

Consent Decree (90-5-2-1-10811) - 1:15-cv-00841 RBJ

End of Phase Report for Tank Systems in Group I

February 27, 2017

Table of Contents

Intro	duction	and Purpose	1
1.0	Engine	ering Design Standard Overview	3
	1.1	Vapor Control Technologies	3
	1.2	Site-specific Construction Constraints	4
	1.3	Tank-to-combustor piping system design considerations	4
	1.4	Separator liquid dump characteristics	4
	1.5	Storage tanks headspace	4
	1.6	Other Vapor Control System design considerations	4
2.0	Require	ements, Constraints, and Limitations of Operation and/or Design Parameters	4
3.0	Summa	ry of Design or Implementation Challenges Encountered	4
4.0	Summa	ry of Vapor Control System Operations	 5
5.0	Summa	ry of Other Significant Observations	5
6.0	Certific	ation	<u></u> 6

<u>Appendices</u>

<u>Appendix A – Summary of Reliable Information for PG1 Certified Locations</u>

Introduction and Purpose

Consistent with the requirements of Paragraph 59 of the Consent Decree ("CD") between the United States, the State of Colorado ("State"), and Noble Energy, Inc. ("Noble"), Civil Action No. 1:15-cv-00841-RBJ, entered by the U.S. District Court for the District of Colorado as final judgment on June 2, 2015, Noble has prepared this third End of Phase Report ("Third Report") for Tank Systems¹ associated with Well Production Operations which produced gas into sales lines that, as of August 17, 2014, had line pressures equal to or greater than 233 pounds per square inch (psi), met the Engineering Evaluation deadline of December 31, 2015 and were not part of the Tank Systems discussed in the First or Second End of Phase Reports. These Tank Systems are also referred to as "Group I" Tank Systems.

The Consent Decree requires an End of Phase Report after the Engineering Evaluation deadline for each group of Tank Systems to provide a public summary of useful information gleaned from Engineering Evaluations, and any modifications to improve capture and control achieved by Vapor Control Systems.

Noble submitted its first End of Phase Report ("First Report") on July 30, 2015. The First Report addressed Tanks Systems that had, as of September 2014, actual uncontrolled annual volatile organic compound ("VOC") emissions of 50 tons per year ("TPY") or more with an Engineering Evaluation deadline of May 1, 2015. Noble received approval of its First Report on December 14, 2015 and in turn made it publically available at noblecolorado.com.

Noble submitted its second End of Phase Report ("Second Report") on January 29, 2016. The Second Report addressed Tanks Systems that were part of the Cross Section Sampling and Analysis with an Engineering Evaluation deadline of July 1, 2015. Noble received approval of its Second Report on March 16, 2016 and in turn made it publically available at noblecolorado.com.

In some instances, information provided by Noble in its First and Second Reports remains applicable to this Third Report. This is due to no material changes to the design and selection of equipment to control Tank System vapors since the previous First and Second reporting periods. Where appropriate, Noble has included notations directing the reader to the First or Second Report instead of including identical details in this Third Report.

¹ Pursuant to Section III of the CD, "Tank System" shall mean one or more tanks that store Condensate and share a common Vapor Control System.

As noted in the First and Second Reports:

- An Engineering Evaluation is the process of applying an appropriate Engineering Design Standard² to determine if the existing Vapor Control System³ at each Tank System is adequately designed and sized to handle the Potential Peak Instantaneous Vapor Flow Rate ("PPIVFR");⁴
- 2. Noble's oil and natural gas production operations in the Denver-Julesburg ("D-J") Basin include the use of Condensate⁵ tanks, which have the potential to produce vapors from flashing⁶ and working and breathing⁷ losses;
- 3. Noble's operations also include the use of produced water storage tanks that may also produce vapors from flashing and working and breathing losses such that the associated emissions are considered by the Engineering Evaluations when they are connected to a Tank System's Vapor Control System;
- 4. Vapor Control Systems are installed on Noble Tank Systems to route vapors from a Tank System to an emission control device; and

² Pursuant to Section III of the CD, "Engineering Design Standard" shall mean an engineering standard developed by Noble pursuant to Paragraph 9 (Engineering Design Standard).

³ Pursuant to Section III of the CD, "Vapor Control System" shall mean the system used to contain, convey, and control vapors from Condensate (including flashing, working, breathing, and standing losses, as well as any unintentional gas carry-through to Condensate tanks) at a Tank System. A Vapor Control System includes a Tank System, piping to convey vapors from a Tank System to a combustion device and/or vapor recovery unit, fittings, connectors, liquid knockout vessels or vapor control piping, openings on Condensate tanks (such as pressure relief valves ("PRVs") and thief hatches), and emission control devices.

⁴ Pursuant to Section III of the CD, "Potential Peak Instantaneous Vapor Flow Rate" shall mean the maximum instantaneous amount of vapors routed to a Vapor Control System during Normal Operations (defined as all periods of operation, excluding Malfunctions, and explicitly including, for storage tanks at well production facilities, liquid dumps from the Separator), including flashing, working, breathing, and standing losses, as determined using the Modeling Guideline (defined as the modeling guideline developed by Noble pursuant to Paragraph 8 (Development of a Modeling Guideline)).

⁵ Pursuant to Section III of the CD, "Condensate" shall mean hydrocarbon liquids that remain liquid at standard conditions (68 degrees Fahrenheit and 29.92 inches mercury) and are formed by condensation from, or produced with, natural gas, and which have an American Petroleum Institute gravity ("API gravity") of 40 degrees or greater.

⁶ Flashing occurs when Condensate or produced water is dumped from pressurized two-phase and three-phase Separators (Pursuant to Section III of the CD, a "Separator" is a pressurized vessel used for separating a well stream into gaseous and liquid components) into storage tanks, at or near atmospheric pressure, causing vapors to be released or "flashed" into a gaseous state as a result of the pressure drop.

⁷ Working and breathing losses are vapors that may be released from Condensate due to liquid level changes and temperature fluctuations.

5. Where flashing, breathing, and/or working emissions have the potential to exceed Vapor Control System capacity, Vapor Control System modifications are necessary to ensure proper capture and control of emissions.

For purposes of the Tank Systems covered by this Third End of Phase Report, Noble did not create a general Engineering Design Standard for use at multiple Tank Systems. Rather, Noble used a site-specific Engineering Design Standard to ensure a Vapor Control System was designed and adequately sized for the PPIVFR of the Tank System.

This Third End of Phase Report covers the Vapor Control Systems for 111 Group I Tank Systems⁸.

As was the case with the First and Second Reports, this Third End of Phase Report is also divided into five (5) sections that, based on the best currently available information, address the following:

- Section 1: An overview of the Engineering Design Standard considerations identified in Paragraph 9 of the CD;
- Section 2: A discussion of requirements, constraints, and limitations of operation and/or design parameters for the Tank Systems and Vapor Control Systems;
- Section 3: A summary of design and implementation challenges;
- Section 4: A summary of Vapor Control Systems operations; and
- Section 5: A discussion of any other significant observations associated with the Tank Systems and Vapor Control Systems.

1. Engineering Design Standard Overview

During this reporting period, Noble did not develop a Three Line Pressure Grouping or subset grouping Engineering Design Standard for the Tank Systems. Instead, Noble developed individual site-specific Engineering Design Standards for those Tank Systems covered during this reporting period.

1.1 <u>Vapor Control Technologies</u>

As these considerations did not change, please refer to the First Report.

⁸ Of the 450 Tank Systems that were included in the January 27th, 2016 Certification of Completion Report for Group I Tank Systems, 111 were certified as complete and 339 were certified as shut in.

1.2 <u>Site-specific Construction Constraints</u>

As these considerations did not change, please refer to the First Report.

1.3 <u>Tank-to-combustor piping system design considerations</u>

As these considerations did not change, please refer to the First Report.

1.4 <u>Separator liquid dump characteristics</u>

As these considerations did not change, please refer to the First Report.

1.5 Storage tank headspace

As these considerations did not change, please refer to the First Report.

1.6 Other Vapor Control System design considerations

As these considerations did not change, please refer to the First Report.

2. Requirements, Constraints, and Limitations of Operation and/or Design Parameters

As these considerations did not change, please refer to the First Report.

3. Summary of Design or Implementation Challenges Encountered

Two new implementation challenges of note were encountered for Group 1 Tank Systems and Vapor Control Systems modified during this reporting period.

Implementation Challenge:

New facility equipment spacing requirements encountered in the Modifications of Tank Systems covered by this Third Report resulted, in some instances, in an increased well pad footprint.

The site-specific Engineering Design Standard included installation of new equipment (e.g., separator(s), piping and emission control devices) for many Tank Systems. For some older Tank Systems, the original equipment spacing was based on COGCC regulatory requirements (Form 2A) that have since been updated, and new equipment installation was required to comply with the updated spacing requirements that include greater distances between equipment (e.g., the distance between separators and emission control devices). Thus, a larger well pad footprint was needed to accommodate the new equipment and spacing requirements. At select well pads, acquiring the land required for the increased footprint requirements and the lead time to obtain the correct COGCC Form 2A approval were implementation challenges.

4. Summary of Vapor Control System Operations

Pursuant to Paragraph 12.a. of the CD, Noble was required to conduct an IR camera inspection of each Tank System before, during and immediately after a dump event to confirm the Vapor Control System is adequately designed and associated tanks were not emitting VOCs. Vapor Control System Verifications and for the modified Tank Systems covered by this reporting period did not observe gas venting from storage tank PRVs or thief hatches.

Pursuant to Paragraph 59.iv. of the CD, a summary of Reliable Information⁹ Noble obtained for the 111 Tank Systems covered in this report can be found in Appendix A. The data set is reflective of the period beginning with each Vapor Control System modification date and ending June 30, 2016 (the end of the reporting period for the most recently submitted semi-annual report). This document provides instances of VOC emissions after modifications and a description of any associated corrective actions.

5. Summary of Other Significant Observations

For this reporting period, there were no other significant observations associated with the Tank Systems and Vapor Control Systems.

⁹ Pursuant to Paragraph III of the CD, "Reliable Information" shall mean any observance or detection of VOC emissions from a Tank System using an optical gas imaging infrared camera, EPA Method 21 monitoring, CDPHE Approved Instrument Monitoring Method ("AIMM"), or audio, visual, olfactory ("AVO") inspections by EPA, CDPHE, or local government inspectors trained by CDPHE, Noble employees or Noble contractors trained to conduct inspections for emissions, or, in the case of the consultant selected by Noble to perform a third party audit, VOC emissions detected or observed using an optical gas imaging infrared camera. For purposes of this Decree only, evidence of past surface staining alone shall not be considered Reliable Information.

6. Certification

Pursuant to Paragraph 63 of the Noble Energy Consent Decree, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

KM Fatter 3/9/2017

Mark Patteson Date

Vice President, DJ Basin Business Unit

APPENDIX A SUMMARY OF RELIABLE INFORMATION FOR PG1 LOCATIONS CERTIFIED ON JANUARY 27, 2016

DATA REPORTED IS FROM DATE OF VAPOR RECOVERY SYSTEM VERIFICATION TO JUNE 30, 2016

DATA	A REPORTED IS	DATA REPORTED IS FROM DATE OF VAPOR RECOVERY SYSTEM VERIFICATION TO JUNE 30, 2016	JR RECOVERY SYS	EM VERIFICATION	ON 10 JUNE 30, 20	16	
Vapor Control System (LOD)	Tank System Number	VCS Verification Date (w/IR Camera)	Leak Report Date	Airs ID	Date of Corrective Action	Description of Corrective Action	Source of VOC Emissions
				123-9589, 123- 9594, 123-		Tightened nut on	
70 RANCH TSN-R63W-S21 L01	329	7/23/2015	2/18/2016 9621	9621	02/18/2016	automation pole	Automation Connection
				123-9589, 123- 9594, 123-		Tightened thief hatch	
70 RANCH TSN-R63W-S21 L01	329	7/23/2015	2/18/2016 9621	9621	02/18/2016	Viton bolts and washers	Thief Hatch
				123-8867, 123- 8869, 123-			
70 RANCH TSN. RESM. S25 102	378	8/26/2015	3/29/2016 9961,	9961, 123- 9980	03/30/2016	Renaired DRV	Nag.
		0707 (07 (0	0.000 (0.00)	123-8867, 123-	0707/00/00		
				8869, 123-		3	
				9961, 123-		Replaced thief hatch	Cartini California e a California e a California e a California e Cali
70 RANCH TSN-R63W-S25 L02	328	8/26/2015	3/29/2016 9980	0866	03/29/2016	envelope gasket	Thief Hatch
				123-8867, 123-			
				9961, 123-		Replaced thief hatch	
70 RANCH T5N-R63W-S25 L02	328	8/26/2015	3/29/2016 9980	9980	03/29/2016	envelope gasket	Thief Hatch
				123-8867, 123- 8869, 123-			
70 RANCH T5N-R63W-525 L02	328	8/26/2015	3/29/2016 9961, 3/29/2016 9980	9961, 123- 9980	03/29/2016	Replaced thiet hatch envelope gasket	Thief Hatch
				271, 123-		tch seal	
70 RANCH USX T5N-R63W-S9 L02	331	7/24/2015	10/28/2015	9496	10/28/2015	and rim.	Thief Hatch
				271, 123-		pu	
70 RANCH USX T5N-R63W-S9 L02	331	7/24/2015	5/2/2016 9496		05/02/2016	olts	Thief Hatch
70 RANCH USX T5N-R63W-S9 L05	330	7/27/2015	4/21/2016 8420	267, 123-	04/22/2016	Taped and doped threads on PRV	PRV

Vapor Control System (LOD)	Tank System Number	VCS Verification Date (w/IR Camera)	Leak Report Date	Airs ID	Date of Corrective Action	Description of Corrective Action	Source of VOC Emissions
70 RANCH USX T5N-R63W-S9 L05	330	7/27/2015	123-6 4/21/2016 8420	1267, 123-	04/21/2016	Cleaned thief hatch and tightened Viton bolts and washers	Thief Hatch
ANDERSON T6N-R65W-52 L01	1516	12/17/2015	3/29/2016 123-7118		03/29/2016	Replaced thief hatch envelope gasket and cleaned and tightened nuts and bolts	Thief Hatch
BILL T6N-R65W-536 L01	1961	8/10/2015	3/15/2016 123-9931		03/15/2016	Tightened slip collar bolts on equalizer line	Thief Hatch
CECIL USX T6N-R64W-S1 L01	1986	8/17/2015	10/16/2015 123-9A1E		10/16/2015	Cleaned thief hatch and replaced envelope gasket.	Thief Hatch
CECIL USX T6N-R64W-S1 L01	1986	8/17/2015	1/31/2016	123-9A1E	02/01/2016	d thief hatch ssembly	Thief Hatch
CECIL USX T6N-R64W-S1 L03	290	8/19/2015	12/9/2015	123-99BE, 123- 99FB, 123- 99FC	12/09/2015	Cleaned thief hatch envelope gasket, vacuum gasket and thief hatch rim.	Thief Hatch
CECIL USX T6N-R64W-S1 L03	590	8/19/2015	12/9/2015	123-998E, 123- 99FB, 123- 99FC	12/09/2015	Tightened thief hatch base gasket bolts.	Thief Hatch
CECIL USX T6N-R64W-S1 L03	590	8/19/2015	2/16/2016	123-998E, 123- 99FB, 123- 99FC	02/16/2016	Replaced thief hatch envelope gasket	Thief Hatch
CPC FERGUSON CHEWY UPRC T5N-R64W-523 L01	311	1/7/2016	6/3/2016	123-3490, 123- 4859 (06/03/2016	Cleaned thief hatch seal	Thief Hatch
DAVIS TSN-R65W-S4 L01	2305	9/9/2015	11/3/2015	123-3156	11/03/2015	8000	Tank Connection
DAVIS TSN-R65W-54 L01	2305	9/9/2015	4/21/2016	123-3156	04/21/2016	Cleaned thief hatch center assembly and replaced envelope gasket	Thief Hatch

Vapor Control System (LOD)	Tank System Number	VCS Verification Date (w/IR Camera)	Leak Report Date	Airs ID	Date of Corrective Action	Description of Corrective Action	Source of VOC Emissions
DAVIS TSN-R6SW-S4 L01	2305	9/9/2015	4/21/2016	123-3156	04/21/2016	Taped and doped threads on blow down piping	Vapor Control Line
DAVIS T5N-R65W-54 L01	2305	9/9/2015	4/21/2016	123-3156	04/21/2016	Taped and doped threads on PRV	PRV
DAVIS T5N-R65W-S4 L01	2305	9/9/2015	4/21/2016	123-3156	04/21/2016	Tightened thief hatch base nuts	Thief Hatch
DAVIS T5N-R65W-S4 L01	2305	9/9/2015	1/11/2016	123-3156	01/11/2016	Cleaned thief hatch and tightened thief hatch nuts	Thief Hatch
DEGENHART ST USX T6N-R62W-516 L01	363	9/3/2015	4/20/2016	123-9562, 123- 9565	04/20/2016	Replaced thief hatch envelope gasket and center assembly	Thief Hatch
DILLARD SHABLE USX T7N-R64W-S11 L01	2062	7/31/2015	8/6/2015 123-9C73		08/06/2015	Replaced 3 inch tank valve.	Tank Connection
DILLARD USX T7N-R64W-S5 L01	1607	9/17/2015	5/12/2016 123-8929	123-8929	05/12/2016	Replaced thief hatch envelope gasket	Thief Hatch
DR PETERSON TSN-R64W-S10 L01	1071	10/1/2015	4/1/2016 123-4346		04/01/2016	Replaced thief hatch envelope gasket	Thief Hatch
DR PETERSON TSN-R64W-S10 L01	1071	10/1/2015	3/29/2016 123-4346		03/29/2016	Replaced thief hatch envelope gasket	Thief Hatch
FRENCH HAMMERBECK T6N-R64W-S33 L01	2132	11/24/2015	12/14/2015 123-3902		12/14/2015	Cleaned thief hatch center assembly.	Thief Hatch
GUTTERSEN ST 74N-R63W-S20 L01	453	12/22/2015	123-5 6383 9512, 2/16/2016	515, 123- 123- 123-	02/16/2016	Replaced thief hatch center assembly	Thief Hatch
HP FARMS T3N-R64W-S32 L01	426	5/8/2015	123-9 11/4/2015 9547	123-, 123-	11/04/2015	Cleaned thief hatch center assembly.	Thief Hatch
HP FARMS T3N-R64W-S32 L01	426	5/8/2015	9/16/2015	123-99FD, 123- 9A00	09/16/2015	ng.	PRV
HP FARMS T3N-R64W-S32 L01	426	5/8/2015	9/16/2015	123-99FD, 123- 9A00	09/16/2015	Retaped and tightened PRV piping.	PRV
HP FARMS T3N-R64W-S32 L01	426	5/8/2015	8/18/2015	123-9539, 123- 9547	08/18/2015	Cleaned thief hatch envelope gasket.	Thief Hatch

Vapor Control System (LOD)	Tank System Number	VCS Verification Date (w/IR Camera)	Leak Report Date	Airs ID	Date of Corrective Action	Description of Corrective Action	Source of VOC Emissions
HP FARMS T3N-R64W-S32 L01	426	5/8/2015	5/20/2016	123-9539, 123- 9547	05/20/2016	Cleaned thief hatch	Thief Hatch
						Cleaned thief hatch envelope gasket and thief hatch rim, reseated vacuum plate, and tightened thief hatch	
KOHLHOFF USX T7N-R64W-S17 L03	1859	9/21/2015	12/11/2015	123-8932	12/11/2015		Thief Hatch
KOHLHOFE USX TZN-864W-517 L03	1859	9/21/2015	6/8/2016	123-8932	06/08/2016	Replaced thief hatch envelope gasket	Thief Hatch
						Cleaned thief hatch	
KOHLHOFF USX T7N-R64W-S17 L03	1859	9/21/2015	3/11/2016	123-8932	03/11/2016	center assembly	Thief Hatch
KOHLHOFE USX TZN-R64W-517 L03	1859	9/21/2015	3/11/2016	123-8932	03/11/2016	Cleaned thief hatch center assembly	Thief Hatch
				12		atch	
LETTERLY T7N-R64W-S23 L01	574	9/17/2015	11/6/2015	9635	11/06/2015	envelope gasket.	Thief Hatch
LETTERLY TZN-R64W-523 L01	574	9/17/2015	11/6/2015	123-8886, 123- 9635	11/06/2015	Replaced thief hatch envelope gasket.	Thief Hatch
				172 8886 173		Toptomotive bonotion	
LETTERLY T7N-R64W-S23 L01	574	9/17/2015	11/6/2015 9635	9635	11/06/2015		Automation Connection
				123-8886, 123-		ened thief hatch	
LETTERLY T7N-R64W-S23 L01	574	9/17/2015	11/6/2015 9635	9635	11/06/2015	bolts.	Thief Hatch
LETTERLY T7N-R64W-523 L01	574	9/17/2015	3/8/2016 9635	123-8886, 123- 9635	03/08/2016	Replaced PRV	PRV
				123.4609 123.		Taped and doped 4"	
LUCCI T5N-R64W-S1 L05	291	1/4/2016	6/10/2016 6167	6167	06/10/2016		Vapor Control Line
NORRIS HP FARMS T3N-R64W-S32 L01	421	9/30/2015	12/14/2015	123-2872	12/14/2015	Cleaned PRV.	PRV
NORRIS HP FARMS T3N-R64W-S32 L01	421	9/30/2015	12/14/2015	123-2872	12/14/2015		PRV
NORRIS HP FARMS T3N-R64W-S32 101	421	9/30/2015	3/17/2016 123-2872	123-2872	03/17/2016	Cleaned thief hatch envelope gasket	Thief Hatch
NORRIS HP FARMS T3N-R64W-S32 101	421	9/30/2015	3/17/2016	123-2872	03/17/2016	tch	Thief Hatch
ייייי איייי אייייי איייייייייייייייייי							

Vapor Control System (LOD)	Tank System Number	VCS Verification Date (w/IR Camera)	Leak Report Date	Airs ID	Date of Corrective Action	Description of Corrective Action	Source of VOC Emissions
				123-5798, 123- 9A1C, 123- 9A21, 123-			
RAYGLO T6N-R64W-S14 L01	591	1/14/2016	5/16/2016	9A46, 123- 9A47	05/16/2016	Replaced thief hatch center assembly	Thief Hatch
RICHTER USX T7N-R64W-S27 L01	298	12/9/2015	123-6 6/21/2016	123-6596, 123- 9671	06/21/2016	Cleaned thief hatch	Thief Hatch
RICHTER USX T7N-R64W-S27 L01	598	12/9/2015	6/21/2016	123-6596, 123- 9671	06/21/2016	Replaced thief hatch envelope gasket	Thief Hatch
RICHTER USX T7N-R64W-S27 L01	598	12/9/2015	6/21/2016		06/21/2016	Replaced thief hatch envelope gasket	Thief Hatch
RITCHEY T3N-R65W-S27 L03	411	12/1/2015	12/10/2015	123-7169, 123- 7336, 123- 7337	12/10/2015	Cleaned thief hatch.	Thief Hatch
SEVLER TSN-R64W-S14 L02	2141	10/13/2015	1/7/2016	123-8517	01/07/2016	Replaced thief hatch envelope gasket	Thief Hatch
SLW ST PC TSN-R63W-518 L01	302	10/15/2015	3/29/2016	123-9A1D, 123- 9A2E	03/29/2016	Replaced thief hatch center assembly	Thief Hatch
UPRC FIVE RIVERS T4N-R66W-S16 L01	180	12/28/2015	4/13/2016	123-3689, 123- 3723, 123- 9213, 123- 9225	04/13/2016	Replaced thief hatch envelope gasket, cleaned center assembly and hatch seat	Thief Hatch
UPRC FIVE RIVERS T4N-R66W-S16 L01	180	12/28/2015	4/13/2016	123-3689, 123- 3723, 123- 9213, 123- 9225	04/13/2016	Replaced thief hatch envelope gasket, cleaned center assembly and hatch seat and tightened bolts	Thief Hatch
WAHLERT AC33 ECONODE T7N-R63W-S3 L01	1992	10/7/2015	1/4/2016	123-9959	01/04/2016	Fixed leaking VOC line valve	Vapor Control Line
WELLS RANCH USX AE T6N-R62W-529 L02	1983	10/27/2015	123-5 1/12/2016 9A2F	123-	01/12/2016	Cleaned thief hatch envelope gasket, vacuum gasket and seal Thief Hatch	Thief Hatch

Vapor Control System (LOD)	Tank System Number	VCS Verification Date (w/IR Camera)	Leak Report Date	Airs ID	Date of Corrective Action	Description of Corrective Action	Source of VOC Emissions
WELLS RANCH USX AE TGN-R62W-529 L02	1983	10/27/2015	123-9 1/12/2016 9A2F	123-99DE, 123- 9A2F	01/12/2016	Tightened collar bolts on pipe connector on tank equalizer line	Tank Connection
						Cleaned thief hatch envelope gasket,	
WELLS RANCH USX AE T6N-R62W-S31 L02	340	10/26/2015	123-8 12/4/2015 8828	123-8800, 123- 8828	12/04/2015	vacuum gasket and thief hatch rim.	Thief Hatch
WELLS RANCH USX BB TSN-R63W-S15 L06	332	10/27/2015	12/8/2015	123-9359, 123- 9430	12/08/2015	Cleaned PRV O ring.	PRV
				123-9359, 123-	1	Cleaned thief hatch	
WELLS RANCH USX BB T5N-R63W-S15 L06	332	10/27/2015	12/8/2015 9430	9430	12/08/2015	seals.	Thief Hatch
						Cleaned thief hatch and	
WELLS RANCH USX BB T5N-R63W-515 L06	332	10/27/2015	3/8/2016 9430	123-9359, 123- 9430	03/08/2016	tightened Viton bolts and washers	Thief Hatch
						ef hatch	
WELLS RANCH USX BB T5N-R63W-S3 L02	1463	12/14/2015	4/5/2016 123-6861	Y	04/05/2016	iket	Thief Hatch
WELLS RANCH USX BB T5N-R63W-S3 L03	1455	12/14/2015	1/6/2016 123-6879	123-6879	01/06/2016	Cleaned PRV	PRV
						D	
WELLS RANCH USX BB T5N-R63W-S3 L03	1455	12/14/2015	1/6/2016 123-6879	123-6879	01/06/2016		PRV
						emperature	
WILSONT7N-R66W-S35 L01	1711	1/4/2016	4/4/2016	123-6157	04/04/2016	controller	Temperature Controller
						Tightened down	
						connections to thief	
WILSONT7N-R66W-S35 L01	1711	1/4/2016	4/4/2016	123-6157	04/04/2016	hatch drain pan	Thief Hatch
						Tightened tank	
WILSONT7N-R66W-535 L01	1711	1/4/2016	4/4/2016 123-6157		04/04/2016	automation nut	Automation Connection