

GW-28

ADMINISTRATIVE COMPLIANCE ORDER (ACO)

2015 -2020



April 21, 2015

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

**RE: Response to Questions Regarding Reverse Osmosis Process
and Reject Water Discharges
Discharge Permit GW-028**

Dear Sirs:

On March 27, 2015, representatives for the Navajo Refining Company (Navajo), Artesia, New Mexico (NM), Refinery (the Refinery) met with the New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division (OCD) in Santa Fe, NM, to discuss the Refinery's discharge of reverse osmosis (RO) reject water under the Refinery's OCD Discharge Permit GW-028 (Discharge Permit). Since that meeting, Navajo has shared further information regarding the RO system and compliance actions. This letter provides the Refinery's response to specific questions raised by OCD. At the outset, Navajo is fully committed to being proactive, responsive, and cooperative with OCD and will be standing by to answer any further questions or provide additional clarifications requested by OCD at the earliest opportunity.

Background

The Refinery currently obtains water to be used in the Refinery as boiler feed water or cooling tower makeup water from the City of Artesia or from freshwater (deep artesian groundwater) wells. To meet process quality requirements for the boiler feed water or cooling tower makeup water, the groundwater is first pre-treated on-site to remove dissolved solids from the water using reverse osmosis (RO). The Refinery discharges reject water from the RO units to its discharge fields (also referred to as "farms") under the Discharge Permit. A technical summary of the RO units and process, as well as an RO unit process diagram, are provided in Attachment 1.

In November 2011, the Refinery installed a temporary RO unit to serve as a back-up unit for the existing permanent RO units in the event of a maintenance shutdown and to supplement the capacity of the two existing permanent RO units operating at the facility. Condition 4.A of the August 22, 2012 Discharge Permit limits RO reject water discharge to the discharge fields to approximately 10,000 barrels per day (bbl/day). Over time, operation of the temporary unit has caused discharge



volumes to exceed the 10,000 bbl/day limit. A summary of the volumes, by unit and totals, was separately provided via email to the OCD on April 10, 2015 (covering the years 2012-2014) and April 13, 2015 (2015 YTD).

Navajo does not believe there is any known or anticipated damage or injury to public health or the environment resulting from any volume exceedance discharges from the temporary RO unit. The discharges take place solely on land owned by Navajo. Moreover, Navajo's groundwater monitoring system has not confirmed any human health or environmental risks, nor any risks that may be attributed to the discharge of RO reject fluid in excess of the permitted volume.

On March 13, 2015, Navajo informed the OCD that the Refinery of the temporary RO unit resulting in exceedances of the 10,000 bbl/day discharge limit. The March 27, 2015, meeting between OCD and Navajo was scheduled to further discuss this notification. The questions that OCD presented to the Navajo representatives at the March 27 meeting are set forth below in ***bold italics***, followed by Navajo's response to each question.

RO Process

Is the 3rd RO Unit critical to the refineries (refinery's) wastewater operations?

The temporary RO unit is not, and has not been, used for wastewater operations. The temporary RO unit functions in the pre-treatment of fresh groundwater, either purchased from the City of Artesia or produced from the Refinery's deep freshwater wells, to be used as boiler feed water or cooling tower makeup water. The temporary unit functions in the same way as the two permitted RO units.

How long has 3rd RO Unit been at the site?

The temporary RO unit began operation on November 30, 2011.

Who at OCD was the 3rd RO Unit discharge reported to? OCD received the "2014 Annual Discharge Permit Report" on around 3/13/2015.

Mike Holder, HollyFrontier Corporate Environmental Specialist, notified Jim Griswold, OCD Environmental Bureau Chief, of the temporary RO unit by phone on March 13, 2015. Denise McWatters, Senior Vice President and General Counsel for HollyFrontier Corporation also notified Bill Brancard, New Mexico Energy, Minerals, and Natural Resources Department General Counsel, by phone of the temporary RO unit discharge on March 13, 2015. In addition, the "2014 Annual Discharge Permit Report" was submitted to OCD on March 13, 2015. Addenda to the 2012 through 2014 annual reports, showing the updated discharge volume information, were provided to OCD on April 10, 2015.



Has this RO Unit been treating wastewater similar to the other RO Units? If not, explain.

The temporary RO unit is not, and has not been, used for wastewater operations. The unit was installed to supplement the permanent RO units in the event of maintenance shutdown. The units (permanent and temporary) function similarly in the pre-treatment of fresh groundwater, either purchased from the City of Artesia or produced from the Refinery's deep freshwater wells, to be used as boiler feed water or cooling tower makeup water.

Has treated RO Unit wastewater been analyzed similar to the other RO Units?

The temporary RO unit's reject water discharge stream was not analyzed similarly to the permanent units' discharge. The permanent units' discharge is manifolded and the combined stream is sampled. Upon investigation following the March 27, 2015 meeting, it was discovered that the effluent from the temporary unit is discharged separately and hence was not included in the discharge sample collection and analysis. The temporary RO unit discharge will be included in future RO reject sampling efforts and was sampled on April 14, 2015.

Where is the discharge location(s)?

The discharge point for the temporary RO unit is at the same outfall as the permanent RO units at the South RO Reject field. Drawings showing the temporary unit discharge location are not yet finalized, but will be included in the forthcoming Discharge Permit modification request.

What are the rates of discharge and volume?

The rate of discharge can vary depending on the demand for boiler feed water and cooling tower makeup water, as well as the operating efficiency of the RO unit membranes. Discharge rates and volumes since the temporary unit went online on November 30, 2011 are included in Attachment 2 to this letter. A technical summary of the vendor's design package, including a process drawing, is provided in Attachment 1. Note that reject water volumes must be maintained at or above a minimum level for efficient system operation.

Addenda to the 2012 through 2014 annual reports showing the updated discharge volume information were provided to OCD on April 10, 2015. Discharge data for 2015 to date was provided to the OCD on April 13, 2015.

Is the 3rd RO Unit metered?

Yes. The 3rd RO unit is a rental unit which is metered by the unit vendor who maintains the meter records and makes those records available to Navajo upon request. The 3rd RO units is not metered or recorded by the Refinery's control system and historian like the permanently install RO units are. However, a Refinery operator will henceforth log the 3rd RO units' discharge volume data on a daily basis and pass the data to the Refinery's Environmental Department staff at the end of each week.



If the 3rd RO Unit were metered into the total discharge rate per day (bbls/day), could the operator comply with the current DP requirement of 10,000 bbls/day?

Per the discharge information submitted to the OCD on April 10, 2015 and April 13, 2015, inclusion of the discharge from the temporary unit as it is currently operated in the total discharge to the farms has and will cause exceedances of the 10,000 bbl/day discharge limit.

Operation of all three RO units is critical to the continued operation of the Refinery because of the need to supply process steam and to discharge process heat. As a result, operational changes cannot be solely relied upon to reduce RO unit discharge volumes below the 10,000 bbl/day limit.

Navajo is taking prompt action to address the violation including, but not limited to, preparing an application to modify the Discharge Permit to authorize Navajo to discharge a total maximum quantity of RO reject fluid that is consistent with Navajo's current and intended future use of the Refinery until such time land application can be ceased. Navajo is also, as OCD is aware, actively pursuing alternatives to limit the volume of RO reject generated and cease land application. For example, the Refinery is investigating options to achieve the following:

- Improve the efficiency of the RO units.
- Reduce the permeate demand by increasing raw water to cooling towers.
- Divert the RO reject to T-809/injection wells.
- Explore options for alternative uses of the RO reject (e.g., provide to local water sellers).
- Install an RO charge storage tank. The additional storage capacity would allow for reduced operation of the RO unit(s) and reduction in reject discharge volume.
- Install a secondary RO unit for reduction of RO reject volume from the primary units and install improved controls for operation of the permanent units.
- If other options cannot be adequately realized, consider cutting crude refining rate to reduce/eliminate use of the temporary RO unit and reduce the amount of RO reject that is land applied.

Finally, as noted in the 2015 discharge volumes submitted to the OCD on April 13, 2015, the Refinery has actively been attempting to minimize the volume of RO reject applied to the land, with the average discharge volumes for March (when the issue was discovered and reported) and April (to date) being below 11,000 bbls/day.

If the 3rd RO Unit is critical to operations, can it be routed and metered similar to the other RO Units to comply with the current DP conditions? If not, explain.

As discussed above, current operation of the temporary RO unit will cause exceedances of the 10,000 bbl/day limit. Due to its location at the Refinery, it is not possible to combine the reject stream with that of the permanent units. However, separate sampling and recording of discharge volumes will allow those permit conditions to be met.



Could the operator comply with the current DP conditions if the 3rd RO Unit is combined and metered with the other RO Units?

As discussed above, it is not possible to combine the reject flow from the temporary unit with that of the permanent units. However, going forward, grab samples of the temporary RO unit discharge will be collected for analysis in compliance with Condition 4.B of the Discharge Permit and the volume will be monitored and logged to ensure compliance with Condition 4.A of the Discharge Permit.

Immediate Corrective Actions

Operator proposed action based on situation, i.e., stop discharge?

Operation of all three reverse osmosis units is critical to the continued operation of the Refinery as it is currently configured. Cessation of operation of the temporary unit thereby ceasing the discharge is not a viable option if the Refinery is to maintain current crude processing capacity. At Navajo, approximately 44 gallons of water are necessary to process a barrel of crude oil (industry average is 65-90 gallons water per barrel of crude oil). A reduction in RO permeate will necessitate a corresponding drop in crude processed.

As mentioned above, the Refinery is actively evaluating a number of possible options for reducing the amount of RO reject that is land applied, including options that may improve RO unit efficiency, reduce RO permeate demand, identify alternate uses of the RO reject water, or identify alternate disposal methods for the RO reject water. The time required for selection and implementation of potential process changes will vary based on the level of difficulty and the severity of corresponding effects of the change to the current RO and Refinery processes (e.g., increased permitting requirements, internal refining process limitations, etc.)

The April 12, 2015 draft Agreed Compliance Order seeks to increase the permitted discharge volume to 20,000 bbl/day and includes sampling, analysis, and reporting requirements. The Refinery will also prepare a request to modify the Discharge Permit to extend the daily volumetric limit to 20,000 bbl/day and to permit the temporary unit, a third permanent unit and secondary RO unit for further treatment of the reject water from the three primary units.

Assess average daily discharge into the RO Fields from all three RO Units if effluent is discharged into the same RO Farm Units?

The Refinery has collected all available discharge data from the permanent and temporary RO units from November 30, 2011 to date. The data has been compiled by year in similar format previously provided in Annual Reports for the Discharge Permit and is provided in Attachment 2 to this letter. The discharge volumes for the temporary unit were obtained from either Operator log sheets or from the vendor (the temporary RO unit is a rental unit).



The temporary RO unit only discharges to the South RO reject discharge field (farm), while the discharges from the permanent units can be alternated between the North and South fields.

Assess average daily discharge at specified location from just the 3rd Temporary RO Unit?

The Refinery has collected all available discharge data from the temporary unit from either Operator log sheets or from the vendor (the temporary RO unit is a rental unit). The data has been compiled by year in similar format previously provided in Annual Reports for GW-028 and is provided in Attachment 2 to this letter. Note that all temporary RO unit discharges are to the South RO Field.

Combine and meter flow into an acceptable discharge location not to exceed 10,000 bbl/day until deadline?

It is not possible, due to their locations, to combine the two discharges (permanent and temporary) at this time and meter as one discharge. The proposed permanently installed 3rd RO unit (to be included in the forthcoming permit modification request and expected to be installed in 2015/2016) will have appropriate metering installed.

Operation of all three RO units (two current permanent units and one temporary unit) is critical to the continued operation of the Refinery and current volume demand is not expected to decrease to such a degree that the 10,000 bbl/day RO unit discharge limit could be consistently met in the short term. The draft Agreed Compliance Order proposes a 20,000 bbl/day limit. The Refinery is also pursuing alternatives—such as installation of the secondary RO unit and underground injection of the secondary reject stream—that will eliminate surface discharges as a primary means of disposing of RO reject fluid.

Administrative Actions

OCD Amended DP to allow 3rd RO Unit to discharge until deadline?

OCD Major Modification to DP to allow 3rd RO Unit to discharge until deadline?

Navajo is preparing a request for a permit modification to address the additional discharge volume generated by the temporary RO unit. The modification request will also address the installation of the temporary RO unit, a permanently mounted RO (3rd RO Unit) and a secondary RO unit for further treatment of the reject water from the three primary units.

In addition, Navajo is seeking to enter into an Agreed Compliance Order with the OCD to allow for increased discharge from the temporary RO unit in the interim. Navajo proposes a 20,000 bbl/day discharge limit and sampling, analysis, and reporting requirements. Navajo also is prepared to negotiate in good faith penalties for non-compliance.



Compliance Actions

Compliance Order needed with penalty assessment under WQCC Regulations?

The draft Compliance Order of April 12, 2015 contemplates the assessment of a penalty for past exceedances and non-compliance with reporting and sampling conditions, as well as stipulated penalties for future instances of non-compliance. Navajo is prepared to negotiate such penalties in good faith.

Operator Self-Audit/Penalty Assessment Option? (Assess average daily discharge (bbls/day) exceedance days for 2014. If 3rd RO Unit discharging into same location as other RO Units, the operator must add this to the total daily discharge volume for compliance assessment. If the 3rd RO Unit discharges to different location, provide the discharge information with days that discharge occurred beginning on the most recent date of permit issuance, i.e., 8/22/2012 until reported date to OCD.)

The draft Agreed Compliance Order of April 12, 2015, contemplates the assessment of penalties. Navajo has compiled the discharge volumes for the two permanent and one temporary RO unit since the temporary unit went online on November 30, 2011 (see Attachment 2).

OCD ACO?

Navajo is reviewing the draft Agreed Compliance Order of April 12, 2015 and, as stated previously, is prepared to negotiate its conditions in good faith.

As stated above, Navajo is standing by to be proactive, constructive, and collaborative in assisting OCD regarding next steps to address the third RO unit, to share information, to assess compliance actions, and to obtain an amended permit. We appreciate the attention OCD has given to this issue and the opportunities for ongoing dialogue. In the meantime, if you have any questions or comments, please contact me at 575-746-5487.

Sincerely,

Michael W. Holder
Corporate Environmental Specialist

cc. HFC: D. McWatters, R. O'Brien, S. Denton
OCD: A. Marks, J. Griswold

Attachment 1
Reverse Osmosis Process Unit Technical Summary

Operational and Technical Data Summary

Operational Summary

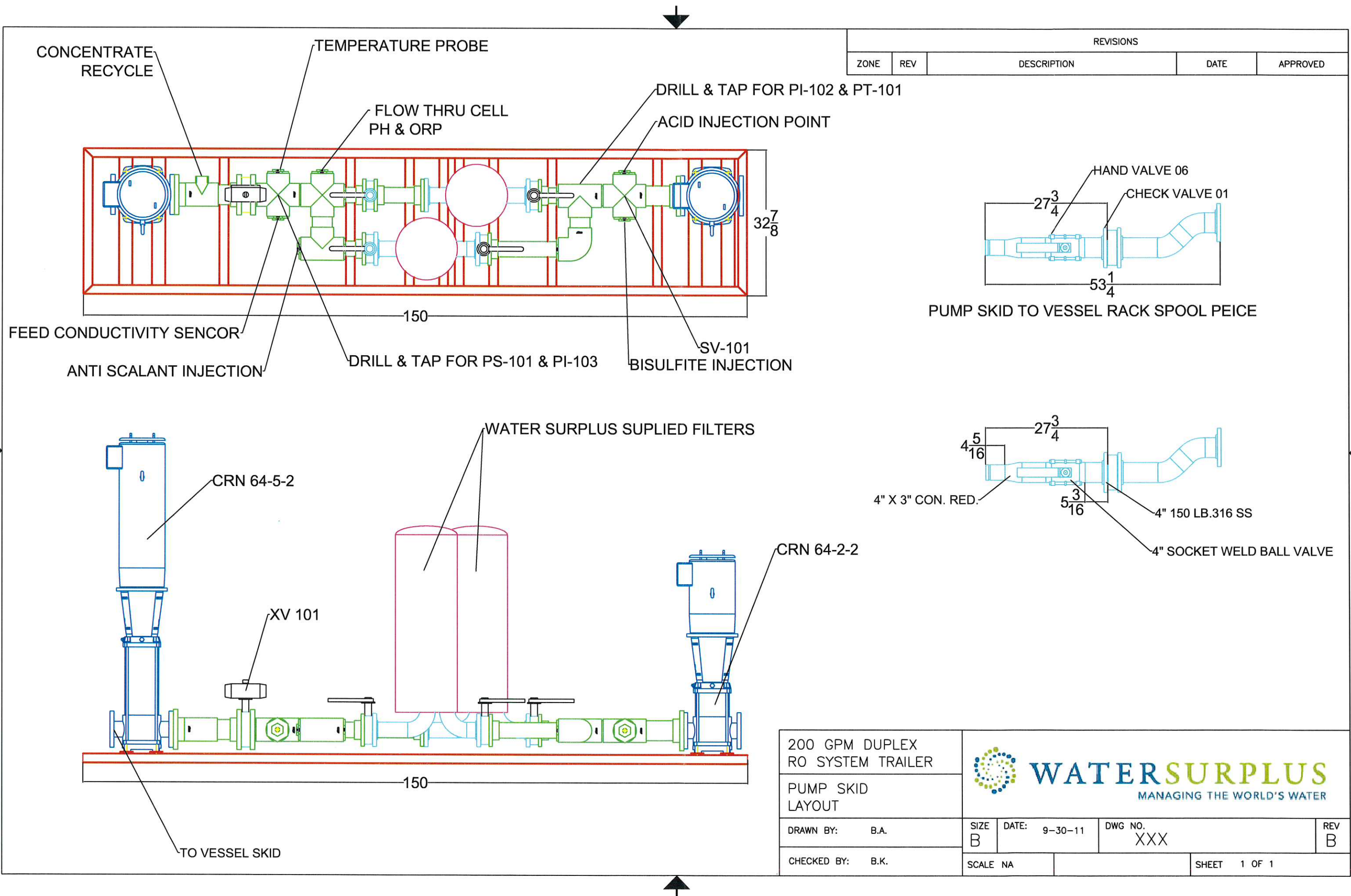
The purpose of this system is to remove dissolved solids from incoming fresh water by the use of Reverse Osmosis (RO) technology. This is achieved by passing high pressure feed water through a series of filter elements that contain a semi-permeable RO membrane. This membrane prevents large molecules, or dissolved solids, from passing through the membrane, but does allow smaller water molecules to pass through the membrane. The clean water then becomes the RO permeate, or product water, while the concentrated, dissolved solids in the feed water becomes the RO concentrate, or reject. Each RO system trailer consists of two single pass RO systems.

Typically, RO systems are designed to operate at 75 percent recovery, though the achievable percent recovery is dependent on a number of factors and consequently, can vary. Percent recovery is defined as the volume of permeate water produced per equivalent volume of feed water. For example, a system that produces 50 gpm permeate at 75% recovery will have a feed water flow rate of 67 gpm. The remaining 17 gpm will carry away the concentrated dissolved solids in the reject stream. Other recovery percentages are possible based upon the quality of the incoming water and system design; however a minimum concentrate flow rate must always be maintained to effectively remove the concentrated dissolved solids from the system. The minimum concentrate flow rate will be determined by the minimum velocity requirements of the membrane manufacturer and the design of the system arrays. The ratio of permeate to feed water is a critical operating and design parameter that needs to be maintained in order to achieve maximum efficiency of the system. RO systems are designed to operate at a specific rate of permeate production, and require a minimum concentrate flow. The %Recovery is achieved by setting the Concentrate Flow Rate; too low of a Concentrate flow will lead to scaling and deposition on the membrane surface; too high of a Concentrate flow rate will decrease the amount and quality of the permeate water produced. In summary, the concentrate flow, or reject water discharge volume, should be maintained at a volume equal to or greater than the minimum volume required for efficient operation of the system; i.e., concentrate flow cannot be lowered with the sole purpose of minimizing reject water discharge volumes.

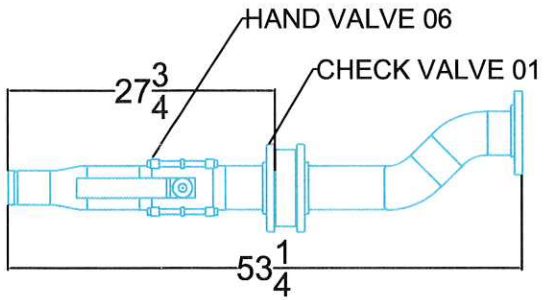
Technical Summary

The unit consists of two skids operating inside of a trailer.

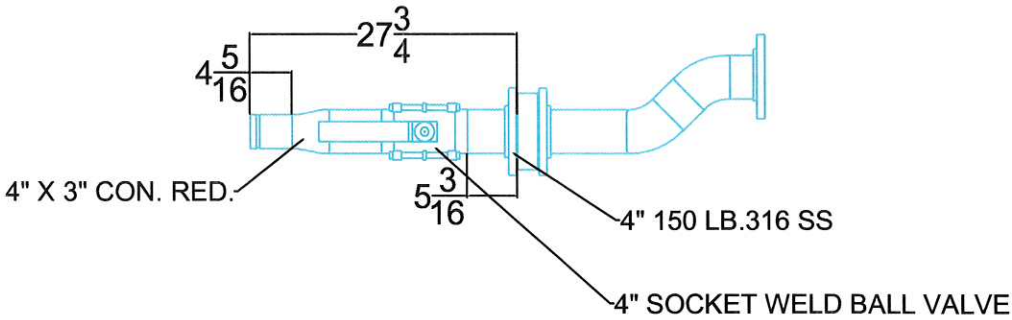
Skid Feed Flow	267 gpm
Total Feed Flow	534 gpm
Skid Permeate (Product) Flow	200 gpm
Total Permeate (Product) Flow	400 gpm
Skid Reject Flow	67 gpm
Total Reject Flow	134 gpm
Design Recovery Rate	75%
Nominal Flux (per skid)	15 gfd
Membranes	
Length	48 inches
Area	400 ft ²
Membranes	48
Prefilters	
Filter Housings	2
Filters/Housing	12
Filter size	30"
Porosity	5 µm



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



PUMP SKID TO VESSEL RACK SPOOL PEICE



200 GPM DUPLEX
RO SYSTEM TRAILER

PUMP SKID
LAYOUT

DRAWN BY: B.A.

CHECKED BY: B.K.



WATERSURPLUS
MANAGING THE WORLD'S WATER

SIZE
B

DATE: 9-30-11

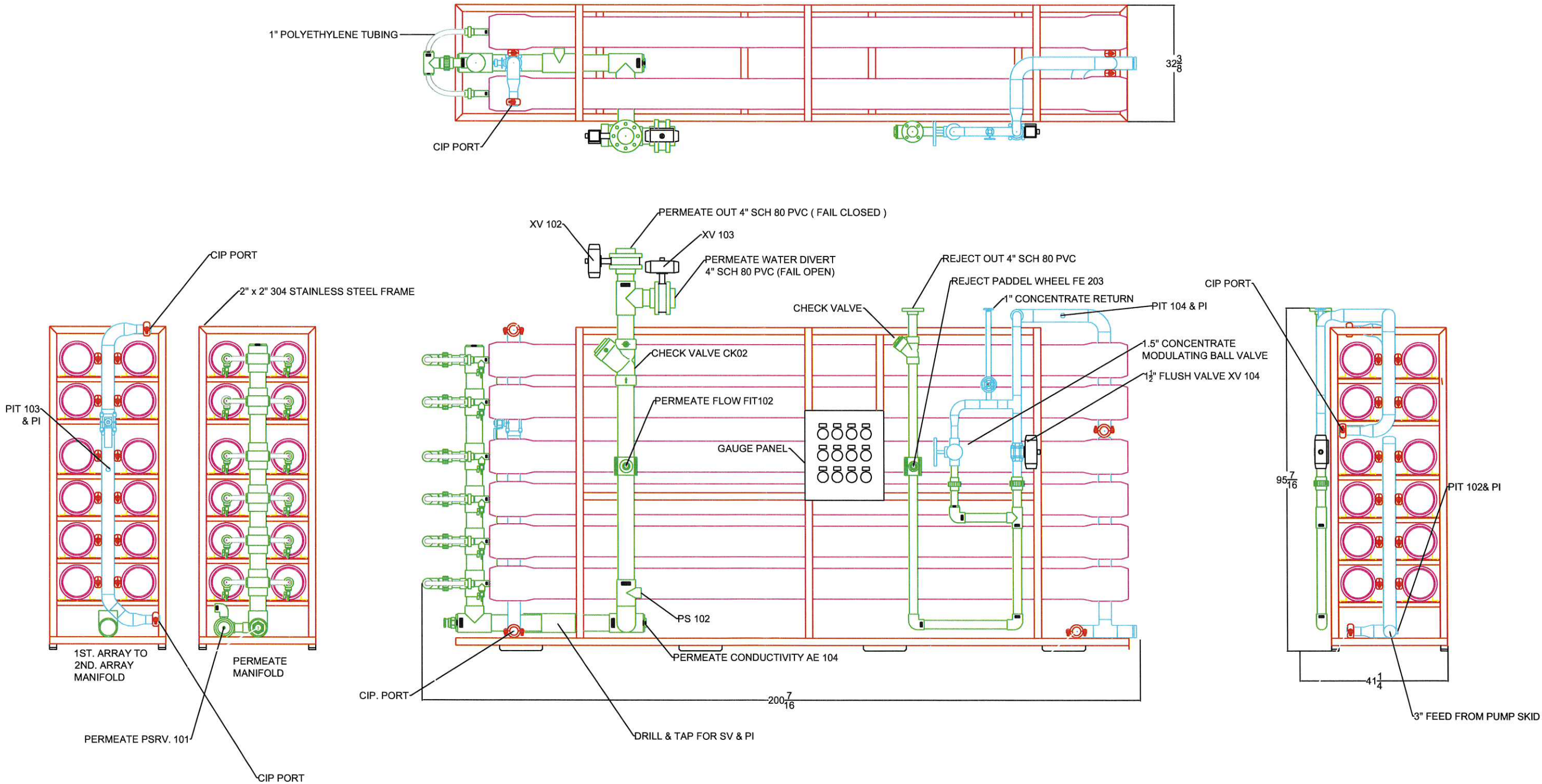
DWG NO.
XXX

REV
B

SCALE NA

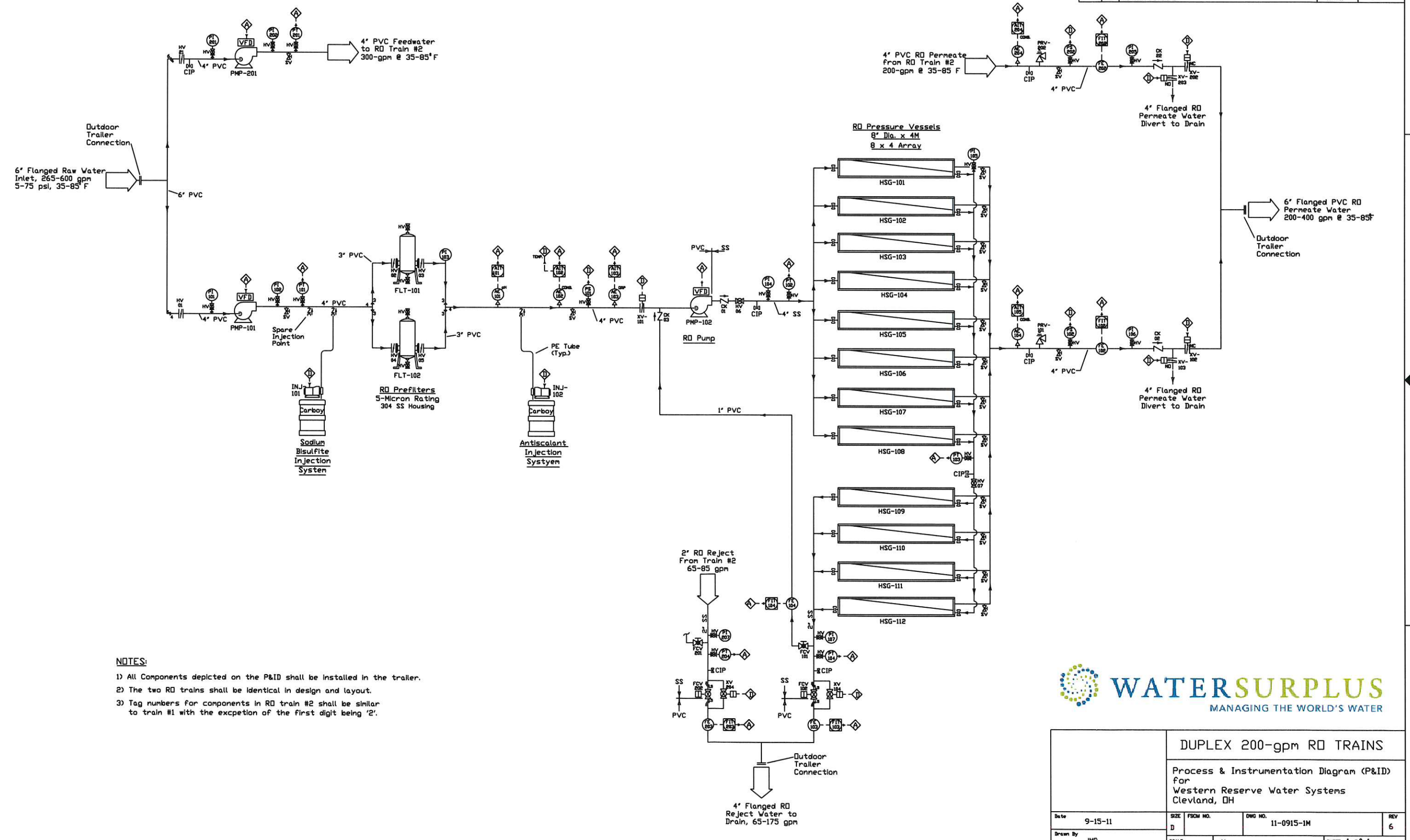
SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



200 GPM DUPLEX RO SYSTEM TRAILER		 WATERSURPLUS MANAGING THE WORLD'S WATER			
VESSEL SKID LAYOUT					
DRAWN BY:	B.A.	SIZE B	DATE: 9-30-11	DWG NO. XXX	REV B
CHECKED BY:	B.K.	SCALE NA		SHEET 1 OF 1	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	Modified low pressure feed pipe sizes. Added actuator to flush valve.	9/27/11	JMR
	2	Removed check valves on RO vessels and feedwater pump. Changed flow control valves to 1.5"	9/27/11	JMR
	3	Changed PVC/SS transition. PT's in lieu of PIT's. Added pH Analyzer.	9/29/11	JMR
	4	Added valve tag nos. CIP located outdoors. Bisulfite pump to digital control.	10/3/11	JMR
	5	Removed CIP tank and FE/FIT-101 & 201	10/3/11	JMR
	6	As-built revisions	11/7/11	JMR

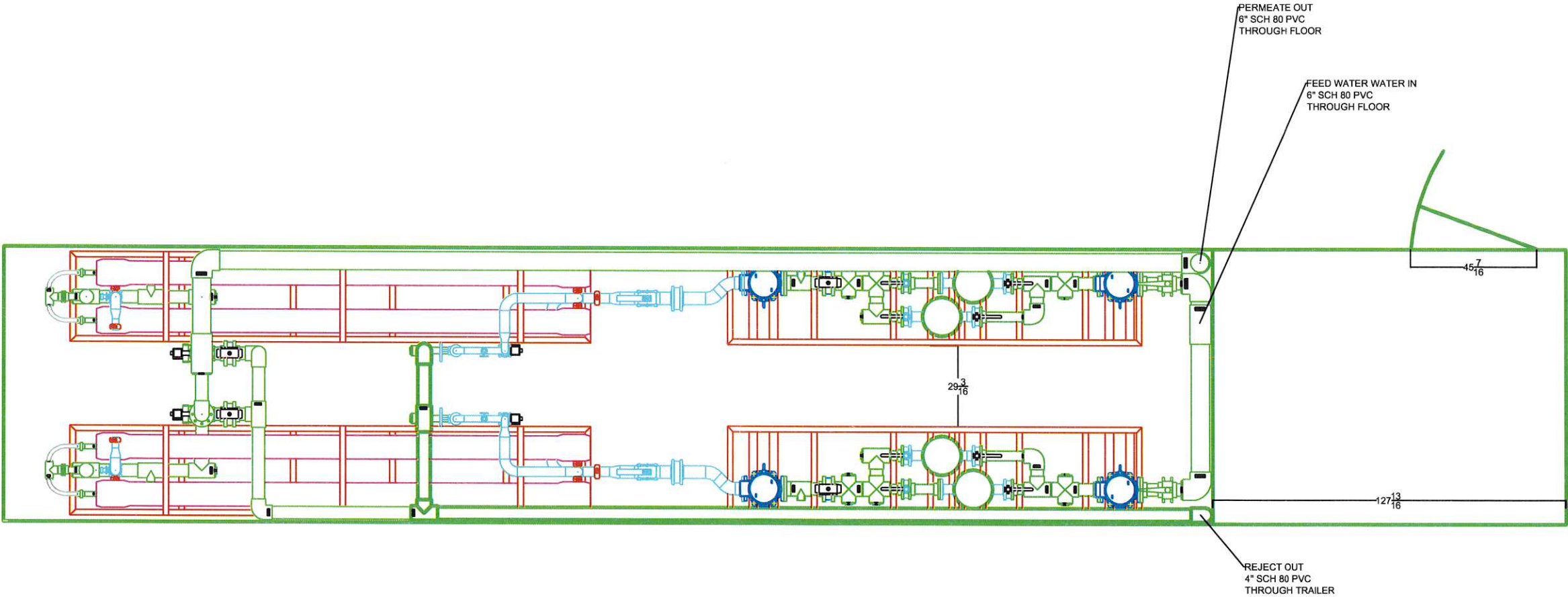


- NOTES:
- 1) All Components depicted on the P&ID shall be installed in the trailer.
 - 2) The two RO trains shall be identical in design and layout.
 - 3) Tag numbers for components in RO train #2 shall be similar to train #1 with the exception of the first digit being '2'.



DUPLIX 200-gpm RO TRAINS				
Process & Instrumentation Diagram (P&ID) for Western Reserve Water Systems Cleveland, OH				
Date	9-15-11	SIZE	FROM NO.	REV
Drawn By	JMR	SCALE	None	6
		Dwg. NO. 11-0915-1M		
		SHEET 1 of 1		

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



200 GPM DUPLEX
RO SYSTEM TRAILER

TRAILER
PLOT PLAN

DRAWN BY: B.A.

CHECKED BY: B.K.



WATERSURPLUS
MANAGING THE WORLD'S WATER

SIZE
B

DATE: 9-30-11

DWG NO.
XXX

REV
B

SCALE NA

SHEET 1 OF 1

Attachment 2
Reverse Osmosis Unit Discharge Rates



April 10, 2015

Mr. Bill Brancard
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Subject: Navajo Refining Company / Addenda to Annual Discharge Reports

Dear Mr. Brancard:

Attached per the request in your letter of April 9, 2015, please find the addenda to the 2012, 2013, and 2014 Annual Reports submitted to OCD as required in Permit GW-028, Condition 2.F.2. The attached files set forth discharge data pertaining to the Refinery's reverse osmosis reject fluids discharge to the farms, including from the temporary RO unit. The discharge data provided is listed on a daily basis to meet requirements of Permit GW-028, Condition 4.B.4. For days on which actual daily discharge volumes from the temporary RO unit were unavailable, Navajo used the average discharge rate of 3,236 barrels per day. For your convenience, those days are highlighted in yellow in the attached documents.

If you have any questions or would like to discuss the attached, please feel free to contact me at 575-746-5487.

Regards,

Scott M. Denton
Environmental Manager

Electronic cc: Allison Marks
Jim Griswold
Carl Chavez
Denise McWatters
Mike Holder

2012 RO Reject Discharge Volume

Annual Discharged Volume (BBLs) 4,302,571
Avg Discharge Rate (BPD) 11,788

	Permanent Unit/Skids				Temporary Unit		Daily Discharged Volume
	36F1101.PV GPM	36F1104.PV GPM	Combined RO Reject Dchg GPM	Combined RO Reject Dchg BBLs	Total RO Reject Discharge GPM	Total RO Reject Discharge/Day BBLs	
	SOUTH SKID REJECT FLOW 36F1101.PV - Average	NORTH SKID REJECT FLOW 36F1104.PV - Average					
Timestamp							
1/1/2012	42.9	130.6	173.5	5948	94	3236	9184
1/2/2012	40.7	129.8	170.5	5845	94	3236	9081
1/3/2012	42.6	130.3	172.9	5928	94	3236	9164
1/4/2012	41.6	130.6	172.2	5904	94	3236	9140
1/5/2012	41.3	129.6	170.9	5859	94	3236	9095
1/6/2012	52.3	126.8	179.1	6141	94	3236	9377
1/7/2012	90.2	122.8	213.0	7303	94	3236	10539
1/8/2012	78.1	119.8	197.9	6784	94	3236	10020
1/9/2012	99.8	119.6	219.4	7523	94	3236	10759
1/10/2012	74.1	119.2	193.4	6630	94	3236	9866
1/11/2012	69.9	123.2	193.2	6623	94	3236	9859
1/12/2012	101.7	123.8	225.4	7729	94	3236	10965
1/13/2012	71.7	122.5	194.2	6657	94	3236	9893
1/14/2012	93.5	118.4	212.0	7267	94	3236	10503
1/15/2012	98.0	110.7	208.7	7156	94	3236	10392
1/16/2012	100.7	118.0	218.7	7499	94	3236	10735
1/17/2012	100.2	121.5	221.7	7602	94	3236	10838
1/18/2012	99.6	117.3	216.9	7435	94	3236	10671
1/19/2012	99.2	113.1	212.3	7279	94	3236	10515
1/20/2012	102.6	113.0	215.6	7392	94	3236	10628
1/21/2012	112.2	112.7	224.9	7711	94	3236	10947
1/22/2012	112.6	114.2	226.8	7777	94	3236	11013
1/23/2012	108.0	111.4	219.4	7522	94	3236	10758
1/24/2012	107.7	110.8	218.5	7491	94	3236	10727
1/25/2012	107.8	113.1	220.8	7571	94	3236	10807
1/26/2012	108.9	106.2	215.1	7376	94	3236	10612
1/27/2012	110.6	108.1	218.6	7496	94	3236	10732
1/28/2012	109.6	107.3	216.8	7434	94	3236	10670
1/29/2012	108.9	104.1	213.0	7303	94	3236	10539
1/30/2012	107.4	99.9	207.2	7105	94	3236	10341
1/31/2012	105.9	114.8	220.8	7570	94	3236	10806
2/1/2012	106.1	114.7	220.8	7569	94	3236	10805
2/2/2012	105.4	114.5	219.9	7541	94	3236	10777
2/3/2012	106.6	119.1	225.8	7741	94	3236	10977
2/4/2012	106.7	118.1	224.8	7707	94	3236	10943
2/5/2012	106.1	114.6	220.7	7567	94	3236	10803
2/6/2012	106.1	116.5	222.6	7632	38	1303	8934
2/7/2012	100.5	113.8	214.3	7347	38	1311	8658
2/8/2012	105.8	109.8	215.6	7393	63	2151	9545
2/9/2012	105.4	112.1	217.5	7458	70	2400	9858
2/10/2012	108.1	111.6	219.7	7533	69	2354	9887
2/11/2012	108.8	118.5	227.3	7794	41	1406	9200
2/12/2012	106.2	122.6	228.8	7843	79	2709	10551
2/13/2012	104.0	120.2	224.3	7690	42	1431	9122
2/14/2012	105.8	122.9	228.7	7841	73	2494	10336
2/15/2012	105.7	126.3	232.0	7954	80	2743	10697
2/16/2012	105.1	124.1	229.2	7857	94	3236	11093
2/17/2012	104.3	120.3	224.6	7699	94	3236	10935
2/18/2012	103.7	117.2	220.9	7573	94	3236	10809
2/19/2012	105.0	116.6	221.6	7597	94	3236	10833
2/20/2012	106.9	123.5	230.3	7897	94	3236	11133
2/21/2012	107.6	124.3	231.9	7951	94	3236	11187
2/22/2012	106.8	122.2	229.1	7854	68	2331	10185
2/23/2012	81.5	116.6	198.0	6790	74	2529	9319
2/24/2012	95.7	113.6	209.3	7175	152	5211	12386
2/25/2012	95.0	110.3	205.3	7040	75	2563	9603
2/26/2012	93.7	105.1	198.8	6816	72	2477	9293
2/27/2012	106.6	110.2	216.9	7436	70	2409	9844
2/28/2012	114.2	107.0	221.2	7585	67	2314	9899
2/29/2012	113.7	109.1	222.8	7638	68	2323	9961
3/1/2012	113.8	109.7	223.5	7663	135	4629	12291
3/2/2012	111.6	103.4	215.0	7370	138	4743	12113
3/3/2012	110.6	103.4	214.0	7337	148	5074	12412
3/4/2012	97.2	106.0	203.2	6966	148	5071	12037
3/5/2012	113.5	100.4	213.8	7332	71	2446	9778
3/6/2012	112.0	93.7	205.7	7051	94	3236	10287
3/7/2012	111.1	95.9	207.0	7097	94	3236	10333
3/8/2012	110.0	97.6	207.6	7117	94	3236	10353
3/9/2012	80.7	90.6	171.4	5875	94	3236	9111
3/10/2012	83.4	91.0	174.4	5978	147	5043	11021
3/11/2012	84.9	90.9	175.8	6026	144	4931	10957
3/12/2012	84.9	89.9	174.8	5993	148	5057	11050
3/13/2012	90.0	90.9	180.9	6203	146	5006	11209
3/14/2012	107.7	95.5	203.2	6968	145	4980	11948
3/15/2012	110.4	104.6	215.0	7371	143	4903	12274
3/16/2012	112.0	109.6	221.7	7600	148	5057	12657
3/17/2012	69.5	108.8	178.3	6112	147	5051	11164
3/18/2012	104.7	107.9	212.6	7290	146	5017	12307
3/19/2012	74.7	107.4	182.0	6241	121	4137	10378
3/20/2012	93.5	108.4	201.9	6922	96	3291	10214
3/21/2012	105.3	110.0	215.3	7382	146	4989	12370
3/22/2012	105.4	109.9	215.3	7382	73	2491	9874
3/23/2012	103.2	110.4	213.6	7324	139	4783	12107
3/24/2012	105.5	110.8	216.2	7413	134	4594	12008
3/25/2012	103.7	110.3	214.0	7337	143	4914	12251
3/26/2012	100.5	109.4	209.9	7197	142	4857	12055
3/27/2012	90.0	107.3	197.2	6762	143	4891	11653
3/28/2012	71.4	103.4	174.7	5991	142	4857	10848
3/29/2012	144.8	109.9	254.7	8732	67	2280	11012
3/30/2012	131.6	114.5	246.1	8437	67	2297	10734
3/31/2012	137.3	113.6	250.9	8602	67	2314	10917
4/1/2012	132.9	115.3	248.2	8511	68	2320	10831
4/2/2012	141.1	114.0	255.1	8747	68	2343	11090
4/3/2012	140.1	115.4	255.5	8760	69	2349	11109
4/4/2012	141.8	114.9	256.7	8801	68	2331	11132
4/5/2012	145.0	115.5	260.5	8932	94	3236	12168
4/6/2012	146.6	77.5	224.1	7684	142	4877	12561
4/7/2012	157.6	60.4	218.0	7473	141	4846	12319
4/8/2012	146.9	103.9	250.8	8597	94	3236	11833
4/9/2012	144.0	112.3	256.2	8785	94	3236	12021
4/10/2012	144.8	112.7	257.4	8826	94	3236	12062
4/11/2012	135.7	112.6	248.3	8514	94	3236	11750
4/12/2012	129.5	113.8	243.3	8342	94	3236	11578
4/13/2012	137.4	116.8	254.2	8715	94	3236	11951
4/14/2012	136.3	116.2	252.6	8660	94	3236	11896
4/15/2012	136.4	116.2	252.5	8658	94	3236	11894
4/16/2012	135.8	115.8	251.6	8626	66	2251	10877
4/17/2012	129.9	115.0	244.9	8397	69	2377	10775
4/18/2012	143.3	114.3	257.6	8831	69	2377	11208
4/19/2012	144.7	115.2	260.0	8914	130	4457	13371
4/20/2012	146.0	116.2	262.2	8990	63	2171	11161
4/21/2012	142.8	113.4	256.1	8782	94	3236	12018
4/22/2012	143.3	115.4	258.7	8870	64	2203	11072
4/23/2012	133.8	117.3	251.0	8606	64	2186	10792
4/24/2012	131.6	116.2	247.8	8495	64	2194	10689

4/25/2012	123.5	106.4	229.9	7884	64	2194	10078
4/26/2012	137.3	111.8	249.1	8541	64	2177	10718
4/27/2012	139.5	114.3	253.8	8701	67	2314	11015
4/28/2012	138.3	113.6	252.0	8639	64	2206	10845
4/29/2012	129.4	112.3	241.7	8287	65	2229	10516
4/30/2012	137.3	109.8	247.1	8471	126	4320	12791
5/1/2012	141.0	106.8	247.9	8498	127	4371	12869
5/2/2012	140.5	105.8	246.3	8444	141	4826	13269
5/3/2012	139.0	100.3	239.3	8203	137	4714	12918
5/4/2012	138.8	104.9	243.7	8355	67	2309	10663
5/5/2012	143.0	107.3	250.2	8580	68	2320	10900
5/6/2012	146.7	106.1	252.8	8667	67	2297	10964
5/7/2012	147.3	106.8	254.1	8711	69	2349	11059
5/8/2012	143.4	106.4	249.8	8565	94	3236	11801
5/9/2012	145.3	107.1	252.4	8653	124	4251	12904
5/10/2012	147.3	89.5	236.8	8119	63	2160	10279
5/11/2012	147.2	107.5	254.7	8731	94	3236	11967
5/12/2012	146.4	106.2	252.6	8662	69	2349	11011
5/13/2012	144.8	106.1	250.9	8602	69	2349	10950
5/14/2012	145.2	107.9	253.0	8675	67	2314	10990
5/15/2012	145.7	109.2	254.9	8739	94	3236	11975
5/16/2012	152.6	115.9	268.5	9205	129	4423	13628
5/17/2012	140.3	115.3	255.6	8762	136	4646	13408
5/18/2012	144.5	115.2	259.7	8905	67	2280	11185
5/19/2012	143.6	113.7	257.3	8820	136	4674	13495
5/20/2012	133.6	114.6	248.2	8509	66	2263	10772
5/21/2012	145.2	113.9	259.1	8884	68	2331	11215
5/22/2012	149.8	114.5	264.3	9062	68	2331	11394
5/23/2012	159.5	117.7	277.2	9505	131	4491	13997
5/24/2012	160.3	117.6	277.9	9529	67	2314	11843
5/25/2012	130.1	112.0	242.1	8300	67	2297	10597
5/26/2012	121.3	111.4	232.7	7977	135	4629	12606
5/27/2012	121.7	113.0	234.6	8044	94	3236	11280
5/28/2012	121.4	112.7	234.1	8027	67	2286	10313
5/29/2012	117.7	112.9	230.6	7905	67	2297	10202
5/30/2012	110.9	109.4	220.2	7551	67	2309	9860
5/31/2012	130.2	115.5	245.7	8425	67	2297	10723
6/1/2012	143.2	115.0	258.2	8853	66	2263	11116
6/2/2012	139.1	114.6	253.7	8700	134	4577	13277
6/3/2012	153.2	115.0	268.3	9198	66	2263	11461
6/4/2012	147.9	115.1	263.0	9018	128	4389	13406
6/5/2012	143.4	115.3	258.7	8870	62	2114	10985
6/6/2012	150.4	114.5	264.9	9081	134	4594	13675
6/7/2012	145.1	111.8	256.9	8808	129	4423	13230
6/8/2012	152.0	116.1	268.1	9193	94	3236	12429
6/9/2012	152.5	116.2	268.8	9215	94	3236	12451
6/10/2012	151.9	113.1	265.0	9087	125	4303	13390
6/11/2012	155.1	116.7	271.8	9319	123	4234	13554
6/12/2012	155.1	116.6	271.7	9316	60	2057	11373
6/13/2012	128.2	121.3	249.6	8556	127	4354	12910
6/14/2012	150.2	126.9	277.0	9499	66	2246	11744
6/15/2012	158.1	125.4	283.5	9719	66	2263	11982
6/16/2012	157.1	127.7	284.8	9763	67	2286	12049
6/17/2012	155.9	127.5	283.4	9716	125	4269	13985
6/18/2012	156.2	127.9	284.1	9741	121	4149	13890
6/19/2012	115.8	124.0	239.8	8223	118	4046	12269
6/20/2012	114.1	122.9	237.0	8126	66	2263	10389
6/21/2012	113.8	121.8	235.7	8079	65	2217	10297
6/22/2012	113.7	121.0	234.6	8044	65	2240	10284
6/23/2012	109.1	123.5	232.6	7974	64	2211	10186
6/24/2012	109.6	123.4	233.0	7987	127	4354	12342
6/25/2012	111.5	120.8	232.3	7965	131	4491	12457
6/26/2012	112.1	121.7	233.8	8018	94	3236	11254
6/27/2012	101.9	111.0	212.9	7301	134	4589	11889
6/28/2012	116.2	119.6	235.9	8088	66	2263	10350
6/29/2012	117.7	118.8	236.5	8108	150	5126	13234
6/30/2012	119.9	118.8	238.7	8184	85	2914	11098
7/1/2012	126.6	119.4	246.1	8437	85	2903	11340
7/2/2012	125.4	119.3	244.7	8389	69	2354	10744
7/3/2012	123.8	123.0	246.8	8462	94	3236	11698
7/4/2012	125.6	123.7	249.3	8548	69	2349	10896
7/5/2012	127.4	123.6	251.0	8604	69	2383	10987
7/6/2012	130.3	124.2	254.6	8727	138	4731	13459
7/7/2012	89.4	122.9	212.3	7279	65	2240	9519
7/8/2012	111.8	122.4	234.2	8031	65	2240	10271
7/9/2012	112.3	121.9	234.2	8029	65	2240	10269
7/10/2012	141.2	126.0	267.2	9162	64	2211	11373
7/11/2012	138.0	118.6	256.6	8797	64	2206	11003
7/12/2012	70.9	103.4	174.4	5978	94	3236	9214
7/13/2012	113.0	147.9	260.9	8946	94	3236	12182
7/14/2012	128.9	108.2	237.1	8130	94	3236	11366
7/15/2012	142.3	81.6	223.9	7676	136	4674	12350
7/16/2012	130.6	71.6	202.3	6935	136	4651	11586
7/17/2012	130.8	71.8	202.6	6945	137	4709	11653
7/18/2012	129.8	105.5	235.3	8067	66	2274	10342
7/19/2012	130.5	149.0	279.5	9582	67	2314	11896
7/20/2012	136.9	148.4	285.3	9782	132	4526	14308
7/21/2012	139.2	146.2	285.3	9782	134	4611	14394
7/22/2012	137.9	141.4	279.3	9577	137	4680	14257
7/23/2012	134.0	140.3	274.4	9408	133	4560	13968
7/24/2012	137.5	139.1	276.6	9484	66	2263	11747
7/25/2012	138.2	140.8	279.0	9566	66	2263	11829
7/26/2012	140.0	141.7	281.7	9658	68	2320	11978
7/27/2012	150.2	137.8	288.0	9873	137	4697	14570
7/28/2012	150.8	142.4	293.2	10053	135	4629	14682
7/29/2012	151.1	142.5	293.6	10067	130	4457	14524
7/30/2012	150.9	141.0	291.9	10008	67	2286	12293
7/31/2012	151.4	141.8	293.2	10053	67	2286	12339
8/1/2012	152.2	142.6	294.8	10106	66	2274	12381
8/2/2012	152.3	142.4	294.7	10105	66	2263	12367
8/3/2012	152.7	143.0	295.7	10140	67	2286	12426
8/4/2012	133.2	139.0	272.1	9330	132	4509	13839
8/5/2012	126.3	138.6	264.9	9083	134	4594	13677
8/6/2012	120.0	139.1	259.1	8883	134	4594	13477
8/7/2012	116.1	138.1	254.2	8715	136	4663	13378
8/8/2012	123.2	138.4	261.6	8968	133	4560	13528
8/9/2012	126.3	136.5	262.8	9010	66	2274	11284
8/10/2012	126.9	137.4	264.3	9062	66	2251	11313
8/11/2012	126.3	137.1	263.5	9033	66	2251	11284
8/12/2012	126.9	137.3	264.2	9058	135	4640	13698
8/13/2012	163.8	138.2	301.9	10351	66	2246	12597
8/14/2012	178.4	140.4	318.8	10930	131	4491	15422
8/15/2012	178.9	141.3	320.2	10979	68	2331	13311
8/16/2012	178.1	141.1	319.2	10945	65	2229	13174
8/17/2012	179.8	139.6	319.4	10949	65	2229	13178
8/18/2012	188.9	139.9	328.7	11271	64	2206	13477
8/19/2012	183.1	139.4	322.5	11056	64	2211	13268
8/20/2012	170.9	140.3	311.2	10671	64	2206	12877
8/21/2012	172.8	141.3	314.0	10767	63	2160	12927
8/22/2012	171.9	140.4	312.4	10710	64	2206	12915
8/23/2012	172.0	140.0	312.1	10699	64	2194	12894
8/24/2012	171.1	139.5	310.6	10650	127	4337	14987
8/25/2012	170.8	140.3	311.0	10664	65	2217	12881

8/26/2012	168.2	139.7	307.9	10558	64	2183	12741
8/27/2012	170.7	139.0	309.7	10617	65	2240	12857
8/28/2012	171.4	139.1	310.5	10647	96	3284	13931
8/29/2012	172.5	140.0	312.5	10715	129	4423	15138
8/30/2012	172.7	140.2	312.9	10728	128	4389	15116
8/31/2012	172.9	139.7	312.6	10719	64	2194	12913
9/1/2012	172.2	139.3	311.5	10678	126	4320	14998
9/2/2012	172.8	139.9	312.6	10719	129	4423	15142
9/3/2012	166.5	138.1	304.6	10444	131	4491	14935
9/4/2012	132.9	130.8	263.7	9042	64	2206	11248
9/5/2012	132.3	129.4	261.8	8976	130	4474	13450
9/6/2012	131.7	128.8	260.5	8931	129	4406	13337
9/7/2012	121.1	130.8	252.0	8639	129	4423	13062
9/8/2012	128.8	128.3	257.1	8813	127	4371	13185
9/9/2012	131.6	128.1	259.8	8907	65	2229	11136
9/10/2012	130.9	126.8	257.7	8834	64	2194	11028
9/11/2012	127.1	125.5	252.6	8661	65	2229	10889
9/12/2012	127.9	129.8	257.7	8835	66	2263	11098
9/13/2012	130.6	132.7	263.4	9029	94	3236	12265
9/14/2012	130.9	133.8	264.7	9074	135	4629	13702
9/15/2012	131.2	133.5	264.7	9076	133	4549	13624
9/16/2012	127.2	131.5	258.7	8871	71	2434	11305
9/17/2012	156.3	122.4	278.7	9555	67	2286	11841
9/18/2012	170.2	126.1	296.4	10161	129	4434	14595
9/19/2012	169.5	126.2	295.7	10138	66	2251	12389
9/20/2012	169.6	126.1	295.7	10138	66	2274	12413
9/21/2012	165.6	128.4	294.0	10079	127	4354	14434
9/22/2012	129.4	131.4	260.8	8943	62	2126	11069
9/23/2012	127.8	129.7	257.4	8827	67	2286	11112
9/24/2012	122.8	129.6	252.4	8653	129	4423	13076
9/25/2012	123.2	131.2	254.5	8724	64	2206	10930
9/26/2012	125.4	130.9	256.2	8785	63	2171	10957
9/27/2012	129.4	130.8	260.2	8920	63	2171	11092
9/28/2012	130.4	133.1	263.5	9035	64	2183	11218
9/29/2012	131.0	134.2	265.2	9092	125	4286	13377
9/30/2012	143.1	135.8	278.9	9564	127	4337	13901
10/1/2012	144.0	136.3	280.2	9608	129	4406	14014
10/2/2012	143.9	135.7	279.5	9584	128	4389	13973
10/3/2012	112.0	135.4	247.5	8485	109	3749	12233
10/4/2012	150.0	132.3	282.3	9680	65	2217	11897
10/5/2012	157.8	135.2	293.0	10044	63	2171	12215
10/6/2012	155.1	133.3	288.3	9886	65	2217	12103
10/7/2012	158.0	135.8	293.8	10073	65	2217	12290
10/8/2012	156.4	133.5	289.9	9940	65	2229	12168
10/9/2012	157.6	135.2	292.8	10040	64	2211	12252
10/10/2012	154.4	133.4	287.8	9867	62	2137	12004
10/11/2012	106.5	130.8	237.3	8136	124	4251	12387
10/12/2012	98.9	131.4	230.3	7897	61	2080	9977
10/13/2012	119.3	132.6	251.9	8637	62	2143	10780
10/14/2012	161.5	86.7	248.2	8511	64	2206	10716
10/15/2012	143.8	114.7	258.5	8862	130	4457	13319
10/16/2012	116.6	121.7	238.3	8170	130	4440	12610
10/17/2012	106.4	121.7	228.0	7818	131	4491	12310
10/18/2012	106.2	120.8	227.1	7785	130	4457	12242
10/19/2012	107.6	122.2	229.7	7876	135	4629	12505
10/20/2012	122.4	98.8	221.1	7581	64	2206	9787
10/21/2012	118.4	135.0	253.5	8690	66	2263	10953
10/22/2012	118.4	133.7	252.1	8642	64	2206	10848
10/23/2012	120.0	128.5	248.6	8522	133	4560	13082
10/24/2012	122.6	127.7	250.4	8584	132	4526	13110
10/25/2012	120.9	119.5	240.4	8243	122	4166	12409
10/26/2012	124.4	130.6	255.0	8745	122	4166	12910
10/27/2012	124.1	130.9	255.0	8742	128	4389	13131
10/28/2012	126.3	134.4	260.7	8938	66	2274	11213
10/29/2012	126.9	134.7	261.6	8968	65	2229	11196
10/30/2012	125.4	135.1	260.6	8935	62	2126	11060
10/31/2012	127.6	135.4	263.1	9019	125	4286	13305
11/1/2012	127.1	135.1	262.3	8992	130	4440	13432
11/2/2012	125.4	132.7	258.1	8851	129	4423	13274
11/3/2012	106.0	114.9	220.9	7575	64	2194	9769
11/4/2012	104.9	113.4	218.3	7484	66	2274	9759
11/5/2012	104.8	113.5	218.3	7484	67	2297	9781
11/6/2012	106.5	112.5	219.0	7510	69	2377	9887
11/7/2012	126.9	116.0	242.9	8328	67	2286	10614
11/8/2012	137.9	116.0	253.8	8703	130	4474	13178
11/9/2012	138.7	117.3	256.0	8777	138	4731	13508
11/10/2012	133.8	118.3	252.1	8645	131	4491	13136
11/11/2012	133.1	117.9	251.0	8607	140	4800	13407
11/12/2012	127.9	119.1	247.0	8468	146	4989	13457
11/13/2012	133.4	120.2	253.6	8695	66	2274	10969
11/14/2012	136.6	119.3	256.0	8776	65	2240	11016
11/15/2012	135.5	118.5	254.0	8708	141	4834	13542
11/16/2012	131.6	118.0	249.5	8555	131	4491	13047
11/17/2012	136.9	120.3	257.2	8817	132	4543	13360
11/18/2012	139.4	120.8	260.1	8919	134	4611	13531
11/19/2012	135.3	119.9	255.3	8752	132	4526	13278
11/20/2012	128.1	115.9	244.0	8367	66	2251	10619
11/21/2012	119.4	119.0	238.3	8171	66	2251	10423
11/22/2012	122.3	114.8	237.0	8127	137	4709	12836
11/23/2012	121.1	113.1	234.2	8030	137	4680	12710
11/24/2012	122.6	113.3	235.9	8088	134	4611	12699
11/25/2012	124.5	118.4	242.9	8328	139	4749	13077
11/26/2012	123.6	115.6	239.2	8202	68	2323	10525
11/27/2012	122.7	115.0	237.7	8150	69	2377	10527
11/28/2012	122.6	115.5	238.1	8164	69	2377	10541
11/29/2012	123.2	115.7	238.8	8188	69	2366	10554
11/30/2012	123.0	113.5	236.5	8109	69	2366	10475
12/1/2012	122.6	113.0	235.6	8077	69	2377	10455
12/2/2012	122.5	113.4	235.9	8089	134	4583	12672
12/3/2012	123.9	114.8	238.8	8187	67	2280	10467
12/4/2012	125.7	118.6	244.3	8375	67	2297	10672
12/5/2012	127.8	122.2	250.0	8571	67	2297	10868
12/6/2012	126.9	121.0	247.9	8500	67	2286	10786
12/7/2012	128.6	120.3	248.9	8534	63	2171	10706
12/8/2012	132.0	119.1	251.1	8610	63	2171	10781
12/9/2012	129.6	120.7	250.3	8581	64	2183	10764
12/10/2012	129.9	121.4	251.3	8615	70	2400	11015
12/11/2012	123.5	118.4	241.9	8292	62	2137	10429
12/12/2012	191.8	128.8	320.6	10993	62	2126	13119
12/13/2012	193.6	130.1	323.7	11098	64	2183	13281
12/14/2012	194.4	130.8	325.2	11150	62	2126	13276
12/15/2012	191.1	131.3	322.4	11052	64	2206	13258
12/16/2012	183.9	132.8	316.7	10859	64	2194	13054
12/17/2012	188.7	132.1	320.8	11000	68	2331	13332
12/18/2012	194.9	131.7	326.7	11201	135	4629	15829
12/19/2012	196.7	133.3	330.1	11316	63	2160	13476
12/20/2012	196.5	133.1	329.7	11303	62	2117	13420
12/21/2012	195.2	132.0	327.2	11218	62	2137	13355
12/22/2012	178.6	133.7	312.3	10708	64	2183	12891
12/23/2012	164.1	132.3	296.4	10163	65	2229	12391
12/24/2012	169.1	131.8	300.9	10316	63	2160	12476
12/25/2012	170.4	132.4	302.8	10383	65	2240	12623
12/26/2012	171.0	132.9	303.9	10418	130	4457	14875

12/27/2012	170.8	132.8	303.6	10410	139	4766	15176
12/28/2012	158.1	132.6	290.6	9964	125	4269	14232
12/29/2012	154.3	134.2	288.5	9891	94	3236	13127
12/30/2012	153.1	134.0	287.1	9843	126	4309	14152
12/31/2012	153.4	133.7	287.1	9844	69	2383	12227

Assume overall avg discharge rate (2012-2014) if no data available

2013 RO Reject Discharge Volume

Annual Discharged Volume (BBLs) 4,014,933
Avg Discharge Rate (BPD) 11,000

	Permanent Unit/Skids				Temporary Unit		Daily Discharge Volume
	36FI101.PV GPM	36FI104.PV GPM	Combined RO Reject Dchg GPM	Combined RO Reject Dchg BBLs	Total RO Reject Discharge GPM	Total RO Reject Discharge/Day BBLs	BBLs
	SOUTH SKID REJECT FLOW 36FI101.PV - Average	NORTH SKID REJECT FLOW 36FI104.PV - Average					
Timestamp							
1/1/2013	151.6	131.9	283.4	9718	70	2411	12129
1/2/2013	151.3	129.9	281.3	9644	70	2383	12026
1/3/2013	151.0	129.2	280.3	9609	68	2343	11952
1/4/2013	152.4	129.7	282.1	9672	69	2366	12037
1/5/2013	151.8	129.2	281.0	9636	0	0	9636
1/6/2013	152.4	129.6	282.0	9668	0	0	9668
1/7/2013	153.9	130.3	284.1	9742	0	0	9742
1/8/2013	152.9	128.8	281.7	9658	0	0	9658
1/9/2013	151.8	126.5	278.4	9544	0	0	9544
1/10/2013	153.8	127.0	280.8	9626	0	0	9626
1/11/2013	155.7	127.3	283.0	9704	0	0	9704
1/12/2013	157.0	128.4	285.4	9786	0	0	9786
1/13/2013	157.9	129.5	287.3	9852	0	0	9852
1/14/2013	155.0	129.1	284.1	9740	0	0	9740
1/15/2013	153.2	128.4	281.6	9654	0	0	9654
1/16/2013	152.8	128.0	280.8	9628	0	0	9628
1/17/2013	152.6	127.8	280.4	9614	0	0	9614
1/18/2013	152.9	128.7	281.6	9655	0	0	9655
1/19/2013	153.7	127.7	281.4	9648	0	0	9648
1/20/2013	153.4	129.3	282.6	9690	0	0	9690
1/21/2013	153.4	128.6	282.0	9667	0	0	9667
1/22/2013	154.1	127.6	281.7	9658	0	0	9658
1/23/2013	153.3	126.5	279.8	9593	0	0	9593
1/24/2013	154.1	127.6	281.7	9659	0	0	9659
1/25/2013	153.6	127.7	281.3	9644	0	0	9644
1/26/2013	154.2	123.5	277.7	9520	0	0	9520
1/27/2013	154.4	128.9	283.3	9712	0	0	9712
1/28/2013	152.5	131.3	283.8	9729	0	0	9729
1/29/2013	143.6	134.2	277.8	9525	0	0	9525
1/30/2013	143.2	134.2	277.4	9510	0	0	9510
1/31/2013	148.1	101.0	249.0	8538	0	0	8538
2/1/2013	161.1	78.4	239.5	8211	0	0	8211
2/2/2013	151.1	126.6	277.6	9518	0	0	9518
2/3/2013	69.5	41.4	110.9	3801	0	0	3801
2/4/2013	161.6	0.0	161.6	5542	0	0	5542
2/5/2013	153.9	0.1	154.0	5279	0	0	5279
2/6/2013	125.6	0.1	125.7	4309	0	0	4309
2/7/2013	93.5	1.0	94.5	3239	0	0	3239
2/8/2013	146.4	21.8	168.2	5766	0	0	5766
2/9/2013	142.9	41.6	184.5	6327	0	0	6327
2/10/2013	140.8	76.9	217.7	7464	0	0	7464
2/11/2013	135.9	69.2	205.1	7031	0	0	7031
2/12/2013	137.0	69.4	206.5	7079	0	0	7079
2/13/2013	136.8	71.1	207.9	7126	0	0	7126
2/14/2013	140.3	47.4	187.7	6436	0	0	6436
2/15/2013	144.2	51.9	196.1	6722	0	0	6722
2/16/2013	140.9	140.1	281.0	9634	0	0	9634
2/17/2013	141.2	162.6	303.9	10418	0	0	10418
2/18/2013	142.8	151.6	294.4	10093	0	0	10093
2/19/2013	154.7	165.2	319.9	10968	0	0	10968
2/20/2013	154.5	164.8	319.3	10946	0	0	10946
2/21/2013	156.8	168.6	325.5	11159	0	0	11159
2/22/2013	156.8	168.3	325.1	11147	0	0	11147
2/23/2013	157.0	168.3	325.3	11152	0	0	11152
2/24/2013	156.5	167.7	324.2	11116	0	0	11116
2/25/2013	155.9	167.7	323.5	11093	0	0	11093
2/26/2013	154.4	165.1	319.5	10953	0	0	10953
2/27/2013	154.0	165.2	319.2	10943	0	0	10943
2/28/2013	153.0	163.1	316.2	10841	0	0	10841
3/1/2013	153.0	163.4	316.4	10848	0	0	10848
3/2/2013	153.7	164.6	318.4	10915	0	0	10915
3/3/2013	152.6	162.4	315.0	10801	0	0	10801
3/4/2013	152.5	162.7	315.2	10806	122	4166	14972
3/5/2013	154.1	165.1	319.2	10944	124	4251	15196
3/6/2013	152.7	162.6	315.3	10812	128	4371	15183
3/7/2013	151.8	161.6	313.5	10748	66	2263	13011
3/8/2013	153.2	163.0	316.2	10841	94	3236	14077
3/9/2013	152.2	162.0	314.2	10773	94	3236	14009
3/10/2013	151.9	161.0	312.8	10726	94	3236	13962
3/11/2013	153.0	162.1	315.0	10800	94	3236	14036
3/12/2013	151.9	160.8	312.7	10721	61	2091	12812
3/13/2013	155.8	127.0	282.8	9697	61	2091	11788
3/14/2013	153.9	162.7	316.5	10853	62	2114	12967
3/15/2013	155.1	163.9	319.0	10937	62	2137	13074
3/16/2013	154.5	164.6	319.0	10938	63	2143	13081
3/17/2013	153.5	163.1	316.6	10856	63	2160	13016
3/18/2013	153.1	162.2	315.4	10813	62	2109	12922
3/19/2013	148.0	148.4	296.4	10164	63	2143	12306
3/20/2013	152.3	161.2	313.5	10747	62	2137	12885
3/21/2013	152.9	156.2	309.1	10596	62	2137	12734
3/22/2013	152.3	160.1	312.5	10714	64	2194	12908
3/23/2013	154.5	164.5	319.0	10936	64	2183	13119
3/24/2013	153.3	162.5	315.8	10827	66	2263	13090
3/25/2013	152.6	162.7	315.2	10808	94	3236	14044
3/26/2013	151.9	161.1	313.0	10731	94	3236	13967
3/27/2013	152.6	162.3	314.9	10798	67	2297	13095
3/28/2013	153.7	163.6	317.3	10879	67	2309	13188
3/29/2013	152.4	159.9	312.3	10709	68	2314	13023
3/30/2013	152.9	162.7	315.6	10821	68	2320	13141
3/31/2013	152.3	161.7	314.0	10764	67	2309	13073
4/1/2013	152.3	161.0	313.3	10741	67	2297	13038
4/2/2013	148.6	149.7	298.3	10227	67	2280	12507
4/3/2013	145.6	143.7	289.3	9918	67	2297	12215
4/4/2013	123.6	163.3	286.9	9836	68	2331	12168
4/5/2013	132.0	165.1	297.1	10185	133	4543	14728
4/6/2013	149.4	156.4	305.9	10487	67	2309	12796
4/7/2013	147.9	154.7	302.6	10375	67	2309	12684
4/8/2013	147.7	154.8	302.5	10373	94	3236	13609
4/9/2013	148.1	154.5	302.6	10376	68	2331	12708
4/10/2013	148.8	154.7	303.5	10405	66	2263	12668
4/11/2013	149.4	155.9	305.3	10468	94	3236	13704
4/12/2013	147.9	155.0	302.8	10383	69	2366	12749
4/13/2013	148.3	153.3	301.6	10339	69	2377	12716
4/14/2013	141.0	154.6	295.5	10133	69	2377	12510
4/15/2013	137.4	155.6	293.0	10045	94	3236	13281
4/16/2013	146.5	152.3	298.8	10243	58	1989	12232
4/17/2013	147.3	146.0	293.3	10056	58	1989	12045
4/18/2013	150.9	144.6	295.5	10133	128	4371	14504
4/19/2013	143.1	137.9	281.0	9634	69	2366	12000
4/20/2013	136.7	139.3	276.0	9461	69	2349	11810
4/21/2013	136.5	138.9	275.3	9440	69	2366	11806
4/22/2013	137.8	139.1	276.9	9493	124	4234	13727
4/23/2013	136.8	138.8	275.6	9449	127	4343	13792
4/24/2013	136.6	138.8	275.4	9442	54	1851	11294
4/25/2013	135.7	140.6	276.3	9471	54	1851	11323
4/26/2013	129.1	141.8	270.9	9287	55	1886	11173
4/27/2013	132.2	139.3	271.5	9308	132	4509	13817
4/28/2013	135.0	138.3	273.3	9371	70	2389	11759
4/29/2013	133.1	138.0	271.0	9293	69	2366	11659
4/30/2013	132.8	138.2	271.1	9294	94	3236	12530
5/1/2013	133.8	137.4	271.2	9299	52	1771	11070
5/2/2013	135.5	137.1	272.6	9346	52	1794	11140

5/3/2013	135.1	137.1	272.3	9334	53	1817	11151
5/4/2013	134.3	136.3	270.6	9277	53	1817	11094
5/5/2013	136.2	137.9	274.1	9397	52	1783	11180
5/6/2013	137.1	138.4	275.5	9445	52	1794	11239
5/7/2013	135.5	137.2	272.7	9348	130	4446	13794
5/8/2013	135.3	136.9	272.2	9334	62	2126	11459
5/9/2013	135.2	136.5	271.7	9316	135	4629	13944
5/10/2013	140.4	136.9	277.3	9509	70	2400	11909
5/11/2013	139.5	137.3	276.8	9491	69	2366	11857
5/12/2013	135.0	136.6	271.6	9313	70	2400	11713
5/13/2013	134.9	137.1	272.0	9326	69	2366	11692
5/14/2013	135.6	137.0	272.5	9344	94	3236	12580
5/15/2013	136.0	137.1	273.0	9361	130	4440	13801
5/16/2013	135.0	136.6	271.6	9314	68	2331	11645
5/17/2013	141.2	137.3	278.5	9550	65	2240	11790
5/18/2013	139.4	136.7	276.1	9468	94	3236	12704
5/19/2013	136.3	136.7	273.0	9359	63	2160	11519
5/20/2013	134.3	135.8	270.1	9262	63	2160	11422
5/21/2013	134.4	136.7	271.1	9295	62	2109	11404
5/22/2013	135.6	137.4	273.0	9360	62	2126	11485
5/23/2013	134.9	137.0	272.0	9325	134	4594	13919
5/24/2013	139.4	136.4	275.8	9457	60	2069	11526
5/25/2013	138.4	136.6	275.0	9429	59	2034	11464
5/26/2013	134.1	136.0	270.1	9259	124	4251	13511
5/27/2013	134.4	136.3	270.7	9282	68	2320	11602
5/28/2013	134.0	135.8	269.7	9248	67	2309	11557
5/29/2013	133.5	135.4	268.9	9219	67	2286	11505
5/30/2013	132.7	134.2	266.9	9152	67	2309	11460
5/31/2013	133.1	135.3	268.4	9201	68	2314	11515
6/1/2013	132.9	135.1	268.0	9188	69	2349	11537
6/2/2013	133.1	135.4	268.5	9205	68	2331	11537
6/3/2013	132.8	135.7	268.5	9205	68	2331	11536
6/4/2013	138.1	136.5	274.6	9416	69	2366	11781
6/5/2013	135.8	137.5	273.3	9371	56	1920	11291
6/6/2013	136.3	138.1	274.3	9405	57	1966	11371
6/7/2013	134.1	138.9	273.0	9361	57	1937	11298
6/8/2013	137.2	139.0	276.2	9471	68	2343	11814
6/9/2013	138.7	139.9	278.6	9552	124	4234	13786
6/10/2013	137.6	139.5	277.1	9500	69	2349	11848
6/11/2013	136.5	138.1	274.6	9416	68	2331	11747
6/12/2013	137.9	139.4	277.4	9510	127	4354	13864
6/13/2013	130.7	139.2	269.9	9254	68	2343	11597
6/14/2013	125.9	138.3	264.3	9060	68	2343	11403
6/15/2013	131.7	137.9	269.6	9245	68	2343	11587
6/16/2013	131.5	137.7	269.3	9232	69	2366	11597
6/17/2013	131.2	138.6	269.8	9249	69	2366	11615
6/18/2013	124.8	137.3	262.1	8985	69	2366	11351
6/19/2013	123.4	136.3	259.7	8905	69	2366	11270
6/20/2013	124.2	137.1	261.3	8958	69	2349	11307
6/21/2013	124.8	137.3	262.1	8986	80	2754	11740
6/22/2013	123.3	136.2	259.6	8900	99	3394	12294
6/23/2013	127.4	136.2	263.6	9038	100	3417	12455
6/24/2013	133.5	136.3	269.9	9253	90	3074	12327
6/25/2013	132.5	135.3	267.7	9179	73	2486	11665
6/26/2013	134.6	133.6	268.2	9194	76	2617	11811
6/27/2013	139.1	136.2	275.3	9438	77	2640	12078
6/28/2013	139.3	137.0	276.3	9472	75	2571	12044
6/29/2013	140.5	138.8	279.3	9576	79	2720	12296
6/30/2013	132.6	136.4	269.0	9223	73	2503	11726
7/1/2013	134.4	135.9	270.3	9267	94	3236	12503
7/2/2013	91.5	134.4	225.9	7745	90	3086	10831
7/3/2013	131.6	133.9	265.5	9104	93	3171	12275
7/4/2013	139.2	135.9	275.1	9432	93	3177	12609
7/5/2013	138.8	136.7	275.5	9446	93	3200	12646
7/6/2013	137.0	137.9	274.9	9424	94	3223	12647
7/7/2013	135.9	137.2	273.1	9363	93	3200	12563
7/8/2013	134.3	135.9	270.2	9263	94	3206	12469
7/9/2013	133.9	133.7	267.5	9173	95	3240	12413
7/10/2013	135.3	135.7	271.0	9290	69	2377	11667
7/11/2013	140.4	135.7	276.0	9463	79	2720	12183
7/12/2013	139.8	135.9	275.7	9453	78	2663	12116
7/13/2013	140.2	135.4	275.6	9450	79	2697	12147
7/14/2013	138.9	134.4	273.3	9372	76	2594	11966
7/15/2013	135.3	134.6	269.8	9251	78	2674	11926
7/16/2013	117.7	133.5	251.2	8613	72	2469	11082
7/17/2013	115.0	133.4	248.4	8518	72	2451	10969
7/18/2013	117.3	133.4	250.7	8596	72	2469	11065
7/19/2013	118.4	134.4	252.9	8670	74	2537	11207
7/20/2013	119.6	134.9	254.5	8724	75	2554	11278
7/21/2013	117.3	134.0	251.3	8616	77	2640	11256
7/22/2013	118.5	134.5	253.0	8675	80	2731	11406
7/23/2013	118.5	136.9	255.4	8756	71	2417	11173
7/24/2013	118.0	137.7	255.7	8766	70	2383	11149
7/25/2013	110.9	138.3	249.3	8546	69	2366	10912
7/26/2013	108.6	138.1	246.7	8459	69	2377	10836
7/27/2013	109.1	138.2	247.3	8479	70	2411	10891
7/28/2013	109.1	138.6	247.7	8493	69	2366	10859
7/29/2013	107.6	137.9	245.5	8417	68	2320	10737
7/30/2013	108.1	138.2	246.3	8444	94	3236	11680
7/31/2013	106.2	136.6	242.8	8324	94	3236	11560
8/1/2013	103.7	137.8	241.5	8279	94	3236	11515
8/2/2013	103.0	138.0	241.0	8262	59	2021	10283
8/3/2013	101.9	136.9	238.8	8189	71	2446	10635
8/4/2013	101.8	137.0	238.8	8187	60	2052	10239
8/5/2013	103.6	137.7	241.3	8273	73	2519	10792
8/6/2013	104.0	137.8	241.8	8291	73	2519	10810
8/7/2013	103.4	137.5	240.9	8260	73	2509	10769
8/8/2013	103.0	137.2	240.1	8233	71	2428	10660
8/9/2013	103.0	137.4	240.5	8244	72	2471	10715
8/10/2013	104.0	137.6	241.7	8286	54	1863	10149
8/11/2013	103.4	137.1	240.6	8248	91	3120	11368
8/12/2013	104.7	137.6	242.3	8306	72	2484	10790
8/13/2013	104.2	137.8	242.1	8299	73	2508	10807
8/14/2013	103.9	137.5	241.4	8277	70	2396	10673
8/15/2013	103.9	137.1	241.0	8261	74	2545	10807
8/16/2013	102.6	136.4	239.0	8195	73	2490	10686
8/17/2013	102.6	136.3	239.0	8193	72	2475	10668
8/18/2013	103.0	136.3	239.4	8207	72	2472	10679
8/19/2013	101.7	135.6	237.3	8135	72	2469	10603
8/20/2013	101.6	135.5	237.1	8129	75	2564	10693
8/21/2013	102.7	136.1	238.8	8188	75	2576	10764
8/22/2013	120.2	136.0	256.2	8783	74	2536	11319
8/23/2013	112.2	137.4	249.6	8558	75	2576	11134
8/24/2013	112.4	137.4	249.8	8565	72	2453	11019
8/25/2013	112.0	137.6	249.7	8560	76	2598	11158
8/26/2013	111.7	137.7	249.4	8550	77	2651	11201
8/27/2013	110.7	137.1	247.7	8494	77	2643	11138
8/28/2013	110.2	136.9	247.1	8472	71	2418	10890
8/29/2013	110.0	136.9	246.8	8463	67	2304	10767
8/30/2013	109.6	136.8	246.4	8447	77	2630	11077
8/31/2013	108.6	136.3	244.9	8395	76	2620	11015
9/1/2013	108.7	136.5	245.2	8407	77	2629	11036
9/2/2013	109.5	136.9	246.3	8446	74	2549	10995
9/3/2013	108.7	136.3	245.0	8401	77	2632	11033
9/4/2013	107.6	135.8	243.3	8343	77	2636	10979
9/5/2013	108.2	138.0	246.2	8441	77	2645	11086
9/6/2013	108.9	138.4	247.3	8480	77	2654	11134
9/7/2013	109.7	137.6	247.3	8480	25	873	9353
9/8/2013	109.3	137.3	246.6	8455	94	3236	11691
9/9/2013	110.0	137.6	247.7	8491	204	6989	15480

9/10/2013	106.0	114.3	220.2	7551	63	2168	9718
9/11/2013	102.4	102.7	205.1	7031	94	3236	10267
9/12/2013	107.3	119.2	226.5	7767	94	3236	11003
9/13/2013	107.6	121.5	229.1	7854	94	3236	11090
9/14/2013	109.5	128.1	237.6	8147	7	245	8393
9/15/2013	110.3	135.8	246.2	8440	82	2818	11258
9/16/2013	109.5	135.4	244.9	8397	72	2478	10876
9/17/2013	111.2	136.8	248.1	8505	37	1268	9773
9/18/2013	111.0	136.3	247.3	8479	49	1675	10154
9/19/2013	106.5	135.9	242.4	8312	77	2624	10936
9/20/2013	97.5	137.9	235.5	8073	77	2628	10702
9/21/2013	97.7	138.3	235.9	8088	77	2625	10713
9/22/2013	97.5	138.3	235.9	8086	75	2586	10672
9/23/2013	96.8	138.1	234.9	8055	74	2547	10602
9/24/2013	97.9	138.8	236.7	8114	77	2634	10748
9/25/2013	99.0	139.6	238.6	8182	77	2637	10819
9/26/2013	98.9	139.4	238.3	8170	77	2632	10802
9/27/2013	98.5	138.5	237.1	8127	61	2080	10208
9/28/2013	98.8	138.8	237.6	8145	77	2625	10770
9/29/2013	99.5	139.4	238.8	8188	77	2628	10816
9/30/2013	99.1	139.3	238.4	8174	77	2637	10811
10/1/2013	97.8	138.8	236.6	8113	77	2637	10750
10/2/2013	97.7	139.2	236.8	8120	64	2179	10299
10/3/2013	96.4	138.7	235.0	8058	91	3106	11165
10/4/2013	95.9	138.7	234.5	8041	143	4908	12949
10/5/2013	95.9	138.5	234.4	8036	153	5251	13287
10/6/2013	100.9	140.2	241.1	8266	152	5219	13485
10/7/2013	102.0	141.0	243.0	8333	118	4038	12371
10/8/2013	98.5	139.7	238.3	8170	74	2540	10710
10/9/2013	97.3	139.0	236.2	8100	66	2252	10352
10/10/2013	98.9	139.7	238.6	8180	66	2257	10437
10/11/2013	98.9	139.4	238.2	8168	66	2254	10421
10/12/2013	101.7	139.9	241.6	8283	64	2210	10493
10/13/2013	107.8	139.9	247.7	8494	17	597	9091
10/14/2013	139.5	138.3	277.8	9524	94	3236	12760
10/15/2013	138.0	138.3	276.3	9474	94	3236	12710
10/16/2013	136.7	137.9	274.7	9417	7	250	9667
10/17/2013	137.0	137.7	274.7	9419	66	2259	11678
10/18/2013	142.8	139.4	282.3	9677	59	2009	11687
10/19/2013	139.7	138.2	277.9	9528	65	2236	11764
10/20/2013	140.2	138.6	278.8	9557	65	2235	11792
10/21/2013	141.6	139.9	281.5	9651	65	2240	11891
10/22/2013	141.6	139.2	280.8	9627	73	2495	12122
10/23/2013	140.7	139.0	279.6	9587	82	2820	12407
10/24/2013	141.3	139.6	280.9	9630	82	2823	12452
10/25/2013	141.2	139.4	280.7	9623	83	2829	12452
10/26/2013	140.8	140.6	281.3	9646	83	2831	12476
10/27/2013	130.1	139.9	270.0	9257	83	2833	12090
10/28/2013	122.6	140.9	263.5	9034	75	2588	11622
10/29/2013	115.6	141.3	256.9	8810	65	2244	11053
10/30/2013	111.3	142.1	253.4	8688	70	2400	11088
10/31/2013	107.4	144.5	251.9	8636	82	2828	11464
11/1/2013	104.0	143.6	247.6	8489	83	2830	11320
11/2/2013	99.7	136.6	236.3	8100	72	2482	10582
11/3/2013	95.3	118.2	213.6	7322	66	2248	9570
11/4/2013	93.1	101.4	194.5	6669	65	2243	8912
11/5/2013	70.6	97.5	168.1	5765	66	2250	8015
11/6/2013	36.1	101.1	137.2	4704	66	2255	6959
11/7/2013	41.1	99.8	140.9	4832	80	2759	7590
11/8/2013	55.9	101.9	157.8	5409	83	2847	8256
11/9/2013	56.1	100.1	156.2	5355	83	2852	8208
11/10/2013	54.1	99.1	153.2	5253	97	3326	8579
11/11/2013	44.1	108.2	152.3	5223	86	2951	8174
11/12/2013	52.0	90.7	142.6	4890	66	2261	7151
11/13/2013	50.5	86.8	137.3	4708	66	2276	6984
11/14/2013	50.6	81.8	132.4	4539	83	2850	7389
11/15/2013	48.9	81.5	130.4	4472	83	2860	7332
11/16/2013	47.7	85.7	133.4	4574	84	2866	7440
11/17/2013	46.6	85.5	132.2	4532	84	2867	7399
11/18/2013	45.9	85.6	131.5	4508	32	1114	5622
11/19/2013	45.5	85.3	130.8	4484	94	3236	7720
11/20/2013	79.4	64.8	144.3	4947	94	3236	8183
11/21/2013	121.2	67.8	188.9	6478	94	3236	9714
11/22/2013	120.3	85.5	205.9	7058	94	3236	10294
11/23/2013	120.6	65.0	185.6	6365	94	3236	9601
11/24/2013	119.9	77.3	197.2	6761	94	3236	9997
11/25/2013	126.4	25.6	151.9	5209	94	3236	8445
11/26/2013	126.0	33.8	159.8	5478	94	3236	8714
11/27/2013	119.3	80.1	199.4	6836	94	3236	10072
11/28/2013	121.2	81.0	202.2	6933	94	3236	10169
11/29/2013	122.4	81.8	204.2	7002	94	3236	10238
11/30/2013	122.0	81.8	203.8	6989	94	3236	10225
12/1/2013	121.8	81.9	203.7	6983	94	3236	10219
12/2/2013	121.8	81.4	203.2	6967	94	3236	10203
12/3/2013	121.7	82.6	204.3	7006	94	3236	10242
12/4/2013	120.5	81.9	202.4	6940	94	3236	10176
12/5/2013	122.0	83.6	205.6	7051	94	3236	10287
12/6/2013	125.2	37.3	162.5	5571	94	3236	8807
12/7/2013	129.9	8.0	137.9	4729	94	3236	7965
12/8/2013	131.2	3.5	134.7	4617	94	3236	7853
12/9/2013	131.9	4.9	136.9	4693	94	3236	7929
12/10/2013	129.4	9.8	139.1	4770	94	3236	8006
12/11/2013	129.8	3.3	133.2	4565	94	3236	7801
12/12/2013	129.1	1.5	130.5	4475	94	3236	7711
12/13/2013	130.2	0.1	130.2	4465	94	3236	7701
12/14/2013	128.3	23.7	152.1	5214	94	3236	8450
12/15/2013	124.7	118.3	243.0	8332	94	3236	11568
12/16/2013	124.1	118.3	242.4	8311	94	3236	11547
12/17/2013	122.1	115.4	237.5	8143	94	3236	11379
12/18/2013	120.9	118.9	239.8	8222	94	3236	11458
12/19/2013	123.7	125.1	248.8	8530	94	3236	11766
12/20/2013	123.7	127.6	251.3	8615	94	3236	11851
12/21/2013	124.3	128.2	252.5	8657	94	3236	11893
12/22/2013	120.4	128.9	249.3	8547	94	3236	11783
12/23/2013	121.4	118.0	239.4	8208	94	3236	11444
12/24/2013	124.0	128.8	252.8	8669	94	3236	11905
12/25/2013	125.2	128.2	253.4	8689	94	3236	11925
12/26/2013	125.3	123.6	248.9	8532	94	3236	11768
12/27/2013	124.6	121.6	246.2	8443	94	3236	11679
12/28/2013	122.0	120.2	242.1	8302	94	3236	11538
12/29/2013	123.2	122.5	245.7	8424	94	3236	11660
12/30/2013	125.1	124.3	249.4	8551	94	3236	11787
12/31/2013	126.6	128.0	254.6	8729	94	3236	11965

Assume overall avg discharge rate (2012-2014) if no data available

2014 RO Reject Discharge Volume

Annual Discharged Volume (BBLs) 4,424,810
Avg Discharge Rate (BPD) 12,123

Timestamp	Permanent Unit/Skids				Temporary Unit		Daily Discharge Volume
	36FI101.PV GPM	36FI104.PV GPM	Combined RO Reject Dchg GPM	Combined RO Reject Dchg BBLs	Total RO Reject Discharge GPM	Total RO Reject Discharge/Day BBLs	
	SOUTH SKID REJECT FLOW 36FI101.PV - Average	NORTH SKID REJECT FLOW 36FI104.PV - Average					
1/1/2014	126.7	126.8	253.5	8693	94	3236	11929
1/2/2014	127.6	125.5	253.1	8677	94	3236	11913
1/3/2014	127.4	129.8	257.2	8818	94	3236	12054
1/4/2014	127.3	125.4	252.7	8665	94	3236	11901
1/5/2014	126.3	127.8	254.1	8713	94	3236	11949
1/6/2014	126.1	121.1	247.2	8476	94	3236	11712
1/7/2014	126.8	119.9	246.7	8457	94	3236	11693
1/8/2014	127.1	121.4	248.5	8519	157	5366	13885
1/9/2014	127.5	121.8	249.3	8547	66	2259	10806
1/10/2014	128.9	127.2	256.1	8782	153	5241	14023
1/11/2014	125.9	122.4	248.3	8512	153	5257	13769
1/12/2014	126.9	121.7	248.5	8520	154	5275	13795
1/13/2014	127.1	121.8	248.8	8531	154	5294	13825
1/14/2014	126.1	116.6	242.7	8321	154	5297	13618
1/15/2014	124.6	117.4	242.0	8296	155	5299	13594
1/16/2014	125.3	116.1	241.4	8277	154	5290	13567
1/17/2014	124.3	117.5	241.9	8293	155	5304	13596
1/18/2014	125.4	117.7	243.0	8333	154	5293	13625
1/19/2014	124.5	120.0	244.5	8382	155	5305	13687
1/20/2014	124.6	111.4	236.0	8090	155	5317	13408
1/21/2014	124.5	114.6	239.1	8197	157	5371	13567
1/22/2014	125.2	112.7	237.9	8157	157	5382	13539
1/23/2014	124.8	113.4	238.2	8167	159	5448	13615
1/24/2014	125.2	122.8	248.0	8503	157	5397	13900
1/25/2014	123.4	116.9	240.3	8240	156	5354	13593
1/26/2014	127.9	127.3	255.2	8750	154	5282	14032
1/27/2014	128.0	129.5	257.5	8828	130	4446	13274
1/28/2014	125.3	116.9	242.2	8303	128	4373	12676
1/29/2014	125.4	117.7	243.1	8334	127	4367	12701
1/30/2014	123.6	118.8	242.4	8310	128	4375	12685
1/31/2014	122.1	125.9	248.0	8503	128	4384	12887
2/1/2014	122.0	119.1	241.1	8266	128	4390	12655
2/2/2014	121.0	119.6	240.5	8247	106	3645	11892
2/3/2014	121.6	119.3	240.9	8259	109	3723	11982
2/4/2014	121.9	120.6	242.5	8314	110	3781	12094
2/5/2014	123.8	121.6	245.4	8413	111	3796	12210
2/6/2014	121.3	117.6	238.8	8188	111	3800	11988
2/7/2014	121.7	118.4	240.1	8231	115	3932	12162
2/8/2014	121.8	120.9	242.7	8322	138	4718	13040
2/9/2014	122.0	118.9	240.9	8259	105	3605	11864
2/10/2014	122.9	117.5	240.5	8245	105	3589	11834
2/11/2014	125.0	119.3	244.3	8376	105	3590	11965
2/12/2014	125.3	119.0	244.3	8375	105	3602	11977
2/13/2014	125.3	116.8	242.2	8303	105	3596	11899
2/14/2014	124.2	117.0	241.2	8271	106	3630	11901
2/15/2014	122.3	104.0	226.3	7759	105	3591	11350
2/16/2014	122.1	105.4	227.5	7800	104	3579	11378
2/17/2014	124.7	104.2	228.9	7849	104	3567	11416
2/18/2014	122.5	103.9	226.4	7764	102	3489	11253
2/19/2014	123.4	103.5	226.9	7778	102	3480	11258
2/20/2014	122.0	100.9	222.9	7643	102	3486	11129
2/21/2014	99.1	99.3	198.4	6803	101	3460	10263
2/22/2014	95.4	99.7	195.2	6691	101	3457	10148
2/23/2014	95.9	100.2	196.0	6722	102	3502	10224
2/24/2014	94.6	100.2	194.9	6681	103	3546	10227
2/25/2014	96.9	99.3	196.2	6726	104	3551	10277
2/26/2014	95.6	99.7	195.3	6696	104	3555	10251
2/27/2014	98.5	99.7	198.1	6793	104	3550	10343
2/28/2014	99.1	99.8	198.8	6817	104	3561	10378
3/1/2014	97.2	99.3	196.5	6738	105	3583	10321
3/2/2014	96.1	99.1	195.2	6692	105	3585	10277
3/3/2014	96.0	96.8	192.8	6609	105	3584	10193
3/4/2014	92.9	77.1	170.1	5832	104	3571	9402
3/5/2014	105.0	98.1	203.1	6965	104	3576	10541
3/6/2014	145.2	97.4	242.6	8319	104	3553	11872
3/7/2014	145.6	98.2	243.8	8360	104	3561	11921
3/8/2014	145.2	97.4	242.6	8317	104	3567	11884
3/9/2014	145.4	93.9	239.3	8204	105	3587	11791
3/10/2014	145.9	87.5	233.4	8002	105	3591	11593
3/11/2014	147.5	81.7	229.2	7859	104	3568	11427
3/12/2014	147.4	88.0	235.4	8070	103	3537	11608
3/13/2014	148.7	93.3	242.0	8296	103	3530	11825
3/14/2014	149.1	94.7	243.8	8358	104	3555	11913
3/15/2014	149.4	95.9	245.2	8408	104	3565	11972
3/16/2014	147.7	87.7	235.4	8072	104	3579	11651
3/17/2014	148.5	69.9	218.4	7489	104	3580	11069
3/18/2014	147.3	85.5	232.8	7983	117	4025	12008
3/19/2014	107.3	64.7	172.1	5900	123	4229	10129
3/20/2014	107.9	46.0	153.9	5276	119	4089	9365
3/21/2014	78.8	87.9	166.7	5714	120	4122	9836
3/22/2014	152.0	81.5	233.5	8004	123	4229	12234
3/23/2014	153.0	84.4	237.4	8138	126	4329	12468
3/24/2014	155.6	75.0	230.6	7905	142	4859	12765
3/25/2014	155.2	71.9	227.1	7786	71	2439	10225
3/26/2014	155.2	96.9	252.2	8646	71	2436	11082
3/27/2014	152.9	95.0	248.0	8501	71	2442	10943
3/28/2014	154.5	102.6	257.1	8816	118	4029	12845
3/29/2014	154.2	98.1	252.2	8648	105	3607	12255
3/30/2014	154.7	83.1	237.8	8152	59	2016	10168
3/31/2014	154.1	81.9	236.0	8093	59	2024	10116
4/1/2014	153.9	71.6	225.5	7732	109	3722	11454
4/2/2014	154.9	76.2	231.1	7923	133	4574	12498
4/3/2014	155.4	76.6	232.0	7954	135	4612	12566
4/4/2014	151.3	68.3	219.7	7531	135	4624	12155
4/5/2014	155.3	80.8	236.1	8095	134	4600	12694
4/6/2014	156.9	79.7	236.6	8111	135	4612	12723
4/7/2014	156.1	79.9	236.0	8092	135	4630	12722
4/8/2014	156.2	80.2	236.3	8103	115	3939	12042
4/9/2014	155.7	79.7	235.4	8071	115	3937	12008
4/10/2014	156.1	79.2	235.3	8068	115	3951	12019
4/11/2014	153.4	77.6	231.0	7919	116	3977	11897
4/12/2014	155.0	78.5	233.5	8004	103	3535	11539
4/13/2014	155.5	77.8	233.3	8000	96	3287	11287
4/14/2014	156.1	77.6	233.6	8010	97	3326	11337
4/15/2014	152.6	77.6	230.2	7894	102	3502	11396
4/16/2014	158.0	76.6	234.6	8043	88	3000	11043
4/17/2014	157.0	75.8	232.8	7982	45	1530	9512
4/18/2014	155.1	76.1	231.2	7926	90	3073	10999
4/19/2014	154.4	75.9	230.2	7894	93	3184	11077
4/20/2014	154.3	76.3	230.5	7903	95	3245	11148
4/21/2014	155.1	76.7	231.7	7944	95	3273	11217
4/22/2014	156.7	74.5	231.3	7929	95	3272	11201
4/23/2014	156.5	76.3	232.8	7980	48	1638	9618
4/24/2014	156.3	78.3	234.6	8045	93	3193	11238
4/25/2014	153.9	78.7	232.6	7974	45	1539	9513
4/26/2014	154.1	79.4	233.5	8004	94	3208	11212
4/27/2014	154.6	78.6	233.2	7995	96	3292	11286
4/28/2014	154.7	79.5	234.2	8030	96	3276	11306
4/29/2014	155.1	74.7	229.7	7877	93	3175	11053
4/30/2014	135.3	73.2	208.5	7149	111	3808	10957
5/1/2014	161.7	83.6	245.3	8412	67	2292	10704
5/2/2014	168.9	97.5	266.3	9131	112	3824	12955

5/3/2014	167.6	99.3	266.9	9150	44	1497	10647
5/4/2014	168.1	99.4	267.5	9170	44	1518	10688
5/5/2014	166.9	98.7	265.6	9105	45	1538	10643
5/6/2014	167.8	95.7	263.4	9033	45	1559	10591
5/7/2014	165.9	98.9	264.9	9081	46	1571	10651
5/8/2014	167.9	99.1	267.0	9156	46	1581	10737
5/9/2014	166.3	99.1	265.4	9099	46	1580	10679
5/10/2014	167.6	98.8	266.4	9133	45	1551	10684
5/11/2014	166.5	99.1	265.7	9109	46	1571	10680
5/12/2014	166.9	98.7	265.6	9107	46	1583	10691
5/13/2014	165.7	99.5	265.2	9093	47	1600	10693
5/14/2014	166.6	99.6	266.2	9125	47	1612	10737
5/15/2014	167.5	101.3	268.8	9217	119	4094	13311
5/16/2014	168.3	100.7	269.0	9224	119	4089	13312
5/17/2014	166.4	100.2	266.6	9140	119	4096	13236
5/18/2014	168.1	99.8	267.9	9185	116	3977	13162
5/19/2014	167.8	100.9	268.6	9211	115	3944	13154
5/20/2014	168.4	99.0	267.4	9167	118	4037	13205
5/21/2014	166.7	99.1	265.8	9114	119	4087	13201
5/22/2014	167.6	100.1	267.8	9181	121	4134	13314
5/23/2014	168.0	101.1	269.0	9224	121	4165	13389
5/24/2014	168.6	99.5	268.1	9192	115	3946	13138
5/25/2014	167.1	99.6	266.7	9145	69	2376	11522
5/26/2014	167.9	99.2	267.2	9160	70	2417	11577
5/27/2014	166.5	99.8	266.3	9129	71	2451	11580
5/28/2014	164.2	101.3	265.6	9105	122	4189	13293
5/29/2014	159.5	103.6	263.1	9020	124	4256	13276
5/30/2014	159.8	104.1	263.9	9048	136	4648	13697
5/31/2014	158.3	102.5	260.8	8942	144	4926	13868
6/1/2014	159.9	105.4	265.3	9097	128	4400	13497
6/2/2014	158.7	105.9	264.6	9071	128	4397	13467
6/3/2014	135.2	99.6	234.8	8049	131	4488	12537
6/4/2014	108.6	93.2	201.8	6918	132	4530	11448
6/5/2014	108.7	93.0	201.8	6917	133	4560	11477
6/6/2014	108.9	92.6	201.4	6907	132	4526	11433
6/7/2014	108.4	91.1	199.4	6838	53	1817	8655
6/8/2014	108.5	90.8	199.3	6832	133	4548	11380
6/9/2014	107.5	89.9	197.3	6766	136	4659	11425
6/10/2014	106.3	89.2	195.5	6703	138	4741	11443
6/11/2014	109.0	89.9	198.9	6818	139	4768	11587
6/12/2014	109.2	90.5	199.6	6845	139	4766	11611
6/13/2014	110.8	91.4	202.2	6931	143	4896	11827
6/14/2014	110.5	92.0	202.5	6943	144	4947	11889
6/15/2014	109.9	91.5	201.4	6904	147	5036	11940
6/16/2014	109.4	91.5	200.8	6886	149	5115	12001
6/17/2014	109.6	91.3	200.9	6887	151	5194	12080
6/18/2014	110.4	92.3	202.7	6949	151	5187	12136
6/19/2014	110.6	91.2	201.7	6916	153	5251	12168
6/20/2014	111.0	91.9	203.0	6959	154	5274	12233
6/21/2014	110.6	91.0	201.6	6913	155	5308	12220
6/22/2014	110.2	91.5	201.6	6913	155	5312	12225
6/23/2014	109.8	90.6	200.4	6872	156	5356	12228
6/24/2014	110.7	92.5	203.2	6967	156	5344	12311
6/25/2014	111.3	91.8	203.1	6962	65	2223	9185
6/26/2014	110.8	92.3	203.1	6962	64	2205	9167
6/27/2014	110.3	91.4	201.7	6915	64	2202	9117
6/28/2014	109.8	91.3	201.0	6893	66	2252	9145
6/29/2014	110.6	90.8	201.3	6903	148	5071	11973
6/30/2014	110.1	90.5	200.6	6877	147	5052	11930
7/1/2014	109.3	89.8	199.1	6826	148	5062	11888
7/2/2014	110.5	90.3	200.8	6883	149	5101	11985
7/3/2014	173.0	146.1	319.1	10940	149	5097	16037
7/4/2014	122.6	183.6	306.2	10499	150	5156	15655
7/5/2014	122.0	181.8	303.8	10414	133	4568	14982
7/6/2014	121.0	179.3	300.3	10296	129	4415	14711
7/7/2014	119.6	179.8	299.3	10263	132	4513	14777
7/8/2014	120.7	178.4	299.1	10254	130	4473	14726
7/9/2014	128.0	166.6	294.6	10100	131	4495	14595
7/10/2014	131.5	163.0	294.5	10098	133	4554	14651
7/11/2014	132.2	162.5	294.8	10107	122	4174	14280
7/12/2014	131.3	159.7	291.1	9979	124	4248	14227
7/13/2014	130.0	156.0	286.0	9806	126	4304	14110
7/14/2014	129.0	155.2	284.1	9741	128	4378	14119
7/15/2014	129.7	154.5	284.2	9744	128	4395	14139
7/16/2014	130.6	154.9	285.5	9787	130	4472	14259
7/17/2014	129.2	153.1	282.4	9681	132	4535	14216
7/18/2014	127.1	150.7	277.8	9524	133	4568	14093
7/19/2014	128.0	150.0	278.0	9530	136	4661	14192
7/20/2014	127.5	148.6	276.1	9467	138	4742	14208
7/21/2014	126.6	146.9	273.5	9378	140	4790	14168
7/22/2014	126.7	147.0	273.7	9383	140	4806	14188
7/23/2014	127.9	148.6	276.5	9479	140	4793	14273
7/24/2014	127.3	147.8	275.2	9434	139	4767	14201
7/25/2014	132.9	148.0	280.9	9631	143	4910	14541
7/26/2014	131.9	146.9	278.8	9560	145	4957	14517
7/27/2014	125.9	145.7	271.6	9311	145	4960	14271
7/28/2014	126.2	145.3	271.6	9311	80	2754	12066
7/29/2014	126.0	145.2	271.2	9297	68	2338	11635
7/30/2014	127.1	78.9	206.0	7063	66	2259	9323
7/31/2014	125.7	111.8	237.5	8141	117	4028	12169
8/1/2014	125.3	110.4	235.7	8080	60	2059	10139
8/2/2014	126.1	111.6	237.7	8149	61	2102	10251
8/3/2014	125.4	110.7	236.0	8093	119	4077	12170
8/4/2014	125.2	109.9	235.2	8062	120	4124	12187
8/5/2014	125.6	110.9	236.5	8108	121	4158	12265
8/6/2014	126.6	112.7	239.3	8204	122	4193	12397
8/7/2014	126.5	112.2	238.7	8184	124	4236	12420
8/8/2014	130.5	112.6	243.1	8334	125	4273	12608
8/9/2014	130.9	112.0	242.9	8326	126	4323	12650
8/10/2014	131.3	112.3	243.6	8352	127	4366	12718
8/11/2014	132.0	113.8	245.9	8429	128	4391	12820
8/12/2014	132.7	114.3	247.0	8469	128	4386	12855
8/13/2014	121.2	111.5	232.8	7981	128	4390	12371
8/14/2014	126.6	111.0	237.6	8147	129	4439	12586
8/15/2014	129.1	114.3	243.4	8347	130	4443	12790
8/16/2014	127.2	110.7	237.9	8157	130	4442	12599
8/17/2014	127.2	107.9	235.1	8060	129	4423	12483
8/18/2014	128.1	109.5	237.6	8147	128	4398	12545
8/19/2014	130.9	113.5	244.4	8378	129	4431	12809
8/20/2014	131.6	113.5	245.1	8404	130	4464	12868
8/21/2014	134.1	105.6	239.7	8219	130	4472	12691
8/22/2014	135.2	95.4	230.6	7906	130	4472	12378
8/23/2014	134.1	94.3	228.4	7831	130	4467	12298
8/24/2014	135.6	95.6	231.2	7925	129	4437	12362
8/25/2014	135.3	96.2	231.5	7936	129	4430	12365
8/26/2014	134.4	93.2	227.6	7803	129	4424	12227
8/27/2014	134.7	95.3	230.0	7886	129	4419	12305
8/28/2014	134.7	93.6	228.3	7828	130	4465	12293
8/29/2014	132.0	93.1	225.1	7719	130	4457	12176
8/30/2014	131.9	92.5	224.4	7692	130	4451	12144
8/31/2014	132.2	93.1	225.3	7725	129	4432	12157
9/1/2014	133.3	92.7	226.0	7748	129	4415	12163
9/2/2014	133.5	93.5	227.0	7781	128	4394	12175
9/3/2014	129.5	85.5	215.0	7371	128	4405	11777
9/4/2014	116.2	130.2	246.5	8450	130	4448	12898
9/5/2014	119.5	132.5	251.9	8638	129	4431	13069
9/6/2014	117.9	131.7	249.6	8559	130	4449	13008
9/7/2014	118.4	132.8	251.2	8612	130	4467	13079
9/8/2014	120.4	130.9	251.4	8618	130	4455	13073
9/9/2014	121.0	131.4	252.4	8653	129	4423	13077

9/10/2014	120.1	129.4	249.5	8553	128	4387	12941
9/11/2014	118.6	126.6	245.2	8407	130	4446	12853
9/12/2014	119.3	128.1	247.4	8482	129	4424	12906
9/13/2014	117.1	127.9	245.0	8400	129	4421	12821
9/14/2014	116.3	128.7	245.0	8400	131	4481	12881
9/15/2014	117.4	129.5	246.9	8464	130	4458	12922
9/16/2014	119.8	131.6	251.5	8621	131	4489	13110
9/17/2014	121.8	133.3	255.0	8744	130	4470	13214
9/18/2014	121.8	132.8	254.6	8729	129	4424	13152
9/19/2014	121.6	132.8	254.5	8724	128	4392	13116
9/20/2014	121.2	132.6	253.8	8703	127	4356	13059
9/21/2014	121.7	131.0	252.7	8664	130	4474	13138
9/22/2014	123.1	132.9	256.1	8779	130	4467	13246
9/23/2014	125.0	136.8	261.8	8974	129	4433	13407
9/24/2014	126.6	140.2	266.8	9147	128	4388	13535
9/25/2014	126.8	141.2	268.0	9189	127	4341	13530
9/26/2014	127.5	141.7	269.2	9229	123	4222	13451
9/27/2014	123.0	144.4	267.4	9167	117	4008	13175
9/28/2014	117.7	147.1	264.8	9079	117	4018	13097
9/29/2014	118.2	147.3	265.6	9106	122	4175	13281
9/30/2014	117.7	147.0	264.8	9078	123	4201	13278
10/1/2014	117.7	147.9	265.6	9106	120	4112	13219
10/2/2014	120.1	147.3	267.4	9168	63	2157	11325
10/3/2014	128.2	143.0	271.3	9300	63	2150	11451
10/4/2014	127.9	143.1	271.0	9291	62	2127	11418
10/5/2014	126.2	142.0	268.2	9195	108	3700	12895
10/6/2014	124.7	140.9	265.6	9105	43	1490	10596
10/7/2014	126.8	142.1	268.9	9220	93	3195	12414
10/8/2014	126.7	121.8	248.5	8520	71	2436	10956
10/9/2014	125.5	117.6	243.1	8334	95	3242	11577
10/10/2014	127.8	121.0	248.8	8529	97	3330	11859
10/11/2014	127.4	120.7	248.0	8504	97	3315	11819
10/12/2014	125.6	117.8	243.4	8344	47	1598	9943
10/13/2014	129.1	122.2	251.3	8615	138	4717	13332
10/14/2014	127.6	121.4	249.0	8538	93	3175	11713
10/15/2014	127.4	121.1	248.4	8518	47	1596	10114
10/16/2014	126.6	120.2	246.8	8462	47	1597	10060
10/17/2014	127.1	119.9	247.0	8470	47	1605	10075
10/18/2014	126.7	119.4	246.1	8439	47	1615	10054
10/19/2014	126.4	120.3	246.7	8457	47	1616	10073
10/20/2014	127.4	120.8	248.2	8509	93	3179	11687
10/21/2014	128.0	121.2	249.2	8544	46	1576	10120
10/22/2014	127.6	120.4	248.0	8504	46	1592	10096
10/23/2014	126.4	119.0	245.5	8415	47	1608	10024
10/24/2014	125.8	118.7	244.5	8382	47	1615	9997
10/25/2014	127.6	120.8	248.4	8515	95	3273	11788
10/26/2014	128.0	121.1	249.0	8538	48	1644	10182
10/27/2014	128.0	121.3	249.3	8548	96	3279	11827
10/28/2014	128.2	120.3	248.4	8518	98	3362	11880
10/29/2014	128.0	119.9	247.9	8500	96	3307	11807
10/30/2014	127.5	120.1	247.6	8490	47	1625	10114
10/31/2014	128.9	121.2	250.1	8575	94	3210	11785
11/1/2014	128.5	121.1	249.5	8556	96	3291	11847
11/2/2014	128.1	120.7	248.8	8531	48	1644	10175
11/3/2014	127.9	120.5	248.4	8517	48	1631	10148
11/4/2014	129.7	122.3	252.0	8639	46	1564	10203
11/5/2014	129.4	122.6	252.0	8639	46	1578	10218
11/6/2014	132.5	123.1	255.7	8766	47	1612	10378
11/7/2014	136.3	123.3	259.6	8900	91	3128	12028
11/8/2014	137.3	122.5	259.8	8908	44	1523	10431
11/9/2014	137.8	121.8	259.6	8902	45	1542	10444
11/10/2014	140.2	122.9	263.1	9022	96	3297	12319
11/11/2014	139.1	122.3	261.3	8960	94	3210	12171
11/12/2014	139.5	122.6	262.0	8984	96	3278	12262
11/13/2014	140.7	123.4	264.0	9053	94	3216	12269
11/14/2014	139.4	123.4	262.8	9011	95	3263	12274
11/15/2014	138.1	122.6	260.7	8938	95	3263	12201
11/16/2014	139.2	122.9	262.1	8985	95	3268	12253
11/17/2014	138.5	123.1	261.6	8970	95	3262	12232
11/18/2014	139.1	123.4	262.5	9000	96	3298	12299
11/19/2014	139.5	123.3	262.8	9010	96	3290	12299
11/20/2014	139.8	123.4	263.1	9022	96	3284	12306
11/21/2014	144.8	122.7	267.5	9172	97	3309	12481
11/22/2014	163.0	124.1	287.1	9845	97	3323	13168
11/23/2014	162.9	123.5	286.4	9819	97	3343	13162
11/24/2014	166.1	125.1	291.2	9985	98	3367	13352
11/25/2014	166.3	124.8	291.1	9981	99	3402	13383
11/26/2014	168.2	125.5	293.7	10069	100	3413	13482
11/27/2014	166.5	124.4	290.9	9974	100	3438	13411
11/28/2014	168.3	125.6	293.9	10076	98	3345	13421
11/29/2014	168.2	125.3	293.5	10062	99	3381	13442
11/30/2014	168.6	125.9	294.5	10097	99	3400	13496
12/1/2014	167.6	124.3	292.0	10010	100	3421	13431
12/2/2014	167.9	126.1	293.9	10078	101	3469	13547
12/3/2014	127.5	124.5	252.0	8639	102	3489	12128
12/4/2014	97.6	122.6	220.2	7550	102	3511	11060
12/5/2014	97.6	122.7	220.3	7555	102	3509	11064
12/6/2014	98.4	122.7	221.1	7579	103	3548	11127
12/7/2014	98.5	122.7	221.2	7585	104	3557	11142
12/8/2014	99.8	123.2	223.1	7648	104	3568	11216
12/9/2014	98.9	122.4	221.3	7587	105	3603	11189
12/10/2014	101.1	123.4	224.4	7695	106	3631	11326
12/11/2014	100.4	122.7	223.2	7652	106	3632	11284
12/12/2014	100.4	122.6	223.0	7647	107	3653	11299
12/13/2014	102.2	123.4	225.5	7733	108	3688	11420
12/14/2014	107.9	123.3	231.2	7926	108	3708	11633
12/15/2014	106.0	122.4	228.4	7831	109	3737	11567
12/16/2014	107.0	122.6	229.6	7873	110	3771	11645
12/17/2014	108.0	123.6	231.7	7943	111	3791	11734
12/18/2014	106.7	122.6	229.3	7862	111	3815	11676
12/19/2014	107.2	124.2	231.5	7936	112	3844	11780
12/20/2014	108.7	125.9	234.6	8043	114	3905	11948
12/21/2014	106.0	124.7	230.7	7911	115	3927	11838
12/22/2014	105.6	123.3	228.9	7848	116	3980	11828
12/23/2014	106.3	123.6	229.9	7881	118	4031	11912
12/24/2014	109.0	125.9	234.9	8055	119	4063	12118
12/25/2014	106.3	141.3	247.6	8488	120	4116	12604
12/26/2014	107.3	169.9	277.2	9504	136	4680	14184
12/27/2014	113.1	165.6	278.7	9556	140	4788	14344
12/28/2014	132.1	170.6	302.7	10378	140	4800	15178
12/29/2014	131.2	169.9	301.1	10325	94	3236	13561
12/30/2014	132.7	170.9	303.6	10410	94	3236	13646
12/31/2014	134.3	171.4	305.7	10483	94	3236	13719

Assume overall avg discharge rate (2012-2014) if no data available

2015 RO Reject Discharge Volume

Annual Discharged Volume (BBLs) 1,240,628
Avg Discharge Rate (BPD) 12,163

	Permanent Unit/Skids				Temporary Unit		Daily Discharged Volume
	36FI101.PV	36FI104.PV	Combined RO Reject Dchg	Combined RO Reject Dchg	Total RO Reject Discharge	Total RO Reject Discharge/Day	
	GPM	GPM	GPM	BBLs	GPM	BBLs	
	SOUTH SKID REJECT FLOW	NORTH SKID REJECT FLOW					
Timestamp	36FI101.PV - Average	36FI104.PV - Average					
1/1/2015	130.4	173.0	303.4	10401	94	3236	13637
1/2/2015	132.1	172.7	304.8	10452	94	3236	13688
1/3/2015	131.9	172.1	304.1	10426	94	3236	13662
1/4/2015	131.4	170.0	301.4	10334	94	3236	13570
1/5/2015	129.6	168.8	298.4	10232	94	3236	13468
1/6/2015	132.2	171.4	303.6	10408	94	3236	13644
1/7/2015	131.6	171.1	302.7	10378	94	3236	13614
1/8/2015	131.9	171.9	303.7	10413	94	3236	13649
1/9/2015	132.1	172.9	305.0	10456	94	3236	13692
1/10/2015	132.9	173.4	306.2	10500	94	3236	13736
1/11/2015	132.0	173.1	305.1	10460	94	3236	13696
1/12/2015	131.7	173.0	304.7	10446	94	3236	13682
1/13/2015	131.9	173.1	305.0	10456	94	3236	13692
1/14/2015	132.6	173.7	306.3	10501	94	3236	13737
1/15/2015	132.2	173.7	306.0	10490	94	3236	13726
1/16/2015	133.5	173.5	306.9	10523	94	3236	13759
1/17/2015	133.3	173.2	306.5	10510	94	3236	13746
1/18/2015	134.3	173.2	307.4	10541	94	3236	13777
1/19/2015	141.4	174.1	315.5	10816	94	3236	14052
1/20/2015	140.9	174.1	315.0	10801	94	3236	14037
1/21/2015	139.6	173.2	312.8	10726	94	3236	13962
1/22/2015	139.7	172.5	312.2	10703	94	3236	13939
1/23/2015	140.2	173.7	314.0	10765	94	3236	14001
1/24/2015	137.5	173.3	310.8	10656	94	3236	13892
1/25/2015	132.1	173.7	305.8	10486	94	3236	13722
1/26/2015	131.9	173.7	305.6	10478	94	3236	13714
1/27/2015	133.7	174.6	308.3	10569	94	3236	13805
1/28/2015	133.8	174.3	308.1	10564	94	3236	13800
1/29/2015	132.4	171.3	303.7	10413	94	3236	13649
1/30/2015	129.8	169.5	299.3	10262	94	3236	13498
1/31/2015	133.4	170.0	303.4	10404	94	3236	13640
2/1/2015	132.3	168.8	301.1	10323	94	3236	13559
2/2/2015	132.1	169.1	301.1	10325	94	3236	13561
2/3/2015	131.3	168.8	300.1	10289	156	5349	15638
2/4/2015	114.9	168.4	283.4	9715	156	5344	15059
2/5/2015	115.5	168.1	283.6	9724	155	5324	15048
2/6/2015	115.9	168.7	284.6	9758	155	5302	15060
2/7/2015	112.8	168.1	280.9	9632	157	5392	15023
2/8/2015	113.7	168.3	282.0	9669	157	5386	15055
2/9/2015	116.2	174.8	291.0	9977	156	5353	15330
2/10/2015	116.5	163.9	280.4	9612	155	5313	14925
2/11/2015	116.6	158.3	274.9	9426	156	5337	14763
2/12/2015	114.5	148.2	262.7	9008	154	5284	14292
2/13/2015	108.8	113.5	222.4	7624	137	4704	12328
2/14/2015	127.9	119.1	247.0	8469	114	3916	12385
2/15/2015	129.2	119.4	248.6	8524	113	3884	12407
2/16/2015	128.7	116.2	244.8	8394	113	3880	12274
2/17/2015	128.8	117.8	246.6	8454	116	3971	12425
2/18/2015	128.5	117.4	245.9	8430	117	4017	12448
2/19/2015	128.3	117.3	245.7	8423	118	4037	12460
2/20/2015	128.0	116.7	244.7	8390	117	4020	12410
2/21/2015	96.7	96.3	193.0	6616	118	4049	10665
2/22/2015	96.7	93.8	190.5	6532	117	4027	10559
2/23/2015	94.3	94.6	189.0	6479	100	3437	9916
2/24/2015	97.0	94.6	191.6	6570	118	4035	10604
2/25/2015	96.9	97.3	194.3	6661	137	4683	11344
2/26/2015	35.3	110.7	146.0	5006	124	4248	9254
2/27/2015	91.3	106.2	197.5	6773	68	2342	9115
2/28/2015	117.1	100.5	217.5	7458	71	2441	9899
3/1/2015	112.7	99.3	212.0	7267	72	2466	9733
3/2/2015	111.0	97.8	208.8	7160	72	2476	9636
3/3/2015	107.7	99.0	206.8	7089	73	2519	9608
3/4/2015	106.3	99.9	206.2	7069	73	2510	9580
3/5/2015	105.7	99.6	205.2	7037	71	2435	9472
3/6/2015	105.0	99.2	204.2	7002	70	2395	9398
3/7/2015	104.3	99.5	203.7	6986	71	2444	9430
3/8/2015	107.7	101.7	209.4	7179	72	2471	9650
3/9/2015	107.9	101.3	209.3	7174	72	2485	9659
3/10/2015	108.3	98.7	207.0	7098	73	2504	9601
3/11/2015	114.2	100.5	214.7	7362	74	2536	9898
3/12/2015	119.6	100.3	219.9	7538	75	2564	10101
3/13/2015	119.7	102.0	221.7	7601	108	3697	11298
3/14/2015	119.7	102.1	221.8	7606	149	5110	12716
3/15/2015	120.2	104.7	224.9	7711	151	5173	12884
3/16/2015	120.0	103.8	223.9	7676	151	5182	12857
3/17/2015	119.6	104.6	224.2	7687	150	5153	12840
3/18/2015	118.6	102.8	221.4	7590	148	5062	12652
3/19/2015	119.4	103.5	222.9	7642	153	5229	12871
3/20/2015	119.1	101.5	220.7	7566	154	5281	12846
3/21/2015	119.1	101.8	220.9	7574	155	5325	12900
3/22/2015	119.8	99.6	219.5	7525	139	4762	12286
3/23/2015	119.4	100.3	219.6	7531	121	4138	11669
3/24/2015	116.2	98.8	215.0	7370	132	4543	11913
3/25/2015	117.2	101.4	218.6	7496	138	4725	12221
3/26/2015	124.2	21.5	145.7	4995	109	3736	8731
3/27/2015	123.1	44.6	167.7	5750	69	2374	8123
3/28/2015	116.6	96.8	213.3	7315	63	2151	9466
3/29/2015	116.7	99.8	216.5	7422	63	2165	9587
3/30/2015	116.9	97.6	214.4	7352	64	2191	9544
3/31/2015	118.3	102.8	221.1	7580	79	2703	10282
4/1/2015	117.9	84.0	201.9	6924	65	2223	9147
4/2/2015	116.7	104.4	221.1	7579	67	2282	9861
4/3/2015	114.7	100.9	215.5	7389	70	2383	9772
4/4/2015	114.5	104.1	218.6	7497	69	2370	9867
4/5/2015	115.0	104.1	219.2	7514	70	2402	9916
4/6/2015	115.7	105.8	221.6	7597	73	2500	10096
4/7/2015	115.8	102.7	218.5	7491	78	2668	10159
4/8/2015	123.5	103.4	227.0	7782	66	2266	10048
4/9/2015	125.3	101.5	226.8	7775	67	2297	10071
4/10/2015	125.6	103.4	229.0	7850	79	2706	10556
4/11/2015	151.7	113.1	264.8	9078	66	2273	11351
4/12/2015	198.1	108.8	306.9	10521	62	2119	12640

Assume overall avg discharge rate (2012-2014) if no data available

**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION
OIL CONSERVATION DIVISION**

**IN THE MATTER OF
Navajo Refining Company, L.L.C.**

No. WQA-OCD-CO-2015-002

AGREED COMPLIANCE ORDER

Pursuant to the New Mexico Water Quality Act, NMSA 1978, Section 74-6-1 through 74-6-17, as amended ("Act"), and the regulations promulgated under the Act, the Oil Conservation Commission and the Oil Conservation Division of the Energy, Minerals and Natural Resources Department of the State of New Mexico (together "OCD") issue this Agreed Compliance Order, including Exhibit A attached hereto (together, the "Order") to Navajo Refining Company L.L.C. ("Navajo"), directing compliance with the Act, the Water Quality Control Commission ("WQCC") Regulations and permits issued under the Act.

I. FINDINGS AND DETERMINATIONS

1. The Oil Conservation Commission is a "constituent agency" under the Act and is charged with administration and enforcement of the Act and regulations promulgated in accordance with the Act. NMSA 1978, Section 74-6-3(K). The Oil Conservation Division of the Energy, Minerals, and Natural Resources Department has concurrent authority with the Oil Conservation Commission. NMSA 1978, Section 70-2-6(B).

2. Navajo is a limited liability company doing business in New Mexico. Navajo is an active entity with a principal address of 501 East Main Street, Artesia, New Mexico 88210.

3. Navajo owns and operates a petroleum refinery located at 501 East Main Street, Artesia, New Mexico ("Facility").

4. The WQCC has adopted regulations, pursuant to the Act, requiring permits for the discharge of fluids directly or indirectly into groundwater. Section 20.6.2.3106 NMAC. For

groundwater discharges at oil and gas operations, including refineries, the WQCC has delegated administration and enforcement of those regulations to OCD.

5. Pursuant to the Act and the WQCC Regulations, on August 22, 2012, OCD issued Discharge Permit GW-028 to Navajo for the discharge of reverse osmosis ("RO") reject fluid to the surface at two farms located at the Facility. The permit included a 10,000 barrel per day discharge limit based on historic discharges from existing RO units.

6. In 2011, Navajo installed a temporary RO unit to serve as a back-up for and to supplement the capacity of the two existing permanent RO units operating at the Facility (the "third temporary RO unit"). Navajo did not obtain a groundwater discharge permit modification at the time the third temporary RO unit was installed.

7. On March 13, 2015, Navajo orally notified OCD that, as a result of the installation of the third temporary RO unit in 2011, Navajo had, on an average annual basis, been discharging RO reject fluid in excess of the 10,000 barrel per day discharge limit in Discharge Permit GW-028.

8. On March 27, 2015, Navajo representatives met with OCD to provide further information regarding discharges of RO reject fluid from the third temporary RO unit and the steps Navajo is taking to address these discharges.

9. Based on the disclosures made by Navajo, OCD has determined that Navajo has committed the following violations:

- a. submission of inaccurate Annual Discharge Permit Reports pursuant to Condition 2.F. of Discharge Permit GW-028;
- b. exceeding the RO discharge volume limit in Condition 4.A. of Discharge Permit GW-028;

- c. failing to collect semi-annual samples of discharges from the third temporary RO unit pursuant to Condition 4.B. of Discharge Permit GW-028.

10. On April 10, 2015, Navajo submitted revised annual reports for 2012, 2013 and 2014 which added the daily discharge data for the third temporary RO unit.

11. Operation of all three RO units is critical to the continued operation of the Facility. As a result, operational changes cannot be relied upon to reduce discharge volumes. Navajo is taking prompt action to address the violation and is preparing an application to modify Discharge Permit GW-028 to authorize Navajo to discharge a quantity of RO reject fluid that is consistent with Navajo's current and intended future use of the Facility. Navajo is also evaluating options—such as underground injection—that may eliminate or significantly reduce surface discharges as a primary means of disposing of RO reject fluid.

12. There is no known or anticipated damage or injury to public health or the environment resulting from the discharges identified above, since the discharges take place solely on land owned by Navajo and, moreover, Navajo's groundwater monitoring system has not confirmed any human health or environmental risks that may be attributed to the discharge of RO reject fluid in excess of permitted amounts.

II. CONCLUSIONS

1. OCD has jurisdiction over the parties and subject matter in this proceeding.
2. Navajo is a person as defined by NMSA 1978, Section 74-6-2.I.
3. Based on the facts presented above, the lack of known or anticipated damage or injury to public health or the environment, the commitments made herein by Navajo, the company's history of compliance with OCD permits prior to the events described above, the lack of future anticipated damage or injury resulting from compliance with this Order, the importance

of the RO units to the ongoing operation of the Facility, and other relevant considerations, OCD has determined that Navajo need not be ordered to cease discharging RO reject fluid during the period of this Order. However, this Paragraph shall not apply in the event: (A) new information not known by OCD at the time of this Order causes OCD to believe that Navajo will not be able to return to compliance pursuant to this Order; or (B) OCD determines that continued discharge of RO reject fluid in excess of 10,000 barrels per day presents an imminent and substantial endangerment of human health and the environment; or (C) Navajo fails to diligently pursue the development and implementation of a remedy to reduce RO reject fluid discharges as provided in Exhibit A to this Order.

III. ORDER

1. Compliance Schedule

a. Navajo shall take the actions and meet the schedule set forth in Exhibit A to this Order.

b. Except where otherwise modified or extended pursuant to Section IV, Paragraph 1, Navajo's obligation to comply with this Order shall be deferred only to the extent and only for the duration that the failure in compliance is caused by "force majeure." For purposes of this Order, "force majeure" is defined as an event or set of circumstances which are beyond Navajo's control and could not have been prevented by Navajo's reasonable action or due diligence, including any delay in required approvals, issuance of any necessary permits or similar items. "Force majeure" shall not apply to any failure in compliance due to increased costs or Navajo's financial inability to carry out this Order. Navajo shall promptly notify OCD of any force majeure event that has resulted in or will result in the inability of Navajo to comply with any obligation under this Order and shall provide OCD with a schedule for completing the obligations.

c. All reports, notifications and other submittals required under this Order shall be sent to OCD at the following address:

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
email: jim.griswold@state.nm.us
carlj.chavez@state.nm.us

All such submittals shall be made electronically. Written amendment to this Order is not required for a change in the e-mail addresses specified above, and any such change in addresses may be made by e-mail.

2. Civil Penalties

a. Subject to the terms of this paragraph, Navajo will pay a penalty of \$456,000 (four hundred and fifty-six thousand dollars) to resolve all of the alleged violations set forth in this Order, including all exceedances of the 10,000 barrel per day discharge limit from August 22, 2012, until the effective date of this Order. Payment of \$381,000 shall be remitted to OCD no later than 30 days after the effective date of this Order. Payment of \$75,000 shall be remitted to OCD no later than 60 days after the effective date of this Order unless Navajo has timely complied with discharge permit modification application requirement in Paragraph 1 of Exhibit A. If Navajo timely submits the \$381,000 payment and complies with the requirement in Paragraph 1 of Exhibit A, the total penalty under this paragraph shall be reduced by \$75,000. Payment must be made to "State of New Mexico – General Fund" and shall be sent to the following address:

Director, 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

b. Navajo shall pay stipulated penalties in the amounts set forth below if the following violations of this Order occur.

i. For each exceedance of the 10,000 barrel per day RO reject fluid discharge volume limit specified in Discharge Permit GW-028:

1. \$1,000 per daily violation for each daily violation prior to Navajo submitting a discharge permit modification application,
2. \$100 per daily violation if the daily volume is between 10,000 and 15,000 barrels, and \$500 if the daily volume exceeds 15,000 barrels, for each daily violation after Navajo submits a discharge permit modification application and prior to OCD approving or denying the application.

ii. For the failure to timely conduct sampling as required in Exhibit A: \$2,000 per day.

iii. For the failure to timely submit any report or notification as required in Exhibit A: \$1,000 per day.

iv. For failure to record the daily discharge flow from the permanent and the temporary RO units: \$1,000 per violation.

A calculation of stipulated penalties shall be made by Navajo and included in each monthly report submitted to OCD under this Order, and payment shall be due within 30 days after each monthly report submittal. Should OCD object to a given penalty calculation, OCD shall notify Navajo within five (5) business days after receipt of the monthly report, and Navajo shall make payment within ten (10) days after resolution of any such dispute. Any overpayment by Navajo shall be credited to further amounts due to OCD. Payments shall be by corporate check, certified

check, or other guaranteed negotiable instrument made payable to the "State of New Mexico – General Fund", and shall be sent to the following address:

Director, 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

IV. OTHER TERMS AND CONDITIONS

1. Termination, Modification and Extension

a. Navajo and OCD have the right to modify or terminate this Order by written instrument signed by both parties.

b. This Order will terminate on the effective date of the discharge permit modification Navajo obtains pursuant to Exhibit A. If Navajo fails to obtain a discharge permit modification increasing the discharge volume limit, this Order shall continue until Navajo removes the third temporary RO unit or completes other water management projects to reduce the total volume of RO reject water that is discharged to the land below 10,000 barrels per day.

c. OCD may grant an extension of any deadline to perform any activity required pursuant to this Order. Navajo shall submit all requests for an extension of a deadline in writing to OCD. The request shall propose a new deadline for the activity and shall include the basis for the request. OCD shall respond in writing by approving, approving in part or denying the request as soon as possible, but no later than fifteen (15) days after receipt. If OCD approves in part or denies the request, the response shall specify the reasons for OCD's actions.

2. By signing this Order, Navajo expressly:

a. acknowledges the authority of OCD to render the above Findings And Determinations, Conclusions, and Order;

b. agrees to comply with the Order;

c. waives any right, pursuant to the Act or otherwise, to a hearing either prior or subsequent to the entry of this Order or to an appeal from this Order; and

d. agrees that if it fails to comply with this Order, the Order may be enforced by suit or otherwise to the same extent and with the same effect as a final Order entered after notice and hearing in accordance with all terms of the Act.

3. Nothing in this Order relieves Navajo of its liability should its operations fail to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health, or the environment. In addition, nothing in this Order relieves Navajo of its responsibility for compliance with any federal, state, or local laws and/or regulations, including all other obligations under the Permit.

4. This Order may be executed in any number of counterparts (whether by facsimile, PDF, or original), each of which will be deemed to be an original and all of which together will constitute the same instrument.

5. This Order shall become effective on the date it is approved and signed by the Chair of the Oil Conservation Commission and the Director of the Oil Conservation Division.

Done at Santa Fe, New Mexico this 27th day of April, 2015.

ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION
OIL CONSERVATION DIVISION

By:



Name: David Catanach

Title: Chair, Oil Conservation Commission
Director, Oil Conservation Division

ACCEPTANCE

Navajo Refining Company, L.L.C. hereby accepts the foregoing Amendment, and agrees to all of the terms and provisions as set forth in the Amendment,

Navajo Refining Company, L.L.C.

By: ROBERT K. O'BRIEN

Name: Robert K O'Brien

Title: Vice President and Refinery Manager

Date: 4/24/2015

**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION
OIL CONSERVATION DIVISION**

**IN THE MATTER OF
Navajo Refining Company, L.L.C.**

No. WQA-OCD-CO-2015-002

Exhibit A to Agreed Compliance Order

Remedy Selection

1. No later than 30 days from the date of this Order, Navajo shall submit to OCD an application for a discharge permit modification to increase the discharge volume to account for the discharge of RO reject fluid from Navajo's operation of the third temporary RO unit. Navajo recognizes that the discharge permit modification is subject to the public notice and participation requirements of the WQCC Regulations. OCD shall review and act on the permit modification application expeditiously and shall not unreasonably delay or extend final agency action on the application.

2. Navajo has been working on a project to enhance its water management system and reduce the total volume of RO reject fluid that is discharged pursuant to the groundwater discharge permit. Options currently under consideration by Navajo include installation of a third permanent RO unit to replace the temporary RO unit as well as the installation of a secondary RO unit to reduce the total volume of RO reject fluid produced at the Facility. 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 Navajo's groundwater discharge permit in order to determine whether concentrations of those chemical constituents in the RO reject fluid exceed background levels. During the term of the Order, Navajo shall provide OCD with updates on

any new developments related to the treatment and disposal of RO reject fluid at the Facility in the monthly reports required under Paragraph 5 below.

Sampling and Analysis Requirements

3. Within five days of the date of this Order, Navajo shall sample the discharge from the third temporary RO unit and submit the sample for analysis. Navajo shall provide OCD by e-mail the final results of this sample within three business days after Navajo's receipt of the data for that sample. During the term of this Order, Navajo shall sample the discharges from a) the two permanent RO units and b) the third temporary RO unit each month on or around the first business day of each month beginning with June 1, 2015. If the effluent streams from the two permanent RO units are combined prior to actual discharge to the land, they may be sampled as a combined stream. The results of the monthly samples shall be submitted with the next monthly report. The sampling and analysis shall be conducted in accordance with the schedule and conditions set forth in Section 4.B. of Discharge Permit GW-028.

4. The Permittee shall monitor and record discharge flows on a daily basis for each RO unit individually and for all RO units together.

Reporting During the Term of the Order

5. Beginning May 15, 2015, for the month of April 2015, Navajo shall provide OCD with monthly reports detailing the actions taken by Navajo during that calendar month under Order. The monthly reports shall be due the fifteenth day of the following month and shall include the following:

- a. The daily discharge flow measurements required pursuant to Paragraph 4, above;
- b. The results of the monthly discharge sample results; and

c. The calculation of stipulated penalties, if any, required under Section III, Paragraph 2 of the Order.

Chavez, Carl J, EMNRD

From: Holder, Mike <Michael.Holder@hollyfrontier.com>
Sent: Friday, April 10, 2015 3:01 PM
To: Brancard, Bill, EMNRD; McWatters, Denise
Cc: Marks, Allison, EMNRD; Griswold, Jim, EMNRD; Chavez, Carl J, EMNRD; Holder, Mike; Denton, Scott
Subject: RE: Navajo Refinery: DP GW-028
Attachments: 150410 RO Reject Ammended Report.pdf

Bill,

Thank you for your message and April 9 correspondence. I apologize for not getting back sooner. We have been working hard and diligently to provide the requested information and are prepared to do so in a timely way. We continued to be committed to working constructively with the State on providing information, seeking to amend the permit, and to enter into an agreed compliance order.

As the first step toward those goals, attached are the addenda for the 2012-2014 annual discharge reports showing the updated discharge information. In addition, we will be sending to you shortly:

- Draft Order for your consideration/review
- Responses to the questions Carl submitted at the meeting
- Information pertaining to the temporary RO unit as requested at the meeting
- A permit modification request for the temporary RO unit, the 3rd primary RO unit planned for construction this year, the secondary RO unit planned for construction this year, and an increased discharge limit until we can operate the secondary RO and the 4th well

We should have the draft order to you shortly, followed by the responses and temporary RO unit information. The permit modification request is underway and will follow the other information.

We appreciate OCD's attention to this issue and are prepared to work collaboratively with you to the fullest extent. Thank you for your patience and please don't hesitate to call with any questions in the interim or if you any comments or suggestions on this approach.

Thanks,
Mike

From: Brancard, Bill, EMNRD [<mailto:bill.brancard@state.nm.us>]
Sent: Thursday, April 09, 2015 3:31 PM
To: McWatters, Denise; Holder, Mike
Cc: Marks, Allison, EMNRD; Griswold, Jim, EMNRD; Chavez, Carl J, EMNRD
Subject: Navajo Refinery: DP GW-028

Denise, Mike,

Thank you for the meeting on March 27 regarding the third RO unit. We have not heard from you all since and we need to keep moving ahead on this issue. Please start by sending us the revised discharge data.

Thank you,

Bill Brancard

General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe NM 87505
505.476.3210
Bill.brancard@state.nm.us

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April 10, 2015

Mr. Bill Brancard
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Subject: Navajo Refining Company / Addenda to Annual Discharge Reports

Dear Mr. Brancard:

Attached per the request in your letter of April 9, 2015, please find the addenda to the 2012, 2013, and 2014 Annual Reports submitted to OCD as required in Permit GW-028, Condition 2.F.2. The attached files set forth discharge data pertaining to the Refinery's reverse osmosis reject fluids discharge to the farms, including from the temporary RO unit. The discharge data provided is listed on a daily basis to meet requirements of Permit GW-028, Condition 4.B.4. For days on which actual daily discharge volumes from the temporary RO unit were unavailable, Navajo used the average discharge rate of 3,236 barrels per day. For your convenience, those days are highlighted in yellow in the attached documents.

If you have any questions or would like to discuss the attached, please feel free to contact me at 575-746-5487.

Regards,

Scott M. Denton
Environmental Manager

Electronic cc: Allison Marks
Jim Griswold
Carl Chavez
Denise McWatters
Mike Holder

2012 RO Reject Discharge Volume

Annual Discharged Volume (BBLs) 4,302,571
Avg Discharge Rate (BPD) 11,788

	Permanent Unit/Skids				Temporary Unit		Daily Discharged Volume
	36F1101.PV GPM	36F1104.PV GPM	Combined RO Reject Dchg GPM	Combined RO Reject Dchg BBLs	Total RO Reject Discharge GPM	Total RO Reject Discharge/Day BBLs	
	SOUTH SKID REJECT FLOW 36F1101.PV - Average	NORTH SKID REJECT FLOW 36F1104.PV - Average					
Timestamp							
1/1/2012	42.9	130.6	173.5	5948	94	3236	9184
1/2/2012	40.7	129.8	170.5	5845	94	3236	9081
1/3/2012	42.6	130.3	172.9	5928	94	3236	9164
1/4/2012	41.6	130.6	172.2	5904	94	3236	9140
1/5/2012	41.3	129.6	170.9	5859	94	3236	9095
1/6/2012	52.3	126.8	179.1	6141	94	3236	9377
1/7/2012	90.2	122.8	213.0	7303	94	3236	10539
1/8/2012	78.1	119.8	197.9	6784	94	3236	10020
1/9/2012	99.8	119.6	219.4	7523	94	3236	10759
1/10/2012	74.1	119.2	193.4	6630	94	3236	9866
1/11/2012	69.9	123.2	193.2	6623	94	3236	9859
1/12/2012	101.7	123.8	225.4	7729	94	3236	10965
1/13/2012	71.7	122.5	194.2	6657	94	3236	9893
1/14/2012	93.5	118.4	212.0	7267	94	3236	10503
1/15/2012	98.0	110.7	208.7	7156	94	3236	10392
1/16/2012	100.7	118.0	218.7	7499	94	3236	10735
1/17/2012	100.2	121.5	221.7	7602	94	3236	10838
1/18/2012	99.6	117.3	216.9	7435	94	3236	10671
1/19/2012	99.2	113.1	212.3	7279	94	3236	10515
1/20/2012	102.6	113.0	215.6	7392	94	3236	10628
1/21/2012	112.2	112.7	224.9	7711	94	3236	10947
1/22/2012	112.6	114.2	226.8	7777	94	3236	11013
1/23/2012	108.0	111.4	219.4	7522	94	3236	10758
1/24/2012	107.7	110.8	218.5	7491	94	3236	10727
1/25/2012	107.8	113.1	220.8	7571	94	3236	10807
1/26/2012	108.9	106.2	215.1	7376	94	3236	10612
1/27/2012	110.6	108.1	218.6	7496	94	3236	10732
1/28/2012	109.6	107.3	216.8	7434	94	3236	10670
1/29/2012	108.9	104.1	213.0	7303	94	3236	10539
1/30/2012	107.4	99.9	207.2	7105	94	3236	10341
1/31/2012	105.9	114.8	220.8	7570	94	3236	10806
2/1/2012	106.1	114.7	220.8	7569	94	3236	10805
2/2/2012	105.4	114.5	219.9	7541	94	3236	10777
2/3/2012	106.6	119.1	225.8	7741	94	3236	10977
2/4/2012	106.7	118.1	224.8	7707	94	3236	10943
2/5/2012	106.1	114.6	220.7	7567	94	3236	10803
2/6/2012	106.1	116.5	222.6	7632	38	1303	8934
2/7/2012	100.5	113.8	214.3	7347	38	1311	8658
2/8/2012	105.8	109.8	215.6	7393	63	2151	9545
2/9/2012	105.4	112.1	217.5	7458	70	2400	9858
2/10/2012	108.1	111.6	219.7	7533	69	2354	9887
2/11/2012	108.8	118.5	227.3	7794	41	1406	9200
2/12/2012	106.2	122.6	228.8	7843	79	2709	10551
2/13/2012	104.0	120.2	224.3	7690	42	1431	9122
2/14/2012	105.8	122.9	228.7	7841	73	2494	10336
2/15/2012	105.7	126.3	232.0	7954	80	2743	10697
2/16/2012	105.1	124.1	229.2	7857	94	3236	11093
2/17/2012	104.3	120.3	224.6	7699	94	3236	10935
2/18/2012	103.7	117.2	220.9	7573	94	3236	10809
2/19/2012	105.0	116.6	221.6	7597	94	3236	10833
2/20/2012	106.9	123.5	230.3	7897	94	3236	11133
2/21/2012	107.6	124.3	231.9	7951	94	3236	11187
2/22/2012	106.8	122.2	229.1	7854	68	2331	10185
2/23/2012	81.5	116.6	198.0	6790	74	2529	9319
2/24/2012	95.7	113.6	209.3	7175	152	5211	12386
2/25/2012	95.0	110.3	205.3	7040	75	2563	9603
2/26/2012	93.7	105.1	198.8	6816	72	2477	9293
2/27/2012	106.6	110.2	216.9	7436	70	2409	9844
2/28/2012	114.2	107.0	221.2	7585	67	2314	9899
2/29/2012	113.7	109.1	222.8	7638	68	2323	9961
3/1/2012	113.8	109.7	223.5	7663	135	4629	12291
3/2/2012	111.6	103.4	215.0	7370	138	4743	12113
3/3/2012	110.6	103.4	214.0	7337	148	5074	12412
3/4/2012	97.2	106.0	203.2	6966	148	5071	12037
3/5/2012	113.5	100.4	213.8	7332	71	2446	9778
3/6/2012	112.0	93.7	205.7	7051	94	3236	10287
3/7/2012	111.1	95.9	207.0	7097	94	3236	10333
3/8/2012	110.0	97.6	207.6	7117	94	3236	10353
3/9/2012	80.7	90.6	171.4	5875	94	3236	9111
3/10/2012	83.4	91.0	174.4	5978	147	5043	11021
3/11/2012	84.9	90.9	175.8	6026	144	4931	10957
3/12/2012	84.9	89.9	174.8	5993	148	5057	11050
3/13/2012	90.0	90.9	180.9	6203	146	5006	11209
3/14/2012	107.7	95.5	203.2	6968	145	4980	11948
3/15/2012	110.4	104.6	215.0	7371	143	4903	12274
3/16/2012	112.0	109.6	221.7	7600	148	5057	12657
3/17/2012	69.5	108.8	178.3	6112	147	5051	11164
3/18/2012	104.7	107.9	212.6	7290	146	5017	12307
3/19/2012	74.7	107.4	182.0	6241	121	4137	10378
3/20/2012	93.5	108.4	201.9	6922	96	3291	10214
3/21/2012	105.3	110.0	215.3	7382	146	4989	12370
3/22/2012	105.4	109.9	215.3	7382	73	2491	9874
3/23/2012	103.2	110.4	213.6	7324	139	4783	12107
3/24/2012	105.5	110.8	216.2	7413	134	4594	12008
3/25/2012	103.7	110.3	214.0	7337	143	4914	12251
3/26/2012	100.5	109.4	209.9	7197	142	4857	12055
3/27/2012	90.0	107.3	197.2	6762	143	4891	11653
3/28/2012	71.4	103.4	174.7	5991	142	4857	10848
3/29/2012	144.8	109.9	254.7	8732	67	2280	11012
3/30/2012	131.6	114.5	246.1	8437	67	2297	10734
3/31/2012	137.3	113.6	250.9	8602	67	2314	10917
4/1/2012	132.9	115.3	248.2	8511	68	2320	10831
4/2/2012	141.1	114.0	255.1	8747	68	2343	11090
4/3/2012	140.1	115.4	255.5	8760	69	2349	11109
4/4/2012	141.8	114.9	256.7	8801	68	2331	11132
4/5/2012	145.0	115.5	260.5	8932	94	3236	12168
4/6/2012	146.6	77.5	224.1	7684	142	4877	12561
4/7/2012	157.6	60.4	218.0	7473	141	4846	12319
4/8/2012	146.9	103.9	250.8	8597	94	3236	11833
4/9/2012	144.0	112.3	256.2	8785	94	3236	12021
4/10/2012	144.8	112.7	257.4	8826	94	3236	12062
4/11/2012	135.7	112.6	248.3	8514	94	3236	11750
4/12/2012	129.5	113.8	243.3	8342	94	3236	11578
4/13/2012	137.4	116.8	254.2	8715	94	3236	11951
4/14/2012	136.3	116.2	252.6	8660	94	3236	11896
4/15/2012	136.4	116.2	252.5	8658	94	3236	11894
4/16/2012	135.8	115.8	251.6	8626	66	2251	10877
4/17/2012	129.9	115.0	244.9	8397	69	2377	10775
4/18/2012	143.3	114.3	257.6	8831	69	2377	11208
4/19/2012	144.7	115.2	260.0	8914	130	4457	13371
4/20/2012	146.0	116.2	262.2	8990	63	2171	11161
4/21/2012	142.8	113.4	256.1	8782	94	3236	12018
4/22/2012	143.3	115.4	258.7	8870	64	2203	11072
4/23/2012	133.8	117.3	251.0	8606	64	2186	10792
4/24/2012	131.6	116.2	247.8	8495	64	2194	10689

4/25/2012	123.5	106.4	229.9	7884	64	2194	10078
4/26/2012	137.3	111.8	249.1	8541	64	2177	10718
4/27/2012	139.5	114.3	253.8	8701	67	2314	11015
4/28/2012	138.3	113.6	252.0	8639	64	2206	10845
4/29/2012	129.4	112.3	241.7	8287	65	2229	10516
4/30/2012	137.3	109.8	247.1	8471	126	4320	12791
5/1/2012	141.0	106.8	247.9	8498	127	4371	12869
5/2/2012	140.5	105.8	246.3	8444	141	4826	13269
5/3/2012	139.0	100.3	239.3	8203	137	4714	12918
5/4/2012	138.8	104.9	243.7	8355	67	2309	10663
5/5/2012	143.0	107.3	250.2	8580	68	2320	10900
5/6/2012	146.7	106.1	252.8	8667	67	2297	10964
5/7/2012	147.3	106.8	254.1	8711	69	2349	11059
5/8/2012	143.4	106.4	249.8	8565	94	3236	11801
5/9/2012	145.3	107.1	252.4	8653	124	4251	12904
5/10/2012	147.3	89.5	236.8	8119	63	2160	10279
5/11/2012	147.2	107.5	254.7	8731	94	3236	11967
5/12/2012	146.4	106.2	252.6	8662	69	2349	11011
5/13/2012	144.8	106.1	250.9	8602	69	2349	10950
5/14/2012	145.2	107.9	253.0	8675	67	2314	10990
5/15/2012	145.7	109.2	254.9	8739	94	3236	11975
5/16/2012	152.6	115.9	268.5	9205	129	4423	13628
5/17/2012	140.3	115.3	255.6	8762	136	4646	13408
5/18/2012	144.5	115.2	259.7	8905	67	2280	11185
5/19/2012	143.6	113.7	257.3	8820	136	4674	13495
5/20/2012	133.6	114.6	248.2	8509	66	2263	10772
5/21/2012	145.2	113.9	259.1	8884	68	2331	11215
5/22/2012	149.8	114.5	264.3	9062	68	2331	11394
5/23/2012	159.5	117.7	277.2	9505	131	4491	13997
5/24/2012	160.3	117.6	277.9	9529	67	2314	11843
5/25/2012	130.1	112.0	242.1	8300	67	2297	10597
5/26/2012	121.3	111.4	232.7	7977	135	4629	12606
5/27/2012	121.7	113.0	234.6	8044	94	3236	11280
5/28/2012	121.4	112.7	234.1	8027	67	2286	10313
5/29/2012	117.7	112.9	230.6	7905	67	2297	10202
5/30/2012	110.9	109.4	220.2	7551	67	2309	9860
5/31/2012	130.2	115.5	245.7	8425	67	2297	10723
6/1/2012	143.2	115.0	258.2	8853	66	2263	11116
6/2/2012	139.1	114.6	253.7	8700	134	4577	13277
6/3/2012	153.2	115.0	268.3	9198	66	2263	11461
6/4/2012	147.9	115.1	263.0	9018	128	4389	13406
6/5/2012	143.4	115.3	258.7	8870	62	2114	10985
6/6/2012	150.4	114.5	264.9	9081	134	4594	13675
6/7/2012	145.1	111.8	256.9	8808	129	4423	13230
6/8/2012	152.0	116.1	268.1	9193	94	3236	12429
6/9/2012	152.5	116.2	268.8	9215	94	3236	12451
6/10/2012	151.9	113.1	265.0	9087	125	4303	13390
6/11/2012	155.1	116.7	271.8	9319	123	4234	13554
6/12/2012	155.1	116.6	271.7	9316	60	2057	11373
6/13/2012	128.2	121.3	249.6	8556	127	4354	12910
6/14/2012	150.2	126.9	277.0	9499	66	2246	11744
6/15/2012	158.1	125.4	283.5	9719	66	2263	11982
6/16/2012	157.1	127.7	284.8	9763	67	2286	12049
6/17/2012	155.9	127.5	283.4	9716	125	4269	13985
6/18/2012	156.2	127.9	284.1	9741	121	4149	13890
6/19/2012	115.8	124.0	239.8	8223	118	4046	12269
6/20/2012	114.1	122.9	237.0	8126	66	2263	10389
6/21/2012	113.8	121.8	235.7	8079	65	2217	10297
6/22/2012	113.7	121.0	234.6	8044	65	2240	10284
6/23/2012	109.1	123.5	232.6	7974	64	2211	10186
6/24/2012	109.6	123.4	233.0	7987	127	4354	12342
6/25/2012	111.5	120.8	232.3	7965	131	4491	12457
6/26/2012	112.1	121.7	233.8	8018	94	3236	11254
6/27/2012	101.9	111.0	212.9	7301	134	4589	11889
6/28/2012	116.2	119.6	235.9	8088	66	2263	10350
6/29/2012	117.7	118.8	236.5	8108	150	5126	13234
6/30/2012	119.9	118.8	238.7	8184	85	2914	11098
7/1/2012	126.6	119.4	246.1	8437	85	2903	11340
7/2/2012	125.4	119.3	244.7	8389	69	2354	10744
7/3/2012	123.8	123.0	246.8	8462	94	3236	11698
7/4/2012	125.6	123.7	249.3	8548	69	2349	10896
7/5/2012	127.4	123.6	251.0	8604	69	2383	10987
7/6/2012	130.3	124.2	254.6	8727	138	4731	13459
7/7/2012	89.4	122.9	212.3	7279	65	2240	9519
7/8/2012	111.8	122.4	234.2	8031	65	2240	10271
7/9/2012	112.3	121.9	234.2	8029	65	2240	10269
7/10/2012	141.2	126.0	267.2	9162	64	2211	11373
7/11/2012	138.0	118.6	256.6	8797	64	2206	11003
7/12/2012	70.9	103.4	174.4	5978	94	3236	9214
7/13/2012	113.0	147.9	260.9	8946	94	3236	12182
7/14/2012	128.9	108.2	237.1	8130	94	3236	11366
7/15/2012	142.3	81.6	223.9	7676	136	4674	12350
7/16/2012	130.6	71.6	202.3	6935	136	4651	11586
7/17/2012	130.8	71.8	202.6	6945	137	4709	11653
7/18/2012	129.8	105.5	235.3	8067	66	2274	10342
7/19/2012	130.5	149.0	279.5	9582	67	2314	11896
7/20/2012	136.9	148.4	285.3	9782	132	4526	14308
7/21/2012	139.2	146.2	285.3	9782	134	4611	14394
7/22/2012	137.9	141.4	279.3	9577	137	4680	14257
7/23/2012	134.0	140.3	274.4	9408	133	4560	13968
7/24/2012	137.5	139.1	276.6	9484	66	2263	11747
7/25/2012	138.2	140.8	279.0	9566	66	2263	11829
7/26/2012	140.0	141.7	281.7	9658	68	2320	11978
7/27/2012	150.2	137.8	288.0	9873	137	4697	14570
7/28/2012	150.8	142.4	293.2	10053	135	4629	14682
7/29/2012	151.1	142.5	293.6	10067	130	4457	14524
7/30/2012	150.9	141.0	291.9	10008	67	2286	12293
7/31/2012	151.4	141.8	293.2	10053	67	2286	12339
8/1/2012	152.2	142.6	294.8	10106	66	2274	12381
8/2/2012	152.3	142.4	294.7	10105	66	2263	12367
8/3/2012	152.7	143.0	295.7	10140	67	2286	12426
8/4/2012	133.2	139.0	272.1	9330	132	4509	13839
8/5/2012	126.3	138.6	264.9	9083	134	4594	13677
8/6/2012	120.0	139.1	259.1	8883	134	4594	13477
8/7/2012	116.1	138.1	254.2	8715	136	4663	13378
8/8/2012	123.2	138.4	261.6	8968	133	4560	13528
8/9/2012	126.3	136.5	262.8	9010	66	2274	11284
8/10/2012	126.9	137.4	264.3	9062	66	2251	11313
8/11/2012	126.3	137.1	263.5	9033	66	2251	11284
8/12/2012	126.9	137.3	264.2	9058	135	4640	13698
8/13/2012	163.8	138.2	301.9	10351	66	2246	12597
8/14/2012	178.4	140.4	318.8	10930	131	4491	15422
8/15/2012	178.9	141.3	320.2	10979	68	2331	13311
8/16/2012	178.1	141.1	319.2	10945	65	2229	13174
8/17/2012	179.8	139.6	319.4	10949	65	2229	13178
8/18/2012	188.9	139.9	328.7	11271	64	2206	13477
8/19/2012	183.1	139.4	322.5	11056	64	2211	13268
8/20/2012	170.9	140.3	311.2	10671	64	2206	12877
8/21/2012	172.8	141.3	314.0	10767	63	2160	12927
8/22/2012	171.9	140.4	312.4	10710	64	2206	12915
8/23/2012	172.0	140.0	312.1	10699	64	2194	12894
8/24/2012	171.1	139.5	310.6	10650	127	4337	14987
8/25/2012	170.8	140.3	311.0	10664	65	2217	12881

8/26/2012	168.2	139.7	307.9	10558	64	2183	12741
8/27/2012	170.7	139.0	309.7	10617	65	2240	12857
8/28/2012	171.4	139.1	310.5	10647	96	3284	13931
8/29/2012	172.5	140.0	312.5	10715	129	4423	15138
8/30/2012	172.7	140.2	312.9	10728	128	4389	15116
8/31/2012	172.9	139.7	312.6	10719	64	2194	12913
9/1/2012	172.2	139.3	311.5	10678	126	4320	14998
9/2/2012	172.8	139.9	312.6	10719	129	4423	15142
9/3/2012	166.5	138.1	304.6	10444	131	4491	14935
9/4/2012	132.9	130.8	263.7	9042	64	2206	11248
9/5/2012	132.3	129.4	261.8	8976	130	4474	13450
9/6/2012	131.7	128.8	260.5	8931	129	4406	13337
9/7/2012	121.1	130.8	252.0	8639	129	4423	13062
9/8/2012	128.8	128.3	257.1	8813	127	4371	13185
9/9/2012	131.6	128.1	259.8	8907	65	2229	11136
9/10/2012	130.9	126.8	257.7	8834	64	2194	11028
9/11/2012	127.1	125.5	252.6	8661	65	2229	10889
9/12/2012	127.9	129.8	257.7	8835	66	2263	11098
9/13/2012	130.6	132.7	263.4	9029	94	3236	12265
9/14/2012	130.9	133.8	264.7	9074	135	4629	13702
9/15/2012	131.2	133.5	264.7	9076	133	4549	13624
9/16/2012	127.2	131.5	258.7	8871	71	2434	11305
9/17/2012	156.3	122.4	278.7	9555	67	2286	11841
9/18/2012	170.2	126.1	296.4	10161	129	4434	14595
9/19/2012	169.5	126.2	295.7	10138	66	2251	12389
9/20/2012	169.6	126.1	295.7	10138	66	2274	12413
9/21/2012	165.6	128.4	294.0	10079	127	4354	14434
9/22/2012	129.4	131.4	260.8	8943	62	2126	11069
9/23/2012	127.8	129.7	257.4	8827	67	2286	11112
9/24/2012	122.8	129.6	252.4	8653	129	4423	13076
9/25/2012	123.2	131.2	254.5	8724	64	2206	10930
9/26/2012	125.4	130.9	256.2	8785	63	2171	10957
9/27/2012	129.4	130.8	260.2	8920	63	2171	11092
9/28/2012	130.4	133.1	263.5	9035	64	2183	11218
9/29/2012	131.0	134.2	265.2	9092	125	4286	13377
9/30/2012	143.1	135.8	278.9	9564	127	4337	13901
10/1/2012	144.0	136.3	280.2	9608	129	4406	14014
10/2/2012	143.9	135.7	279.5	9584	128	4389	13973
10/3/2012	112.0	135.4	247.5	8485	109	3749	12233
10/4/2012	150.0	132.3	282.3	9680	65	2217	11897
10/5/2012	157.8	135.2	293.0	10044	63	2171	12215
10/6/2012	155.1	133.3	288.3	9886	65	2217	12103
10/7/2012	158.0	135.8	293.8	10073	65	2217	12290
10/8/2012	156.4	133.5	289.9	9940	65	2229	12168
10/9/2012	157.6	135.2	292.8	10040	64	2211	12252
10/10/2012	154.4	133.4	287.8	9867	62	2137	12004
10/11/2012	106.5	130.8	237.3	8136	124	4251	12387
10/12/2012	98.9	131.4	230.3	7897	61	2080	9977
10/13/2012	119.3	132.6	251.9	8637	62	2143	10780
10/14/2012	161.5	86.7	248.2	8511	64	2206	10716
10/15/2012	143.8	114.7	258.5	8862	130	4457	13319
10/16/2012	116.6	121.7	238.3	8170	130	4440	12610
10/17/2012	106.4	121.7	228.0	7818	131	4491	12310
10/18/2012	106.2	120.8	227.1	7785	130	4457	12242
10/19/2012	107.6	122.2	229.7	7876	135	4629	12505
10/20/2012	122.4	98.8	221.1	7581	64	2206	9787
10/21/2012	118.4	135.0	253.5	8690	66	2263	10953
10/22/2012	118.4	133.7	252.1	8642	64	2206	10848
10/23/2012	120.0	128.5	248.6	8522	133	4560	13082
10/24/2012	122.6	127.7	250.4	8584	132	4526	13110
10/25/2012	120.9	119.5	240.4	8243	122	4166	12409
10/26/2012	124.4	130.6	255.0	8745	122	4166	12910
10/27/2012	124.1	130.9	255.0	8742	128	4389	13131
10/28/2012	126.3	134.4	260.7	8938	66	2274	11213
10/29/2012	126.9	134.7	261.6	8968	65	2229	11196
10/30/2012	125.4	135.1	260.6	8935	62	2126	11060
10/31/2012	127.6	135.4	263.1	9019	125	4286	13305
11/1/2012	127.1	135.1	262.3	8992	130	4440	13432
11/2/2012	125.4	132.7	258.1	8851	129	4423	13274
11/3/2012	106.0	114.9	220.9	7575	64	2194	9769
11/4/2012	104.9	113.4	218.3	7484	66	2274	9759
11/5/2012	104.8	113.5	218.3	7484	67	2297	9781
11/6/2012	106.5	112.5	219.0	7510	69	2377	9887
11/7/2012	126.9	116.0	242.9	8328	67	2286	10614
11/8/2012	137.9	116.0	253.8	8703	130	4474	13178
11/9/2012	138.7	117.3	256.0	8777	138	4731	13508
11/10/2012	133.8	118.3	252.1	8645	131	4491	13136
11/11/2012	133.1	117.9	251.0	8607	140	4800	13407
11/12/2012	127.9	119.1	247.0	8468	146	4989	13457
11/13/2012	133.4	120.2	253.6	8695	66	2274	10969
11/14/2012	136.6	119.3	256.0	8776	65	2240	11016
11/15/2012	135.5	118.5	254.0	8708	141	4834	13542
11/16/2012	131.6	118.0	249.5	8555	131	4491	13047
11/17/2012	136.9	120.3	257.2	8817	132	4543	13360
11/18/2012	139.4	120.8	260.1	8919	134	4611	13531
11/19/2012	135.3	119.9	255.3	8752	132	4526	13278
11/20/2012	128.1	115.9	244.0	8367	66	2251	10619
11/21/2012	119.4	119.0	238.3	8171	66	2251	10423
11/22/2012	122.3	114.8	237.0	8127	137	4709	12836
11/23/2012	121.1	113.1	234.2	8030	137	4680	12710
11/24/2012	122.6	113.3	235.9	8088	134	4611	12699
11/25/2012	124.5	118.4	242.9	8328	139	4749	13077
11/26/2012	123.6	115.6	239.2	8202	68	2323	10525
11/27/2012	122.7	115.0	237.7	8150	69	2377	10527
11/28/2012	122.6	115.5	238.1	8164	69	2377	10541
11/29/2012	123.2	115.7	238.8	8188	69	2366	10554
11/30/2012	123.0	113.5	236.5	8109	69	2366	10475
12/1/2012	122.6	113.0	235.6	8077	69	2377	10455
12/2/2012	122.5	113.4	235.9	8089	134	4583	12672
12/3/2012	123.9	114.8	238.8	8187	67	2280	10467
12/4/2012	125.7	118.6	244.3	8375	67	2297	10672
12/5/2012	127.8	122.2	250.0	8571	67	2297	10868
12/6/2012	126.9	121.0	247.9	8500	67	2286	10786
12/7/2012	128.6	120.3	248.9	8534	63	2171	10706
12/8/2012	132.0	119.1	251.1	8610	63	2171	10781
12/9/2012	129.6	120.7	250.3	8581	64	2183	10764
12/10/2012	129.9	121.4	251.3	8615	70	2400	11015
12/11/2012	123.5	118.4	241.9	8292	62	2137	10429
12/12/2012	191.8	128.8	320.6	10993	62	2126	13119
12/13/2012	193.6	130.1	323.7	11098	64	2183	13281
12/14/2012	194.4	130.8	325.2	11150	62	2126	13276
12/15/2012	191.1	131.3	322.4	11052	64	2206	13258
12/16/2012	183.9	132.8	316.7	10859	64	2194	13054
12/17/2012	188.7	132.1	320.8	11000	68	2331	13332
12/18/2012	194.9	131.7	326.7	11201	135	4629	15829
12/19/2012	196.7	133.3	330.1	11316	63	2160	13476
12/20/2012	196.5	133.1	329.7	11303	62	2117	13420
12/21/2012	195.2	132.0	327.2	11218	62	2137	13355
12/22/2012	178.6	133.7	312.3	10708	64	2183	12891
12/23/2012	164.1	132.3	296.4	10163	65	2229	12391
12/24/2012	169.1	131.8	300.9	10316	63	2160	12476
12/25/2012	170.4	132.4	302.8	10383	65	2240	12623
12/26/2012	171.0	132.9	303.9	10418	130	4457	14875

12/27/2012	170.8	132.8	303.6	10410	139	4766	15176
12/28/2012	158.1	132.6	290.6	9964	125	4269	14232
12/29/2012	154.3	134.2	288.5	9891	94	3236	13127
12/30/2012	153.1	134.0	287.1	9843	126	4309	14152
12/31/2012	153.4	133.7	287.1	9844	69	2383	12227

Assume overall avg discharge rate (2012-2014) if no data available

2013 RO Reject Discharge Volume

Annual Discharged Volume (BBLs) 4,014,933
Avg Discharge Rate (BPD) 11,000

	Permanent Unit/Skids				Temporary Unit		Daily Discharge Volume
	36FI101.PV GPM	36FI104.PV GPM	Combined RO Reject Dchg GPM	Combined RO Reject Dchg BBLs	Total RO Reject Discharge GPM	Total RO Reject Discharge/Day BBLs	BBLs
	SOUTH SKID REJECT FLOW	NORTH SKID REJECT FLOW					
Timestamp	36FI101.PV - Average	36FI104.PV - Average					
1/1/2013	151.6	131.9	283.4	9718	70	2411	12129
1/2/2013	151.3	129.9	281.3	9644	70	2383	12026
1/3/2013	151.0	129.2	280.3	9609	68	2343	11952
1/4/2013	152.4	129.7	282.1	9672	69	2366	12037
1/5/2013	151.8	129.2	281.0	9636	0	0	9636
1/6/2013	152.4	129.6	282.0	9668	0	0	9668
1/7/2013	153.9	130.3	284.1	9742	0	0	9742
1/8/2013	152.9	128.8	281.7	9658	0	0	9658
1/9/2013	151.8	126.5	278.4	9544	0	0	9544
1/10/2013	153.8	127.0	280.8	9626	0	0	9626
1/11/2013	155.7	127.3	283.0	9704	0	0	9704
1/12/2013	157.0	128.4	285.4	9786	0	0	9786
1/13/2013	157.9	129.5	287.3	9852	0	0	9852
1/14/2013	155.0	129.1	284.1	9740	0	0	9740
1/15/2013	153.2	128.4	281.6	9654	0	0	9654
1/16/2013	152.8	128.0	280.8	9628	0	0	9628
1/17/2013	152.6	127.8	280.4	9614	0	0	9614
1/18/2013	152.9	128.7	281.6	9655	0	0	9655
1/19/2013	153.7	127.7	281.4	9648	0	0	9648
1/20/2013	153.4	129.3	282.6	9690	0	0	9690
1/21/2013	153.4	128.6	282.0	9667	0	0	9667
1/22/2013	154.1	127.6	281.7	9658	0	0	9658
1/23/2013	153.3	126.5	279.8	9593	0	0	9593
1/24/2013	154.1	127.6	281.7	9659	0	0	9659
1/25/2013	153.6	127.7	281.3	9644	0	0	9644
1/26/2013	154.2	123.5	277.7	9520	0	0	9520
1/27/2013	154.4	128.9	283.3	9712	0	0	9712
1/28/2013	152.5	131.3	283.8	9729	0	0	9729
1/29/2013	143.6	134.2	277.8	9525	0	0	9525
1/30/2013	143.2	134.2	277.4	9510	0	0	9510
1/31/2013	148.1	101.0	249.0	8538	0	0	8538
2/1/2013	161.1	78.4	239.5	8211	0	0	8211
2/2/2013	151.1	126.6	277.6	9518	0	0	9518
2/3/2013	69.5	41.4	110.9	3801	0	0	3801
2/4/2013	161.6	0.0	161.6	5542	0	0	5542
2/5/2013	153.9	0.1	154.0	5279	0	0	5279
2/6/2013	125.6	0.1	125.7	4309	0	0	4309
2/7/2013	93.5	1.0	94.5	3239	0	0	3239
2/8/2013	146.4	21.8	168.2	5766	0	0	5766
2/9/2013	142.9	41.6	184.5	6327	0	0	6327
2/10/2013	140.8	76.9	217.7	7464	0	0	7464
2/11/2013	135.9	69.2	205.1	7031	0	0	7031
2/12/2013	137.0	69.4	206.5	7079	0	0	7079
2/13/2013	136.8	71.1	207.9	7126	0	0	7126
2/14/2013	140.3	47.4	187.7	6436	0	0	6436
2/15/2013	144.2	51.9	196.1	6722	0	0	6722
2/16/2013	140.9	140.1	281.0	9634	0	0	9634
2/17/2013	141.2	162.6	303.9	10418	0	0	10418
2/18/2013	142.8	151.6	294.4	10093	0	0	10093
2/19/2013	154.7	165.2	319.9	10968	0	0	10968
2/20/2013	154.5	164.8	319.3	10946	0	0	10946
2/21/2013	156.8	168.6	325.5	11159	0	0	11159
2/22/2013	156.8	168.3	325.1	11147	0	0	11147
2/23/2013	157.0	168.3	325.3	11152	0	0	11152
2/24/2013	156.5	167.7	324.2	11116	0	0	11116
2/25/2013	155.9	167.7	323.5	11093	0	0	11093
2/26/2013	154.4	165.1	319.5	10953	0	0	10953
2/27/2013	154.0	165.2	319.2	10943	0	0	10943
2/28/2013	153.0	163.1	316.2	10841	0	0	10841
3/1/2013	153.0	163.4	316.4	10848	0	0	10848
3/2/2013	153.7	164.6	318.4	10915	0	0	10915
3/3/2013	152.6	162.4	315.0	10801	0	0	10801
3/4/2013	152.5	162.7	315.2	10806	122	4166	14972
3/5/2013	154.1	165.1	319.2	10944	124	4251	15196
3/6/2013	152.7	162.6	315.3	10812	128	4371	15183
3/7/2013	151.8	161.6	313.5	10748	66	2263	13011
3/8/2013	153.2	163.0	316.2	10841	94	3236	14077
3/9/2013	152.2	162.0	314.2	10773	94	3236	14009
3/10/2013	151.9	161.0	312.8	10726	94	3236	13962
3/11/2013	153.0	162.1	315.0	10800	94	3236	14036
3/12/2013	151.9	160.8	312.7	10721	61	2091	12812
3/13/2013	155.8	127.0	282.8	9697	61	2091	11788
3/14/2013	153.9	162.7	316.5	10853	62	2114	12967
3/15/2013	155.1	163.9	319.0	10937	62	2137	13074
3/16/2013	154.5	164.6	319.0	10938	63	2143	13081
3/17/2013	153.5	163.1	316.6	10856	63	2160	13016
3/18/2013	153.1	162.2	315.4	10813	62	2109	12922
3/19/2013	148.0	148.4	296.4	10164	63	2143	12306
3/20/2013	152.3	161.2	313.5	10747	62	2137	12885
3/21/2013	152.9	156.2	309.1	10596	62	2137	12734
3/22/2013	152.3	160.1	312.5	10714	64	2194	12908
3/23/2013	154.5	164.5	319.0	10936	64	2183	13119
3/24/2013	153.3	162.5	315.8	10827	66	2263	13090
3/25/2013	152.6	162.7	315.2	10808	94	3236	14044
3/26/2013	151.9	161.1	313.0	10731	94	3236	13967
3/27/2013	152.6	162.3	314.9	10798	67	2297	13095
3/28/2013	153.7	163.6	317.3	10879	67	2309	13188
3/29/2013	152.4	159.9	312.3	10709	68	2314	13023
3/30/2013	152.9	162.7	315.6	10821	68	2320	13141
3/31/2013	152.3	161.7	314.0	10764	67	2309	13073
4/1/2013	152.3	161.0	313.3	10741	67	2297	13038
4/2/2013	148.6	149.7	298.3	10227	67	2280	12507
4/3/2013	145.6	143.7	289.3	9918	67	2297	12215
4/4/2013	123.6	163.3	286.9	9836	68	2331	12168
4/5/2013	132.0	165.1	297.1	10185	133	4543	14728
4/6/2013	149.4	156.4	305.9	10487	67	2309	12796
4/7/2013	147.9	154.7	302.6	10375	67	2309	12684
4/8/2013	147.7	154.8	302.5	10373	94	3236	13609
4/9/2013	148.1	154.5	302.6	10376	68	2331	12708
4/10/2013	148.8	154.7	303.5	10405	66	2263	12668
4/11/2013	149.4	155.9	305.3	10468	94	3236	13704
4/12/2013	147.9	155.0	302.8	10383	69	2366	12749
4/13/2013	148.3	153.3	301.6	10339	69	2377	12716
4/14/2013	141.0	154.6	295.5	10133	69	2377	12510
4/15/2013	137.4	155.6	293.0	10045	94	3236	13281
4/16/2013	146.5	152.3	298.8	10243	58	1989	12232
4/17/2013	147.3	146.0	293.3	10056	58	1989	12045
4/18/2013	150.9	144.6	295.5	10133	128	4371	14504
4/19/2013	143.1	137.9	281.0	9634	69	2366	12000
4/20/2013	136.7	139.3	276.0	9461	69	2349	11810
4/21/2013	136.5	138.9	275.3	9440	69	2366	11806
4/22/2013	137.8	139.1	276.9	9493	124	4234	13727
4/23/2013	136.8	138.8	275.6	9449	127	4343	13792
4/24/2013	136.6	138.8	275.4	9442	54	1851	11294
4/25/2013	135.7	140.6	276.3	9471	54	1851	11323
4/26/2013	129.1	141.8	270.9	9287	55	1886	11173
4/27/2013	132.2	139.3	271.5	9308	132	4509	13817
4/28/2013	135.0	138.3	273.3	9371	70	2389	11759
4/29/2013	133.1	138.0	271.0	9293	69	2366	11659
4/30/2013	132.8	138.2	271.1	9294	94	3236	12530
5/1/2013	133.8	137.4	271.2	9299	52	1771	11070
5/2/2013	135.5	137.1	272.6	9346	52	1794	11140

5/3/2013	135.1	137.1	272.3	9334	53	1817	11151
5/4/2013	134.3	136.3	270.6	9277	53	1817	11094
5/5/2013	136.2	137.9	274.1	9397	52	1783	11180
5/6/2013	137.1	138.4	275.5	9445	52	1794	11239
5/7/2013	135.5	137.2	272.7	9348	130	4446	13794
5/8/2013	135.3	136.9	272.2	9334	62	2126	11459
5/9/2013	135.2	136.5	271.7	9316	135	4629	13944
5/10/2013	140.4	136.9	277.3	9509	70	2400	11909
5/11/2013	139.5	137.3	276.8	9491	69	2366	11857
5/12/2013	135.0	136.6	271.6	9313	70	2400	11713
5/13/2013	134.9	137.1	272.0	9326	69	2366	11692
5/14/2013	135.6	137.0	272.5	9344	94	3236	12580
5/15/2013	136.0	137.1	273.0	9361	130	4440	13801
5/16/2013	135.0	136.6	271.6	9314	68	2331	11645
5/17/2013	141.2	137.3	278.5	9550	65	2240	11790
5/18/2013	139.4	136.7	276.1	9468	94	3236	12704
5/19/2013	136.3	136.7	273.0	9359	63	2160	11519
5/20/2013	134.3	135.8	270.1	9262	63	2160	11422
5/21/2013	134.4	136.7	271.1	9295	62	2109	11404
5/22/2013	135.6	137.4	273.0	9360	62	2126	11485
5/23/2013	134.9	137.0	272.0	9325	134	4594	13919
5/24/2013	139.4	136.4	275.8	9457	60	2069	11526
5/25/2013	138.4	136.6	275.0	9429	59	2034	11464
5/26/2013	134.1	136.0	270.1	9259	124	4251	13511
5/27/2013	134.4	136.3	270.7	9282	68	2320	11602
5/28/2013	134.0	135.8	269.7	9248	67	2309	11557
5/29/2013	133.5	135.4	268.9	9219	67	2286	11505
5/30/2013	132.7	134.2	266.9	9152	67	2309	11460
5/31/2013	133.1	135.3	268.4	9201	68	2314	11515
6/1/2013	132.9	135.1	268.0	9188	69	2349	11537
6/2/2013	133.1	135.4	268.5	9205	68	2331	11537
6/3/2013	132.8	135.7	268.5	9205	68	2331	11536
6/4/2013	138.1	136.5	274.6	9416	69	2366	11781
6/5/2013	135.8	137.5	273.3	9371	56	1920	11291
6/6/2013	136.3	138.1	274.3	9405	57	1966	11371
6/7/2013	134.1	138.9	273.0	9361	57	1937	11298
6/8/2013	137.2	139.0	276.2	9471	68	2343	11814
6/9/2013	138.7	139.9	278.6	9552	124	4234	13786
6/10/2013	137.6	139.5	277.1	9500	69	2349	11848
6/11/2013	136.5	138.1	274.6	9416	68	2331	11747
6/12/2013	137.9	139.4	277.4	9510	127	4354	13864
6/13/2013	130.7	139.2	269.9	9254	68	2343	11597
6/14/2013	125.9	138.3	264.3	9060	68	2343	11403
6/15/2013	131.7	137.9	269.6	9245	68	2343	11587
6/16/2013	131.5	137.7	269.3	9232	69	2366	11597
6/17/2013	131.2	138.6	269.8	9249	69	2366	11615
6/18/2013	124.8	137.3	262.1	8985	69	2366	11351
6/19/2013	123.4	136.3	259.7	8905	69	2366	11270
6/20/2013	124.2	137.1	261.3	8958	69	2349	11307
6/21/2013	124.8	137.3	262.1	8986	80	2754	11740
6/22/2013	123.3	136.2	259.6	8900	99	3394	12294
6/23/2013	127.4	136.2	263.6	9038	100	3417	12455
6/24/2013	133.5	136.3	269.9	9253	90	3074	12327
6/25/2013	132.5	135.3	267.7	9179	73	2486	11665
6/26/2013	134.6	133.6	268.2	9194	76	2617	11811
6/27/2013	139.1	136.2	275.3	9438	77	2640	12078
6/28/2013	139.3	137.0	276.3	9472	75	2571	12044
6/29/2013	140.5	138.8	279.3	9576	79	2720	12296
6/30/2013	132.6	136.4	269.0	9223	73	2503	11726
7/1/2013	134.4	135.9	270.3	9267	94	3236	12503
7/2/2013	91.5	134.4	225.9	7745	90	3086	10831
7/3/2013	131.6	133.9	265.5	9104	93	3171	12275
7/4/2013	139.2	135.9	275.1	9432	93	3177	12609
7/5/2013	138.8	136.7	275.5	9446	93	3200	12646
7/6/2013	137.0	137.9	274.9	9424	94	3223	12647
7/7/2013	135.9	137.2	273.1	9363	93	3200	12563
7/8/2013	134.3	135.9	270.2	9263	94	3206	12469
7/9/2013	133.9	133.7	267.5	9173	95	3240	12413
7/10/2013	135.3	135.7	271.0	9290	69	2377	11667
7/11/2013	140.4	135.7	276.0	9463	79	2720	12183
7/12/2013	139.8	135.9	275.7	9453	78	2663	12116
7/13/2013	140.2	135.4	275.6	9450	79	2697	12147
7/14/2013	138.9	134.4	273.3	9372	76	2594	11966
7/15/2013	135.3	134.6	269.8	9251	78	2674	11926
7/16/2013	117.7	133.5	251.2	8613	72	2469	11082
7/17/2013	115.0	133.4	248.4	8518	72	2451	10969
7/18/2013	117.3	133.4	250.7	8596	72	2469	11065
7/19/2013	118.4	134.4	252.9	8670	74	2537	11207
7/20/2013	119.6	134.9	254.5	8724	75	2554	11278
7/21/2013	117.3	134.0	251.3	8616	77	2640	11256
7/22/2013	118.5	134.5	253.0	8675	80	2731	11406
7/23/2013	118.5	136.9	255.4	8756	71	2417	11173
7/24/2013	118.0	137.7	255.7	8766	70	2383	11149
7/25/2013	110.9	138.3	249.3	8546	69	2366	10912
7/26/2013	108.6	138.1	246.7	8459	69	2377	10836
7/27/2013	109.1	138.2	247.3	8479	70	2411	10891
7/28/2013	109.1	138.6	247.7	8493	69	2366	10859
7/29/2013	107.6	137.9	245.5	8417	68	2320	10737
7/30/2013	108.1	138.2	246.3	8444	94	3236	11680
7/31/2013	106.2	136.6	242.8	8324	94	3236	11560
8/1/2013	103.7	137.8	241.5	8279	94	3236	11515
8/2/2013	103.0	138.0	241.0	8262	59	2021	10283
8/3/2013	101.9	136.9	238.8	8189	71	2446	10635
8/4/2013	101.8	137.0	238.8	8187	60	2052	10239
8/5/2013	103.6	137.7	241.3	8273	73	2519	10792
8/6/2013	104.0	137.8	241.8	8291	73	2519	10810
8/7/2013	103.4	137.5	240.9	8260	73	2509	10769
8/8/2013	103.0	137.2	240.1	8233	71	2428	10660
8/9/2013	103.0	137.4	240.5	8244	72	2471	10715
8/10/2013	104.0	137.6	241.7	8286	54	1863	10149
8/11/2013	103.4	137.1	240.6	8248	91	3120	11368
8/12/2013	104.7	137.6	242.3	8306	72	2484	10790
8/13/2013	104.2	137.8	242.1	8299	73	2508	10807
8/14/2013	103.9	137.5	241.4	8277	70	2396	10673
8/15/2013	103.9	137.1	241.0	8261	74	2545	10807
8/16/2013	102.6	136.4	239.0	8195	73	2490	10686
8/17/2013	102.6	136.3	239.0	8193	72	2475	10668
8/18/2013	103.0	136.3	239.4	8207	72	2472	10679
8/19/2013	101.7	135.6	237.3	8135	72	2469	10603
8/20/2013	101.6	135.5	237.1	8129	75	2564	10693
8/21/2013	102.7	136.1	238.8	8188	75	2576	10764
8/22/2013	120.2	136.0	256.2	8783	74	2536	11319
8/23/2013	112.2	137.4	249.6	8558	75	2576	11134
8/24/2013	112.4	137.4	249.8	8565	72	2453	11019
8/25/2013	112.0	137.6	249.7	8560	76	2598	11158
8/26/2013	111.7	137.7	249.4	8550	77	2651	11201
8/27/2013	110.7	137.1	247.7	8494	77	2643	11138
8/28/2013	110.2	136.9	247.1	8472	71	2418	10890
8/29/2013	110.0	136.9	246.8	8463	67	2304	10767
8/30/2013	109.6	136.8	246.4	8447	77	2630	11077
8/31/2013	108.6	136.3	244.9	8395	76	2620	11015
9/1/2013	108.7	136.5	245.2	8407	77	2629	11036
9/2/2013	109.5	136.9	246.3	8446	74	2549	10995
9/3/2013	108.7	136.3	245.0	8401	77	2632	11033
9/4/2013	107.6	135.8	243.3	8343	77	2636	10979
9/5/2013	108.2	138.0	246.2	8441	77	2645	11086
9/6/2013	108.9	138.4	247.3	8480	77	2654	11134
9/7/2013	109.7	137.6	247.3	8480	25	873	9353
9/8/2013	109.3	137.3	246.6	8455	94	3236	11691
9/9/2013	110.0	137.6	247.7	8491	204	6989	15480

9/10/2013	106.0	114.3	220.2	7551	63	2168	9718
9/11/2013	102.4	102.7	205.1	7031	94	3236	10267
9/12/2013	107.3	119.2	226.5	7767	94	3236	11003
9/13/2013	107.6	121.5	229.1	7854	94	3236	11090
9/14/2013	109.5	128.1	237.6	8147	7	245	8393
9/15/2013	110.3	135.8	246.2	8440	82	2818	11258
9/16/2013	109.5	135.4	244.9	8397	72	2478	10876
9/17/2013	111.2	136.8	248.1	8505	37	1268	9773
9/18/2013	111.0	136.3	247.3	8479	49	1675	10154
9/19/2013	106.5	135.9	242.4	8312	77	2624	10936
9/20/2013	97.5	137.9	235.5	8073	77	2628	10702
9/21/2013	97.7	138.3	235.9	8088	77	2625	10713
9/22/2013	97.5	138.3	235.9	8086	75	2586	10672
9/23/2013	96.8	138.1	234.9	8055	74	2547	10602
9/24/2013	97.9	138.8	236.7	8114	77	2634	10748
9/25/2013	99.0	139.6	238.6	8182	77	2637	10819
9/26/2013	98.9	139.4	238.3	8170	77	2632	10802
9/27/2013	98.5	138.5	237.1	8127	61	2080	10208
9/28/2013	98.8	138.8	237.6	8145	77	2625	10770
9/29/2013	99.5	139.4	238.8	8188	77	2628	10816
9/30/2013	99.1	139.3	238.4	8174	77	2637	10811
10/1/2013	97.8	138.8	236.6	8113	77	2637	10750
10/2/2013	97.7	139.2	236.8	8120	64	2179	10299
10/3/2013	96.4	138.7	235.0	8058	91	3106	11165
10/4/2013	95.9	138.7	234.5	8041	143	4908	12949
10/5/2013	95.9	138.5	234.4	8036	153	5251	13287
10/6/2013	100.9	140.2	241.1	8266	152	5219	13485
10/7/2013	102.0	141.0	243.0	8333	118	4038	12371
10/8/2013	98.5	139.7	238.3	8170	74	2540	10710
10/9/2013	97.3	139.0	236.2	8100	66	2252	10352
10/10/2013	98.9	139.7	238.6	8180	66	2257	10437
10/11/2013	98.9	139.4	238.2	8168	66	2254	10421
10/12/2013	101.7	139.9	241.6	8283	64	2210	10493
10/13/2013	107.8	139.9	247.7	8494	17	597	9091
10/14/2013	139.5	138.3	277.8	9524	94	3236	12760
10/15/2013	138.0	138.3	276.3	9474	94	3236	12710
10/16/2013	136.7	137.9	274.7	9417	7	250	9667
10/17/2013	137.0	137.7	274.7	9419	66	2259	11678
10/18/2013	142.8	139.4	282.3	9677	59	2009	11687
10/19/2013	139.7	138.2	277.9	9528	65	2236	11764
10/20/2013	140.2	138.6	278.8	9557	65	2235	11792
10/21/2013	141.6	139.9	281.5	9651	65	2240	11891
10/22/2013	141.6	139.2	280.8	9627	73	2495	12122
10/23/2013	140.7	139.0	279.6	9587	82	2820	12407
10/24/2013	141.3	139.6	280.9	9630	82	2823	12452
10/25/2013	141.2	139.4	280.7	9623	83	2829	12452
10/26/2013	140.8	140.6	281.3	9646	83	2831	12476
10/27/2013	130.1	139.9	270.0	9257	83	2833	12090
10/28/2013	122.6	140.9	263.5	9034	75	2588	11622
10/29/2013	115.6	141.3	256.9	8810	65	2244	11053
10/30/2013	111.3	142.1	253.4	8688	70	2400	11088
10/31/2013	107.4	144.5	251.9	8636	82	2828	11464
11/1/2013	104.0	143.6	247.6	8489	83	2830	11320
11/2/2013	99.7	136.6	236.3	8100	72	2482	10582
11/3/2013	95.3	118.2	213.6	7322	66	2248	9570
11/4/2013	93.1	101.4	194.5	6669	65	2243	8912
11/5/2013	70.6	97.5	168.1	5765	66	2250	8015
11/6/2013	36.1	101.1	137.2	4704	66	2255	6959
11/7/2013	41.1	99.8	140.9	4832	80	2759	7590
11/8/2013	55.9	101.9	157.8	5409	83	2847	8256
11/9/2013	56.1	100.1	156.2	5355	83	2852	8208
11/10/2013	54.1	99.1	153.2	5253	97	3326	8579
11/11/2013	44.1	108.2	152.3	5223	86	2951	8174
11/12/2013	52.0	90.7	142.6	4890	66	2261	7151
11/13/2013	50.5	86.8	137.3	4708	66	2276	6984
11/14/2013	50.6	81.8	132.4	4539	83	2850	7389
11/15/2013	48.9	81.5	130.4	4472	83	2860	7332
11/16/2013	47.7	85.7	133.4	4574	84	2866	7440
11/17/2013	46.6	85.5	132.2	4532	84	2867	7399
11/18/2013	45.9	85.6	131.5	4508	32	1114	5622
11/19/2013	45.5	85.3	130.8	4484	94	3236	7720
11/20/2013	79.4	64.8	144.3	4947	94	3236	8183
11/21/2013	121.2	67.8	188.9	6478	94	3236	9714
11/22/2013	120.3	85.5	205.9	7058	94	3236	10294
11/23/2013	120.6	65.0	185.6	6365	94	3236	9601
11/24/2013	119.9	77.3	197.2	6761	94	3236	9997
11/25/2013	126.4	25.6	151.9	5209	94	3236	8445
11/26/2013	126.0	33.8	159.8	5478	94	3236	8714
11/27/2013	119.3	80.1	199.4	6836	94	3236	10072
11/28/2013	121.2	81.0	202.2	6933	94	3236	10169
11/29/2013	122.4	81.8	204.2	7002	94	3236	10238
11/30/2013	122.0	81.8	203.8	6989	94	3236	10225
12/1/2013	121.8	81.9	203.7	6983	94	3236	10219
12/2/2013	121.8	81.4	203.2	6967	94	3236	10203
12/3/2013	121.7	82.6	204.3	7006	94	3236	10242
12/4/2013	120.5	81.9	202.4	6940	94	3236	10176
12/5/2013	122.0	83.6	205.6	7051	94	3236	10287
12/6/2013	125.2	37.3	162.5	5571	94	3236	8807
12/7/2013	129.9	8.0	137.9	4729	94	3236	7965
12/8/2013	131.2	3.5	134.7	4617	94	3236	7853
12/9/2013	131.9	4.9	136.9	4693	94	3236	7929
12/10/2013	129.4	9.8	139.1	4770	94	3236	8006
12/11/2013	129.8	3.3	133.2	4565	94	3236	7801
12/12/2013	129.1	1.5	130.5	4475	94	3236	7711
12/13/2013	130.2	0.1	130.2	4465	94	3236	7701
12/14/2013	128.3	23.7	152.1	5214	94	3236	8450
12/15/2013	124.7	118.3	243.0	8332	94	3236	11568
12/16/2013	124.1	118.3	242.4	8311	94	3236	11547
12/17/2013	122.1	115.4	237.5	8143	94	3236	11379
12/18/2013	120.9	118.9	239.8	8222	94	3236	11458
12/19/2013	123.7	125.1	248.8	8530	94	3236	11766
12/20/2013	123.7	127.6	251.3	8615	94	3236	11851
12/21/2013	124.3	128.2	252.5	8657	94	3236	11893
12/22/2013	120.4	128.9	249.3	8547	94	3236	11783
12/23/2013	121.4	118.0	239.4	8208	94	3236	11444
12/24/2013	124.0	128.8	252.8	8669	94	3236	11905
12/25/2013	125.2	128.2	253.4	8689	94	3236	11925
12/26/2013	125.3	123.6	248.9	8532	94	3236	11768
12/27/2013	124.6	121.6	246.2	8443	94	3236	11679
12/28/2013	122.0	120.2	242.1	8302	94	3236	11538
12/29/2013	123.2	122.5	245.7	8424	94	3236	11660
12/30/2013	125.1	124.3	249.4	8551	94	3236	11787
12/31/2013	126.6	128.0	254.6	8729	94	3236	11965

Assume overall avg discharge rate (2012-2014) if no data available

2014 RO Reject Discharge Volume

Annual Discharged Volume (BBLs) 4,424,810
Avg Discharge Rate (BPD) 12,123

	Permanent Unit/Skids				Temporary Unit		Daily Discharge Volume
	36FI101.PV GPM	36FI104.PV GPM	Combined RO Reject Dchg GPM	Combined RO Reject Dchg BBLs	Total RO Reject Discharge GPM	Total RO Reject Discharge/Day BBLs	
	SOUTH SKID REJECT FLOW 36FI101.PV - Average	NORTH SKID REJECT FLOW 36FI104.PV - Average					
Timestamp							
1/1/2014	126.7	126.8	253.5	8693	94	3236	11929
1/2/2014	127.6	125.5	253.1	8677	94	3236	11913
1/3/2014	127.4	129.8	257.2	8818	94	3236	12054
1/4/2014	127.3	125.4	252.7	8665	94	3236	11901
1/5/2014	126.3	127.8	254.1	8713	94	3236	11949
1/6/2014	126.1	121.1	247.2	8476	94	3236	11712
1/7/2014	126.8	119.9	246.7	8457	94	3236	11693
1/8/2014	127.1	121.4	248.5	8519	157	5366	13885
1/9/2014	127.5	121.8	249.3	8547	66	2259	10806
1/10/2014	128.9	127.2	256.1	8782	153	5241	14023
1/11/2014	125.9	122.4	248.3	8512	153	5257	13769
1/12/2014	126.9	121.7	248.5	8520	154	5275	13795
1/13/2014	127.1	121.8	248.8	8531	154	5294	13825
1/14/2014	126.1	116.6	242.7	8321	154	5297	13618
1/15/2014	124.6	117.4	242.0	8296	155	5299	13594
1/16/2014	125.3	116.1	241.4	8277	154	5290	13567
1/17/2014	124.3	117.5	241.9	8293	155	5304	13596
1/18/2014	125.4	117.7	243.0	8333	154	5293	13625
1/19/2014	124.5	120.0	244.5	8382	155	5305	13687
1/20/2014	124.6	111.4	236.0	8090	155	5317	13408
1/21/2014	124.5	114.6	239.1	8197	157	5371	13567
1/22/2014	125.2	112.7	237.9	8157	157	5382	13539
1/23/2014	124.8	113.4	238.2	8167	159	5448	13615
1/24/2014	125.2	122.8	248.0	8503	157	5397	13900
1/25/2014	123.4	116.9	240.3	8240	156	5354	13593
1/26/2014	127.9	127.3	255.2	8750	154	5282	14032
1/27/2014	128.0	129.5	257.5	8828	130	4446	13274
1/28/2014	125.3	116.9	242.2	8303	128	4373	12676
1/29/2014	125.4	117.7	243.1	8334	127	4367	12701
1/30/2014	123.6	118.8	242.4	8310	128	4375	12685
1/31/2014	122.1	125.9	248.0	8503	128	4384	12887
2/1/2014	122.0	119.1	241.1	8266	128	4390	12655
2/2/2014	121.0	119.6	240.5	8247	106	3645	11892
2/3/2014	121.6	119.3	240.9	8259	109	3723	11982
2/4/2014	121.9	120.6	242.5	8314	110	3781	12094
2/5/2014	123.8	121.6	245.4	8413	111	3796	12210
2/6/2014	121.3	117.6	238.8	8188	111	3800	11988
2/7/2014	121.7	118.4	240.1	8231	115	3932	12162
2/8/2014	121.8	120.9	242.7	8322	138	4718	13040
2/9/2014	122.0	118.9	240.9	8259	105	3605	11864
2/10/2014	122.9	117.5	240.5	8245	105	3589	11834
2/11/2014	125.0	119.3	244.3	8376	105	3590	11965
2/12/2014	125.3	119.0	244.3	8375	105	3602	11977
2/13/2014	125.3	116.8	242.2	8303	105	3596	11899
2/14/2014	124.2	117.0	241.2	8271	106	3630	11901
2/15/2014	122.3	104.0	226.3	7759	105	3591	11350
2/16/2014	122.1	105.4	227.5	7800	104	3579	11378
2/17/2014	124.7	104.2	228.9	7849	104	3567	11416
2/18/2014	122.5	103.9	226.4	7764	102	3489	11253
2/19/2014	123.4	103.5	226.9	7778	102	3480	11258
2/20/2014	122.0	100.9	222.9	7643	102	3486	11129
2/21/2014	99.1	99.3	198.4	6803	101	3460	10263
2/22/2014	95.4	99.7	195.2	6691	101	3457	10148
2/23/2014	95.9	100.2	196.0	6722	102	3502	10224
2/24/2014	94.6	100.2	194.9	6681	103	3546	10227
2/25/2014	96.9	99.3	196.2	6726	104	3551	10277
2/26/2014	95.6	99.7	195.3	6696	104	3555	10251
2/27/2014	98.5	99.7	198.1	6793	104	3550	10343
2/28/2014	99.1	99.8	198.8	6817	104	3561	10378
3/1/2014	97.2	99.3	196.5	6738	105	3583	10321
3/2/2014	96.1	99.1	195.2	6692	105	3585	10277
3/3/2014	96.0	96.8	192.8	6609	105	3584	10193
3/4/2014	92.9	77.1	170.1	5832	104	3571	9402
3/5/2014	105.0	98.1	203.1	6965	104	3576	10541
3/6/2014	145.2	97.4	242.6	8319	104	3553	11872
3/7/2014	145.6	98.2	243.8	8360	104	3561	11921
3/8/2014	145.2	97.4	242.6	8317	104	3567	11884
3/9/2014	145.4	93.9	239.3	8204	105	3587	11791
3/10/2014	145.9	87.5	233.4	8002	105	3591	11593
3/11/2014	147.5	81.7	229.2	7859	104	3568	11427
3/12/2014	147.4	88.0	235.4	8070	103	3537	11608
3/13/2014	148.7	93.3	242.0	8296	103	3530	11825
3/14/2014	149.1	94.7	243.8	8358	104	3555	11913
3/15/2014	149.4	95.9	245.2	8408	104	3565	11972
3/16/2014	147.7	87.7	235.4	8072	104	3579	11651
3/17/2014	148.5	69.9	218.4	7489	104	3580	11069
3/18/2014	147.3	85.5	232.8	7983	117	4025	12008
3/19/2014	107.3	64.7	172.1	5900	123	4229	10129
3/20/2014	107.9	46.0	153.9	5276	119	4089	9365
3/21/2014	78.8	87.9	166.7	5714	120	4122	9836
3/22/2014	152.0	81.5	233.5	8004	123	4229	12234
3/23/2014	153.0	84.4	237.4	8138	126	4329	12468
3/24/2014	155.6	75.0	230.6	7905	142	4859	12765
3/25/2014	155.2	71.9	227.1	7786	71	2439	10225
3/26/2014	155.2	96.9	252.2	8646	71	2436	11082
3/27/2014	152.9	95.0	248.0	8501	71	2442	10943
3/28/2014	154.5	102.6	257.1	8816	118	4029	12845
3/29/2014	154.2	98.1	252.2	8648	105	3607	12255
3/30/2014	154.7	83.1	237.8	8152	59	2016	10168
3/31/2014	154.1	81.9	236.0	8093	59	2024	10116
4/1/2014	153.9	71.6	225.5	7732	109	3722	11454
4/2/2014	154.9	76.2	231.1	7923	133	4574	12498
4/3/2014	155.4	76.6	232.0	7954	135	4612	12566
4/4/2014	151.3	68.3	219.7	7531	135	4624	12155
4/5/2014	155.3	80.8	236.1	8095	134	4600	12694
4/6/2014	156.9	79.7	236.6	8111	135	4612	12723
4/7/2014	156.1	79.9	236.0	8092	135	4630	12722
4/8/2014	156.2	80.2	236.3	8103	115	3939	12042
4/9/2014	155.7	79.7	235.4	8071	115	3937	12008
4/10/2014	156.1	79.2	235.3	8068	115	3951	12019
4/11/2014	153.4	77.6	231.0	7919	116	3977	11897
4/12/2014	155.0	78.5	233.5	8004	103	3535	11539
4/13/2014	155.5	77.8	233.3	8000	96	3287	11287
4/14/2014	156.1	77.6	233.6	8010	97	3326	11337
4/15/2014	152.6	77.6	230.2	7894	102	3502	11396
4/16/2014	158.0	76.6	234.6	8043	88	3000	11043
4/17/2014	157.0	75.8	232.8	7982	45	1530	9512
4/18/2014	155.1	76.1	231.2	7926	90	3073	10999
4/19/2014	154.4	75.9	230.2	7894	93	3184	11077
4/20/2014	154.3	76.3	230.5	7903	95	3245	11148
4/21/2014	155.1	76.7	231.7	7944	95	3273	11217
4/22/2014	156.7	74.5	231.3	7929	95	3272	11201
4/23/2014	156.5	76.3	232.8	7980	48	1638	9618
4/24/2014	156.3	78.3	234.6	8045	93	3193	11238
4/25/2014	153.9	78.7	232.6	7974	45	1539	9513
4/26/2014	154.1	79.4	233.5	8004	94	3208	11212
4/27/2014	154.6	78.6	233.2	7995	96	3292	11286
4/28/2014	154.7	79.5	234.2	8030	96	3276	11306
4/29/2014	155.1	74.7	229.7	7877	93	3175	11053
4/30/2014	135.3	73.2	208.5	7149	111	3808	10957
5/1/2014	161.7	83.6	245.3	8412	67	2292	10704
5/2/2014	168.9	97.5	266.3	9131	112	3824	12955

5/3/2014	167.6	99.3	266.9	9150	44	1497	10647
5/4/2014	168.1	99.4	267.5	9170	44	1518	10688
5/5/2014	166.9	98.7	265.6	9105	45	1538	10643
5/6/2014	167.8	95.7	263.4	9033	45	1559	10591
5/7/2014	165.9	98.9	264.9	9081	46	1571	10651
5/8/2014	167.9	99.1	267.0	9156	46	1581	10737
5/9/2014	166.3	99.1	265.4	9099	46	1580	10679
5/10/2014	167.6	98.8	266.4	9133	45	1551	10684
5/11/2014	166.5	99.1	265.7	9109	46	1571	10680
5/12/2014	166.9	98.7	265.6	9107	46	1583	10691
5/13/2014	165.7	99.5	265.2	9093	47	1600	10693
5/14/2014	166.6	99.6	266.2	9125	47	1612	10737
5/15/2014	167.5	101.3	268.8	9217	119	4094	13311
5/16/2014	168.3	100.7	269.0	9224	119	4089	13312
5/17/2014	166.4	100.2	266.6	9140	119	4096	13236
5/18/2014	168.1	99.8	267.9	9185	116	3977	13162
5/19/2014	167.8	100.9	268.6	9211	115	3944	13154
5/20/2014	168.4	99.0	267.4	9167	118	4037	13205
5/21/2014	166.7	99.1	265.8	9114	119	4087	13201
5/22/2014	167.6	100.1	267.8	9181	121	4134	13314
5/23/2014	168.0	101.1	269.0	9224	121	4165	13389
5/24/2014	168.6	99.5	268.1	9192	115	3946	13138
5/25/2014	167.1	99.6	266.7	9145	69	2376	11522
5/26/2014	167.9	99.2	267.2	9160	70	2417	11577
5/27/2014	166.5	99.8	266.3	9129	71	2451	11580
5/28/2014	164.2	101.3	265.6	9105	122	4189	13293
5/29/2014	159.5	103.6	263.1	9020	124	4256	13276
5/30/2014	159.8	104.1	263.9	9048	136	4648	13697
5/31/2014	158.3	102.5	260.8	8942	144	4926	13868
6/1/2014	159.9	105.4	265.3	9097	128	4400	13497
6/2/2014	158.7	105.9	264.6	9071	128	4397	13467
6/3/2014	135.2	99.6	234.8	8049	131	4488	12537
6/4/2014	108.6	93.2	201.8	6918	132	4530	11448
6/5/2014	108.7	93.0	201.8	6917	133	4560	11477
6/6/2014	108.9	92.6	201.4	6907	132	4526	11433
6/7/2014	108.4	91.1	199.4	6838	53	1817	8655
6/8/2014	108.5	90.8	199.3	6832	133	4548	11380
6/9/2014	107.5	89.9	197.3	6766	136	4659	11425
6/10/2014	106.3	89.2	195.5	6703	138	4741	11443
6/11/2014	109.0	89.9	198.9	6818	139	4768	11587
6/12/2014	109.2	90.5	199.6	6845	139	4766	11611
6/13/2014	110.8	91.4	202.2	6931	143	4896	11827
6/14/2014	110.5	92.0	202.5	6943	144	4947	11889
6/15/2014	109.9	91.5	201.4	6904	147	5036	11940
6/16/2014	109.4	91.5	200.8	6886	149	5115	12001
6/17/2014	109.6	91.3	200.9	6887	151	5194	12080
6/18/2014	110.4	92.3	202.7	6949	151	5187	12136
6/19/2014	110.6	91.2	201.7	6916	153	5251	12168
6/20/2014	111.0	91.9	203.0	6959	154	5274	12233
6/21/2014	110.6	91.0	201.6	6913	155	5308	12220
6/22/2014	110.2	91.5	201.6	6913	155	5312	12225
6/23/2014	109.8	90.6	200.4	6872	156	5356	12228
6/24/2014	110.7	92.5	203.2	6967	156	5344	12311
6/25/2014	111.3	91.8	203.1	6962	65	2223	9185
6/26/2014	110.8	92.3	203.1	6962	64	2205	9167
6/27/2014	110.3	91.4	201.7	6915	64	2202	9117
6/28/2014	109.8	91.3	201.0	6893	66	2252	9145
6/29/2014	110.6	90.8	201.3	6903	148	5071	11973
6/30/2014	110.1	90.5	200.6	6877	147	5052	11930
7/1/2014	109.3	89.8	199.1	6826	148	5062	11888
7/2/2014	110.5	90.3	200.8	6883	149	5101	11985
7/3/2014	173.0	146.1	319.1	10940	149	5097	16037
7/4/2014	122.6	183.6	306.2	10499	150	5156	15655
7/5/2014	122.0	181.8	303.8	10414	133	4568	14982
7/6/2014	121.0	179.3	300.3	10296	129	4415	14711
7/7/2014	119.6	179.8	299.3	10263	132	4513	14777
7/8/2014	120.7	178.4	299.1	10254	130	4473	14726
7/9/2014	128.0	166.6	294.6	10100	131	4495	14595
7/10/2014	131.5	163.0	294.5	10098	133	4554	14651
7/11/2014	132.2	162.5	294.8	10107	122	4174	14280
7/12/2014	131.3	159.7	291.1	9979	124	4248	14227
7/13/2014	130.0	156.0	286.0	9806	126	4304	14110
7/14/2014	129.0	155.2	284.1	9741	128	4378	14119
7/15/2014	129.7	154.5	284.2	9744	128	4395	14139
7/16/2014	130.6	154.9	285.5	9787	130	4472	14259
7/17/2014	129.2	153.1	282.4	9681	132	4535	14216
7/18/2014	127.1	150.7	277.8	9524	133	4568	14093
7/19/2014	128.0	150.0	278.0	9530	136	4661	14192
7/20/2014	127.5	148.6	276.1	9467	138	4742	14208
7/21/2014	126.6	146.9	273.5	9378	140	4790	14168
7/22/2014	126.7	147.0	273.7	9383	140	4806	14188
7/23/2014	127.9	148.6	276.5	9479	140	4793	14273
7/24/2014	127.3	147.8	275.2	9434	139	4767	14201
7/25/2014	132.9	148.0	280.9	9631	143	4910	14541
7/26/2014	131.9	146.9	278.8	9560	145	4957	14517
7/27/2014	125.9	145.7	271.6	9311	145	4960	14271
7/28/2014	126.2	145.3	271.6	9311	80	2754	12066
7/29/2014	126.0	145.2	271.2	9297	68	2338	11635
7/30/2014	127.1	78.9	206.0	7063	66	2259	9323
7/31/2014	125.7	111.8	237.5	8141	117	4028	12169
8/1/2014	125.3	110.4	235.7	8080	60	2059	10139
8/2/2014	126.1	111.6	237.7	8149	61	2102	10251
8/3/2014	125.4	110.7	236.0	8093	119	4077	12170
8/4/2014	125.2	109.9	235.2	8062	120	4124	12187
8/5/2014	125.6	110.9	236.5	8108	121	4158	12265
8/6/2014	126.6	112.7	239.3	8204	122	4193	12397
8/7/2014	126.5	112.2	238.7	8184	124	4236	12420
8/8/2014	130.5	112.6	243.1	8334	125	4273	12608
8/9/2014	130.9	112.0	242.9	8326	126	4323	12650
8/10/2014	131.3	112.3	243.6	8352	127	4366	12718
8/11/2014	132.0	113.8	245.9	8429	128	4391	12820
8/12/2014	132.7	114.3	247.0	8469	128	4386	12855
8/13/2014	121.2	111.5	232.8	7981	128	4390	12371
8/14/2014	126.6	111.0	237.6	8147	129	4439	12586
8/15/2014	129.1	114.3	243.4	8347	130	4443	12790
8/16/2014	127.2	110.7	237.9	8157	130	4442	12599
8/17/2014	127.2	107.9	235.1	8060	129	4423	12483
8/18/2014	128.1	109.5	237.6	8147	128	4398	12545
8/19/2014	130.9	113.5	244.4	8378	129	4431	12809
8/20/2014	131.6	113.5	245.1	8404	130	4464	12868
8/21/2014	134.1	105.6	239.7	8219	130	4472	12691
8/22/2014	135.2	95.4	230.6	7906	130	4472	12378
8/23/2014	134.1	94.3	228.4	7831	130	4467	12298
8/24/2014	135.6	95.6	231.2	7925	129	4437	12362
8/25/2014	135.3	96.2	231.5	7936	129	4430	12365
8/26/2014	134.4	93.2	227.6	7803	129	4424	12227
8/27/2014	134.7	95.3	230.0	7886	129	4419	12305
8/28/2014	134.7	93.6	228.3	7828	130	4465	12293
8/29/2014	132.0	93.1	225.1	7719	130	4457	12176
8/30/2014	131.9	92.5	224.4	7692	130	4451	12144
8/31/2014	132.2	93.1	225.3	7725	129	4432	12157
9/1/2014	133.3	92.7	226.0	7748	129	4415	12163
9/2/2014	133.5	93.5	227.0	7781	128	4394	12175
9/3/2014	129.5	85.5	215.0	7371	128	4405	11777
9/4/2014	116.2	130.2	246.5	8450	130	4448	12898
9/5/2014	119.5	132.5	251.9	8638	129	4431	13069
9/6/2014	117.9	131.7	249.6	8559	130	4449	13008
9/7/2014	118.4	132.8	251.2	8612	130	4467	13079
9/8/2014	120.4	130.9	251.4	8618	130	4455	13073
9/9/2014	121.0	131.4	252.4	8653	129	4423	13077

9/10/2014	120.1	129.4	249.5	8553	128	4387	12941
9/11/2014	118.6	126.6	245.2	8407	130	4446	12853
9/12/2014	119.3	128.1	247.4	8482	129	4424	12906
9/13/2014	117.1	127.9	245.0	8400	129	4421	12821
9/14/2014	116.3	128.7	245.0	8400	131	4481	12881
9/15/2014	117.4	129.5	246.9	8464	130	4458	12922
9/16/2014	119.8	131.6	251.5	8621	131	4489	13110
9/17/2014	121.8	133.3	255.0	8744	130	4470	13214
9/18/2014	121.8	132.8	254.6	8729	129	4424	13152
9/19/2014	121.6	132.8	254.5	8724	128	4392	13116
9/20/2014	121.2	132.6	253.8	8703	127	4356	13059
9/21/2014	121.7	131.0	252.7	8664	130	4474	13138
9/22/2014	123.1	132.9	256.1	8779	130	4467	13246
9/23/2014	125.0	136.8	261.8	8974	129	4433	13407
9/24/2014	126.6	140.2	266.8	9147	128	4388	13535
9/25/2014	126.8	141.2	268.0	9189	127	4341	13530
9/26/2014	127.5	141.7	269.2	9229	123	4222	13451
9/27/2014	123.0	144.4	267.4	9167	117	4008	13175
9/28/2014	117.7	147.1	264.8	9079	117	4018	13097
9/29/2014	118.2	147.3	265.6	9106	122	4175	13281
9/30/2014	117.7	147.0	264.8	9078	123	4201	13278
10/1/2014	117.7	147.9	265.6	9106	120	4112	13219
10/2/2014	120.1	147.3	267.4	9168	63	2157	11325
10/3/2014	128.2	143.0	271.3	9300	63	2150	11451
10/4/2014	127.9	143.1	271.0	9291	62	2127	11418
10/5/2014	126.2	142.0	268.2	9195	108	3700	12895
10/6/2014	124.7	140.9	265.6	9105	43	1490	10596
10/7/2014	126.8	142.1	268.9	9220	93	3195	12414
10/8/2014	126.7	121.8	248.5	8520	71	2436	10956
10/9/2014	125.5	117.6	243.1	8334	95	3242	11577
10/10/2014	127.8	121.0	248.8	8529	97	3330	11859
10/11/2014	127.4	120.7	248.0	8504	97	3315	11819
10/12/2014	125.6	117.8	243.4	8344	47	1598	9943
10/13/2014	129.1	122.2	251.3	8615	138	4717	13332
10/14/2014	127.6	121.4	249.0	8538	93	3175	11713
10/15/2014	127.4	121.1	248.4	8518	47	1596	10114
10/16/2014	126.6	120.2	246.8	8462	47	1597	10060
10/17/2014	127.1	119.9	247.0	8470	47	1605	10075
10/18/2014	126.7	119.4	246.1	8439	47	1615	10054
10/19/2014	126.4	120.3	246.7	8457	47	1616	10073
10/20/2014	127.4	120.8	248.2	8509	93	3179	11687
10/21/2014	128.0	121.2	249.2	8544	46	1576	10120
10/22/2014	127.6	120.4	248.0	8504	46	1592	10096
10/23/2014	126.4	119.0	245.5	8415	47	1608	10024
10/24/2014	125.8	118.7	244.5	8382	47	1615	9997
10/25/2014	127.6	120.8	248.4	8515	95	3273	11788
10/26/2014	128.0	121.1	249.0	8538	48	1644	10182
10/27/2014	128.0	121.3	249.3	8548	96	3279	11827
10/28/2014	128.2	120.3	248.4	8518	98	3362	11880
10/29/2014	128.0	119.9	247.9	8500	96	3307	11807
10/30/2014	127.5	120.1	247.6	8490	47	1625	10114
10/31/2014	128.9	121.2	250.1	8575	94	3210	11785
11/1/2014	128.5	121.1	249.5	8556	96	3291	11847
11/2/2014	128.1	120.7	248.8	8531	48	1644	10175
11/3/2014	127.9	120.5	248.4	8517	48	1631	10148
11/4/2014	129.7	122.3	252.0	8639	46	1564	10203
11/5/2014	129.4	122.6	252.0	8639	46	1578	10218
11/6/2014	132.5	123.1	255.7	8766	47	1612	10378
11/7/2014	136.3	123.3	259.6	8900	91	3128	12028
11/8/2014	137.3	122.5	259.8	8908	44	1523	10431
11/9/2014	137.8	121.8	259.6	8902	45	1542	10444
11/10/2014	140.2	122.9	263.1	9022	96	3297	12319
11/11/2014	139.1	122.3	261.3	8960	94	3210	12171
11/12/2014	139.5	122.6	262.0	8984	96	3278	12262
11/13/2014	140.7	123.4	264.0	9053	94	3216	12269
11/14/2014	139.4	123.4	262.8	9011	95	3263	12274
11/15/2014	138.1	122.6	260.7	8938	95	3263	12201
11/16/2014	139.2	122.9	262.1	8985	95	3268	12253
11/17/2014	138.5	123.1	261.6	8970	95	3262	12232
11/18/2014	139.1	123.4	262.5	9000	96	3298	12299
11/19/2014	139.5	123.3	262.8	9010	96	3290	12299
11/20/2014	139.8	123.4	263.1	9022	96	3284	12306
11/21/2014	144.8	122.7	267.5	9172	97	3309	12481
11/22/2014	163.0	124.1	287.1	9845	97	3323	13168
11/23/2014	162.9	123.5	286.4	9819	97	3343	13162
11/24/2014	166.1	125.1	291.2	9985	98	3367	13352
11/25/2014	166.3	124.8	291.1	9981	99	3402	13383
11/26/2014	168.2	125.5	293.7	10069	100	3413	13482
11/27/2014	166.5	124.4	290.9	9974	100	3438	13411
11/28/2014	168.3	125.6	293.9	10076	98	3345	13421
11/29/2014	168.2	125.3	293.5	10062	99	3381	13442
11/30/2014	168.6	125.9	294.5	10097	99	3400	13496
12/1/2014	167.6	124.3	292.0	10010	100	3421	13431
12/2/2014	167.9	126.1	293.9	10078	101	3469	13547
12/3/2014	127.5	124.5	252.0	8639	102	3489	12128
12/4/2014	97.6	122.6	220.2	7550	102	3511	11060
12/5/2014	97.6	122.7	220.3	7555	102	3509	11064
12/6/2014	98.4	122.7	221.1	7579	103	3548	11127
12/7/2014	98.5	122.7	221.2	7585	104	3557	11142
12/8/2014	99.8	123.2	223.1	7648	104	3568	11216
12/9/2014	98.9	122.4	221.3	7587	105	3603	11189
12/10/2014	101.1	123.4	224.4	7695	106	3631	11326
12/11/2014	100.4	122.7	223.2	7652	106	3632	11284
12/12/2014	100.4	122.6	223.0	7647	107	3653	11299
12/13/2014	102.2	123.4	225.5	7733	108	3688	11420
12/14/2014	107.9	123.3	231.2	7926	108	3708	11633
12/15/2014	106.0	122.4	228.4	7831	109	3737	11567
12/16/2014	107.0	122.6	229.6	7873	110	3771	11645
12/17/2014	108.0	123.6	231.7	7943	111	3791	11734
12/18/2014	106.7	122.6	229.3	7862	111	3815	11676
12/19/2014	107.2	124.2	231.5	7936	112	3844	11780
12/20/2014	108.7	125.9	234.6	8043	114	3905	11948
12/21/2014	106.0	124.7	230.7	7911	115	3927	11838
12/22/2014	105.6	123.3	228.9	7848	116	3980	11828
12/23/2014	106.3	123.6	229.9	7881	118	4031	11912
12/24/2014	109.0	125.9	234.9	8055	119	4063	12118
12/25/2014	106.3	141.3	247.6	8488	120	4116	12604
12/26/2014	107.3	169.9	277.2	9504	136	4680	14184
12/27/2014	113.1	165.6	278.7	9556	140	4788	14344
12/28/2014	132.1	170.6	302.7	10378	140	4800	15178
12/29/2014	131.2	169.9	301.1	10325	94	3236	13561
12/30/2014	132.7	170.9	303.6	10410	94	3236	13646
12/31/2014	134.3	171.4	305.7	10483	94	3236	13719

Assume overall avg discharge rate (2012-2014) if no data available

Chavez, Carl J, EMNRD

From: Brancard, Bill, EMNRD
Sent: Thursday, April 09, 2015 2:31 PM
To: Denise McWatters; Holder, Mike (Mike.Holder@hollyfrontier.com)
(Mike.Holder@hollyfrontier.com)
Cc: Marks, Allison, EMNRD; Griswold, Jim, EMNRD; Chavez, Carl J, EMNRD
Subject: Navajo Refinery: DP GW-028
Attachments: Navajo LT violations 4-15.pdf

Denise, Mike,

Thank you for the meeting on March 27 regarding the third RO unit. We have not heard from you all since and we need to keep moving ahead on this issue. Please start by sending us the revised discharge data.

Thank you,
Bill Brancard

General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe NM 87505
505.476.3210
Bill.brancard@state.nm.us

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Bill Brancard, General Counsel
Office of General Counsel



April 9, 2015

Denise C. McWatters
Senior Vice President General Counsel
HollyFrontier
2828 N. Harwood Suite 1300
Dallas TX 75201-1507

Navajo Refinery: New Mexico OCD Discharge Permit GW-028

Dear Ms McWatters:

Thank you for the meeting on March 27, 2015 with you and Mike Holder. At the meeting, you provided information to the New Mexico Oil Conservation Division ("OCD") about additional unreported discharges of reverse osmosis reject water at the Navajo Refinery ("facility").

The Discharge Permit for the facility (GW-028, issued August 22, 2012 or "Permit"), requires in Section 2.F that the permittee submit an annual discharge permit report which includes "a summary of discharge activities, including the quality and volume of the discharge". Based on the information provided at the meeting, the annual discharge permit reports previously submitted by the permittee during the term of the Permit do not include all the discharges at the facility. You also informed us that the actual discharge volumes likely exceed the discharge volumes permitted under Section 4.A of the Permit.

Therefore, Navajo Refining Company must immediately submit revised annual discharge permit reports covering the years 2012, 2013 and 2014. Based on the information in these reports, OCD will determine what further steps are necessary. You indicated that HollyFrontier is willing to work with OCD to amend the Permit and to enter into a possible agreed compliance order. We appreciate your cooperation in this matter.

Sincerely,

A handwritten signature in blue ink that reads "Bill Brancard".

Bill Brancard
General Counsel