GW – 028

2015 Annual Discharge Permit Report

PART 3 OF 16

March 2016

Navajo Refining Company, L.L.C.

2015 FOURTH QUARTER MONTHLY INJECTION PRESSURES, RATES, AND VOLUMES

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maximum Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure Av (psig)	Maximum Annular Pressure Mx (psig)	Minimum Annular Pressure Mn (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	TOTAL CUMULATIVE Volume (barrels)
WDW-1													**Previous Quarter**	37,147,100
Oct-15	1,379	1,400	1,234	124	129	95	480	837	305	4,251	4,423	3,257	131,794	37,278,894
Nov-15	1,376	1,400	1,252	121	128	94	335	447	91	4,149	4,389	3,223	124,457	37,403,351
Dec-15	1,342	1,400	1,256	124	256	99	398	661	193	4,251	8,777	3,394	131,794	37,535,146
WDW-2													**Previous Quarter**	24,267,637
Oct-15	1,378	1,234	1,252	102	181	59	467	769	248	3,497	6,206	2,023	108,411	24,376,048
Nov-15	1,376	1,400	1,252	92	100	54	341	787	217	3,154	3,429	1,851	94,629	24,470,677
Dec-15	1,326	1,400	1,253	79	99	55	281	345	209	2,709	3,394	1,886	83,966	24,554,643
WDW-3													**Previous Quarter**	14,329,329
Oct-15	1,370	1,390	1,233	141	769	52	855	1,006	708	4,834	26,366	1,783	149,863	14,479,192
Nov-15	1,369	1,390	1,252	143	151	110	857	983	686	4,903	5,177	3,771	147,086	14,626,278
Dec-15	1,334	1,390	1,255	135	151	108	812	965	715	4,629	5,177	3,703	143,486	14,769,763
													Total Injected fluids:	76,859,552

Navajo Refining Company, L.L.C.

2015 FOURTH QUARTER WEEKLY WAMS LEVEL TABLE

	10/6/15	10/12/15	10/19/15	10/26/15	11/2/15	11/9/15	11/16/15	11/23/15	11/30/15	12/7/15	12/14/16	12/16/15	12/21/15	12/28/15
WDW -1[1]	100	100	155**	150	150	150	145	145	145	145	145		145	Inaccessible
WDW-2[1]	100	100	150**	150	145	145	150	150	150	150	150		150	Inaccessible
WDW-3[1]	255*	170	250	310***	150	250	130****	150	200	245	255	300*****	145	Inaccessible
Comments: * Removed 130 gal. ** Added 55 gal. glycol *** Removed 255 gal. ****Removed 180 gal. *****Removed 200 gal.														

[1] Graduated tank gauged weekly in the field. Reading is in gallons.

WDW-1 is Mewbourne
WDW-2 is Chukka
WDW-3 is Gaines

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

November 24, 2015

Micki Schultz
Navajo Refining Company
P.O. Box 159
Artesia, NM 88211-0159
TEL: (575) 746-5281
FAX

RE: Quarterly WDW-1, 2, & 3 Inj Well OrderNo.: 1510908

Dear Micki Schultz:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/20/2015 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 www.hallenvironmental.com 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1510908**
Date Reported: **11/24/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company
Project: Quarterly WDW-1, 2, & 3 Inj Well
Lab ID: 1510908-001 **Matrix:** AQUEOUS

Client Sample ID: WDW-1,2,&3 Effluent
Collection Date: 10/19/2015 7:40:00 AM
Received Date: 10/20/2015 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
IGNITABILITY METHOD 1010						Analyst: **SUB**	
Ignitability	>200	0		°F	1	10/23/2015	R30423
SULFIDE, REACTIVE						Analyst: **SUB**	
Reactive Sulfide	ND	1.0		mg/L	1	10/23/2015	R30423
SPECIFIC GRAVITY						Analyst: **JRR**	
Specific Gravity	0.9991	0			1	10/20/2015 1:22:00 PM	R29675
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Fluoride	5.5	0.50	*	mg/L	5	10/20/2015 2:08:09 PM	R29684
Chloride	520	50		mg/L	100	10/27/2015 11:24:40 PM	R29842
Bromide	0.72	0.50		mg/L	5	10/20/2015 2:08:09 PM	R29684
Phosphorus, Orthophosphate (As P)	ND	10	H	mg/L	20	11/7/2015 4:57:03 AM	A30103
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	11/3/2015 11:53:29 PM	R29992
Sulfate	2700	50		mg/L	100	10/27/2015 11:24:40 PM	R29842
Nitrate+Nitrite as N	ND	1.0		mg/L	5	10/30/2015 11:15:10 AM	R29930
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	6800	0.010		µmhos/cm	1	10/20/2015 2:13:12 PM	R29677
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	296.6	20.00		mg/L CaCO3	1	10/20/2015 2:13:12 PM	R29677
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	10/20/2015 2:13:12 PM	R29677
Total Alkalinity (as CaCO3)	296.6	20.00		mg/L CaCO3	1	10/20/2015 2:13:12 PM	R29677
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	4880	100	*D	mg/L	1	10/23/2015 11:44:00 AM	21952
CORROSIVITY						Analyst: **SUB**	
pH	7.63			pH Units	1	10/26/2015	R30423
CYANIDE, REACTIVE						Analyst: **SUB**	
Cyanide, Reactive	ND	1.00		mg/L	1	10/28/2015	R30423
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.75	1.68	H	pH units	1	10/20/2015 2:13:12 PM	R29677
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	10/21/2015 3:46:07 PM	21960
MERCURY, TCLP						Analyst: **DBD**	
Mercury	ND	0.020		mg/L	1	11/3/2015 4:41:03 PM	22145
EPA METHOD 6010B: TCLP METALS						Analyst: **MED**	
Arsenic	ND	5.0		mg/L	1	10/22/2015 5:15:45 PM	21978

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

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EPA METHOD 6010B: TCLP METALS						Analyst: **MED**	
Barium	ND	100		mg/L	1	10/22/2015 5:15:45 PM	21978
Cadmium	ND	1.0		mg/L	1	10/22/2015 5:15:45 PM	21978
Chromium	ND	5.0		mg/L	1	10/22/2015 5:15:45 PM	21978
Lead	ND	5.0		mg/L	1	10/22/2015 5:15:45 PM	21978
Selenium	ND	1.0		mg/L	1	10/22/2015 5:15:45 PM	21978
Silver	ND	5.0		mg/L	1	10/22/2015 5:15:45 PM	21978
EPA 6010B: TOTAL METALS						Analyst: **MED**	
Aluminum	0.57	0.040		mg/L	2	10/22/2015 4:50:43 PM	21972
Antimony	ND	0.10		mg/L	2	10/22/2015 4:50:43 PM	21972
Arsenic	ND	0.040		mg/L	2	10/22/2015 4:50:43 PM	21972
Barium	ND	0.040		mg/L	2	10/22/2015 4:50:43 PM	21972
Beryllium	ND	0.0060		mg/L	2	10/22/2015 4:50:43 PM	21972
Cadmium	ND	0.0040		mg/L	2	10/22/2015 4:50:43 PM	21972
Calcium	65	2.0		mg/L	2	10/22/2015 4:50:43 PM	21972
Chromium	ND	0.012		mg/L	2	10/22/2015 4:50:43 PM	21972
Cobalt	ND	0.012		mg/L	2	10/22/2015 4:50:43 PM	21972
Copper	0.016	0.012		mg/L	2	10/22/2015 4:50:43 PM	21972
Iron	0.45	0.10		mg/L	2	10/22/2015 4:50:43 PM	21972
Lead	ND	0.010		mg/L	2	10/22/2015 4:50:43 PM	21972
Magnesium	20	2.0		mg/L	2	10/22/2015 4:50:43 PM	21972
Manganese	0.089	0.0040		mg/L	2	10/22/2015 4:50:43 PM	21972
Nickel	ND	0.020		mg/L	2	10/22/2015 4:50:43 PM	21972
Potassium	28	2.0		mg/L	2	10/22/2015 4:50:43 PM	21972
Selenium	0.27	0.10		mg/L	2	10/22/2015 4:50:43 PM	21972
Silver	ND	0.010		mg/L	2	10/22/2015 4:50:43 PM	21972
Sodium	1400	50		mg/L	50	10/22/2015 4:46:39 PM	21972
Thallium	ND	0.10		mg/L	2	10/22/2015 4:50:43 PM	21972
Vanadium	ND	0.10		mg/L	2	10/22/2015 4:50:43 PM	21972
Zinc	ND	0.040		mg/L	2	10/22/2015 4:50:43 PM	21972
EPA METHOD 8260B: VOLATILES						Analyst: **SUB**	
Acetonitrile	ND	2.0		µg/L	1	11/2/2015	R30423
Allyl chloride	ND	2.0		µg/L	1	11/2/2015	R30423
Chloroprene	ND	2.0		µg/L	1	11/2/2015	R30423
Cyclohexane	ND	2.0		µg/L	1	11/2/2015	R30423
Diethyl ether	ND	0.50		µg/L	1	11/2/2015	R30423
Diisopropyl ether	ND	2.0		µg/L	1	11/2/2015	R30423
Epichlorohydrin	ND	5.0		µg/L	1	11/2/2015	R30423
Ethyl acetate	ND	2.0		µg/L	1	11/2/2015	R30423

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EPA METHOD 8260B: VOLATILES							Analyst: **SUB**
Ethyl methacrylate	ND	2.0		µg/L	1	11/2/2015	R30423
Ethyl tert-butyl ether	ND	2.0		µg/L	1	11/2/2015	R30423
Freon-113	ND	2.0		µg/L	1	11/2/2015	R30423
Isobutanol	ND	2.0		µg/L	1	11/2/2015	R30423
Isopropyl acetate	ND	2.0		µg/L	1	11/2/2015	R30423
Methacrylonitrile	ND	2.0		µg/L	1	11/2/2015	R30423
Methyl acetate	ND	2.0		µg/L	1	11/2/2015	R30423
Methyl ethyl ketone	ND	2.5		µg/L	1	11/2/2015	R30423
Methyl isobutyl ketone	ND	2.5		µg/L	1	11/2/2015	R30423
Methyl methacrylate	ND	2.0		µg/L	1	11/2/2015	R30423
Methylcyclohexane	ND	2.0		µg/L	1	11/2/2015	R30423
n-Amyl acetate	ND	2.0		µg/L	1	11/2/2015	R30423
n-Hexane	ND	0.50		µg/L	1	11/2/2015	R30423
Nitrobenzene	ND	5.0		µg/L	1	11/2/2015	R30423
Pentachloroethane	ND	5.0		µg/L	1	11/2/2015	R30423
p-isopropyltoluene	ND	0.50		µg/L	1	11/2/2015	R30423
Propionitrile	ND	2.0		µg/L	1	11/2/2015	R30423
Tetrahydrofuran	ND	2.0		µg/L	1	11/2/2015	R30423
Benzene	ND	0.50		µg/L	1	11/2/2015	R30423
Toluene	ND	0.50		µg/L	1	11/2/2015	R30423
Ethylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	1	11/2/2015	R30423
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dichloroethane (EDC)	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dibromoethane (EDB)	ND	0.50		µg/L	1	11/2/2015	R30423
Naphthalene	ND	0.50		µg/L	1	11/2/2015	R30423
Acetone	ND	2.5		µg/L	1	11/2/2015	R30423
Bromobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Bromodichloromethane	ND	0.50		µg/L	1	11/2/2015	R30423
Bromoform	ND	0.50		µg/L	1	11/2/2015	R30423
Bromomethane	ND	0.50		µg/L	1	11/2/2015	R30423
Carbon disulfide	ND	0.50		µg/L	1	11/2/2015	R30423
Carbon Tetrachloride	ND	0.50		µg/L	1	11/2/2015	R30423
Chlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Chloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
Chloroform	ND	0.50		µg/L	1	11/2/2015	R30423
Chloromethane	ND	0.50		µg/L	1	11/2/2015	R30423
2-Chlorotoluene	ND	0.50		µg/L	1	11/2/2015	R30423

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: **SUB**
4-Chlorotoluene	ND	0.50		µg/L	1	11/2/2015	R30423
cis-1,2-DCE	ND	0.50		µg/L	1	11/2/2015	R30423
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dibromo-3-chloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
Dibromochloromethane	ND	0.50		µg/L	1	11/2/2015	R30423
Dibromomethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,3-Dichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,4-Dichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Dichlorodifluoromethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1-Dichloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1-Dichloroethene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dichloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
1,3-Dichloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
2,2-Dichloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1-Dichloropropene	ND	0.50		µg/L	1	11/2/2015	R30423
Hexachlorobutadiene	ND	0.50		µg/L	1	11/2/2015	R30423
2-Hexanone	ND	0.50		µg/L	1	11/2/2015	R30423
Isopropylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Methylene Chloride	ND	2.5		µg/L	1	11/2/2015	R30423
n-Butylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
n-Propylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
sec-Butylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Styrene	ND	0.50		µg/L	1	11/2/2015	R30423
tert-Butylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
Tetrachloroethene (PCE)	ND	0.50		µg/L	1	11/2/2015	R30423
trans-1,2-DCE	ND	0.50		µg/L	1	11/2/2015	R30423
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2,3-Trichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2,4-Trichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,1,1-Trichloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1,2-Trichloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
Trichloroethene (TCE)	ND	0.50		µg/L	1	11/2/2015	R30423
Trichlorofluoromethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,2,3-Trichloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
Vinyl chloride	ND	0.50		µg/L	1	11/2/2015	R30423
mp-Xylenes	ND	1.0		µg/L	1	11/2/2015	R30423

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EPA METHOD 8260B: VOLATILES							Analyst: **SUB**
o-Xylene	ND	0.50		µg/L	1	11/2/2015	R30423
tert-Amyl methyl ether	ND	2.0		µg/L	1	11/2/2015	R30423
tert-Butyl alcohol	ND	0.50		µg/L	1	11/2/2015	R30423
Acrolein	ND	2.0		µg/L	1	11/2/2015	R30423
Acrylonitrile	ND	2.0		µg/L	1	11/2/2015	R30423
Bromochloromethane	ND	0.50		µg/L	1	11/2/2015	R30423
2-Chloroethyl vinyl ether	ND	2.0		µg/L	1	11/2/2015	R30423
Iodomethane	ND	0.50		µg/L	1	11/2/2015	R30423
trans-1,4-Dichloro-2-butene	ND	0.50		µg/L	1	11/2/2015	R30423
Vinyl acetate	ND	2.0		µg/L	1	11/2/2015	R30423
1,4-Dioxane	ND	20		µg/L	1	11/2/2015	R30423
Surr: 1,2-Dichlorobenzene-d4	111	70-130		%REC	1	11/2/2015	R30423
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	11/2/2015	R30423
Surr: Toluene-d8	104	70-130		%REC	1	11/2/2015	R30423
EPA 8270C: SEMIVOLATILES/MOD							Analyst: **SUB**
1,1-Biphenyl	ND	2.0		µg/L	1	10/30/2015	R30423
Atrazine	ND	2.0		µg/L	1	10/30/2015	R30423
Benzaldehyde	3.6	2.0		µg/L	1	10/30/2015	R30423
Caprolactam	ND	2.0		µg/L	1	10/30/2015	R30423
N-Nitroso-di-n-butylamine	ND	2.0		µg/L	1	10/30/2015	R30423
Acetophenone	ND	5.0		µg/L	1	10/30/2015	R30423
1-Methylnaphthalene	ND	5.0		µg/L	1	10/30/2015	R30423
2,3,4,6-Tetrachlorophenol	ND	5.0		µg/L	1	10/30/2015	R30423
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	10/30/2015	R30423
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	10/30/2015	R30423
2,4-Dichlorophenol	ND	5.0		µg/L	1	10/30/2015	R30423
2,4-Dimethylphenol	ND	5.0		µg/L	1	10/30/2015	R30423
2,4-Dinitrophenol	ND	5.0		µg/L	1	10/30/2015	R30423
2,4-Dinitrotoluene	ND	5.0		µg/L	1	10/30/2015	R30423
2,6-Dinitrotoluene	ND	5.0		µg/L	1	10/30/2015	R30423
2-Chloronaphthalene	ND	5.0		µg/L	1	10/30/2015	R30423
2-Chlorophenol	ND	5.0		µg/L	1	10/30/2015	R30423
2-Methylnaphthalene	ND	5.0		µg/L	1	10/30/2015	R30423
2-Methylphenol	ND	5.0		µg/L	1	10/30/2015	R30423
2-Nitroaniline	ND	5.0		µg/L	1	10/30/2015	R30423
2-Nitrophenol	ND	5.0		µg/L	1	10/30/2015	R30423
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	10/30/2015	R30423
3-Nitroaniline	ND	5.0		µg/L	1	10/30/2015	R30423
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	10/30/2015	R30423

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Qualifiers:

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- H Holding times for preparation or analysis exceeded
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- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company
Project: Quarterly WDW-1, 2, & 3 Inj Well
Lab ID: 1510908-001 **Matrix:** AQUEOUS

Client Sample ID: WDW-1,2,&3 Effluent
Collection Date: 10/19/2015 7:40:00 AM
Received Date: 10/20/2015 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 8270C: SEMIVOLATILES/MOD						Analyst: **SUB**	
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	10/30/2015	R30423
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	10/30/2015	R30423
4-Chloroaniline	ND	5.0		µg/L	1	10/30/2015	R30423
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	10/30/2015	R30423
4-Nitroaniline	ND	5.0		µg/L	1	10/30/2015	R30423
4-Nitrophenol	ND	5.0		µg/L	1	10/30/2015	R30423
Acenaphthene	ND	5.0		µg/L	1	10/30/2015	R30423
Acenaphthylene	ND	5.0		µg/L	1	10/30/2015	R30423
Anthracene	ND	5.0		µg/L	1	10/30/2015	R30423
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	10/30/2015	R30423
Benz(a)anthracene	ND	0.10		µg/L	1	10/30/2015	R30423
Benzo(a)pyrene	ND	0.10		µg/L	1	10/30/2015	R30423
Benzo(b)fluoranthene	ND	0.10		µg/L	1	10/30/2015	R30423
Benzo(k)fluoranthene	ND	0.10		µg/L	1	10/30/2015	R30423
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	10/30/2015	R30423
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	10/30/2015	R30423
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	10/30/2015	R30423
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	10/30/2015	R30423
Butyl benzyl phthalate	ND	5.0		µg/L	1	10/30/2015	R30423
Carbazole	ND	5.0		µg/L	1	10/30/2015	R30423
Chrysene	ND	0.10		µg/L	1	10/30/2015	R30423
Dibenz(a,h)anthracene	ND	0.10		µg/L	1	10/30/2015	R30423
Dibenzofuran	ND	5.0		µg/L	1	10/30/2015	R30423
Diethyl phthalate	ND	5.0		µg/L	1	10/30/2015	R30423
Dimethyl phthalate	ND	5.0		µg/L	1	10/30/2015	R30423
Di-n-butyl phthalate	ND	5.0		µg/L	1	10/30/2015	R30423
Di-n-octyl phthalate	ND	5.0		µg/L	1	10/30/2015	R30423
Fluoranthene	ND	5.0		µg/L	1	10/30/2015	R30423
Fluorene	ND	5.0		µg/L	1	10/30/2015	R30423
Hexachlorobenzene	ND	1.0		µg/L	1	10/30/2015	R30423
Hexachlorobutadiene	ND	5.0		µg/L	1	10/30/2015	R30423
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	10/30/2015	R30423
Hexachloroethane	ND	5.0		µg/L	1	10/30/2015	R30423
Indeno(1,2,3-cd)pyrene	ND	0.10		µg/L	1	10/30/2015	R30423
Isophorone	ND	5.0		µg/L	1	10/30/2015	R30423
Naphthalene	ND	5.0		µg/L	1	10/30/2015	R30423
Nitrobenzene	ND	5.0		µg/L	1	10/30/2015	R30423
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	10/30/2015	R30423
N-Nitrosodiphenylamine	ND	2.0		µg/L	1	10/30/2015	R30423

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company
Project: Quarterly WDW-1, 2, & 3 Inj Well
Lab ID: 1510908-001 **Matrix:** AQUEOUS

Client Sample ID: WDW-1,2,&3 Effluent
Collection Date: 10/19/2015 7:40:00 AM
Received Date: 10/20/2015 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 8270C: SEMIVOLATILES/MOD							Analyst: **SUB**
Pentachlorophenol	ND	5.0		µg/L	1	10/30/2015	R30423
Phenanthrene	ND	5.0		µg/L	1	10/30/2015	R30423
Phenol	ND	5.0		µg/L	1	10/30/2015	R30423
Pyrene	ND	5.0		µg/L	1	10/30/2015	R30423
o-Toluidine	ND	2.0		µg/L	1	10/30/2015	R30423
Pyridine	ND	5.0		µg/L	1	10/30/2015	R30423
1,2,4,5-Tetrachlorobenzene	ND	5.0		µg/L	1	10/30/2015	R30423
Surr: 2,4,6-Tribromophenol	104	10-123		%REC	1	10/30/2015	R30423
Surr: 2-Fluorobiphenyl	90.8	19-130		%REC	1	10/30/2015	R30423
Surr: 2-Fluorophenol	70.2	21-120		%REC	1	10/30/2015	R30423
Surr: Nitrobenzene-d5	85.6	25-130		%REC	1	10/30/2015	R30423
Surr: Phenol-d5	121	10-130		%REC	1	10/30/2015	R30423
Surr: Terphenyl-d14	44.4	21-141		%REC	1	10/30/2015	R30423

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company
Client Sample ID: TRIP BLANK
Project: Quarterly WDW-1, 2, & 3 Inj Well
Collection Date:
Lab ID: 1510908-002
Matrix: TRIP BLANK
Received Date: 10/20/2015 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **SUB**	
Acetonitrile	ND	0.50		µg/L	1	11/2/2015	R30423
Allyl chloride	ND	0.50		µg/L	1	11/2/2015	R30423
Chloroprene	ND	0.50		µg/L	1	11/2/2015	R30423
Cyclohexane	ND	0.50		µg/L	1	11/2/2015	R30423
Diethyl ether	ND	0.50		µg/L	1	11/2/2015	R30423
Diisopropyl ether	ND	0.50		µg/L	1	11/2/2015	R30423
Epichlorohydrin	ND	5.0		µg/L	1	11/2/2015	R30423
Ethyl acetate	ND	0.50		µg/L	1	11/2/2015	R30423
Ethyl methacrylate	ND	0.50		µg/L	1	11/2/2015	R30423
Ethyl tert-butyl ether	ND	0.50		µg/L	1	11/2/2015	R30423
Freon-113	ND	0.50		µg/L	1	11/2/2015	R30423
Isobutanol	ND	0.50		µg/L	1	11/2/2015	R30423
Isopropyl acetate	ND	0.50		µg/L	1	11/2/2015	R30423
Methacrylonitrile	ND	0.50		µg/L	1	11/2/2015	R30423
Methyl acetate	ND	0.50		µg/L	1	11/2/2015	R30423
Methyl ethyl ketone	ND	2.5		µg/L	1	11/2/2015	R30423
Methyl isobutyl ketone	ND	2.5		µg/L	1	11/2/2015	R30423
Methyl methacrylate	ND	0.50		µg/L	1	11/2/2015	R30423
Methylcyclohexane	ND	1.0		µg/L	1	11/2/2015	R30423
n-Amyl acetate	ND	0.50		µg/L	1	11/2/2015	R30423
n-Hexane	ND	0.50		µg/L	1	11/2/2015	R30423
Nitrobenzene	ND	5.0		µg/L	1	11/2/2015	R30423
Pentachloroethane	ND	5.0		µg/L	1	11/2/2015	R30423
p-Isopropyltoluene	ND	0.50		µg/L	1	11/2/2015	R30423
Propionitrile	ND	0.50		µg/L	1	11/2/2015	R30423
Tetrahydrofuran	ND	0.50		µg/L	1	11/2/2015	R30423
Benzene	ND	0.50		µg/L	1	11/2/2015	R30423
Toluene	ND	0.50		µg/L	1	11/2/2015	R30423
Ethylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	1	11/2/2015	R30423
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dichloroethane (EDC)	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dibromoethane (EDB)	ND	0.50		µg/L	1	11/2/2015	R30423
Naphthalene	ND	0.50		µg/L	1	11/2/2015	R30423
Acetone	ND	2.5		µg/L	1	11/2/2015	R30423
Bromobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Bromodichloromethane	ND	0.50		µg/L	1	11/2/2015	R30423
Bromoform	ND	0.50		µg/L	1	11/2/2015	R30423

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company
Client Sample ID: TRIP BLANK
Project: Quarterly WDW-1, 2, & 3 Inj Well
Collection Date:
Lab ID: 1510908-002
Matrix: TRIP BLANK
Received Date: 10/20/2015 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: **SUB**
Bromomethane	ND	0.50		µg/L	1	11/2/2015	R30423
Carbon disulfide	ND	0.50		µg/L	1	11/2/2015	R30423
Carbon Tetrachloride	ND	0.50		µg/L	1	11/2/2015	R30423
Chlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Chloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
Chloroform	ND	0.50		µg/L	1	11/2/2015	R30423
Chloromethane	ND	0.50		µg/L	1	11/2/2015	R30423
2-Chlorotoluene	ND	0.50		µg/L	1	11/2/2015	R30423
4-Chlorotoluene	ND	0.50		µg/L	1	11/2/2015	R30423
cis-1,2-DCE	ND	0.50		µg/L	1	11/2/2015	R30423
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dibromo-3-chloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
Dibromochloromethane	ND	0.50		µg/L	1	11/2/2015	R30423
Dibromomethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,3-Dichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,4-Dichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Dichlorodifluoromethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1-Dichloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1-Dichloroethene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2-Dichloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
1,3-Dichloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
2,2-Dichloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1-Dichloropropene	ND	0.50		µg/L	1	11/2/2015	R30423
Hexachlorobutadiene	ND	0.50		µg/L	1	11/2/2015	R30423
2-Hexanone	ND	0.50		µg/L	1	11/2/2015	R30423
Isopropylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Methylene Chloride	ND	2.5		µg/L	1	11/2/2015	R30423
n-Butylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
n-Propylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
sec-Butylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
Styrene	ND	0.50		µg/L	1	11/2/2015	R30423
tert-Butylbenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
Tetrachloroethene (PCE)	ND	0.50		µg/L	1	11/2/2015	R30423
trans-1,2-DCE	ND	0.50		µg/L	1	11/2/2015	R30423
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	11/2/2015	R30423
1,2,3-Trichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Navajo Refining Company
Client Sample ID: TRIP BLANK
Project: Quarterly WDW-1, 2, & 3 Inj Well
Collection Date:
Lab ID: 1510908-002
Matrix: TRIP BLANK
Received Date: 10/20/2015 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: **SUB**
1,2,4-Trichlorobenzene	ND	0.50		µg/L	1	11/2/2015	R30423
1,1,1-Trichloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,1,2-Trichloroethane	ND	0.50		µg/L	1	11/2/2015	R30423
Trichloroethene (TCE)	ND	0.50		µg/L	1	11/2/2015	R30423
Trichlorofluoromethane	ND	0.50		µg/L	1	11/2/2015	R30423
1,2,3-Trichloropropane	ND	0.50		µg/L	1	11/2/2015	R30423
Vinyl chloride	ND	0.50		µg/L	1	11/2/2015	R30423
mp-Xylenes	ND	1.0		µg/L	1	11/2/2015	R30423
o-Xylene	ND	0.50		µg/L	1	11/2/2015	R30423
tert-Amyl methyl ether	ND	0.50		µg/L	1	11/2/2015	R30423
tert-Butyl alcohol	ND	0.50		µg/L	1	11/2/2015	R30423
Acrolein	ND	0.50		µg/L	1	11/2/2015	R30423
Acrylonitrile	ND	0.50		µg/L	1	11/2/2015	R30423
Bromochloromethane	ND	0.50		µg/L	1	11/2/2015	R30423
2-Chloroethyl vinyl ether	ND	0.50		µg/L	1	11/2/2015	R30423
Iodomethane	ND	0.50		µg/L	1	11/2/2015	R30423
trans-1,4-Dichloro-2-butene	ND	0.50		µg/L	1	11/2/2015	R30423
Vinyl acetate	ND	0.50		µg/L	1	11/2/2015	R30423
1,4-Dioxane	ND	20		µg/L	1	11/2/2015	R30423
Surr: 1,2-Dichlorobenzene-d4	108	70-130		%REC	1	11/2/2015	R30423
Surr: 4-Bromofluorobenzene	105	70-130		%REC	1	11/2/2015	R30423
Surr: Toluene-d8	102	70-130		%REC	1	11/2/2015	R30423

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R29842**	RunNo: **29842**
Prep Date:	Analysis Date: **10/27/2015**	SeqNo: **908890** 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**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R29842**	RunNo: **29842**
Prep Date:	Analysis Date: **10/27/2015**	SeqNo: **908891** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	97.0	90	110			
Sulfate	9.8	0.50	10.00	0	98.3	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R29930**	RunNo: **29930**
Prep Date:	Analysis Date: **10/30/2015**	SeqNo: **911773** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R29930**	RunNo: **29930**
Prep Date:	Analysis Date: **10/30/2015**	SeqNo: **911774** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R29992**	RunNo: **29992**
Prep Date:	Analysis Date: **11/3/2015**	SeqNo: **913762** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R29992**	RunNo: **29992**
Prep Date:	Analysis Date: **11/3/2015**	SeqNo: **913763** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.1	90	110			

Qualifiers:

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- J Analyte detected below quantitation limits
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- RL Reporting Detection Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A30103**	RunNo: **30103**
Prep Date:	Analysis Date: **11/6/2015**	SeqNo: **916979** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A30103**	RunNo: **30103**
Prep Date:	Analysis Date: **11/6/2015**	SeqNo: **916980** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-R30423**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **11/2/2015**	SeqNo: **928381** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl ethyl ketone	ND	2.5								
Methyl isobutyl ketone	ND	2.5								
p-Isopropyltoluene	ND	0.50								
Benzene	ND	0.50								
Toluene	ND	0.50								
Ethylbenzene	ND	0.50								
Methyl tert-butyl ether (MTBE)	ND	0.50								
1,2,4-Trimethylbenzene	ND	0.50								
1,3,5-Trimethylbenzene	ND	0.50								
1,2-Dichloroethane (EDC)	ND	0.50								
1,2-Dibromoethane (EDB)	ND	0.50								
Naphthalene	ND	0.50								
Acetone	ND	2.5								
Bromobenzene	ND	0.50								
Bromodichloromethane	ND	0.50								
Bromoform	ND	0.50								
Bromomethane	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon Tetrachloride	ND	0.50								
Chlorobenzene	ND	0.50								
Chloroethane	ND	0.50								
Chloroform	ND	0.50								
Chloromethane	ND	0.50								
2-Chlorotoluene	ND	0.50								
4-Chlorotoluene	ND	0.50								
cis-1,2-DCE	ND	0.50								
cis-1,3-Dichloropropene	ND	0.50								
1,2-Dibromo-3-chloropropane	ND	0.50								
Dibromochloromethane	ND	0.50								
Dibromomethane	ND	0.50								
1,2-Dichlorobenzene	ND	0.50								
1,3-Dichlorobenzene	ND	0.50								
1,4-Dichlorobenzene	ND	0.50								
Dichlorodifluoromethane	ND	0.50								
1,1-Dichloroethane	ND	0.50								
1,1-Dichloroethene	ND	0.50								
1,2-Dichloropropane	ND	0.50								
1,3-Dichloropropane	ND	0.50								
2,2-Dichloropropane	ND	0.50								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510908

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-R30423**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **11/2/2015**	SeqNo: **928381** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.50								
Hexachlorobutadiene	ND	0.50								
2-Hexanone	ND	2.5								
Isopropylbenzene	ND	0.50								
Methylene Chloride	ND	2.5								
n-Butylbenzene	ND	0.50								
n-Propylbenzene	ND	0.50								
sec-Butylbenzene	ND	0.50								
Styrene	ND	0.50								
tert-Butylbenzene	ND	0.50								
1,1,1,2-Tetrachloroethane	ND	0.50								
1,1,2,2-Tetrachloroethane	ND	0.50								
Tetrachloroethene (PCE)	ND	0.50								
trans-1,2-DCE	ND	0.50								
trans-1,3-Dichloropropene	ND	0.50								
1,2,3-Trichlorobenzene	ND	0.50								
1,2,4-Trichlorobenzene	ND	0.50								
1,1,1-Trichloroethane	ND	0.50								
1,1,2-Trichloroethane	ND	0.50								
Trichloroethene (TCE)	ND	0.50								
Trichlorofluoromethane	ND	0.50								
1,2,3-Trichloropropane	ND	0.50								
Vinyl chloride	ND	0.50								
mp-Xylenes	ND	0.50								
o-Xylene	ND	0.50								
Acrylonitrile	ND	0.50								
Bromochloromethane	ND	0.50								

Sample ID **LCS-R30423**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **11/2/2015**	SeqNo: **928382** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	9.2	0	10.00	0	92.1	80	120			
Toluene	9.6	0	10.00	0	96.5	80	120			
Ethylbenzene	9.7	0	10.00	0	96.9	80	120			
Chlorobenzene	9.5	0	10.00	0	94.7	80	120			
1,1-Dichloroethene	10	0	10.00	0	102	80	120			
Tetrachloroethene (PCE)	9.9	0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **LCS-R30423**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **11/2/2015**	SeqNo: **928382** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	10	0	10.00	0	102	80	120			
o-Xylene	10	0	10.00	0	105	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510908

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-R30423**	SampType: **MBLK**	TestCode: **EPA 8270C: Semivolatiles/Mod**
Client ID: **PBW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **10/30/2015**	SeqNo: **928385** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acetophenone	ND	5.0								
1-Methylnaphthalene	ND	5.0								
2,3,4,6-Tetrachlorophenol	ND	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dichlorophenol	ND	5.0								
2,4-Dimethylphenol	ND	5.0								
2,4-Dinitrophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	5.0								
2-Chloronaphthalene	ND	5.0								
2-Chlorophenol	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
2-Nitroaniline	ND	5.0								
2-Nitrophenol	ND	5.0								
3,3'-Dichlorobenzidine	ND	5.0								
3-Nitroaniline	ND	5.0								
4,6-Dinitro-2-methylphenol	ND	5.0								
4-Bromophenyl phenyl ether	ND	5.0								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
4-Chlorophenyl phenyl ether	ND	5.0								
4-Nitroaniline	ND	5.0								
4-Nitrophenol	ND	5.0								
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Anthracene	ND	5.0								
Benzo(g,h,i)perylene	ND	5.0								
Benz(a)anthracene	ND	0.10								
Benzo(a)pyrene	ND	0.10								
Benzo(b)fluoranthene	ND	0.10								
Benzo(k)fluoranthene	ND	0.10								
Bis(2-chloroethoxy)methane	ND	5.0								
Bis(2-chloroethyl)ether	ND	5.0								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	ND	5.0								
Butyl benzyl phthalate	ND	5.0								
Carbazole	ND	5.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510908

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-R30423**	SampType: **MBLK**	TestCode: **EPA 8270C: Semivolatiles/Mod**
Client ID: **PBW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **10/30/2015**	SeqNo: **928385** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chrysene	ND	0.10								
Dibenz(a,h)anthracene	ND	0.10								
Dibenzofuran	ND	5.0								
Diethyl phthalate	ND	5.0								
Dimethyl phthalate	ND	5.0								
Di-n-butyl phthalate	ND	5.0								
Di-n-octyl phthalate	ND	5.0								
Fluoranthene	ND	5.0								
Fluorene	ND	5.0								
Hexachlorobenzene	ND	1.0								
Hexachlorobutadiene	ND	5.0								
Hexachlorocyclopentadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	0.10								
Isophorone	ND	5.0								
Naphthalene	ND	5.0								
Nitrobenzene	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	2.0								
Pentachlorophenol	ND	5.0								
Phenanthrene	ND	1.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
o-Toluidine	ND	2.0								
Pyridine	ND	5.0								
1,2,4,5-Tetrachlorobenzene	ND	5.0								

Sample ID **LCS-R30423**	SampType: **LCS**	TestCode: **EPA 8270C: Semivolatiles/Mod**
Client ID: **LCSW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **10/30/2015**	SeqNo: **928386** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	4.8	0	5.000	0	95.6	49	134			
2-Chlorophenol	4.7	0	5.000	0	94.4	50	31			S
4-Chloro-3-methylphenol	4.8	0	5.000	0	95.4	42	139			
4-Nitrophenol	3.2	0	5.000	0	65.0	19	137			
Acenaphthene	5.2	0	5.000	0	105	36	122			
Bis(2-ethylhexyl)phthalate	5.9	0	5.000	0	118	43	142			
N-Nitrosodi-n-propylamine	4.7	0	5.000	0	94.4	46	140			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **LCS-R30423**	SampType: **LCS**	TestCode: **EPA 8270C: Semivolatiles/Mod**
Client ID: **LCSW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **10/30/2015**	SeqNo: **928386** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	4.8	0	5.000	0	95.4	22	138			
Phenol	4.5	0	5.000	0	90.8	45	134			
Pyrene	4.6	0	5.000	0	92.2	45	138			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID	**MB-21960**	SampType:	**MBLK**	TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**PBW**	Batch ID:	**21960**	RunNo:	**29703**					
Prep Date:	**10/21/2015**	Analysis Date:	**10/21/2015**	SeqNo:	**904542**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-21960**	SampType:	**LCS**	TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**LCSW**	Batch ID:	**21960**	RunNo:	**29703**					
Prep Date:	**10/21/2015**	Analysis Date:	**10/21/2015**	SeqNo:	**904543**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.3	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-22145**	SampType: **MBLK**	TestCode: **MERCURY, TCLP**
Client ID: **PBW**	Batch ID: **22145**	RunNo: **29977**
Prep Date: **11/3/2015**	Analysis Date: **11/3/2015**	SeqNo: **913123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID **LCS-22145**	SampType: **LCS**	TestCode: **MERCURY, TCLP**
Client ID: **LCSW**	Batch ID: **22145**	RunNo: **29977**
Prep Date: **11/3/2015**	Analysis Date: **11/3/2015**	SeqNo: **913124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-21978**	SampType: **MBLK**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **PBW**	Batch ID: **21978**	RunNo: **29736**
Prep Date: **10/22/2015**	Analysis Date: **10/22/2015**	SeqNo: **905688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Barium	ND	100								
Cadmium	ND	1.0								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID **LCS-21978**	SampType: **LCS**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **LCSW**	Batch ID: **21978**	RunNo: **29736**
Prep Date: **10/22/2015**	Analysis Date: **10/22/2015**	SeqNo: **905689** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	107	80	120			
Barium	ND	100	0.5000	0	100	80	120			
Cadmium	ND	1.0	0.5000	0	102	80	120			
Chromium	ND	5.0	0.5000	0	100	80	120			
Lead	ND	5.0	0.5000	0	101	80	120			
Selenium	ND	1.0	0.5000	0	107	80	120			
Silver	ND	5.0	0.1000	0	101	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-21972**	SampType: **MBLK**	TestCode: **EPA 6010B: Total Metals**
Client ID: **PBW**	Batch ID: **21972**	RunNo: **29736**
Prep Date: **10/21/2015**	Analysis Date: **10/22/2015**	SeqNo: **905617** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Antimony	ND	0.050								
Arsenic	ND	0.020								
Barium	ND	0.020								
Beryllium	ND	0.0030								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.050								
Lead	ND	0.0050								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Nickel	ND	0.010								
Potassium	ND	1.0								
Selenium	ND	0.050								
Silver	ND	0.0050								
Sodium	ND	1.0								
Thallium	ND	0.050								
Vanadium	ND	0.050								
Zinc	ND	0.020								

Sample ID **LCS-21972**	SampType: **LCS**	TestCode: **EPA 6010B: Total Metals**
Client ID: **LCSW**	Batch ID: **21972**	RunNo: **29736**
Prep Date: **10/21/2015**	Analysis Date: **10/22/2015**	SeqNo: **905618** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	103	80	120			
Antimony	0.52	0.050	0.5000	0	103	80	120			
Arsenic	0.51	0.020	0.5000	0	101	80	120			
Barium	0.49	0.020	0.5000	0	97.9	80	120			
Beryllium	0.51	0.0030	0.5000	0	103	80	120			
Cadmium	0.50	0.0020	0.5000	0	99.2	80	120			
Calcium	49	1.0	50.00	0	97.9	80	120			
Chromium	0.49	0.0060	0.5000	0	97.6	80	120			
Cobalt	0.48	0.0060	0.5000	0	95.3	80	120			
Copper	0.51	0.0060	0.5000	0	102	80	120			
Iron	0.49	0.050	0.5000	0	97.9	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **LCS-21972**	SampType: **LCS**	TestCode: **EPA 6010B: Total Metals**
Client ID: **LCSW**	Batch ID: **21972**	RunNo: **29736**
Prep Date: **10/21/2015**	Analysis Date: **10/22/2015**	SeqNo: **905618** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.49	0.0050	0.5000	0	97.9	80	120			
Magnesium	50	1.0	50.00	0	99.1	80	120			
Manganese	0.48	0.0020	0.5000	0	96.9	80	120			
Nickel	0.48	0.010	0.5000	0	95.8	80	120			
Potassium	47	1.0	50.00	0	94.3	80	120			
Selenium	0.49	0.050	0.5000	0	98.4	80	120			
Silver	0.099	0.0050	0.1000	0	99.2	80	120			
Sodium	49	1.0	50.00	0	98.4	80	120			
Thallium	0.51	0.050	0.5000	0	103	80	120			
Vanadium	0.51	0.050	0.5000	0	102	80	120			
Zinc	0.48	0.020	0.5000	0	95.3	80	120			

Sample ID **1510908-001BMS**	SampType: **MS**	TestCode: **EPA 6010B: Total Metals**
Client ID: **WDW-1,2,&3 Effluen**	Batch ID: **21972**	RunNo: **29736**
Prep Date: **10/21/2015**	Analysis Date: **10/22/2015**	SeqNo: **905634** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	1.2	0.040	0.5000	0.5719	126	75	125			S
Antimony	0.60	0.10	0.5000	0	120	75	125			
Arsenic	0.63	0.040	0.5000	0	126	75	125			S
Barium	0.54	0.040	0.5000	0.01050	106	75	125			
Beryllium	0.55	0.0060	0.5000	0	110	75	125			
Cadmium	0.56	0.0040	0.5000	0	111	75	125			
Calcium	120	2.0	50.00	65.14	113	75	125			
Chromium	0.52	0.012	0.5000	0	105	75	125			
Cobalt	0.53	0.012	0.5000	0	106	75	125			
Copper	0.62	0.012	0.5000	0.01570	121	75	125			
Iron	0.99	0.10	0.5000	0.4468	110	75	125			
Lead	0.55	0.010	0.5000	0	110	75	125			
Magnesium	74	2.0	50.00	19.57	110	75	125			
Manganese	0.62	0.0040	0.5000	0.08908	106	75	125			
Nickel	0.54	0.020	0.5000	0	108	75	125			
Potassium	85	2.0	50.00	27.55	115	75	125			
Selenium	0.86	0.10	0.5000	0.2670	118	75	125			
Silver	0.11	0.010	0.1000	0	112	75	125			
Thallium	0.58	0.10	0.5000	0	115	75	125			
Vanadium	0.57	0.10	0.5000	0.01404	110	75	125			
Zinc	0.59	0.040	0.5000	0.03952	110	75	125			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **1510908-001BMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Metals**

Client ID: **WDW-1,2,&3 Effluen** Batch ID: **21972** RunNo: **29736**

Prep Date: **10/21/2015** Analysis Date: **10/22/2015** SeqNo: **905635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	1.1	0.040	0.5000	0.5719	115	75	125	4.76	20	
Antimony	0.54	0.10	0.5000	0	108	75	125	10.5	20	
Arsenic	0.59	0.040	0.5000	0	118	75	125	6.26	20	
Barium	0.51	0.040	0.5000	0.01050	99.5	75	125	6.53	20	
Beryllium	0.50	0.0060	0.5000	0	101	75	125	8.90	20	
Cadmium	0.52	0.0040	0.5000	0	104	75	125	6.55	20	
Calcium	110	2.0	50.00	65.14	88.0	75	125	11.0	20	
Chromium	0.49	0.012	0.5000	0	98.8	75	125	5.80	20	
Cobalt	0.50	0.012	0.5000	0	99.8	75	125	6.05	20	
Copper	0.58	0.012	0.5000	0.01570	112	75	125	7.19	20	
Iron	0.90	0.10	0.5000	0.4468	91.6	75	125	9.48	20	
Lead	0.51	0.010	0.5000	0	102	75	125	7.39	20	
Magnesium	69	2.0	50.00	19.57	99.3	75	125	7.30	20	
Manganese	0.58	0.0040	0.5000	0.08908	98.6	75	125	6.53	20	
Nickel	0.51	0.020	0.5000	0	101	75	125	6.22	20	
Potassium	77	2.0	50.00	27.55	98.0	75	125	10.6	20	
Selenium	0.80	0.10	0.5000	0.2670	108	75	125	6.07	20	
Silver	0.10	0.010	0.1000	0	102	75	125	8.73	20	
Thallium	0.54	0.10	0.5000	0	107	75	125	7.22	20	
Vanadium	0.53	0.10	0.5000	0.01404	103	75	125	6.69	20	
Zinc	0.55	0.040	0.5000	0.03952	103	75	125	6.44	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-R30423**	SampType: **MBLK**	TestCode: **CYANIDE, Reactive**
Client ID: **PBW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **10/28/2015**	SeqNo: **928390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Reactive	ND	1.00								

Sample ID **LCS-R30423**	SampType: **LCS**	TestCode: **CYANIDE, Reactive**
Client ID: **LCSW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **10/28/2015**	SeqNo: **928391** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Reactive	0.478		0.5000	0	95.6	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-R30423**	SampType: **MBLK**	TestCode: **SULFIDE, Reactive**
Client ID: **PBW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **10/23/2015**	SeqNo: **928393** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Reactive Sulfide	ND	1.0								

Sample ID **LCS-R30423**	SampType: **LCS**	TestCode: **SULFIDE, Reactive**
Client ID: **LCSW**	Batch ID: **R30423**	RunNo: **30423**
Prep Date:	Analysis Date: **10/23/2015**	SeqNo: **928394** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Reactive Sulfide	0.20		0.2000	0	100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510908

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **mb-1**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**
Client ID: **PBW**	Batch ID: **R29677**	RunNo: **29677**
Prep Date:	Analysis Date: **10/20/2015**	SeqNo: **904176** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID **lcs-1**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW**	Batch ID: **R29677**	RunNo: **29677**
Prep Date:	Analysis Date: **10/20/2015**	SeqNo: **904177** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.04	20.00	80.00	0	96.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **1510908-001ADUP** SampType: **DUP** TestCode: **Specific Gravity**

Client ID: **WDW-1,2,&3 Effluen** Batch ID: **R29675** RunNo: **29675**

Prep Date: Analysis Date: **10/20/2015** SeqNo: **903627** Units:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity	1.000	0						0.0900	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1510908**

24-Nov-15

Client: Navajo Refining Company

Project: Quarterly WDW-1, 2, & 3 Inj Well

Sample ID **MB-21952**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **21952**	RunNo: **29751**
Prep Date: **10/21/2015**	Analysis Date: **10/23/2015**	SeqNo: **906219** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-21952**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **21952**	RunNo: **29751**
Prep Date: **10/21/2015**	Analysis Date: **10/23/2015**	SeqNo: **906220** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1030	20.0	1000	0	103	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: NAVAJO REFINING CO Work Order Number: 1510908 RcptNo: 1

Received by/date: BA 10/20/15

Logged By: Lindsay Mangin 10/20/2015 8:55:00 AM

Completed By: Lindsay Mangin 10/20/2015 9:15:21 AM

Reviewed By: JA 10/20/15

Chain of Custody

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 samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 2 3 (<2 or >12 unless noted)

Adjusted? no

Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			

Chain-of-Custody Record

Client: Navajo Refining Co.

Mailing Address: P.O. Box 159 Artesia,

NM 88211-0159

Phone #: 575-748-3311

email or Fax#: 575-748-5451

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standar ☐ Rush

Project Name:
Quarterly WDW-1, 2, & 3 Inj Well

Project #: P.O. # 167795

Project Manager:
Micki Schultz / Scott Denton / Mike Holder

Sampler: Elizabeth Salsberry

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1510108	Specific Gravity, HCO_3, CO_3, Cl, SO_4, TDS, pH, cond., Fl, Cation/anion bal., Br, Eh/40	VOCs/SW-846 Method 8260C (see attached list 'VOCs')	SVOCs/SW-846 Method 8270D (see attached list 'SVOCs')	R,C,I/40 CFR part 261	Metals/SW-846 Mthd 6010, 7470 (see attached list 'Metals')	Ca, K, Mg, Na/40 CFR 136.3	TCLP Metals, only /40 CFR Part 261/ SW-846 Method 1311
10/19/15	7:40	Liquid	WDW-1, 2, & 3 Effluent	3	Neat/H2SO4	-001	X						X
10/19/15	7:40	Liquid	WDW-1, 2, & 3 Effluent	1	HNO3	-001					X	X	
10/19/15	7:40	Liquid	WDW-1, 2, & 3 Effluent	3	HCL	-001		X					
10/19/15	7:40	Liquid	WDW-1, 2, & 3 Effluent	2	Neat	-001			X				
10/19/15	7:40	Liquid	WDW-1, 2, & 3 Effluent	2	Neat	-001				X			
10/19/15	7:40	Liquid	Trip Blank	2	Neat	-002		X					
10/19/15	7:40	Liquid	Temperature Blank	1	Neat	-							

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
10/19/15	11:30	Elizabeth Salsberry				Send results to Scott Denton, Mike Holder, Micki Schultz, Robert Combs and Andrew Contreras.
Date:	Time:	Relinquished by:	Received by:	Date	Time	
				10/20/15	0855	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Navajo Refining Company, LLC
501 E. Main
Artesia, NM 88210
(Tel)575.748.3311
(Fax)575.746.5451

Injection Well Quarterly Sample Details Attachment

HOLLYFRONTIER
The HollyFrontier Companies

Project Name	WDW-1,2, & 3 Qrtly Inj Well
Samplers Name	Elizabeth Salsberry
Samplers Affiliation	Navajo Refining Co. LLC
Start Date and Time	10/19/2015 9:00 7:30am
End Date and Time	10/19/2015 10:00 7:45am

Sample Type	
Grab	☑
Time Weighted Composite	☐
Flow Weighted Composite	☐

Physical Property	
Solid	☐
Liquid	☑
Sludge	☐

Parts / Sample Intervals	One

Type of Sampler	Directly to sample jars

Outfall / Sample Location: Waste water effluent pumps to injection wells

☑ P-855 sample point (first from east)
☐ P-855 sample point (second from east)
☐ P-856 sample point (third from east)
☐ P-857 sample point (fourth from east)

Container	Size	Material	# of Containers	Preservatives: Neat (None)	HCL	HNO3	H2SO4	NaOH	Na2S2O3	NaHSO4	Other	Analysis and/or Method Requested
1			3	X			X					Specific Gravity,HCO3, CO3, Cl, SO4, TDS, pH, cond, Fl, Cation/anion bal., Br, Eh/40 CFR 136.3
2			1			X						VOCs/SW-846 Method 8260C (see attached list 'VOCs')
3			3		X							SVOCs/SW-846 Method 8270D (see attached list 'SVOCs')
4			2	X								R,C,I/40 CFR part 261
5			2	X								Metals/SW-846 Mthd 6010, 7470 (see attached list 'Metals')
6			2	X								Ca, K, Mg, Na/40 CFR 136.3
7			1	X								TCLP Metals, only /40 CFR Part 261/ SW-846 Method 1311
8												
9												
10												

Field Data (Weather, Observations, Etc): 10/19/2015 Temp 55.4 F Humidity 100% Wind Direction South Wind Speed 5 mph Condition Clear
Date and Time:

Field Temp. 42.8C Field pH 7.54

Storage Method	
Ice	☑
Refrigerated	☐
Other	☐

Shipping Media	
Ice	☑
Other	☐

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P. O. Box 6429
Santa Fe, NM 87505

OPERATOR'S MONTHLY REPORT

Form C-115 First Page
Revised October 17, 1993
Instruction on Reverse Side
1 ☐ Amended Report

2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 1/2015
501 E MAIN PO BOX 159, ARTESIA, N.M. 88210		6 Page 1

		INJECTION			PRODUCTION					DISPOSITION OF OIL, GAS, AND WATER						
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	132,986	1,393	W												
30-015-20894	D	122,685	1,393	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	131,757	1,384	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number	575-748-3311
			2/9/2015		

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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Santa Fe, NM 87505

OPERATOR'S MONTHLY REPORT

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 2/2015
501 E MAIN PO BOX 159, ARTESIA, N.M. 88210		6 Page 1

		INJECTION			PRODUCTION				DISPOSITION OF OIL, GAS, AND WATER							
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	118,968	1,383	W												
30-015-20894	D	108,866	1,383	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	111,941	1,362	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	3/9/2015	Phone Number	575-748-3311

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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OPERATOR'S MONTHLY REPORT

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 3/2015
501 E MAIN PO BOX 159, ARTESIA, N.M. 88210		6 Page 1

		INJECTION			PRODUCTION					DISPOSITION OF OIL, GAS, AND WATER						
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	130,953	1,383	W												
30-015-20894	D	121,907	1,383	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	133,166	1,374	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number	575-748-3311
			4/7/2015		

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P. O. Box 6429
Santa Fe, NM 87505

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 4/2015
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		INJECTION			PRODUCTION				DISPOSITION OF OIL, GAS, AND WATER							
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	124,144	1,350	W												
30-015-20894	D	115,053	1,365	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	129,740	1,364	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number	575-748-3311
			5/7/2015		

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P. O. Box 6429
Santa Fe, NM 87505

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 5/2015
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		INJECTION			PRODUCTION				DISPOSITION OF OIL, GAS, AND WATER							
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	137,792	1,393	W												
30-015-20894	D	124,679	1,389	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	129,153	1,359	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	6/5/2015	Phone Number	575-748-3311

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

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OIL CONSERVATION DIVISION

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Santa Fe, NM 87505

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 6/2015
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		INJECTION			PRODUCTION					DISPOSITION OF OIL, GAS, AND WATER						
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	133,424	1,398	W												
30-015-20894	D	124,945	1,399	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	132,203	1,379	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number	575-748-3311
			7/5/2015		

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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Santa Fe, NM 87505

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 7/2015
501 E MAIN PO BOX 159, ARTESIA, N.M. 88210		6 Page 1

		INJECTION			PRODUCTION				DISPOSITION OF OIL, GAS, AND WATER							
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	135,690	1,392	W												
30-015-20894	D	158,617	1,391	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	132,167	1,373	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number
			8/12/2015	575-748-3311

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

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Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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Santa Fe, NM 87505

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 8/2015
501 E MAIN PO BOX 159, ARTESIA, N.M. 88210		6 Page 1

		INJECTION			PRODUCTION				DISPOSITION OF OIL, GAS, AND WATER							
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	133,695	1,389	W												
30-015-20894	D	214,764	1,392	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	126,544	1,381	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number
			9/14/2015	575-748-3311

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

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OIL CONSERVATION DIVISION

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Santa Fe, NM 87505

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 9/2015
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		INJECTION			PRODUCTION				DISPOSITION OF OIL, GAS, AND WATER							
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	126,349	1,381	W												
30-015-20894	D	127,967	1,369	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	161,879	1,362	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number	575-748-3311
			10/12/2015		

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P. O. Box 6429
Santa Fe, NM 87505

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 10/2015
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		INJECTION			PRODUCTION				DISPOSITION OF OIL, GAS, AND WATER							
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	131,332	1,378	W												
30-015-20894	D	107,845	1,378	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	150,328	1,369	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number
			11/6/2015	575-748-3311

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

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Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 11/2015
501 E MAIN PO BOX 159, ARTESIA, N.M. 88210		6 Page 1

		INJECTION			PRODUCTION					DISPOSITION OF OIL, GAS, AND WATER						
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	124,530	1,376	W												
30-015-20894	D	94,793	1,376	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	147,493	1,369	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	12/7/2015 Date	Phone Number	575-748-3311

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P. O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos, Aztec, NM 84710

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
P. O. Box 6429
Santa Fe, NM 87505
OPERATOR'S MONTHLY REPORT

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1 ☐ Amended Report

2 Operator NAVAJO REFINING CO	3 OGRID: 15694	4 Month/Year 11/2015
501 E MAIN PO BOX 159, ARTESIA, N.M. 88210		6 Page 1

		INJECTION			PRODUCTION				DISPOSITION OF OIL, GAS, AND WATER							
7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API No.	8 CODE 1	9 Volume	10 Pressure	11 CODE 2	12 Barrels of Oil/condensate produced	13 Barrels of water produced	14 MCF Gas Produced	15 Days Produced	16 CODE 3	17 Point of Disposition	18 Gas BTU or Oil API Gravity	19 Oil on hand at beginning of month	20 Volume (Bbls/mcf)	21 Transporter Ogrid	22 CODE 4	23 Oil on hand at end of month
96918 NAVAJO PERMO-PENN																
023592 WDW																
30-015-27592	D	126,349	1,342	W												
30-015-20894	D	127,967	1,326	W												
78890 ILLINOIS CAMP;MORROW NORTH																
023592 WDW #003																
30-015-26575	D	161,879	1,334	W												

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.
24

Signature	Printed Name & Title	Micki Schultz Environmental Specialist	Date	Phone Number	575-748-3311
			12/7/2015		

B.2 Treated Wastewater to Artesia POTW

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
2/1/14	56	41	97	2.6
2/2/14	56	41	96	0.0
2/3/14	57	41	98	0.0
2/4/14	50	42	92	0.0
2/5/14	63	42	104	2.1
2/6/14	45	42	87	0.0
2/7/14	47	43	89	2.6
2/8/14	53	43	96	0.0
2/9/14	52	41	94	0.0
2/10/14	57	44	101	0.0
2/11/14	47	45	92	0.0
2/12/14	50	44	94	0.0
2/13/14	51	44	95	0.0
2/14/14	47	44	91	0.0
2/15/14	55	43	98	2.7
2/16/14	55	43	98	3.8
2/17/14	56	39	96	3.8
2/18/14	66	35	101	3.7
2/19/14	63	35	98	4.0
2/20/14	64	34	98	1.5
2/21/14	74	33	107	1.4
2/22/14	70	34	104	0.0
2/23/14	67	37	104	2.2
2/24/14	75	43	118	2.8
2/25/14	95	46	141	3.2
2/26/14	95	45	140	1.4
2/27/14	71	46	117	4.3
2/28/14	67	46	113	3.7
3/1/14	61	45	106	5.6
3/2/14	95	45	140	5.0
3/3/14	95	43	138	5.6
3/4/14	71	42	113	5.9
3/5/14	95	42	137	2.8
3/6/14	71	42	112	0.7

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
3/7/14	66	42	108	4.4
3/8/14	95	45	140	0.6
3/9/14	93	45	138	4.9
3/10/14	66	45	110	4.5
3/11/14	64	45	109	6
3/12/14	95	44	139	4.1
3/13/14	60	44	104	1.2
3/14/14	54	45	99	3
3/15/14	66	39	106	0
3/16/14	85	37	122	3.7
3/17/14	46	44	90	0
3/18/14	52	43	95	2.6
3/19/14	83	44	127	0
3/20/14	46	44	90	3.3
3/21/14	43	43	86	5.4
3/22/14	58	43	101	1.5
3/23/14	92	43	135	0
3/24/14	48	44	92	0
3/25/14	64	43	107	0
3/26/14	35	42	77	5.4
3/27/14	13	42	54	7.2
3/28/14	37	42	79	6.6
3/29/14	46	43	89	9.5
3/30/14	33	42	75	7.5
3/31/14	33	39	71	4.5
4/1/14	38	38	75	0.6
4/2/14	28	37	64	0
4/3/14	25	36	62	7.3
4/4/14	53	36	89	9.3
4/5/14	37	14	51	8.2
4/6/14	46	12	58	3.6
4/7/14	56	38	94	0
4/8/14	42	38	80	0
4/9/14	35	37	72	0
4/10/14	16	33	49	0

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
4/11/14	33	32	64	0
4/12/14	24	31	55	0
4/13/14	5	32	37	0
4/14/14	95	31	126	0
4/15/14	42	31	73	0
4/16/14	32	31	63	0
4/17/14	44	30	74	0
4/18/14	28	30	58	0
4/19/14	17	30	47	0
4/20/14	24	30	54	3.8
4/21/14	17	28	45	8.7
4/22/14	0	28	28	9.6
4/23/14	0	24	24	7.8
4/24/14	0	24	24	0
4/25/14	2	23	25	0
4/26/14	0	13	13	0
4/27/14	16	31	46	2
4/28/14	50	46	95	4.6
4/29/14	80	47	128	1.2
4/30/14	79	47	127	3.9
5/1/14	59	48	106	0
5/2/14	45	48	92	6.6
5/3/14	28	48	76	2.8
5/4/14	18	48	66	0
5/5/14	0	23	24	3.3
5/6/14	4	33	37	0
5/7/14	7	32	39	3.8
5/8/14	48	43	91	5.1
5/9/14	45	46	91	0
5/10/14	40	46	86	0
5/11/14	13	46	59	0
5/12/14	53	49	102	0
5/13/14	85	47	132	8.8
5/14/14	55	47	102	4.5
5/15/14	37	47	84	4.7

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
5/16/14	25	48	73	0
5/17/14	26	48	74	0
5/18/14	14	48	62	5.4
5/19/14	11	48	59	0.6
5/20/14	16	48	64	0
5/21/14	19	48	67	0
5/22/14	33	48	81	3.4
5/23/14	58	47	106	13.4
5/24/14	66	48	114	9.7
5/25/14	47	48	95	6.1
5/26/14	51	45	97	0
5/27/14	38	43	81	0
5/28/14	23	44	67	0
5/29/14	26	43	69	0
5/30/14	20	43	63	2.2
5/31/14	29	44	73	3.1
6/1/14	14	43	57	6.6
6/2/14	28	45	73	0
6/3/14	20	47	67	7.9
6/4/14	28	47	75	8.9
6/5/14	30	47	77	9.9
6/6/14	34	47	81	5.5
6/7/14	48	47	95	0
6/8/14	80	48	128	0
6/9/14	87	48	135	0
6/10/14	60	47	107	0
6/11/14	45	48	93	7.1
6/12/14	49	47	96	7.7
6/13/14	37	48	85	6.8
6/14/14	17	48	64	10.1
6/15/14	24	46	70	10.6
6/16/14	38	44	82	11.5
6/17/14	49	44	93	11.4
6/18/14	58	49	107	2
6/19/14	69	55	124	0

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
6/20/14	48	46	95	10.7
6/21/14	52	46	98	10.4
6/22/14	40	46	86	4.1
6/23/14	67	46	113	5.5
6/24/14	72	50	122	0
6/25/14	60	46	106	0
6/26/14	41	46	87	0
6/27/14	22	45	67	0
6/28/14	28	43	71	0
6/29/14	30	41	71	0
6/30/14	52	42	95	0
7/1/14	95	46	141	0
7/2/14	95	44	139	0
7/3/14	87	42	129	0
7/4/14	70	41	111	0
7/5/14	59	39	98	0
7/6/14	92	40	132	0
7/7/14	62	39	101	0
7/8/14	43	36	79	0
7/9/14	0	31	31	0
7/10/14	0	31	31	0
7/11/14	0	31	31	0
7/12/14	0	31	31	0
7/13/14	1	29	29	0
7/14/14	14	28	42	0
7/15/14	34	28	62	0
7/16/14	25	26	51	0
7/17/14	9	24	33	0
7/18/14	17	26	43	0
7/19/14	4	27	31	0
7/20/14	29	23	52	0
7/21/14	48	26	74	0
7/22/14	95	29	124	0
7/23/14	95	30	125	0
7/24/14	94	30	124	0

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
7/25/14	87	29	116	0
7/26/14	82	27	110	0
7/27/14	95	20	115	0
7/28/14	89	22	111	0
7/29/14	91	24	115	0
7/30/14	91	23	114	0
7/31/14	95	23	118	0
8/1/14	95	23	118	0
8/2/14	92	20	112	0
8/3/14	71	18	89	0
8/4/14	48	18	66	0
8/5/14	49	18	67	0
8/6/14	46	19	65	0
8/7/14	64	22	86	0
8/8/14	79	23	102	0
8/9/14	79	22	101	0
8/10/14	72	22	94	0
8/11/14	80	20	100	0
8/12/14	63	19	82	0
8/13/14	42	18	60	0
8/14/14	52	18	70	0
8/15/14	59	17	76	0
8/16/14	62	17	79	0
8/17/14	55	15	70	0
8/18/14	45	9	54	0
8/19/14	36	8	44	0
8/20/14	39	9	48	0
8/21/14	62	24	86	0
8/22/14	88	41	129	0
8/23/14	53	45	98	0
8/24/14	42	49	91	0
8/25/14	66	49	115	0
8/26/14	74	49	123	0
8/27/14	78	49	127	0
8/28/14	55	49	104	0

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
8/29/14	62	49	111	0
8/30/14	43	49	92	0
8/31/14	37	49	86	0
9/1/14	27	49	76	0
9/2/14	33	49	82	0
9/3/14	22	49	71	0
9/4/14	33	49	82	0
9/5/14	76	49	125	0
9/6/14	95	49	144	0
9/7/14	88	49	137	0
9/8/14	40	49	89	0
9/9/14	24	49	73	0
9/10/14	27	49	76	0
9/11/14	47	49	96	0
9/12/14	88	48	136	0
9/13/14	94	48	142	0
9/14/14	79	48	127	0
9/15/14	43	49	92	0
9/16/14	34	49	83	0
9/17/14	34	49	83	0
9/18/14	35	49	84	0
9/19/14	55	49	104	0
9/20/14	38	49	86	0
9/21/14	56	49	104	0
9/22/14	64	48	112	0
9/23/14	33	48	82	0
9/24/14	37	48	85	0
9/25/14	41	48	89	0
9/26/14	33	48	81	0
9/27/14	26	48	74	0
9/28/14	18	48	66	0
9/29/14	13	48	62	0
9/30/14	19	48	67	0
10/1/14	36	48	84	0
10/2/14	36	48	85	0

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
10/3/14	52	48	100	0
10/4/14	37	48	85	0
10/5/14	41	48	89	0
10/6/14	43	47	90	0
10/7/14	37	47	84	0
10/8/14	37	47	84	1.3
10/9/14	9	47	56	1.3
10/10/14	77	51	128	2.5
10/11/14	54	48	102	3
10/12/14	13	48	61	2.8
10/13/14	39	49	88	3
10/14/14	42	49	91	2.6
10/15/14	41	49	90	2.7
10/16/14	36	49	85	2.8
10/17/14	31	49	80	2.8
10/18/14	44	46	90	1.6
10/19/14	35	49	84	0
10/20/14	29	49	78	0
10/21/14	22	49	71	1.6
10/22/14	0	49	49	0.1
10/23/14	11	49	60	0
10/24/14	26	49	75	0
10/25/14	18	49	67	0
10/26/14	18	49	67	2.8
10/27/14	6	49	55	2.7
10/28/14	68	49	117	0
10/29/14	47	49	96	0
10/30/14	49	49	98	0.8
10/31/14	51	49	100	2.8
11/1/14	41	48	89	1.7
11/2/14	23	49	72	1.7
11/3/14	34	47	81	2.8
11/4/14	93	45	138	3
11/5/14	87	45	132	1
11/6/14	70	42	112	0.2

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW GPM
11/7/14	49	40	89	2.8
11/8/14	47	44	91	1
11/9/14	34	42	76	0.8
11/10/14	11	42	53	2.3
11/11/14	88	45	133	0
11/12/14	95	48	143	2.9
11/13/14	94	39	133	2.6
11/14/14	69	44	113	2.9
11/15/14	45	42	87	3
11/16/14	87	49	136	2.6
11/17/14	77	52	129	2.9
11/18/14	71	45	116	2.8
11/19/14	64	41	105	2.8
11/20/14	46	52	98	3
11/21/14	31	44	75	2.8
11/22/14	29	43	72	2.8
11/23/14	27	45	72	3
11/24/14	27	47	74	0.5
11/25/14	33	45	78	2
11/26/14	26	43	69	0.8
11/27/14	22	47	69	1.1
11/28/14	23	49	72	0.3
11/29/14	18	43	61	0.9
11/30/14	18	44	62	2.8
12/1/14	0	45	45	2.8
12/2/14	11	46	57	0.4
12/3/14	24	45	69	0.0
12/4/14	95	43	138	0.0
12/5/14	86	47	133	0.0
12/6/14	33	40	73	0.0
12/7/14	0	45	45	2.0
12/8/14	0	47	47	2.8
12/9/14	0	44	44	2.7
12/10/14	0	44	44	1.9
12/11/14	0	43	43	0.8

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM		WWT to POTW GPM	
12/12/14	0	40	40		1.7	
12/13/14	0	43	43		3.0	
12/14/14	0	39	39		1.2	
12/15/14	0	44	44		2.3	
12/16/14	0	44	44		2.7	
12/17/14	0	40	40		0.9	
12/18/14	0	44	44		1.9	
12/19/14	0	44	44		0.0	
12/20/14	0	39	39		0.0	
12/21/14	0	40	40		2.2	
12/22/14	0	49	49		1.9	
12/23/14	0	43	43		2.0	
12/24/14	0	37	37		3.7	
12/25/14	0	45	45		2.6	
12/26/14	0	50	50		1.6	
12/27/14	0	42	42		2.0	
12/28/14	0	37	37		1.0	
12/29/14	0	43	43		0.8	
12/30/14	0	44	44		2.7	
12/31/14	0	80	80		2.6	
1/1/15	0	76	76	109440	2.8	4032
1/2/15	0	22	22	31680	2.6	3744
1/3/15	0	39	39	56160	2.8	4032
1/4/15	0	41	41	59040	0.8	1152
1/5/15	0	47	47	67680	1.8	2592
1/6/15	0	46	46	66240	1.5	2160
1/7/15	0	44	44	63360	1.1	1584
1/8/15	0	42	42	60480	1.4	2016
1/9/15	0	43	43	61920	0.5	720
1/10/15	0	51	51	73440	2.8	4032
1/11/15	2	49	51	73440	1.5	2160
1/12/15	0	19	19	27360	1.1	1584
1/13/15	0	26	26	37440	0.5	720
1/14/15	0	28	28	40320	2.7	3888
1/15/15	0	24	24	34560	2.9	4176

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM	WWT to POTW		
					GPM	
1/16/15	0	23	23	33120	2.4	3456
1/17/15	0	23	23	33120	2.7	3888
1/18/15	0	25	25	36000	2.7	3888
1/19/15	1	24	25	36000	2.8	4032
1/20/15	0	25	25	36000	2.8	4032
1/21/15	0	24	24	34560	2.8	4032
1/22/15	0	0	0	0	2.8	4032
1/23/15	0	0	0	0	1.2	1728
1/24/15	0	0	0	0	2.7	3888
1/25/15	0	0	0	0	2.8	4032
1/26/15	1	0	1	1440	2.8	4032
1/27/15	10	0	10	14400	2.5	3600
1/28/15	11	0	11	15840	2.8	4032
1/29/15	0	0	0	0	2.5	3600
1/30/15	0	0	0	0	3.0	4320
1/31/15	0	0	0	0	2.8	4032
2/1/15	0	0	0	0	2.6	3744
2/2/15	3	0	3	4320	2.5	3600
2/3/15	24	0	24	34560	2.8	4032
2/4/15	24	0	24	34560	2.8	4032
2/5/15	10	0	10	14400	0.6	864
2/6/15	36	0	36	51840	2.9	4176
2/7/15	51	0	51	73440	2.5	3600
2/8/15	52	0	52	74880	1.0	1440
2/9/15	37	15	52	74880	1.4	2016
2/10/15	38	14	52	74880	0.7	1008
2/11/15	1	15	16	23040	1.9	2736
2/12/15	4	18	22	31680	0.6	864
2/13/15	29	13	42	60480	0.0	0
2/14/15	41	13	54	77760	0.0	0
2/15/15	45	12	57	82080	0.0	0
2/16/15	0	11	11	15840	0.0	0
2/17/15	5	11	16	23040	1.7	2448
2/18/15	36	12	48	69120	2.8	4032
2/19/15	43	11	55	78494.92048	3.0	4320

Cooling Tower Blowdown to City	Y-11 GPM	Y-1 GPM	Total GPM		WWT to POTW GPM	
2/20/15	44	11	55	79338.89381	2.2	3168
2/21/15	95	11	106	153020.8772	1.7	2448
2/22/15	81	12	92	132990.6247	2.8	4032
2/23/15	67	13	80	115200	2.6	3744
2/24/15	70	23	93	133920	2.7	3888
2/25/15	78	12	90	129600	2.7	3888
2/26/15	59	12	71	102240	2.8	4032
2/27/15	45	12	56	81281.82414	3.0	4320
2/28/15	47	11	58	83604.79921	2.8	4032
3/1/15	50	11	61	88224.14654	2.8	4032
3/2/15	49	11	60	86400	3.0	4320
3/3/15	49	11	60	86400	1.5	2160
3/4/15	57	13	70	100800	2.1	3024
3/5/15	58	27	85	122400	2.8	4032
3/6/15	47	36	83	119520	2.8	4032
3/7/15	41	33	74	106560	2.7	3888
3/8/15	38	31	69	99360	3.0	4320
3/9/15	35	30	65	93600	3.0	4320
3/10/15	50	34	84	120960	0.5	720
3/11/15	59	36	95	136800	0.4	576
3/12/15	58	36	94	135360	2.9	4176
3/13/15	60	33	93	133920	1.3	1872
3/14/15	60	30	90	129600	2.5	3600
3/15/15	61	29	90	129600	3.0	4320
3/16/15	61	27	88	126720	3.0	4320
3/17/15	62	27	89	128160	0.4	576
3/18/15	70	4	74	106560	0.4	576
3/19/15	61	31	92	132480	0.0	0
3/20/15	64	31	95	136800	0.9	1296
3/21/15	62	40	102	146880	0.6	864
3/22/15	62	40	102	146880	2.5	3600
3/23/15	61	41	102	146880	2.9	4176
3/24/15	60	41	101	145440	2.5	3600
3/25/15	57	41	98	141120	0.1	144
3/26/15	56	41	97	139680	1.4	2016