyst	
Mercury	ND	0.00020	mg/L	1	5/4/2015 2:01:49 PM	18982
EPA METHOD 8260B: VOLATILES			5		Analyst	: cada
Benzene	ND	1.0	µg/L	1	4/29/2015 6:01:15 PM	R25860
Toluene	ND	1.0	μg/L	1	4/29/2015 6:01:15 PM	R25860
Ethylbenzene	ND	1.0	μg/L	1	4/29/2015 6:01:15 PM	R25860
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	4/29/2015 6:01:15 PM	R25860
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	4/29/2015 6:01:15 PM	R25860
Carbon Tetrachloride	ND	1.0	µg/L	1	4/29/2015 6:01:15 PM	R25860
Chloroform	ND	1.0	μg/L	1	4/29/2015 6:01:15 PM	R25860
1,1-Dichloroethane	ND	1.0	μg/L	1	4/29/2015 6:01:15 PM	R25860
1,1-Dichloroethene	ND	1.0	µg/L	1	4/29/2015 6:01:15 PM	R25860
Methylene Chloride	ND	3.0	μg/L	1	4/29/2015 6:01:15 PM	R25860
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	4/29/2015 6:01:15 PM	R25860
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	4/29/2015 6:01:15 PM	R25860
1,1,1-Trichloroethane	ND	1.0	µg/L	1	4/29/2015 6:01:15 PM	R25860
1,1,2-Trichloroethane	ND	1.0	µg/L	1	4/29/2015 6:01:15 PM	R25860
Trichloroethene (TCE)	ND	1.0	µg/L	1	4/29/2015 6:01:15 PM	R25860
Vinyl chloride	ND	1.0	μg/L	1	4/29/2015 6:01:15 PM	R25860
Xylenes, Total	ND	1.5	μg/L	1	4/29/2015 6:01:15 PM	R2586
Surr: 1,2-Dichloroethane-d4	89.8	70-130	%REC	1	4/29/2015 6:01:15 PM	R25860
Surr: 4-Bromofluorobenzene	99.8	70-130	%REC	1	4/29/2015 6:01:15 PM	R25860
Surr: Dibromofluoromethane	92.8	70-130	%REC	1	4/29/2015 6:01:15 PM	R25860
Surr: Toluene-d8	103	70-130	%REC	1	4/29/2015 6:01:15 PM	R25860

Hall Environmental Analysis Laboratory, Inc.

TOTAL PHENOLICS BY SW-846 9067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank	
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 20	
	0	RSD is greater than RSDlimit	Р	Sample pH Not In Range		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report Lab Order 1504C24 Date Reported: 5/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company Project: Monthly RO Reject

Client Sample ID: R.O. Collection Date: 4/28/2015 8:45:00 AM

Lab ID: 1504C24-001	Matrix:	AQUEOUS	s R	eceived I	Date: 4/2	29/2015 9:15:00 AM	
Analyses	Result	RL (Qual U	nits	DF	Date Analyzed	Batch
TOTAL PHENOLICS BY SW-846 906	7					Analyst	SCC
Phenolics, Total Recoverable	ND	2.5	Ч	g/L	1	4/30/2015	18972
EPA 335.4: TOTAL CYANIDE SUBBE	D					Analyst	SUB
Cyanide	ND	0.0100	n	ng/L	1	5/5/2015	R26153
SM4500-H+B: PH						Analyst	JRR
pН	8.09	1.68	н р	H units	1	5/5/2015 5:57:25 PM	R25990
SM2540C MOD: TOTAL DISSOLVED	SOLIDS					Analyst	KS
Total Dissolved Solids	2190	20.0	* m	ng/L	1	5/1/2015 3:30:00 PM	18979

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	E	Value above quantitation range	н	Holding times for preparation or analyst	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 20
	0	RSD is greater than RSDlimit	Р	Sample pH Not In Range	1 age 5 01 20
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1504C24 Date Reported: 5/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company

1504C24-002

Project: Monthly RO Reject

Lab ID:

Client Sample ID: Trip Blank Collection Date:

Matrix: TRIP BLANK Received Date: 4/29/2015 9:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB					Analyst	: JME
1,2-Dibromoethane	ND	0.010	µg/L	1	4/30/2015 5:46:54 PM	18974
EPA METHOD 8260B: VOLATILES					Analyst	: cadg
Benzene	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Toluene	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Ethylbenzene	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Carbon Tetrachloride	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Chloroform	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
1,1-Dichloroethane	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
1,1-Dichloroethene	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Methylene Chloride	ND	3.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
1,1,1-Trichloroethane	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
1,1,2-Trichloroethane	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Trichloroethene (TCE)	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Vinyl chloride	ND	1.0	µg/L	1	4/29/2015 6:29:57 PM	R25860
Xylenes, Total	ND	1.5	µg/L	1	4/29/2015 6:29:57 PM	R25860
Surr: 1,2-Dichloroethane-d4	94.6	70-130	%REC	1	4/29/2015 6:29:57 PM	R25860
Surr: 4-Bromofluorobenzene	104	70-130	%REC	1	4/29/2015 6:29:57 PM	R25860
Surr: Dibromofluoromethane	99.0	70-130	%REC	1	4/29/2015 6:29:57 PM	R25860
Surr: Toluene-d8	98.0	70-130	%REC	1	4/29/2015 6:29:57 PM	R25860

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	н	Holding times for preparation or analyst	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 20
	0	RSD is greater than RSDlimit	Р	Sample pH Not In Range	1 age 4 01 20
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Pace Project No.:	1504C24 30147057						
Sample: 1504C24- PWS:	001H R.O.	Lab ID: 301470 Site ID:	057001 Collected: 04/28/15 08:45 Sample Type:	Received:	05/01/15 09:35	Matrix: Water	
Parame	ters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 903.1	1.75 ± 0.849 (0.976) C:NA T:60%	pCi/L	05/13/15 10:06	3 13982-63-3	
Radium-228		EPA 904.0	0.398 ± 0.412 (0.851) C:72% T:77%	pCi/L	05/11/15 17:31	15262-20-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..



QUALITY CONTROL - RADIOCHEMISTRY

Project:	1504C24						
Pace Project No.:	30147057						
QC Batch:	RADC/24384		Analysis Method:	EPA 904.0			
QC Batch Method:	EPA 904.0		Analysis Description:	904.0 Radiu	m 228		
Associated Lab Sa	mples: 3014705	7001					
METHOD BLANK:	890250		Matrix: Water				
Associated Lab Sa	mples: 3014705	7001					
Para	meter	Act ± U	Inc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-228		0.437 ± 0.426	(0.869) C:70% T:70%	pCi/L	05/11/15 17:33		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..



QUALITY CONTROL - RADIOCHEMISTRY

Project:	1504C24						
Pace Project No.:	30147057						
QC Batch: RADC/24322 QC Batch Method: EPA 903.1			Analysis Method:		EPA 903.1		
			Analysis Description:	903.1 Radiu	m-226		
Associated Lab Sam	nples: 301470570	01					
METHOD BLANK:	888781		Matrix: Water				
Associated Lab Sam	nples: 301470570	01					
Parameter		Act ± 0	Act ± Unc (MDC) Carr Trac		Analyzed	Qualifiers	
adium-226 0.256 ± 0.438 (0.767) C:NA T:98%		pCi/L	05/13/15 09:55				

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..

WO#:	1504C24
	13-May-15

Client: Project:		Navajo Refining C Monthly RO Rejec										
Sample ID M	В	Samp	Type: ME	BLK	Tes	TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: PE	BW	Bate	h ID: R2	5851	F	RunNo: 2	5851					
Prep Date:		Analysis	Date: 4/	29/2015	S	SeqNo: 7	66029	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Aluminum		ND	0.020									
Barium		ND	0.0020									
Boron		ND	0.040									
Chromium		ND	0.0060									
Cobalt		ND	0.0060									
Copper		ND	0.0060									
ron		ND	0.020									
Manganese		ND	0.0020									
Nickel		ND	0.010									
Zinc		ND	0.010									
Sample ID LC	s	Samp	Type: LC	S	Tes	tCode: E	PA Method	200.7: Dissol	ved Metal	s		
Client ID: LC	csw	Batch ID: R25851		F	RunNo: 2	5851						
Prep Date:		Analysis	Date: 4/	29/2015	S	SeqNo: 7	66030	Units: mg/L				
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Aluminum		0.51	0.020	0.5000	0	103	85	115				
Barium		0.47	0.0020	0.5000	0	93.0	85	115				
Boron		0.49	0.040	0.5000	0	97.9	85	115				
Chromium		0.48	0.0060	0.5000	0	95.5	85	115				
Cobalt		0.47	0.0060	0.5000	0	94.4	85	115				
Copper		0.47	0.0060	0.5000	0	94.3	85	115				
ron		0.47	0.020	0.5000	0	94.6	85	115				
Manganese		0.44	0.0020	0.5000	0	88.9	85	115				
Nickel		0.48	0.010	0.5000	0	96.6	85	115				
Zinc		0.48	0.010	0.5000	0	95.6	85	115				
Sample ID M	в	Samp	Type: ME	BLK	Tes	tCode: E	PA Method	200.7: Dissol	ved Metal	s		
Client ID: PE	зw	Bate	ch ID: R2	5881	F	RunNo: 2	5881					
Prep Date:		Analysis	Date: 4/	30/2015	S	SeqNo: 7	67040	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cadmium		ND	0.0020									
Molybdenum		ND	0.0080									
Silver		ND	0.0050									

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Р Sample pH Not In Range
 - RL Reporting Detection Limit

- Page 5 of 20

WO#:	1504C24
	13-May-15

Client: Project:	Navajo Refining C Monthly RO Rejec									
Sample ID LCS	Samp	Type: LC	s	TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: LCSV	SW Batch ID: R25881			F	unNo: 2	5881				
Prep Date:	Analysis	Date: 4/	30/2015	S	eqNo: 7	67041	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	103	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.4	85	115			
Silver	0.088	0.0050	0.1000	0	87.9	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - P Sample pH Not In Range
 - RL Reporting Detection Limit

Page 6 of 20

ND

0.0010

Navajo Refining Company

Project:		Monthly RO Reject	- ·	0							
Sample ID Client ID:			ype: LC			TestCode: EPA 200.8: Dissolved Metals RunNo: 25950					
Prep Date:	20011	Analysis D				eqNo: 7		Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.024	0.0010	0.02500	0	96.4	85	115			
Selenium		0.024	0.0010	0.02500	0	94.9	85	115			
Uranium		0.025	0.0010	0.02500	0	98.7	85	115			
Sample ID	MB	SampType: MBLK TestCode: EPA 200.8: Dissolved Metals									
Client ID:	PBW	Batch	Batch ID: R25950 RunNo: 25950								
Prep Date:		Analysis D	ate: 5	5/2015	S	eqNo: 7	69415	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.0010								
Selenium		ND	0.0010								
Uranium		ND	0.0010								
Sample ID	LCS	SampT	ype: LC	S	Test	Code: El	PA 200.8: D	Dissolved Me	tals		
Client ID:	LCSW	Batch	n ID: R2	6042	R	unNo: 2	6042				
Prep Date:		Analysis D	ate: 5	7/2015	S	eqNo: 7	72040	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.024	0.0010	0.02500	0	97.4	85	<mark>115</mark>			
Sample ID	MB	SampT	ype: MI	BLK	Test	Code: El	PA 200.8: E	Dissolved Me	tals		
Client ID:	PBW	Batcl	DID: R2	6042	R	unNo: 2	6042				
Prep Date:		Analysis D	ate: 5	7/2015	S	eqNo: 7	72041	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic

Client:

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - P Sample pH Not In Range
 - RL Reporting Detection Limit

Page 7 of 20

1504C24 13-May-15

WO#:

WO#:	1504C24
	13-May-15

Client: Project:	1960 A.S.	jo Refining Company thly RO Reject						
Sample ID	MB-18982	SampType: MBLK	TestCode:	EPA Method	245.1: Mercu	ry		
Client ID:	PBW	Batch ID: 18982	RunNo:	25930				
Prep Date:	4/30/2015	Analysis Date: 5/4/2015	SeqNo	768647	Units: mg/L			
Analyte		Result PQL SPK val	ue SPK Ref Val %RE	C LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND 0.00020						
Sample ID	LCS-18982	SampType: LCS	TestCode:	EPA Method	245.1: Mercu	ry		
Client ID:	LCSW	Batch ID: 18982	RunNo	25930				
Prep Date:	4/30/2015	Analysis Date: 5/4/2015	SeqNo	768648	Units: mg/L			
Analyte		Result PQL SPK val	ue SPK Ref Val %RE	C LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0051 0.00020 0.0050	00 0 10	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
 - Р Sample pH Not In Range
 - RL Reporting Detection Limit

Page 8 of 20

Client:	Navajo Refining C	ompany								
Project:	Monthly RO Reject	t								
Sample ID MB	Samp	Type: MI	BLK	Tes	tCode: El	PA Method	300.0: Anion:	S		
Client ID: PBW	Bato	h ID: R2	5872	F	RunNo: 2	5872				
Prep Date:	Analysis	Date: 4	29/2015	S	SeqNo: 7	66806	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10					-			
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								
Sample ID LCS	Samp	Type: LC	s	Tes	tCode: El	PA Method	300.0: Anion:	s		
Client ID: LCSW	Bato	h ID: R2	25872	F	RunNo: 2	5872				
Prep Date:	Analysis	Date: 4	29/2015	S	SeqNo: 7	66807	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.46	0.10	0.5000	0	92.4	90	110		2008 - Contra De 1972 198	
Chloride	4.5	0.50	5.000	0	91.0	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.2	90	110			
Sample ID 1504C24-001EMS SampType: MS TestCode: EPA Method 300.0: Anions										
Client ID: R.O.	Bato	h ID: R2	5872	F	RunNo: 2	5872				
Prep Date:	Analysis	Date: 4	29/2015	S	SeqNo: 7	66822	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.5	0.10	0.5000	2.238	55.2	66.1	113			S
Nitrogen, Nitrate (As N)	3.3	0.10	2.500	1.147	86.1	84	109			
Sample ID 1504C2	24-001EMSD Samp	Type: M	SD	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: R.O.		h ID: R2			RunNo: 2					
Prep Date:	Analysis	Date: 4	29/2015	s	SeqNo: 7	66823	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.4	0.10	0.5000	2.238	30.4	66.1	113	5.06	20	S
Nitrogen, Nitrate (As N)	3.3	0.10	2.500	1.147	86.6	84	109	0.363	20	
		Type: MI	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Sample ID MB	Samp	ypc.								
Sample ID MB Client ID: PBW		h ID: R2	5994	F	RunNo: 2	5994				
		h ID: R2			RunNo: 2 SeqNo: 7		Units: mg/L			
Client ID: PBW	Bato	h ID: R2	5/2015				Units: mg/L HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Р Sample pH Not In Range
 - **Reporting Detection Limit** RL

Page 9 of 20

WO#: 1504C24

WO#:	1504C24
	13-May-15

Client: Project:	Navajo Refining Con Monthly RO Reject	mpany								
Sample ID LCS	SampTy	/pe: LC	s	Test	tCode: El	PA Method	300.0: Anion	s		
Client ID: LCSW	Batch	ID: R2	5994	R	unNo: 2	5994				
Prep Date:	Analysis Da	ate: 5/	5/2015	S	eqNo: 7	70621	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.7	0.50	10.00	0	97.2	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - P Sample pH Not In Range
 - RL Reporting Detection Limit

Page 10 of 20

1 450 10 01 20

WO#:	1504C24
	13-May-15

Client: Project:		o Refining Co nly RO Reject									
Sample ID	MB-18974	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8011/504.1: E	DB		
Client ID:	PBW	Batch	n ID: 18	974	F	RunNo: 2	5898				
Prep Date:	4/30/2015	Analysis D	ate: 4/	30/2015	5	SeqNo: 7	67691	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoeth	ane	ND	0.010								
Sample ID	LCS-18974	SampT	ype: LC	s	Tes	tCode: E	PA Method	8011/504.1: E	DB		
Client ID:	LCSW	Batch	1D: 18	974	F	RunNo: 2	5898				
Prep Date:	4/30/2015	Analysis D	ate: 4/	30/2015	9	SeqNo: 7	67692	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoeth	ane	0.11	0.010	0.1000	0	114	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Р Sample pH Not In Range
 - RL Reporting Detection Limit

Page 11 of 20

Navajo Refining Company

13-May-15

Sample ID MB-18947	Samp	Type: ME	BLK	Tes	tCode: El	PA Method	8015D: Diese	Range		
Client ID: PBW	Batc	h ID: 18	947	F	unNo: 2	5835				
Prep Date: 4/29/2015	Analysis [Date: 4/	29/2015	S	eqNo: 7	66304	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		109	76.5	150			
Sample ID LCS-18947	Samp	Type: LC	s	Tes	tCode: El	PA Method	8015D: Diese	Range		
Client ID: LCSW	Batc	h ID: 18	947	F	unNo: 2	5835				
Prep Date: 4/29/2015	Analysis [Date: 4/	29/2015	5	eqNo: 7	66305	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	104	60.1	156			

Qualifiers:

Client:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Р Sample pH Not In Range
 - RL Reporting Detection Limit

Page 12 of 20

WO#:

WO#:	1504C24

13-May-15

	vajo Refining Co onthly RO Rejec									
Sample ID 5ML RB	Samp	Type: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBW	Batc	Batch ID: R25939		F	RunNo: 2	5939				
Prep Date:	Analysis [Date: 5/	4/2015	S	SeqNo: 7	68862	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GF	RO) ND	0.050								
Surr: BFB	18		20.00		88. <mark>4</mark>	80	120			
Sample ID 2.5UG GRC	LCS Samp	Type: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSW	Batc	h ID: R2	5939	F	RunNo: 2	5939				
Prep Date:	Analysis [Date: 5/	4/2015	S	SeqNo: 7	68863	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GF	RO) 0.46	0.050	0.5000	0	92.2	80	120			
Surr: BFB	18		20.00		91.1	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
 - Р Sample pH Not In Range
 - RL Reporting Detection Limit

QC SUMMARY Hall Environmen			aborat	ory, Inc.					WO#:	1504C24 13-May-15
and the second	Refining Co y RO Reject	· ·								
Sample ID MB-18997	SampTy	ype: ME	BLK	Tes	tCode: E	PA Method	8082: PCB's			
Client ID: PBW	Batch	ID: 18	997	RunNo: 25944						
Prep Date: 5/1/2015	Analysis Da	ate: 5/	5/2015	5	SeqNo: 7	69049	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	1.0								50 1
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	2.2		2.500		87.2	44.5	110			
Surr: Tetrachloro-m-xylene	2.4		2.500		97.6	31.8	95.7			S
Sample ID LCS-18997	SampTy	ype: LC	S	Tes	tCode: E	PA Method	8082: PCB's			
Client ID: LCSW	Batch	ID: 18	997	RunNo: 25944						
Prep Date: 5/1/2015	Analysis Da	ate: 5/	5/2015	5	SeqNo: 7	69942	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	4.9	1.0	5.000	0	98.7	22.6	127			
Aroclor 1260	5.1	1.0	5.000	0	102	20.4	122			
Surr: Decachlorobiphenyl	2.9		2.500		114	44.5	110			S
Surr: Tetrachloro-m-xylene	4.2		2.500		169	31.8	95.7			S
Sample ID LCSD-18997	SampTy	ype: LC	SD	Tes	tCode: E	PA Method	8082: PCB's			
Client ID: LCSS02	Batch	ID: 18	997	F	RunNo: 2	5944				
Prep Date: 5/1/2015	Analysis Da	ate: 5/	5/2015	5	SeqNo: 7	69944	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	4.6	1.0	5.000	0	93.0	22.6	127	6.03	26.9	
Aroclor 1260	5.3	1.0	5.000	0	107	20.4	122	4.45	29.1	
Surr: Decachlorobiphenyl	3.0		2.500		118	44.5	110	0	0	S
								023		

2.500

3.8

Qualifiers:

* Value exceeds Maximum Contaminant Level.

QC SUMMARY REPORT

E Value above quantitation range

Surr: Tetrachloro-m-xylene

- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank

150

31.8

95.7

0

- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
 - Р Sample pH Not In Range
 - RL Reporting Detection Limit

Page 14 of 20

0

S

WO#:	1504C24
	13-May-15

Client:	Navajo Refining Company
Project:	Monthly RO Reject

SampT	VDE: LC	s	Test	Code: FI	PA Method	8260B: VOI	ATILES		
						Units: un/			
Analysis D	ale. 4/	29/2015	3	equito. A	00334				
Result	PQL	2000-0018-0012000018-2	CLOSED & SERVICES PLANES	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	1.0				70	130			
20	1.0	20.00	0	98.9		130			
22	1.0	20.00	0	108	75.6	144			
20	1.0	20.00	0	98.3	70	130			
9.9		10.00		98.9	70	130			
10		10.00		103	70	130			
10		10.00		103	70	130			
10		10.00		101	70	130			
SampType: MBLK			Test	tCode: El	PA Method	8260B: VOL	ATILES		
Batch	ID: R2	5860	R	unNo: 2	5860				
Analysis D	ate: 4/	29/2015	S	eqNo: 7	66361	Units: µg/L			
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ND	1.0								
ND	1.0								
ND	1.0								
ND	1.0								
ND	1.0								
ND	1.0								
ND	1.0								
ND	1.0								
ND	1.0								
ND	3.0								
ND	2.0								
ND	1.0								
ND									
ND	1.5								
	1.0			22.2		130			
		10.00		96.8	70				
9.7		10.00		96.8	70 70				
		10.00 10.00 10.00		96.8 104 101	70 70 70	130 130 130			
	Batch Analysis D Result 19 20 22 20 9.9 10 10 10 10 10 32 20 9.9 10 10 10 10 10 10 10 10 10 10 10 10 10	Batch ID: R2 Analysis Date: 4/ Result PQL 19 1.0 20 1.0 20 1.0 22 1.0 20 1.0 20 1.0 20 1.0 20 1.0 20 1.0 9.9 10 10 10 10 10 SampType: ME Batch ID: R2 Analysis Date: 4/ Result PQL ND 1.0 ND	19 1.0 20.00 20 1.0 20.00 22 1.0 20.00 20 1.0 20.00 20 1.0 20.00 20 1.0 20.00 20 1.0 20.00 20 1.0 20.00 20 1.0 20.00 9.9 1.0.00 10.00 10 10.00 10.00 10 10.00 10.00 10 Result R25860 Analysis Date: 4/29/2015 4/29/2015 Result PQL SPK value ND 1.0 1.0 ND 1.0 1.0	Batch ID: R25860 R Analysis Date: Y29/2015 S Result PQL SPK value SPK Ref Val 19 1.0 20.00 0 20 1.0 20.00 0 20 1.0 20.00 0 20 1.0 20.00 0 20 1.0 20.00 0 20 1.0 20.00 0 20 1.0 20.00 0 20 1.0 20.00 0 20 1.0 20.00 0 20 1.0 20.00 0 10 10.00 0 0 10 10.00 10.00 0 10 10.00 10.00 0 Result PQL SPK value SPK Ref Val ND 1.0 1.0 1.0 ND 1.0 1.0 1.0 ND 1.0 1.0 1.0 ND 1.0 1.0 1.0 ND	Batch ID: R25860 RunNo: 2 Analysis Date: 4/29/2015 SeqNo: 7 Result PQL SPK value SPK Ref Val %REC 19 1.0 20.00 0 95.6 20 1.0 20.00 0 98.9 22 1.0 20.00 0 98.9 20 1.0 20.00 0 98.9 20 1.0 20.00 0 98.9 10 1.0 98.9 10.3 103 10 10.00 103 103 103 10 10.00 103 101 101 SampType: HELK TestCode: El Result PQL SPK value SPK Ref Val %REC ND 1.0 SPK SPK SPK SPK ND 1.0 SPK SPK SPK SPK Result PQL SPK value SPK Ref Val %REC ND 1.0 SPK SPK SPK SPK	Runk: 25860 Analysis Dir: R23060 Runk: 25860 Analysis Dir: A/29/2015 SeqN: 766354 Result PQL SPK value SPK Ref Val %REC LowLimit 19 1.0 20.00 0 95.6 70 20 1.0 20.00 0 98.9 70 22 1.0 20.00 0 98.9 70 22 1.0 20.00 0 98.9 70 20 1.0 20.00 0 98.9 70 20 1.0 20.00 98.9 70 9.9 - 10.00 98.9 70 10 10.00 103 70 10 10.00 103 70 10 10.00 103 70 10 10.00 103 70 10 10.00 103 70 10 Result PQL SPK value SPK Ref Val %REC LowLimit ND 1.0	RunNo: 25860 Analysis Date: 4/29/2015 SeqNo: 766354 Units: µg/L Result PQL SPK value SPK Ref Val %REC LowLinit HighLinit 19 1.0 20.00 0 95.6 70 130 20 1.0 20.00 0 98.9 70 130 22 1.0 20.00 0 98.9 70 130 22 1.0 20.00 0 98.9 70 130 9.9 10.00 98.9 70 130 9.9 10.00 98.9 70 130 10 10.00 103 70 130 10 10.00 103 70 130 10 10.00 103 70 130 10 10.00 103 70 130 10 10.00 101 70 130 10 10.00 101 70 130 10 Result PQL SPK value SPK Ref Val %REC	RunNo: 25860 Analysis Date: 4/29/2015 SeqNo: 766354 Units: µg/L Result PQL SPK value SPK Ref Val %REC LowLinit HighLinit %RPD 19 1.0 20.00 0 95.6 700 130 20 1.0 20.00 0 98.9 700 134 22 1.0 20.00 0 98.3 700 130 22 1.0 20.00 0 98.9 700 130 9.9 10.00 98.9 700 130 9.9 10.00 103 700 130 10 10.00 103 700 130 10 10.00 103 700 130 SampType: High 100.0 RunNo: 200.0 100	Bate-Trip Runko: 2580/ Analysis Lie $4/29/2015$ SeqNo: 76334 Units: $µg/L$ Result PQL SPK value SPK Ref Val %REC LowLinit HighLinit %RPD RPDLinit Result PQL SPK value SPK Ref Val %REC LowLinit HighLinit %RPD RPDLinit Result PQL 2000 0 98.9 70 130 100

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

WO#: 1504C24 13-May-15

Client:	Navajo Refining Company
Project:	Monthly RO Reject

	<u> </u>						0040. 5411			
Sample ID MB-18998	SampType: MBLK					PA Method				
Client ID: PBW	Batch ID: 18998			R	RunNo: 2	5938				
Prep Date: 5/1/2015	Analysis E	Date: 5/	5/2015	S	eqNo: 7	69391	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	2.0								
2-Methylnaphthalene	ND	2.0								
Acenaphthylene	ND	2.5								
Acenaphthene	ND	2.0								
Fluorene	ND	0.80								
Phenanthrene	ND	0.60								
Anthracene	ND	0.60								
Fluoranthene	ND	0.30								
Pyrene	ND	0.30								
Benz(a)anthracene	ND	0.070								
Chrysene	ND	0.20								
Benzo(b)fluoranthene	ND	0.10								
Benzo(k)fluoranthene	ND	0.070								
Benzo(a)pyrene	ND	0.070								
Dibenz(a,h)anthracene	ND	0.12								
Benzo(g,h,i)perylene	ND	0.12								
Indeno(1,2,3-cd)pyrene	ND	0.25								
Surr Benzo(e)pyrene	14		20.00		71.8	30.8	125			
Sample ID LCS-18998	Samp	Type: LC	S	Test	tCode: El	PA Method	8310: PAHs			
Client ID: LCSW		h ID: 18		R	RunNo: 2	5938				
Prep Date: 5/1/2015	Analysis E	Date: 5/	5/2015	s	SeqNo: 7	69392	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	55	2.0	80.00	0	69.3	41	76.8			
1-Methylnaphthalene	57	2.0	80.20	0	71.0	24.7	81			
2-Methylnaphthalene	56	2.0	80.00	0	70.4	17.4	81.9			
Acenaphthylene	60	2.5	80.20	0	75.4	50.3	77.5			
Acenaphthene	57	2.0	80.00	0	71.8	27.7	81.1			
Fluorene	5.8	0.80	8.020	0	72.8	34.2	75.1			
Phenanthrene	2.9	0.60	4.020	0	72.4	44.6	88.3			
Anthracene	2.9	0.60	4.020	0	72.1	41.9	85.3			
Fluoranthene	6.1	0.30	8.020	0	76.2	40.6	88			
Pyrene	6.6	0.30	8.020	0	82.8	41	86.6			
Benz(a)anthracene	0.62	0.070	0.8020	0	77.3	43.8	86.7			
Chrysene	3.1	0.070	4.020	0	76.9	44.5	80.7			
Benzo(b)fluoranthene	0.81	0.20	1.002	0	80.8	44.3	87.1			
Benzo(k)fluoranthene	0.39	0.070	0.5000	0	78.0	44.3 39.9	94.3			
						.74 4	94.5			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- Р Sample pH Not In Range
- **Reporting Detection Limit** RL

Page 16 of 20

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	1504C24
	13-May-15

Client: Navajo F	Refining Co	ompany								
Project: Monthly	RO Reject	t								
Sample ID LCS-18998	Samp	Type: LC	s	Tes	tCode: El	PA Method	8310: PAHs			
Client ID: LCSW	Batc	h ID: 18	998	F	RunNo: 2	5938				
Prep Date: 5/1/2015	Analysis [Date: 5/	5/2015	s	SeqNo: 7	69392	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(a)pyrene	0.39	0.070	0.5020	0	77.7	44	86.5			
Dibenz(a,h)anthracene	0.78	0.12	1.002	0	77.8	48.8	83.6			
Benzo(g,h,i)perylene	0.83	0.12	1.000	0	83.0	43.6	84.5			
Indeno(1,2,3-cd)pyrene	1.6	0.25	2.004	0	77.3	49.2	91.1			
Surr: Benzo(e)pyrene	21	8380286-4640	20.00	5-30	106	30.8	125			
Sample ID LCSD-18998	Samp	Type: LC	SD	Tes	tCode: El	PA Method	8310: PAHs			
Client ID: LCSS02	Batc	h ID: 18	998	F	RunNo: 2	5938				
Prep Date: 5/1/2015	Analysis [Date: 5/	5/2015	5	SeqNo: 7	69393	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	58	2.0	80.00	0	72.7	41	76.8	4.75	20	
1-Methylnaphthalene	60	2.0	80.20	0	74.4	24.7	81	4.68	20	
2-Methylnaphthalene	59	2.0	80.00	0	73.8	17.4	81.9	4.70	20	
Acenaphthylene	63	2.5	80.20	0	78.7	50.3	77.5	4.29	20	S
Acenaphthene	60	2.0	80.00	0	74.9	27.7	81.1	4.26	20	
Fluorene	6.1	0.80	8.020	0	75.7	34.2	75.1	3.86	20	S
Phenanthrene	3.1	0.60	4.020	0	76.1	44.6	88.3	5.03	24	
Anthracene	3.0	0.60	4.020	0	75.9	41.9	85.3	5.04	20	
Fluoranthene	6.4	0.30	8.020	0	79.9	40.6	88	4.79	20.9	
Pyrene	7.0	0.30	8.020	0	86.8	41	86.6	4.71	20.8	S
Benz(a)anthracene	0.65	0.070	0.8020	0	81.0	43.8	86.7	4.72	20	
Chrysene	3.3	0.20	4.020	0	80.8	44.5	80.7	5.05	20	S
Benzo(b)fluoranthene	0.84	0.10	1.002	0	83.8	44.3	87.1	3.64	20.6	
Benzo(k)fluoranthene	0.41	0.070	0.5000	0	82.0	39.9	94.3	5.00	20.8	
Benzo(a)pyrene	0.41	0.070	0.5020	0	81.7	44	86.5	5.00	20	
Dibenz(a,h)anthracene	0.83	0.12	1.002	0	82.8	48.8	83.6	6.21	20	
www.coline.coline.com				0	07.0	10.0	04 5	4 74	00	0
Benzo(g,h,i)perylene	0.87	0.12	1.000	0	87.0	43.6	84.5	4.71	20	S
Benzo(g,h,i)perylene Indeno(1,2,3-cd)pyrene	0.87 1.6	0.12 0.25	1.000 2.004	0	87.0	43.6 49.2	91.1	5.03	20	5

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Value above quantitation range E
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Р Sample pH Not In Range
 - RL Reporting Detection Limit

Page 17 of 20

				,						10 1110/ 10
	o Refining Co ly RO Reject	· ·								
MB-18972	SampT	ype: M	BLK	Tes	tCode: To	otal Phenol	ics by SW-84	6 9067		
PBW	Batc	h ID: 18	972	F	RunNo: 2	5901				
4/30/2015	Analysis D	Date: 4/	30/2015	S	eqNo: 7	67792	Units: µg/L			
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Phenolics, Total Recoverable	ND	2.5								
Sample ID LCS-18972	SampT	ype: LC	S	Tes	tCode: To	otal Phenol	ics by SW-84	6 9067		
Client ID: LCSW	Batch	ID: 18	972	F	RunNo: 2	5901				
Prep Date: 4/30/2015	Analysis D	ate: 4/	30/2015	S	SeqNo: 7	67793	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics, Total Recoverable	22	2.5	20.00	0	109	75.7	126			

Qualifiers:

Client:

Project:

Client ID:

Prep Date:

Analyte

Sample ID MB-18972

- Value exceeds Maximum Contaminant Level. *
- E Value above quantitation range
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Р Sample pH Not In Range
 - **Reporting Detection Limit** RL

Page 18 of 20

WO#:

Client: Project:		o Refining C ly RO Rejec									
Sample ID	MB-R26153	Samp	Type: MI	BLK	Tes	tCode: El	PA 335.4: T	otal Cyanide	Subbed		
Client ID:	PBW	Bate	ch ID: R2	26153	F	RunNo: 2	6153				
Prep Date:		Analysis	Date: 5	/5/2015	S	SeqNo: 7	75896	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide		ND	0.0100								

Sample ID LCS-R26153	SampT	pe: LC	s	Test	tCode: E	PA 335.4: T	otal Cyanide	Subbed		
Client ID: LCSW	Batch	ID: R2	6153	R	unNo: 2	6153				
Prep Date:	Analysis Da	ate: 5/	5/2015	S	eqNo: 7	75897	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide	0.500		0.5000	0	100	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Р Sample pH Not In Range
 - Reporting Detection Limit RL

Page 19 of 20

WO#: 1504C24 13-May-15

WO#:	1504C24
	13-Mav-15

	avajo Refining Company onthly RO Reject		
Sample ID MB-18979	SampType: MBLK	TestCode: SM2540C MC	D: Total Dissolved Solids
Client ID: PBW	Batch ID: 18979	RunNo: 25912	
Prep Date: 4/30/201	Analysis Date: 5/1/2015	SeqNo: 768004	Units: mg/L
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qua
Total Dissolved Solids	ND 20.0		
Sample ID LCS-1897	SampType: LCS	TestCode: SM2540C MC	D: Total Dissolved Solids
Client ID: LCSW	Batch ID: 18979	RunNo: 25912	
Prep Date: 4/30/2019	Analysis Date: 5/1/2015	SeqNo: 768005	Units: mg/L
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qua
Total Dissolved Solids	999 20.0 1000	0 99.9 80	120

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Р Sample pH Not In Range
 - RL Reporting Detection Limit

Page 20 of 20

LABORATORY	ALCHER NO STREET, MO	allenvironmental		and shared as	
Client Name: NAVAJO REFINING CO	Work Order Numbe	r: 1504C24		RoptNo: 1	
Received by/date:	64/29/15				
Logged By: Lindsay Mangin	4/29/2015 9:15:00 AM	4	July Hugo		
Completed By: Lindsay Mangin	4/29/2015 10:14:50 A	м	Alto		
Reviewed By:	04/29/15				
Chain of Custody	0//~///				
1. Custody seals intact on sample bottles?	*	Yes	No 🗌	Not Present	
2. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?		Courier			
Log In					
4. Was an attempt made to cool the sample	s?	Yes 🗸	No 🗌		
5. Were all samples received at a temperatu	re of >0° C to 6.0°C	Yes 🔽	No 🗌		
6. Sample(s) in proper container(s)?		Yes 🔽	No 🗌		
7. Sufficient sample volume for indicated tes	t(s)?	Yes 🗸	No 🗌		
8. Are samples (except VOA and ONG) prop	erly preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗌	
10.VOA vials have zero headspace?		Yes	No U	CS 04/29/15 Sami	ple -002, has a bub.
11. Were any sample containers received bro	ken?	Yes 🗆	No 🗸	(2 of a)	nas a eaco
				# of preserved bottles checked	
12. Does paperwork match bottle labels?		Yes 🖌	No 🗌	for pH: _ DA	
(Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain	of Crustody 2	Yes 🔽	No 🗆	(<2 g/ 12 upless n Adjusted? NO	iatea)
13. Are matrices correctly identified on Chain 14. Is it clear what analyses were requested?	of Custody?	Yes 🗹	No 🗌		
15. Were all holding times able to be met?		Yes 🔽	No 🗌	Checked by: CS	
(If no, notify customer for authorization.)					
special Handling (if applicable)					
6. Was client notified of all discrepancies wit	h this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified:	Date				
By Whom:	Via:	🗌 eMail 🔲 I	Phone 🗌 Fax	In Person	
Regarding:					
Client Instructions:					

1.0 Good

Yes

Page 1 of 1

1

Cha	ain-oi	F-Cus	Chain-of-Custody Record	Turn-Around Time:	11116			MALL ENVIDONMENTAL
Client: Navajo Refining Co.	ajo Refin	ing Co.		X Standard	C Rush	h		ANALYSIS LABORATORY
				Project Name:				www.hallenvironmental.com
Mailing Address: P.O. Box 159 Artesia	ress. P.(O Box		Monthly RO R	teject			4901 Hawkins NE - Albuquerque, NM 87109
NM 88211-0159	0159			Project #: P.O. # 167796). # 167796			Tel. 505-345-3975 Fax 505-345-4107
Phone #: 575-748-3311	5-748-3	311						Analysis Request
email or Fax#: 575-746-5451	x#: 575-1	746-545	-	Project Manager	ger.			
QA/QC Package:	age:	-	1 Avel 4 (Full Validation)	Scott Denton / Rohert Combs	/ Robert Cor	she		
			T		adala de la			
		Dthor						
C EDD (Type)				Ter		1.00 C		
Date T		Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL	100. f	
4/28/15 8:45AM		Aq	R.o.	2 - 500ml P	1-unpres 1 H2SO4	20-1	1	
4/28/15 8:45AM		4		3-40ml VOA	HCL	100	16	See Attachment
4/28/15 8:45AM	15AM			1-500ml P	HNO3	9-	-	
4/28/15 8:45AM	15AM			1-125ml P	HNO3	8	/(
4/28/15 8:45AM	45AM			1-500ml P	NaOH	8-	~	
4/28/15 8:45AM	45AM			2-1L P	HNO3	à	16	
4/28/15 8:45AM	45AM			3-40ml VOA HCL	HCL	8	1	
4/28/15 8:45AM	15AM			2 - 1L Glass	unpres	8-	1	
4/28/15 8:45AM	45AM			1 - 1L Glass	unpres	95	1	
4/28/15 8:45AM	45AM		1	2-40ml VOA unpres	unpres	2	2/	
4/28/15 8:45AM	45AM	7	Trip Blank	2-40ml VOA HCL	HCL	-00-	2	
		65 04/29/15	15					
Date: Tin 4/28/15 (D:	Time: Re ID:45	acture	Relinquished by Elitadeth Salstarry Sunaderh Salderu	Received by:	Free	Date 04/29/15	ome F	Remarks: Send results to Scott Denton, Mike Holder, Micki Schultz, Robert Combs and Andrew Contreras.
Date: Time:	-	Relinquished by:	d by:	Received by:		Date	Time	

	T
<i></i>	5
2	÷
	2
	÷
	۰.

									0.005	-	0000	A A A A A A A A A A A A A A A A A A A				1 DOE+DO : NMED CAN INFORMATION IN A 1 202 CI	
		0.0014	2 0 0 0 1 U		2 0,205	L	L		2000			0.000		3005			
		\$	s	12	ļ	1					6 000	2000	-	S007		CAN DI MUCCINI INTERNITION CAUSAL	
			2002		1.000			8	_							S OUGHT SHIELD DAY IS THE LEWIS CONTRACT OF THE	man
		! +-	5.03	2.102	t	and a second	4		0.001		12 0.002	0.00		Contraction of the			5
		1000	2002	100 miles		10001		0.104	2.05	0.:02	01-2 . 0.1	20.0	1942	- mys		5,00E-C) CPA NCL	TT ALL
		T-ANA	1		2002	0.0553	-	0.0-5-	9.005	0.0573		1000		200	0.124	2.50E-01 [IMED GW Impation 170.6 2.3103.0]	
		200	10.2%	1 24 100 0	0.035	0.00.01	-	0.0025	C(0) 0	-	1	4	C NOT	0.025	0.0225	E.002+00 (MMPD GiV Human Health (20.6.2.3:03.A)	
			000	0.0567	-	0.00301	÷.,	5.500.5	0,0	1 1111	ł	001	-	1 0.005		THE ACTION AND A THE AC	
									~~~	20141	-	10.03		2 6.62		12/20/2/2 0/20/20/20/20/20/20/20/20/20/20/20/20/20	2
					10.002	, ,	2										Suco -
					10000		1 0000		U 10.000103		_	Ŀ		CANADA L			d Motais (mg/L)
					1 X X X		0 1 0,0002	_	V 0.000.02		£.,	t		and a second sec	-	1 2.00E-04 (H9A (HC)	In the second second
					10002	-			C00000 4		л.	-		1020102	-	1 3 205-02 1MMED ON HUMAN HEART (20 6.2 3103 A)	N. OC.Y
		1	20005		10,000	-	t-		701100 0 00107	1	and the second se	1.5		E0100001 1			N OF A LAND AND A LAND AND AND AND AND AND AND AND AND AND
					-		İ.					-1	-	1 0 000 03 U		A 2022 2 8 02) URRAN URUNA 20 8 2 202 A.	
			1 2:02		1 0 0 2 1		0 1 0.00		-								Mineral war have
			1000		÷				- 38)	-	6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 - 6.32	-	7.2.0007			malt
					1 2 2 2 2	-			L DAW		c ( 188	10.25	-	2000			Chown.
					1000		1 100		0.25		Sec. 1 3	C		C 1 0.015	Ī	2.004-03 PDA MC	"Outwine"
			0 0.00		1 ANA		1 1 1 1 1 1		U 0.005		N 0.001	U 1 202		×		D DE CI IMED GW HUMAN HUMAN / D/ A 100 A	A MANCING
			1 2 2	-			1000		U 0.035	_	÷	21 2.05			1	1 . SOE J: INMED OW HUMAN WARPS TO G 5 YES? AT	
		1	N N N N				0.00	-	SCORE IN		-					5.00E-30 FP4 MO	N. This is a start of the
		1			100		1 2022	_	0 0.4		100 B					2006-01 [62A MC]	
		!	100	-	3	c	1 2000 1 1	_	ļ,		2 0.00			1.0.1		1 2 00 E 0 3 1504 MCL	0107 0107 C
			5 1 2 334	-	3		-		l	I		1	-	20.05		3 007 512 39/87 OY HUMAN PRANT (30.6.2.3132,A)	10000
		1		-	1		ŀ		t	Ī		-		- N.X.S		LA PAG. 30-407 6	The second second
			1 2000		136.6	i.	0 0 00		t			22.2		SXC 1 2		7 COL 2 1 2 X XX	
			1 4.45	-	1 2 0001		1000		Ť			5 - C.W.		2 . J.X.S		TANK AND	
			5.00		1.2.2		1		÷			-		0 9 9 W		Contraction of the second seco	
		Î	10.00		3.00						u 10.0	5. 1 0.008		1000			Company and
		1	2 1 2 2 2 2		1			-			- C - C - C - C - C - C - C - C - C - C	× - 087	-	1			Constanting of the second
		ł	1 1 1 1 1 1					-			3 V 2.20	e cons	-	2.25			DADA ATA A
		1			100						1 2 2 2 2		1- : :				- Contraction No.
		1					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0 1 0 0 0 0					1.1.1.1.1			A CONTRACTOR OF
	Other     Non-     Construction     Non-     Construction     Non-     Construction       Construction     Final     Same     Same     Same     Same     Same		14 · 5.33				10 1 Vian										1.5070.505
West     Convert. Searce     Englished     Englished     Englished     Englished       West     Englished     Englished     Englished     Englished		-			+++++++++++++++++++++++++++++++++++++++					-							MU'L1
							- I		_	_						3005.01 14465 17.	Concer Calorina A
Viag	CONST. Searce Brand A. Month C. S. Park Onto T. B. Band D. S. Band	1	An Alexandree -		1 0 2 4			_		+	2 205					144 03WM 10 2000	ST RATE Drame
Work     Convert Source     Revent     At     Month     Convert Source     Revent     Convert Source     Convert Source     Convert Source     Convert Source     Revent     Convert Source     Revent     Convert Source     Convert Source     Convert Source     Revent     Convert Source     Convert Source	Other									-						0	国際になるの形式の
		1			Ľ		Ê	L	L	1 TINGAN		ł	- 1				900
																-	
				-	-							****					Analyte
		Section 1	The second	1		4.2.5	6'N'S	4	21-20-2	Γ	012010	10.112				angerer van de state oor de stere Antonio en s	
vanovana en	and a second					Service and the service of the servi	THE REPORT OF THE PARTY	The second second	D Deschards	R					1		
								N. I BARRAN			the statement and the state of the state	AND A REAL MARKED WAS	Cardina - Santa -	<ul> <li>A second second rep.</li> </ul>	Contraction of the local division of the loc	Let Al	

ALC: NOT THE OWNER OF

	Total Decident South 1					(F. Anion)	Cheron Cheron		The supervise of the supervised of the supervise	Padaum 226 5 Radaum 2"	222- magazi	07-00 P			222			Sugar	Shr	SHOULD I	UNICERCL.		No.	NOVDOWN IN	ATCH.			Land	ION		(none	CODAL CODAL	CTRANKIN .		Catoria -	6 Construction	0000	TO LOT		ALCONC.	ACAL CRACKER	Turul Notals (mg/L)	ALL	Con red a Varian	Nachtmene 1	~~~~~~~~~~~	Public State Landard	1.000 0.000	the second se		"Children and	COLD WARDAN	C June P	A Distance and	A CONTRACTOR OF	Sector Se	ļ		Charles and the second		Contraction of the second		ŝ		L DADA ANA	The second se		「「「ここ」」になったないであってい	T L L L L L L L L L L L L L L L L L L L	and the second se	When insure a	CHANNER CANNER	Cartos Ronce Cramera	ABOLDE DE LA CLUBIKS	(Theway Red.)	Anayte
1002-03 (MMFD SW Domestic (20.6.2.3103.8)		STOCE-OT LEAN WOL	5.975 TUX 14/50 GW DOR-BOC (20.5 2 310); R)	ANY TAY INVOLVED HUMAN HAARS I TO S 2 3103 AL	100 A 100 100 ON PURP POID (20.0 2 310). A		2 \$55+02 MMCD GW Domestic (20.6.2 2012 B)		P ORE TOO LUCK TA SECU	READ				COLORIA TO AND A COLORA TO AND A COLORA TO A COLORA	DOF-101 MAND ON DOMAGNA IN A TANK S	3.00E-02 [MMEU GW Heren Heads (20.6.2.3*C3.4)		AND AND AND AN AND AND AND AND AND AND A		5.00E-C2 INNED GW Haman Models (2017) 1 21-12 41	1	2.202.20 million of the definite of a 2.3103 Ct	Provide a state of the state of	1 DOE +CO INVED CVJ Investor COC C 2 200 C	2.00E-02 INVED GW HURIAN Heiden / JD 6 2 240 2 at	2.005-02 NMED GW Dommar (20.6.2.3103 0)	A DATING ON AND	COLON TEM INC. COLONIA COLONIA	: 00E-00 INHED GW (momon (20.6.2 Tinter)	- X-15-60 INTED GW (Intodrion (20.5.2.3)03.C)		Scote-02 (Nast2 GM/ Immatum / Yor 6 3 stort m	5 902-02 INHED GW Human Health (20 6.2.3103.4)		AND	SCOR C) CPA MC1	2.50E-01 [NMED GIV Impation 120 6 2 3103 ch	1.00±+00 INMED GrV Human Health (20.6.2.3:03.A)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		5.02E+00 NHED GW (maxim / 25 6 2 1107 /1		A WARNE I REA WELL	A COS 2 N COL MARK COMPANY AND A COMPANY	TACO INCOURT AND	300E-02 INTED OV Human Health 120 & 3 120 A	2:30E-02 MED G// Human Health (20.6.2.3:32.4)		5,002 V3 (19982) 637 Human Health (30,6,2,3103 A)	The Mail Constants	-		SOF ALL INVESTIGATION FORMAN REALIST INTO A VIEW AND	SU06-30 1694 MCI	TADADI IRA MO	This Mail of BANK	A 2012 Ter Target Mar Indian Land (2012 1 22 22 4)		1 5 408 0 8 404 Mil	5005-01 192 MC	5.30F 60 1294 MC	Contract State of the second s		21- 1. 150A I/	LAND OF ALL MARD ON A AVAILABLE TO A DATE OF A			CALEND VERT OF MARKED AND A THE AND	LOOK ALL MAD ON ALL AND YARD TO ALL DOD A	i.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Die of Water			CGWSL CGWSL Source
3100 1 1 20		-	02 1420	с +	3.41 1 01	ŀ			050	20 2 2 1		31.0 1 2 1 82.0		600 1 1 JT60	Contra La Contra La Contra La Contra	4	-	L U 1 0.005	20110 - 222400			c.	U.W/SS 1 1 0.005	ţ		1	2 0.005			2 200	0005	t	11 7000		2000 1 1 1 1 2002			0.000	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 0 1 6.52		ŀ	1 1 2 200:03	501000 L 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	010001 0	4.			7006 2 7	20.00	1 2 3 6.03				225					the second se		2000	1 2.85			2 2 2 2 2 4		TANK I TANK								Rowald Stand of
C: 1 0586		U 3.02	0101	-	1.0	202 25			25.0	c.	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	-	_	2000	20.6	ļ		0.005	2000 1 2002		and the second second	-	2000 1 12800.01	0 0 0 000				1 0 1 62	CAN'N THE REAL PROPERTY OF A		0.005	service in the service is a service is			c	200			a box	L 1 203		Contraction of the second second	1 1 1 1 1	ę.	ç			1	10 0 000		C	1 0 1 2025	247.8				1 1 1 2 2 3 4		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				1 C - 0000	1000 C V												Box. At Call
DI 1 0515			2000		2.22	675 7 0.5			x	X	5			1 2 22 2	0.005		The second se	1 0 0005	0.005 1 0.005	44 1 0.2	CASH P 1 200000	1	20125	1 0 9 0000	20.0			0.0	S20'0 1 1 177505		1 0 000	0 0.005			-	01-7	- 1 0 0CS	1. N. O. V.		0.00 208 1 0.00					6	1 1 1 1 0 0002					101 202	E 0.00	1 1 2 22	100 C 1 N	A STATE OF			0.20	1 2 3 801	1000 6 0 1	100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	÷		1 0 - 0.05					the second		5		505 5 5		10 11 11 11 11 11 11 11 11 11 11 11 11 1	
3300 101	20.0	0 1 0.00		The second secon		34 1 246		1.15	k	-	1.15 7 0.15		ŀ	D mot	0.005181 0.005				0.00926 0.005		V 0.005	2000 Day 2000		U 0.0002	U 0.005	C00 0 1	A A A A A A A A A A A A A A A A A A A		U 0.005	600 A .		1 0.005		- W.E. O			0.0573 0.045	500 C U 1	-2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2.12 - 2			U 10.000152	20.020.01	a non-na-		4 U D D00102		1 0 . 3.012		24-0	-	2010 1 0	1 0 1 3.035	S2010 1 1 1	0 0.4	2000			6		5005	244.X - X - X - X - X - X - X - X - X - X -		- L - D 205	0.104	CO.C. 7		C = 0%3							manufic i upitali i i li	
5. 1 , 01.2	0.00407 1 3 1 0.02					1		×0	-		0.40		11 1 1 0V:		-	6	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0.00%	29: 1 1 1.02	e	2000 1 22000	4	┦	1 0 001	1 9 1 202	U ( 04	t	0 000	10.0	A A A A A A A A A A A A A A A A A A A		292	U 6002			200.0	0.0025 1 1 3.01	ł			2 U 1 60000	1 0 1 0,0002	t	ł	-		U 1 0.001	19C'0 P	100 C 1 C 1			1000	0 . 0.00	1 1 2022	2000	000 T 1		-	0 0 000			and the second s		02.5			40.0			the second	-1			Rosult - Court - FL	
31 1 0655	20 1 10	3	1 1 0.03	2.26 0.				0.5 38	U 1 6.57	The second se	-		COD672 1 0.005	ķ		*	¢	CDC-1 200001	I	ļ	1 0.00329	0.00004			1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 0.005		CON X Y	×. v · · ·		CO215 2 F 1.3 T COVA		40	-	0.0244		0.0551	0.000413 : 0.004	l.,	L			-	100001				~ c . 02.		i c					c	-				12.1															Report Cup At	
2770	2005 0 1	1340 25	1.04	2.67 1 0.1	111			8	1.06	10 11 578				r	L.	Ľ	-	0.005			0.001177 1 0.000	2000151 12:0000		5000 - 1000			0.12 1 2 0 2 2	A000 1 1 1 0 000	A	0000	0 2005		10	0 1 6 6 6 7	2.00 1 2.05	CAVA	The second secon		0.057 0.02					1 0 10002				1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2																Ī			1			ſ	Ī				Rought Shad No.	
NA0		1.00		Ľ	4				125.0	2.5%			2	9.00-4				0.000		N. 01 .		0.100		0.000					ļ		0.0016	Ĺ		1	-	1000	A NAME				Ł					Ì	Ī						Ì	1	1					1					Ì			ł				4-	ł		1	

A No CONST, in parameters
 CONST, V. Chana, "Building Structure (Inst.)
 Constraint of the structure of the structure (Inst.)
 Constructure of the structure of the structure (Inst.)
 Constructure of the structure 
Norw
 CDVDL, a the band of the faboring bacytom
 SCVDL, a the band for fabor Standard Structure (2014), 2014 (2014)
 Norw Mark, Standard Standard Structure (2014), 2014 (2014)
 Norw Mark, Standard Standard Structure (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014 (2014), 2014), 2014 (2014), 2014 (2014), 2014), 2014 (2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014 (2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014 (2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014), 2014),

# Table 7 - Summary of Groundwator Sampling Analytical Results Fourth Quarke 2013 Final Report -RO Report Decebergs heres Navajo Antonio ("The and Andrea Herbert June Vice"

		1 0 0000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Res         Annual         Annual         Annual           1         1         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2	не соозу 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	65         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         <	100001 1 100001 1 100001 1 100001 1 100001 1 100001 1 100001 1 100001 1 1000001 1 1000000	20001 F 20001 F 200
	CODE         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C <thc< th=""> <thc< th=""> <thc< th=""> <thc< th=""></thc<></thc<></thc<></thc<>		
	Control         Control <t< td=""><td>900139 9.00139 9.00139 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.000000000000000000000000000000000000</td><td>91000021 91000021 4</td></t<>	900139 9.00139 9.00139 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.0014 9.000000000000000000000000000000000000	91000021 91000021 4
Notes.		0.02000 0 0 0.02000 0.02000 0 0 0.0200 0.02000 0 0.02000 0.02000 0 0.02000 0.02000000000000000000000000000	Control         Control         Control           Control
the following spanning	1000000         1         0.00000           0.000000         1         0.0000           0.000000         1         0.0000           0.000000         1         0.0000           0.00000         1         0.0000           0.00000         1         0.0000           0.00000         1         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         0.0000           0.0000         0.0000         <	2000 U 2000 U 20	
	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Averal (1999)
		1 U 10000 1 U 1000 1 U 1	
		1000 1 10000 1000 0 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 1000000 100000 100000 100000 1000000 100000 1000000 100000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 10000000 10000000 100000000	Bayes         Date         Date <thdate< th="">         Date         Date         <th< td=""></th<></thdate<>
		282220288888555 2822202888885555 29222028888855555	
	3000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000         6000 <th< td=""><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td><td></td></th<>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

- COVID_14, low served if the behavior sources. Same Vence 2014 Carlor StateWide Union in NULLIG 2016 2.211111 (The ways in NULLIG 2012, 2010) and address them the 2014 CARL 2013 (The ways in NULLIG 2012, 2010) and address the The 2014 CARL 2013 (Same Carlor vence) the major in Strategies and the Strategies Neuron in Carlo 2010 (Same Carlor vence) the major in Strategies and the Strategies Neuron in Carlo 2010 (Same Carlor vence) the major in Strategies and the Strategies Neuron in Strategies (Neuron In Strategies Neuron In Strategies Neuron In Strategies Neuron In Strategies Neuron In Strategies (Neuron In Strategies Neuron In Strategies (Neuron In Strategies Neuron In Strategies (Neuron In Strategies Neuron Neuron In Strategies Neuron In Strategies Neuron In Strategies Neuron Neuron In Strategies Neuron Neuron In Strategies Neuron Neuron Neuron In Strategies Neuron - тана Раниа не орбоного малар 206 г. 1933 ж. парегичени ріка перено стопаделогого и Алемаро. Тема Рании сонселового ŝ 1 the stand device the set Cod local nposition in Additional contractions. University i an

the rection of \$10000 method

not attained by the Service of the P.

VERONAL V

- In Statistic consider in sectors and an experimental sectors. The experimental sectors are associated and an experimental sectors and an experimental sectors. The experimental sectors are associated and an experimental sectors are associated and an experimental sectors. The experimental sectors are associated and an experimental sectors are associated and an experimental sectors. The experimental sectors are associated and an experimental sectors are associated and an experimental sectors. The experimental sectors are associated and an experimental sectors are associated and an experimental sectors. The experimental sectors are associated and an experimental sectors. The experimental sectors are associated and an experimental sectors. The experimental sectors are associated and an experimental sectors. The experimental sectors are associated and an experimental sectors. The experimental sectors are associated and an experimental sectors. The experimental sectors are associated associated and an experimental sectors. The experimental sectors are associated associated and an experimental sectors. The experimental sectors are associated asso

  - Армин Тарабан (алына) Мал на балууш Байлан Тарабан (алына) на барабан Кайлан Калана (алына) на барабан Кайлан Канана (алына) на барабан Кайлан Кайлан (алына) на барабан Кайлан Кайлан (алына) на барабан Ка

ī

1010



July 15, 2015

Submitted electronically via email to jim.griswold@state.nm.us and carlj.chavez@state.nm.us

Oil Conservation Division New Mexico Energy, Minerals & Natural Resources Department 1220 South St. Francis Drive Santa Fe, NM 87505

## RE: WQA-OCD-CO-2015-002 Monthly Report – June 2015 Reporting Period

Dear Sirs:

In accordance with Exhibit A, paragraph 5, to Agreed Compliance Order No. WQA-OCD-CO-2015-002 (the Order), the Navajo Refining Company, L.L.C. (Navajo), Artesia, New Mexico, Refinery (the Refinery) hereby submits the required monthly report to the New Mexico Energy, Minerals, and Natural Resources Department Oil Conservation Division (OCD). This letter and all attachments provided herein constitute Navajo's July 2015 monthly report, for the period of June 1-30, under the Order.

Specifically, this report covers the June 2015 reporting period and includes the following data and information as required by Exhibit A, Paragraph 2 and Paragraph 5.a - c:

- Daily discharge flow measurements for each reverse osmosis (RO) unit and for all RO units together.
- Calculation of stipulated penalties, if any, required under Section III, Paragraph 2 of the Order.
- Results of the monthly discharge sample results.
- Updates on any new developments related to the treatment and disposal of RO reject fluid at the facility.

A discussion of each topic is provided below and the associated data is provided in Attachments 1 through 3.

Navajo Refining Company, L.L.C. 501 East Main • Artesia, NM 88210 (575) 748-3311 • <u>http://www.hollyfrontier.com</u> OCD July 15, 2015 Page 2 of 3

# Daily RO Reject Fluid Discharge Flow Measurements

Flow rate for the RO reject fluid is monitored from the two permanent RO units and the temporary RO unit on a daily basis. Daily discharge volumes are provided in Attachment 1.

# **Stipulated Penalties**

In accordance with Exhibit A, Paragraph 1 of the Order, Navajo submitted the GW-028 discharge permit modification request on May 22, 2015, prior to 30 days from April 27, 2015, the date of the Order. Therefore, for the entire June reporting period, Paragraph III.2.b.i.2 of the Order is applicable. Stipulated penalties were calculated for each day following Navajo's submittal of the permit modification request, and prior to OCD action on that request, as follows:

- \$100 per day for each daily RO reject fluid discharge volume between 10,000 and 15,000 barrels from June 1 through June 30.
- \$500 per day for each daily RO reject fluid discharge volume that exceeds 15,000 barrels from June 1 through June 30.

Navajo has calculated a penalty of \$2,600 for June 2015. The daily discharge volume exceeded the 10,000 barrels/day (bbl/day) limit, but was under 15,000 barrels total, on 26 days in June. Calculations conducted in accordance with Paragraph III.2.b.i.2 of the Agreed Compliance Order are provided in Attachment 2.

Payment of the stipulated penalty will be sent to the OCD Director's mailing address within 30 days after the date of this monthly report pursuant to Paragraph III.2.b. of the Order.

## Monthly Discharge Sample Results

Navajo collected a sample of the RO reject fluid discharge from both the permanent RO units (combined discharge) and the temporary RO unit on June 5, 2015. The analytical lab report for these samples is provided in Attachment 3.

# Updates Regarding Treatment and Disposal of RO Reject Fluid

As described in the Order, Navajo is working to enhance its water management system and reduce the total volume of RO reject fluid that is discharged pursuant to its groundwater discharge permit. Options under consideration include the installation of a third permanent RO unit to replace the temporary RO unit and the installation of a secondary RO unit to reduce the total volume of RO reject fluid produced. Navajo is also evaluating options for the underground injection of RO reject fluid. In addition, Navajo is conducting a study of background groundwater concentrations of key chemical constituents of the RO reject fluid discharged under its groundwater discharge permit to determine whether concentrations of these constituents exceed background levels.

> Navajo Refining Company, L.L.C. 501 East Main • Artesia, NM 88210 (575) 748-3311 • <u>http://www.hollyfrontier.com</u>

OCD July 15, 2015 Page 3 of 3

In accordance with Exhibit A, Paragraph 1 of the Order, Navajo submitted a GW-028 discharge permit modification request on May 22, 2015. The requested modifications include operating a temporary RO unit at the Navajo Refinery and increasing the total maximum volume of RO reject fluids that can be applied to the surface of Navajo's discharge fields from approximately 10,000 bbl/day to approximately 20,000 bbl/day calculated on a rolling 12-month average. OCD notified Navajo that the application for the requested permit modification is administratively complete by letter dated July 1, 2015.

Navajo is currently evaluating alternative locations for the permitting and construction of a new nonhazardous waste injection well for use in disposal of Refinery fluids, including RO reject water. Navajo previously submitted an application for a Discharge Permit for the new injection well (WDW-4) on November 7, 2014. OCD notified Navajo that the application was administratively complete by letter dated April 23, 2015. On June 25, 2015, Navajo withdrew the OCD permit application to allow for further technical review regarding well locations and injection zones to confirm sufficient injection capacity to meet the refinery's needs. Navajo will provide a new application to OCD when the review is complete, and well location(s) are selected.

Navajo is committed to proactively meeting the requirements of the Order and working cooperatively with OCD. If you have any questions or comments, please contact me at 575-746-5487.

Sincerely,

Scott M. Denton Environmental Manager

Enclosures:

Attachment 1: Daily Discharge Flow Rates Attachment 2: Stipulated Penalty Calculation Attachment 3: Analytical Lab Report

cc. HFC: D. McWatters, R. O'Brien, M. Holder OCD: A. Marks, B. Brancard Attachment 1 Daily Discharge Flow Rates

		Permanen	t RO Units		Tempo	Daily Discharge Volume	
	Metere	ed Data	The second s	d RO Reject (Calculated)	Total R Disc (Calculate Di		
	GPM	GPM	GPM	BBL/DAY	GPM	BBL/DAY	BBL
	SOUTH	NORTH					
6/1/2015	142	107	249	8537	61	2096	10633
6/2/2015	139	106	245	8400	60	2069	10469
6/3/2015	139	114	253	8674	60	2065	10739
6/4/2015	137	104	241	8263	79	2709	10972
6/5/2015	101	83	184	6309	116	3962	10271
6/6/2015	0	124	124	4251	70	2387	6638
6/7/2015	130	108	238	8160	62	2137	10297
6/8/2015	132	95	227	7783	63	2147	9930
6/9/2015	135	113	248	8503	59	2022	10525
6/10/2015	129	109	238	8160	51	1735	9895
6/11/2015	133	117	250	8571	52	1783	10354
6/12/2015	139	108	247	8469	52	1799	10268
6/13/2015	133	107	240	8229	56	1911	10140
6/14/2015	130	109	239	8194	57	1961	10155
6/15/2015	132	111	243	8331	59	2027	10358
6/16/2015	140	112	252	8640	60	2057	10697
6/17/2015	135	114	249	8537	60	2057	10594
6/18/2015	141	112	253	8674	61	2081	10755
6/19/2015	135	104	239	8194	61	2091	10285
6/20/2015	131	117	248	8503	64	2200	10703
6/21/2015	137	115	252	8640	64	2196	10836
6/22/2015	133	103	236	8091	65	2241	10332
6/23/2015	137	107	244	8366	60	2049	10415
6/24/2015	125	107	232	7954	55	1902	9856
6/25/2015	131	106	237	8126	59	2031	10157
6/26/2015	123	111	234	8023	63	2156	10179
6/27/2015	131	114	245	8400	63	2160	10560
6/28/2015	123	110	233	7989	63	2160	10149
6/29/2015	122	109	231	7920	64	2179	10099
6/30/2015	129	105	234	8023	64	2194	10217

# Daily RO Reject Discharge Flow Rate Measurements and Calculated Daily Discharge

Attachment 2 Stipulated Penalty Calculation

### Calculation of Stipulated Penalties - June 2015

Order Section III., Paragraph Number	Penalty	Payment per day	No. of Days (per violation)	Amount
2.b.i	Exceedance of the 10,000 barrel per day RO reject fluid discharge volume limit specified in Discharge Permit GW-028:			
2.b.i.1	- <b>Prior</b> to Navajo submitting a discharge permit modification application	\$1,000		\$0
2.b.i.2	<ul> <li>If the daily volume is between 10,000</li> <li>and 15,000 barrels after Navajo submits</li> <li>discharge permit modification</li> <li>application</li> </ul>	\$100	26	\$2,600
2.b.i.2	- If the daily volume exceeds 15,000 barrels <b>after</b> Navajo submits discharge permit modification application	\$500		\$0
2.b.ii	Failure to conduct sampling as required in Exhibit A of Order	\$2,000		\$0
2.b.iii	Failure to timely submit any report or notifications as required in Exhibit A of Order	\$1,000		\$0
2.b.iv	Failure to record the daily discharge flow from the permanent and the temporary RO units	\$1,000		\$0
		Total	Amount:	\$2,600

Attachment 3 Analytical Lab Report



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

June 22, 2015

Robert Combs Navajo Refining Company P.O. Box 159 Artesia, NM 88211-0159 TEL: (575) 748-3311 FAX

RE: Monthly Temporary RO Reject

OrderNo.: 1506316

Dear Robert Combs:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/6/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**Analytical Report** Lab Order 1506316 Date Reported: 6/22/2015

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company Monthly Temporary RO Reject **Project:** 

1506316-001

Lab ID:

Client Sample ID: South Field RO Reject Discharge Collection Date: 6/5/2015 1:54:00 PM

Received Date: 6/6/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst	DBD
Arsenic	ND	0.0050		mg/L	5	6/17/2015 7:44:15 PM	R26904
Lead	ND	0.0010		mg/L	1	6/16/2015 7:43:36 PM	R26876
Selenium	0.0099	0.0010		mg/L	1	6/16/2015 7:43:36 PM	R26876
Uranium	0.0082	0.0010		mg/L	1	6/16/2015 7:43:36 PM	R26876
EPA 903.1: RA 226 AND EPA 904.0: RA	228-SUBBE	D				Analyst	SUB
Radium-226	2.04	0.578		pCi/L	1	6/16/2015	R26972
Radium-226 ±	0.849	0.578		pCi/L	1	6/16/2015	R26972
Radium-228	0.384	0.696		pCi/L	1	6/16/2015	R26972
Radium-228 ±	0.345	0.696		pCi/L	1	6/16/2015	R26972
EPA METHOD 300.0: ANIONS						Analyst	LGT
Fluoride	4.6	2.0	*	mg/L	20	6/8/2015 1:22:42 PM	R26695
Chloride	460	50		mg/L	100	6/10/2015 1:28:53 AM	R26721
Sulfate	2300	50		mg/L	100	6/10/2015 1:28:53 AM	R26721
Nitrate+Nitrite as N	1.8	1.0		mg/L	5	6/9/2015 4:16:18 AM	R26695
SM2540C MOD: TOTAL DISSOLVED SO	LIDS					Analyst	KS
Total Dissolved Solids	4710	20.0	*	mg/L	1	6/10/2015 12:32:00 PM	19636
EPA 335.4: TOTAL CYANIDE SUBBED						Analyst	SUB
Cyanide	ND	0.0100		mg/L	1	6/18/2015	R26972
SM4500-H+B: PH						Analyst	JRR
рH	8.03	1.68	н	pH units	1	6/9/2015 9:57:39 PM	R26740
EPA METHOD 200.7: DISSOLVED META	LS					Analyst	JLF
Aluminum	ND	0.020		mg/L	1	6/16/2015 5:05:13 PM	R26882
Barium	0.080	0.0020		mg/L	1	6/16/2015 5:05:13 PM	R26882
Boron	0.098	0.040		mg/L	1	6/16/2015 5:05:13 PM	R26882
Cadmium	ND	0.0020		mg/L	1	6/16/2015 5:05:13 PM	R26882
Chromium	0.0067	0.0060		mg/L	1	6/16/2015 5:05:13 PM	R26882
Cobalt	ND	0.0060		mg/L	1	6/16/2015 5:05:13 PM	R26882
Copper	ND	0.0060		mg/L	1	6/16/2015 5:05:13 PM	R26882
Iron	0.040	0.020		mg/L	1	6/16/2015 5:05:13 PM	R26882
Manganese	0.012	0.0020		mg/L	1	6/16/2015 5:05:13 PM	R26882
Molybdenum	ND	0.0080		mg/L	1	6/16/2015 5:05:13 PM	R26882
Nickel	ND	0.010		mg/L	1	6/16/2015 5:05:13 PM	R26882
Silver	ND	0.0050		mg/L	1	6/16/2015 5:05:13 PM	R26882
Zinc	0.030	0.010		mg/L	1	6/16/2015 5:05:13 PM	R26882
EPA METHOD 245.1: MERCURY						Analyst	MED
Mercury	ND	0.00020		mg/L	1	6/9/2015 3:13:06 PM	19630
Refer to the QC Summary report an	d sample log	in checklis	t for fl	agged QC da	ta and p	reservation informatio	n.

Matrix: AQUEOUS

* Value exceeds Maximum Contaminant Level. Value above quantitation range

Holding times for preparation or analysis exceeded H

Page 1 of 21

Not Detected at the Reporting Limit

J Analyte detected below quantitation limits

RSD is greater than RSDlimit 0

E

R RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits S

Р Sample pH Not In Range Reporting Detection Limit RL

ND

**Analytical Report** Lab Order 1506316 Date Reported: 6/22/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Navajo Refining Company **Project:** Monthly Temporary RO Reject 1506316-001

Lab ID:

Client Sample ID: South Field RO Reject Discharge Collection Date: 6/5/2015 1:54:00 PM Received Date: 6/6/2015 12:15:00 PM

Analyses Result **RL** Oual Units **DF** Date Analyzed Batch EPA METHOD 8011/504.1: EDB Analyst: JME 1,2-Dibromoethane ND 0.010 µg/L 6/11/2015 5:16:00 PM 19674 1 Analyst: SCC EPA METHOD 8082: PCB'S ND Aroclor 1016 1.0 µg/L 1 6/12/2015 2:49:54 PM 19626 Aroclor 1221 ND 1.0 µg/L 1 6/12/2015 2:49:54 PM 19626 Aroclor 1232 ND 1.0 µg/L 1 6/12/2015 2:49:54 PM 19626 Aroclor 1242 ND 1.0 µg/L 1 6/12/2015 2:49:54 PM 19626 Aroclor 1248 ND 1.0 µg/L 6/12/2015 2:49:54 PM 19626 1 ND Aroclor 1254 1.0 µg/L 6/12/2015 2:49:54 PM 19626 1 Aroclor 1260 ND 1.0 µg/L 1 6/12/2015 2:49:54 PM 19626 6/12/2015 2:49:54 PM 93.6 %REC Surr: Decachlorobiphenyl 44.5-110 1 19626 Surr: Tetrachloro-m-xylene 82.8 31.8-95.7 %REC 1 6/12/2015 2:49:54 PM 19626 EPA METHOD 8015D: DIESEL RANGE Analyst: KJH **Diesel Range Organics (DRO)** ND 1.0 1 6/9/2015 10:08:27 PM 19616 mg/L Motor Oil Range Organics (MRO) ND 5.0 mg/L 1 6/9/2015 10:08:27 PM 19616 Surr: DNOP 105 76.5-150 %REC 1 6/9/2015 10:08:27 PM 19616 EPA METHOD 8015D: GASOLINE RANGE Analyst: NSB 6/10/2015 6:06:50 PM R26753 Gasoline Range Organics (GRO) ND 0.050 mg/L 1 Surr: BFB 90.7 57.8-137 %REC 6/10/2015 6:06:50 PM R26753 1 EPA METHOD 8310: PAHS Analyst: SCC Naphthalene ND 2.0 µg/L 1 6/16/2015 12:08:51 PM 19627 ND 2.0 6/16/2015 12:08:51 PM 19627 1-Methylnaphthalene µg/L 1 2-Methylnaphthalene 6/16/2015 12:08:51 PM ND 2.0 µg/L 1 19627 ND Benzo(a)pyrene 0.070 µg/L 6/16/2015 12:08:51 PM 19627 1 Surr: Benzo(e)pyrene 66.6 37.2-136 %REC 1 6/16/2015 12:08:51 PM 19627 EPA METHOD 8260B: VOLATILES Analyst: DJF Benzene ND 1.0 1 6/13/2015 8:29:41 AM R26817 µg/L Toluene ND 1.0 µg/L 1 6/13/2015 8:29:41 AM R26817 Ethylbenzene ND 6/13/2015 8:29:41 AM R26817 1.0 µg/L 1 1,2-Dichloroethane (EDC) ND 1.0 µg/L 1 6/13/2015 8:29:41 AM R26817 1,2-Dibromoethane (EDB) ND 1.0 µg/L 1 6/13/2015 8:29:41 AM R26817 Carbon Tetrachloride ND 1.0 6/13/2015 8:29:41 AM R26817 µg/L 1 Chloroform ND 1.0 µg/L 1 6/13/2015 8:29:41 AM R26817 1,1-Dichloroethane ND 1.0 µg/L 1 6/13/2015 8:29:41 AM R26817 6/13/2015 8:29:41 AM 1,1-Dichloroethene ND R26817 1.0 µg/L 1 ND Methylene Chloride 3.0 µg/L 1 6/13/2015 8:29:41 AM R26817 1,1,2,2-Tetrachloroethane ND 2.0 µg/L 1 6/13/2015 8:29:41 AM R26817 Tetrachloroethene (PCE) ND 1.0 6/13/2015 8:29:41 AM R26817 µg/L 1

Matrix: AQUEOUS

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:** * Value exceeds Maximum Contaminant Level.

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank B
- H Holding times for preparation or analysis exceeded
  - Not Detected at the Reporting Limit Page 2 of 21
- Р Sample pH Not In Range

ND

RL **Reporting Detection Limit** 

Analytical Report Lab Order 1506316 Date Reported: 6/22/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Navajo Refining Company **Project:** Monthly Temporary RO Reject Client Sample ID: South Field RO Reject Discharge Collection Date: 6/5/2015 1:54:00 PM Received Date: 6/6/2015 12:15:00 PM

Lab ID: 1506316-001	Matrix:	AQUEOUS	5/2015 12:15:00 PM			
Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	DJF
1,1,1-Trichloroethane	ND	1.0	µg/L	1	6/13/2015 8:29:41 AM	R26817
1,1,2-Trichloroethane	ND	1.0	µg/L	1	6/13/2015 8:29:41 AM	R26817
Trichloroethene (TCE)	ND	1.0	µg/L	1	6/13/2015 8:29:41 AM	R26817
Vinyl chloride	ND	1.0	µg/L	1	6/13/2015 8:29:41 AM	R26817
Xylenes, Total	ND	1.5	µg/L	1	6/13/2015 8:29:41 AM	R26817
Surr: 1,2-Dichloroethane-d4	90.0	70-130	%REC	1	6/13/2015 8:29:41 AM	R26817
Surr: 4-Bromofluorobenzene	101	70-130	%REC	1	6/13/2015 8:29:41 AM	R26817
Surr: Dibromofluoromethane	96.9	70-130	%REC	1	6/13/2015 8:29:41 AM	R26817
Surr: Toluene-d8	100	70-130	%REC	1	6/13/2015 8:29:41 AM	R26817
TOTAL PHENOLICS BY SW-846 9067					Analyst	SCC
Phenolics, Total Recoverable	ND	2.5	µg/L	1	6/18/2015	19794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	н	Holding times for preparation or analys	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 21
	0	RSD is greater than RSDlimit	Р	Sample pH Not In Range	1 age 5 61 2
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1506316

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 1506316 Date Reported: 6/22/2015

CLIENT: Navajo Refining CompanyProject: Monthly Temporary RO RejectLab ID: 1506316-002

**Collection Date:** 

Client Sample ID: Trip Blank

Matrix: TRIP BLANK Received Date: 6/6/2015 12:15:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	DJF
Benzene	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Toluene	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Ethylbenzene	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Carbon Tetrachloride	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Chloroform	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
1,1-Dichloroethane	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
1,1-Dichloroethene	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Methylene Chloride	ND	3.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
1,1,1-Trichloroethane	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
1,1,2-Trichloroethane	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Trichloroethene (TCE)	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Vinyl chloride	ND	1.0	µg/L	1	6/13/2015 9:25:05 AM	R26817
Xylenes, Total	ND	1.5	µg/L	1	6/13/2015 9:25:05 AM	R26817
Surr: 1,2-Dichloroethane-d4	95.4	70-130	%REC	1	6/13/2015 9:25:05 AM	R26817
Surr: 4-Bromofluorobenzene	98.6	70-130	%REC	1	6/13/2015 9:25:05 AM	R26817
Surr: Dibromofluoromethane	95.4	70-130	%REC	1	6/13/2015 9:25:05 AM	R26817
Surr: Toluene-d8	98.5	70-130	%REC	1	6/13/2015 9:25:05 AM	R26817

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	E	Value above quantitation range	н	Holding times for preparation or analyst	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 21
	0	RSD is greater than RSDlimit	Р	Sample pH Not In Range	1 uge + 01 21
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

WO#: 1506316 22-Jun-15

Client: Project:		Navajo Refining C Monthly Tempora									
Sample ID	MB	Samp	Type: MI	BLK	Tes	tCode: El	PA Method	200.7: Dissol	ved Metal	s	
Client ID:	PBW	Bat	ch ID: R2	6882	F	RunNo: 2	6882				
Prep Date:		Analysis	Date: 6	16/2015	S	SeqNo: 8	02272	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum		ND	0.020								
Barium		ND	0.0020								
Boron		ND	0.040								
Cadmium		ND	0.0020								
Chromium		ND	0.0060								
Cobalt		ND	0.0060								
Copper		ND	0.0060								
ron		ND	0.020								
Manganese		ND	0.0020								
		ND	0.0080								
Molybdenum											
Vlolybdenum Nickel		ND	0.010								
•		ND ND	0.010								
Nickel											
Nickel Silver Zinc	LCS	ND ND	0.0050 0.010	s	Tes	tCode: El	PA Method	200.7: Dissol	ved Metal	s	
Nickel Silver Zinc Sample ID		ND ND Samp	0.0050 0.010 Type: LC					200.7: Dissol	ved Meta	s	
Nickel Silver Zinc Sample ID Client ID:	LCS LCSW	ND ND Samp Bat	0.0050 0.010 Type: LC ch ID: R2	6882	F	RunNo: 2	6882		ved Metal	ls	
Nickel Silver Zinc Sample ID Client ID: Prep Date:		ND ND Samp Bate Analysis	0.0050 0.010 Type: LC ch ID: R2 Date: 6/	26882 (16/2015	F	RunNo: 20 SeqNo: 80	6882 02273	Units: mg/L			
Nickel Silver Zinc Sample ID Client ID: Prep Date: Analyte		ND ND Samp Bate Analysis Result	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL	26882 (16/2015 SPK value	F S SPK Ref Val	RunNo: 20 SeqNo: 80 %REC	6882 02273 LowLimit	Units: <b>mg/L</b> HighLimit	ved Metal %RPD	I <b>s</b> RPDLimit	Qual
Nickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum		ND ND Samp Bate Analysis Result 0.53	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020	26882 216/2015 SPK value 0.5000	F S SPK Ref Val 0	RunNo: 20 SeqNo: 80 <u>%REC</u> 107	6882 02273 LowLimit 85	Units: <b>mg/L</b> HighLimit 115			Qual
Nickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium		ND ND Samp Bate Analysis <u>Result</u> 0.53 0.50	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.0020	26882 216/2015 SPK value 0.5000 0.5000	F S SPK Ref Val 0 0	RunNo: 20 SeqNo: 80 <u>%REC</u> 107 99.3	6882 02273 LowLimit 85 85	Units: <b>mg/L</b> HighLimit 115 115			Qual
Nickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium Boron		ND ND Samp Bate Analysis Result 0.53 0.50 0.53	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.0020 0.040	26882 216/2015 SPK value 0.5000 0.5000 0.5000	F S SPK Ref Val 0 0 0	RunNo: 20 SeqNo: 80 <u>%REC</u> 107 99.3 105	6882 02273 LowLimit 85 85 85	Units: mg/L HighLimit 115 115 115			Qual
Nickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Numinum Barium Barium Baron Cadmium		ND ND Samp Bate Analysis Result 0.53 0.50 0.53 0.54	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.040 0.040 0.0020	26882 216/2015 SPK value 0.5000 0.5000 0.5000 0.5000	F S SPK Ref Val 0 0 0 0	RunNo: 20 SeqNo: 80 %REC 107 99.3 105 107	6882 02273 LowLimit 85 85 85 85	Units: <b>mg/L</b> HighLimit 115 115 115 115			Qual
Nickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Numinum Barium Barium Boron Cadmium Chromium		ND ND Samp Bate Analysis <u>Result</u> 0.53 0.50 0.53 0.54 0.51	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.0020 0.040 0.0020 0.0060	26882 216/2015 SPK value 0.5000 0.5000 0.5000 0.5000 0.5000	F SPK Ref Val 0 0 0 0 0 0	RunNo: 20 SeqNo: 80 %REC 107 99.3 105 107 101	6882 02273 LowLimit 85 85 85 85 85	Units: mg/L HighLimit 115 115 115 115 115 115			Qual
Nickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium Boron Cadmium Chromium Cobalt		ND ND Samp Bate Analysis <u>Result</u> 0.53 0.50 0.53 0.54 0.51 0.52	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.0020 0.0040 0.0020 0.0060 0.0060	26882 216/2015 SPK value 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000	F SPK Ref Val 0 0 0 0 0 0 0	RunNo: 20 SeqNo: 80 %REC 107 99.3 105 107 101 103	6882 02273 LowLimit 85 85 85 85 85 85	Units: mg/L HighLimit 115 115 115 115 115 115 115			Qual
Vickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium Boron Cadmium Chromium Cobalt Copper		ND ND Samp Bate Analysis Result 0.53 0.50 0.53 0.54 0.51 0.52 0.49	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.040 0.0020 0.040 0.0060 0.0060 0.0060	26882 216/2015 SPK value 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000	F SPK Ref Val 0 0 0 0 0 0 0 0 0 0	RunNo: 20 SeqNo: 8 %REC 107 99.3 105 107 101 103 97.4	6882 02273 LowLimit 85 85 85 85 85 85 85 85	Units: mg/L HighLimit 115 115 115 115 115 115 115 115			Qual
Vickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium Baron Cadmium Chromium Cobalt Copper ron		ND ND Samp Bate Analysis Result 0.53 0.50 0.53 0.54 0.51 0.52 0.52 0.49 0.50	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.040 0.0020 0.040 0.0060 0.0060 0.0060 0.020	26882 216/2015 SPK value 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000	F SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0	RunNo: 20 SeqNo: 80 %REC 107 99.3 105 107 101 103 97.4 99.7	6882 02273 LowLimit 85 85 85 85 85 85 85 85	Units: mg/L HighLimit 115 115 115 115 115 115 115 115 115			Qual
Vickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium Barium Baron Cadmium Chromium Cobalt Copper ron Manganese		ND ND Samp Bate Analysis Result 0.53 0.50 0.53 0.54 0.51 0.52 0.54 0.51 0.52 0.49 0.50 0.48	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.040 0.0020 0.040 0.0060 0.0060 0.0060 0.020 0.020	26882 216/2015 SPK value 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000	F SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RunNo: 20 SeqNo: 80 %REC 107 99.3 105 107 101 103 97.4 99.7 96.4	6882 02273 LowLimit 85 85 85 85 85 85 85 85 85	Units: mg/L HighLimit 115 115 115 115 115 115 115 115 115 11			Qual
Vickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium Barium Barium Cadmium Chromium Cobalt Copper ron Manganese Molybdenum		ND ND Samp Bate Analysis Result 0.53 0.50 0.53 0.54 0.51 0.52 0.49 0.50 0.48 0.51	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.0020 0.0040 0.0060 0.0060 0.0060 0.0060 0.0060 0.0020 0.0020 0.0020 0.0020	26882 276/2015 276/2015 276/2015 276/2000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000	F SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RunNo: 20 SeqNo: 80 %REC 107 99.3 105 107 101 103 97.4 99.7 96.4 102	6882 02273 LowLimit 85 85 85 85 85 85 85 85 85 85 85	Units: mg/L HighLimit 115 115 115 115 115 115 115 115 115 11			Qual
Vickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium Barium Barium Cadmium Chromium Cobalt Copper ron Manganese Molybdenum Vickel		ND ND Samp Bate Analysis Result 0.53 0.50 0.53 0.54 0.51 0.52 0.49 0.50 0.48 0.51 0.51 0.50	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.0020 0.0060 0.0060 0.0060 0.0060 0.020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 0.002	26882 216/2015 SPK value 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000	F SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RunNo: 20 SeqNo: 80 %REC 107 99.3 105 107 101 103 97.4 99.7 96.4 102 100	6882 02273 85 85 85 85 85 85 85 85 85 85 85 85 85	Units: mg/L HighLimit 115 115 115 115 115 115 115 115 115 11			Qual
Vickel Silver Zinc Sample ID Client ID: Prep Date: Analyte Aluminum Barium Barium Barium Cadmium Chromium Cobalt Copper ron Manganese Molybdenum		ND ND Samp Bate Analysis Result 0.53 0.50 0.53 0.54 0.51 0.52 0.49 0.50 0.48 0.51	0.0050 0.010 Type: LC ch ID: R2 Date: 6/ PQL 0.020 0.0020 0.0040 0.0060 0.0060 0.0060 0.0060 0.0060 0.0020 0.0020 0.0020 0.0020	26882 276/2015 276/2015 276/2015 276/2000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000	F SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RunNo: 20 SeqNo: 80 %REC 107 99.3 105 107 101 103 97.4 99.7 96.4 102	6882 02273 LowLimit 85 85 85 85 85 85 85 85 85 85 85	Units: mg/L HighLimit 115 115 115 115 115 115 115 115 115 11			Qual

#### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH Not In Range
  - RL Reporting Detection Limit

Page	5	of 21
1 age	2	0121

WO#: 1506316

22-	Jun-	15
22-	, un-	10

Client: Project:		Navajo Refining O Monthly Tempora									
Sample ID	LCS	Sam	oType: L	.CS	Tes	tCode: E	PA 200.8: [	Dissolved Me	tals		
Client ID:	LCSW	Bat	ch ID: F	26876	F	RunNo: 2	6876				
Prep Date:		Analysis	Date:	6/16/2015	5	SeqNo: 8	02096	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.013	0.00050	0.01250	0	101	85	115			
Selenium		0.025	0.0010		0	99.4	85	115			
Uranium		0.013	0.00050	0 0.01250	0	102	85	115			
Sample ID	LCS	Sam	Type: L	.CS	Tes	tCode: E	PA 200.8: [	Dissolved Me	tals		
Client ID:	LCSW	Bat	ch ID: R	26876	F	RunNo: 2	6876				
Prep Date:		Analysis	Date:	6/16/2015	5	SeqNo: 8	02099	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.012	0.00050	0.01250	0	96.3	85	115			
Selenium		0.025	0.0010	0.02500	0	100	85	115			
Uranium		0.012	0.00050	0.01250	0	96.9	85	115			
Sample ID	МВ	Sam	Type: N	IBLK	Tes	tCode: E	PA 200.8: [	Dissolved Me	tals		
Client ID:	PBW	Bat	ch ID: R	26876	F	RunNo: 2	6876				
Prep Date:		Analysis	Date:	6/16/2015	5	SeqNo: 8	02100	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.00050	0							
Selenium		ND	0.0010	0							
Uranium		ND	0.00050	)							
Sample ID	MB	Sam	оТуре: N	IBLK	Tes	tCode: E	PA 200.8: [	Dissolved Me	tals		
Client ID:	PBW	Bat	ch ID: R	26876	F	RunNo: 2	6876				
Prep Date:		Analysis	Date:	6/16/2015	S	SeqNo: 8	02101	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.00050	)							
Selenium		ND	0.0010	D							
Uranium		ND	0.00050	)							
Sample ID	LCS	Sam	oType: L	.CS	Tes	tCode: E	PA 200.8: [	Dissolved Me	tals		
Client ID:	LCSW	Bat	ch ID: R	26904	F	RunNo: 2	6904				
Prep Date:		Analysis	Date:	6/17/2015	5	SeqNo: 8	03447	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.024	0.0010	0.02500	0	97.9	85	115			

#### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH Not In Range
- RL Reporting Detection Limit

Page 6 of 21

1 450 0 01 21

WO#:	1506316
	22-Jun-15

Client: Project:		Navajo Refining Company Monthly Temporary RO Reject	
Sample ID	LCS	SampType: LCS TestCode: EPA 200.8: Dissolved Metals	
Client ID:	LCSW	V Batch ID: R26904 RunNo: 26904	
Prep Date:		Analysis Date: 6/17/2015 SeqNo: 803448 Units: mg/L	
Analyte		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qua	ıl
Arsenic		0.024 0.0010 0.02500 0 97.8 85 115	
Sample ID	MB	SampType: MBLK TestCode: EPA 200.8: Dissolved Metals	
Client ID:	PBW	Batch ID: R26904 RunNo: 26904	
Prep Date:		Analysis Date: 6/17/2015 SeqNo: 803449 Units: mg/L	
Analyte		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qua	l.
Arsenic		ND 0.0010	
Sample ID	МВ	SampType: MBLK TestCode: EPA 200.8: Dissolved Metals	
Client ID:	PBW	Batch ID: R26904 RunNo: 26904	
Prep Date:		Analysis Date: 6/17/2015 SeqNo: 803450 Units: mg/L	
Analyte		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qua	d.
Arsenic		ND 0.0010	

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
  - Р Sample pH Not In Range
  - RL Reporting Detection Limit

Page 7 of 21

Client: Project:		o Refining Company hly Temporary RO Re	eject							
Sample ID				TestCode: EPA Method 245.1: Mercury						
Client ID:	PBW Batch ID: 19630			RunNo: 26705						
Prep Date:	6/9/2015	Analysis Date: 6/	9/2015	S	SeqNo: 7	95807	Units: mg/L			
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vercury		ND 0.00020								
Sample ID	_CS-19630	SampType: LC	S	Tes	tCode: El	PA Method	245.1: Mercu	ry		
Client ID:	LCSW	Batch ID: 19	630	F	RunNo: 20	6705				
Prep Date:	6/9/2015	Analysis Date: 6/	9/2015	S	SeqNo: 79	95808	Units: mg/L			
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0050 0.00020	0.005000	0	100	80	120			

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH Not In Range
  - RL Reporting Detection Limit

Page 8 of 21

WO#:	1506316
	22 Jun 15

22-Jun-15

Client: Project:		Navajo Refining Cor Monthly Temporary	· ·									
Sample ID	MB	SampTy	pe: ME	BLK	TestCode: EPA Method 300.0: Anions							
Client ID:	PBW	Batch	D: R2	6695	F	RunNo: 2	6695					
Prep Date:		Analysis Da	te: 6/	8/2015	S	eqNo: 7	95454	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride Nitrate+Nitrite	as <mark>N</mark>	ND ND	0.10 0.20									
Sample ID	LCS	SampTy	pe: LC	s	Tes	tCode: El	PA Method	300.0: Anions	;			
Client ID:	LCSW	Batch	D: R2	6695	F	RunNo: 2	6695					
Prep Date:		Analysis Da	te: 6/	8/2015	S	eqNo: 7	95455	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0.000	0.48	0.10	0.5000	0	95.8	90	110				
Nitrate+Nitrite	as N	3.5	0.20	3.500	0	100	90	110				
Sample ID	MB	SampTy	pe: ME	BLK	Tes	tCode: El	PA Method	300.0: Anions	5			
Client ID:	PBW	Batch	D: R2	6721	RunNo: 26721							
Prep Date:		Analysis Da	te: 6/	9/2015	S	eqNo: 7	96475	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride		ND	0.50									
Sulfate		ND	0.50									
Sample ID	LCS	SampTy	pe: LC	s	Tes	tCode: El	PA Method	300.0: Anions	5			
Client ID:	LCSW	Batch	D: R2	6721	R	RunNo: 2	6721					
Prep Date:		Analysis Da	te: 6/	9/2015	S	eqNo: 7	96476	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride		5.1	0.50	5.000	0	103	90	110				
Sulfate		11	0.50	10.00	0	106	90	110				

#### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
  - Р Sample pH Not In Range
  - RL Reporting Detection Limit

- Page 9 of 21

Client: Project:		o Refining Co hly Temporary		eject							
Sample ID	MB-19674 SampType: MBLK PBW Batch ID: 19674			TestCode: EPA Method 8011/504.1: EDB							
Client ID:	PBW Batch ID: 19674			RunNo: 26780							
Prep Date:	6/11/2015 Analysis Date: 6/11/2015				S	SeqNo: 798570 Units: µg/L					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoetha	ane	ND	0.010								
Sample ID	LCS-19674	SampT	ype: LC	S	Tes	tCode: E	PA Method	8011/504.1: E	DB		
Client ID:	LCSW	Batch	ID: 19	674	F	RunNo: 2	6780				
Prep Date:	6/11/2015	Analysis D	ate: 6/	11/2015	S	SeqNo: 7	98571	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoetha	ane	0.11	0.010	0.1000	0	109	70	130			

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Р Sample pH Not In Range
  - Reporting Detection Limit RL

Page 10 of 21

WO#:	1506316
	22-Jun-15

	Refining Co y Temporary	- ·								
Sample ID MB-19616 SampType: MBLK			TestCode: EPA Method 8015D: Diesel Range							
Client ID: PBW	Batch ID: 19616		F	RunNo: 26673						
Prep Date: 6/8/2015	Analysis Date: 6/9/2015		S	SeqNo: 796030 Uni			g/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.94		1.000		94.1	76.5	150			
Sample ID LCS-19616	SampT	ype: LC	S	TestCode: EPA Method 8015D: Diesel Range						
Client ID: LCSW	Batch	h ID: 19	616	F	RunNo: 2	6673				
Prep Date: 6/8/2015	Analysis D	)ate: 6/	9/2015	S	SeqNo: 7	96031	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	99.3	60.1	156			
Surr: DNOP	0.45		0.5000		89.8	76.5	150			

#### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH Not In Range
  - RL Reporting Detection Limit

Page 11 of 21

WO#:	1506316
	22-Jun-15

	Refining Co Temporar										
Sample ID 5ML RB	Samp	Type: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBW	Batc	Batch ID: R26753			RunNo: 26753						
Prep Date:	Analysis D	Analysis Date: 6/10/2015			eqNo: 7	97263	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	0.050									
Surr: BFB	18		20.00		88.9	57.8	137				
Sample ID 2.5UG GRO LCS	Samp	Type: LC	s	Tes	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSW	Batc	h ID: R2	6753	F	RunNo: 2	6753					
Prep Date:	Analysis E	Date: 6/	10/2015	S	eqNo: 7	97264	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.5	80	120				
Surr: BFB	21		20.00		103	57.8	137				

### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
  - Р Sample pH Not In Range
  - RL Reporting Detection Limit

Page 12 of 21

Hall Environmen	nvironmental Analysis Laboratory, Inc.								
state and the second	Refining Company y Temporary RO Re	ject							
Sample ID MB-19626	SampType: MB	LK	Test	Code: El	PA Method	8082: PCB's			
Client ID: PBW	Batch ID: 196	26	R	unNo: 2	6808				
Prep Date: 6/9/2015	Analysis Date: 6/1	2/2015	S	eqNo: 7	99539	Units: µg/L			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND 1.0								
Aroclor 1221	ND 1.0								
Aroclor 1232	ND 1.0								
Aroclor 1242	ND 1.0								
Aroclor 1248	ND 1.0								
Aroclor 1254	ND 1.0								
Aroclor 1260	ND 1.0								
Surr: Decachlorobiphenyl	1.8	2.500		72.8	44.5	110			
Surr: Tetrachloro-m-xylene	1.6	2.500		63.2	31.8	95.7			
Sample ID MB-19672	SampType: MB	LK	Test	Code: El	PA Method	8082: PCB's			
Client ID: PBW	PBW Batch ID: 19672				6808				
Prep Date: 6/11/2015	Analysis Date: 6/1	2/2015	S	eqNo: 7	99540	Units: %REC	0		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	2.3	2.500		92.0	44.5	110			
Surr: Tetrachloro-m-xylene	1.9	2.500		75.2	31.8	95.7			
Sample ID LCS-19672	SampType: LCS	6	Test	Code: El	PA Method	8082: PCB's			
Client ID: LCSW	Batch ID: 196	72	R	unNo: 2	6808				
Prep Date: 6/11/2015	Analysis Date: 6/1	2/2015	s	eqNo: 7	99541	Units: %REC	0		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	2.0	2.500		82.0	44.5	110			
Surr: Tetrachloro-m-xylene	1.8	2.500		70.4	31.8	95.7			
Sample ID LCSD-19626	SampType: LCS	SD	Test	Code: El	PA Method	8082: PCB's			
Client ID: LCSS02	Batch ID: 196	26	R	unNo: 2	6808				
Prep Date: 6/9/2015	Analysis Date: 6/1	2/2015	S	eqNo: 7	99543	Units: µg/L			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	3.1 1.0	5.000	0	61.8	22.6	127	4.98	26.9	
Aroclor 1260	4.7 1.0	5.000	0	94.3	20.4	122	8.96	29.1	
Surr: Decachlorobiphenyl	1.7	2.500		69.2	44.5	110	0	0	
Surr: Tetrachloro-m-xylene	1.5	2.500		58.4	31.8	95.7	0	0	

* Value exceeds Maximum Contaminant Level.

**QC SUMMARY REPORT** 

- E Value above quantitation range
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH Not In Range
- RL Reporting Detection Limit

Page 13 of 21

1506316 WO#:

WO#: 1506316 22-Jun-15

#### **Client:** Navajo Refining Company **Project:** Monthly Temporary RO Reject

Sample ID LCS-19626	SW Batch ID: 19626			Tes	tCode: El	PA Method	8082: PCB's			
Client ID: LCSW				RunNo: 26808						
Prep Date: 6/9/2015				S	SeqNo: 799548 Units:					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	2.9	1.0	5.000	0	58.8	22.6	127			
Aroclor 1260	5.2	1.0	5.000	0	103	20.4	122			
Surr: Decachlorobiphenyl	1.9		2.500		74.8	44.5	110			
Surr: Tetrachloro-m-xylene	1.7		2.500		66.4	31.8	95.7			

#### Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Р Sample pH Not In Range
  - **Reporting Detection Limit** RL

Page 14 of 21