





**SUBJECT: REQUEST TO MODIFY THE SUNCO #1 2020 ANNUAL FALL OFF TEST**

Dear Carl Chavez:

Agua Moss, LLC requests the OCD's approval to substitute a reservoir pressure evaluation test (RPE) to fulfill the Sunco #1's annual fall-off test requirement for the 2021 reporting period.

After evaluating the 2021 injection volumes and economic viability for the Sunco #1, Agua Moss, LLC feels that performing a fall of test this year would only affirm existing data. Over the past few years, the fall-off tests have yielded similar results and have not indicated reasons for concern. Please see the table below.

Fall Off Test Results	2020	2019	2018	2017	2016	2015	2010	2009	2008	2007
Rate (bbl/day)			3292	3150	3132	3340	4500			
P* (psi)	2968 <sup>1</sup>	2939 <sup>1</sup>	3479	3273	3114	3283	3231	3242	3176	3258
K (md)			10.8	10.4	11.5	15.8	13.6	10.2	20.7	
S			-6.0	-6.0	-5.93	-5.97	-7.18	-7.23	-6.79	
Radius of Inv (ft)			1690	1790	1430	1580	1450	1250	1750	1620
Frac ½ Length (ft)			598	517	594	467	893	926	596	688
Boundary			none	none	none	none	648, 1520	755	987	none

<sup>1</sup> Pressure collected from Reservoir Pressure Evaluation test, all other data from Fall-Off Test

From December 2020 to April 2021 all of Agua Moss's produced water was routed to Sunco due to issues with the Pretty Lady SWD. The resulting injection at Sunco went from an average of 651 bbls per month to 23,244 bbls per month. Once the Pretty Lady was repaired in April all the water went back to normal routes and in May the Sunco injected 0 bbls. Due to the irregular operating conditions, Sunco's injection volumes are inflated for the first four months of 2021. There is no indication that higher than normal injection rates will continue at Sunco and the rest of the year will return to the average 651 bbls per month.

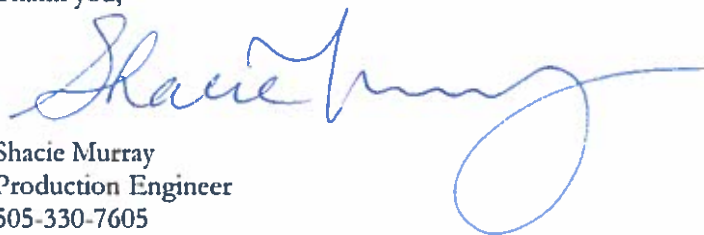
A fall-off test requires ~6,500 bbls to be performed, which requires Sunco to outsource a significant volume of water. Currently, Farmington is at Stage 1 drought conditions and has released a water shortage advisory with a request to reduce consumption by 10%. We are concerned that drought conditions will persist and sourcing water will be an issue both logistically and economically.

Additionally, the well has not indicated any abnormal mechanical issues or pressures. The highest injection pressure recorded this year was 2204 psig, which is significantly below the facility's max allowable pressure of 2400 psig. Based on pressures during the irregular high-volume injection recently and normal operating conditions, there is no indication of additional stress to the injection zone that would warrant concern or require fall-off test analytics. We are also requesting to forgo the slickline work. Operating surface pressures have not indicated restrictions downhole and there will not be fluid injection during the RPE. If an indication does occur it will be addressed at that time.

Economics is another reason for not performing the fall-off test. When evaluating the viability of continuing operations, the cost to perform and analyze the fall-off test plays a significant role in economics. This cost especially impacts the economics when volumes are marginal. Agua Moss understands the importance of this well to the State, so the avoidance of any additional expenditure aids in the continuance of our operations.

Please let us know your decision as soon as possible. If we aren't able to perform the RPE, we would need to plan accordingly to make the September report submission deadline.

Thank you,

A handwritten signature in blue ink, appearing to read "Shacie Murray", with a large, stylized loop at the end.

Shacie Murray  
Production Engineer  
505-330-7605

Well Information			
Well:	Sunco Disposal 1	Field:	Mesaverde SWD
Location:	1595' fnl & 1005' fwl S2, T29N, R12W San Juan Co. New Mexico	Elevations:	5859' GL 5872' RKB
		Depths:	4706' KB PBTD 4760' KB TD
		Engineer:	Shacie Murray(505.330.7605)
API:	30-045-28653	Date:	June 4, 2021
Surface Casing:	8- 5/8" @ 209' KB w/ 150sx; Circ to surface	Production Casing:	5-1/2" @ 4750' KB w/ 230 sx stage 1, 515 sx stage 2, circ 25 sx to surf, DV tool @ 2244' KB
Tubulars:	2- 7/8" 6.5# EUE (Epoxy Coated) @ 4282' KB	Packer:	Arrow XL-W retrievable seal bore @ 4282' KB.
Perforations (MV)		4350-4460' KB 2 spf (2000 gals 15% HCL, Frac w/ 100,000# 20/40)	
Additional Perforations			
Perforations (MV)		None	

**Version 1: Static Reservoir Pressure Evaluation** Procedure subject to change based on changing well conditions.

**Proposed Test Schedule:**

Date	Event	Remarks
Monday, July 12 <sup>th</sup> , 2021	Check conditions, check pressures and perform MIT	Check conditions, check tubing pressure 9 am
Friday, July 16 <sup>th</sup> , 2021	96 hrs	Conclude test at 9am

**Test Considerations:**

- V.1 The pressure acquisition will be performed with pressure gauges at the surface.
- V.2 There will be adequate storage capacity for waste water for the duration of the test.
- V.3 There is one offset well completed in the Point Lookout disposal formation. The McGrath #4 is a class II disposal operated by ConocoPhillips approx 1.25 miles to the north west of the Sunco #1. The well has been P&A'd, so there will not be any injection activity from offset wells during the test.
- V.4 A shut-in valve is located on the injection riser approx 3-feet from the wellhead. This valve can be shut to isolated the tubing at the wellhead.
- V.5 Bottomhole pressure will not be collected directly but calculated from the surface pressure collected using the appropriate gradient. The use of surface pressure for the test is justified by the fact that the well will maintain a positive pressure at the surface during the entire test.
- V.6 A test log will be kept during the test and submitted with the FOT results. The log will include key events with date and times.
  - Well isolation
  - Pressure recordings

V.7 Surface pressures will be recorded continuously using a data logger and transducer during the FOT. If any abnormal surface pressure change occurs the test validity will be questioned and the test will be aborted if deemed invalid.

V.8 The continuous data recording consists of a HOBO UX120-006M data logger with a Foxboro IGP10S industrial pressure transducer. The data logger features 4MB memory capable of keeping 1.9 million measurements, 1 year batter life (at 1 minute logging and 15 second sampling interval), and an accuracy of +/- 0.2%. Data will be recorded every 15 seconds. The pressure transducer has an accuracy of +/-0.05% and operating pressure range of 0-6,000 psi.

V.9 In addition, a chart recorder will monitor the tubing and casing pressure during the test as a backup for the data logger

## Reservoir Pressure Test Procedure:

---

### Prepare Well for Fall Off Test

1. Perform MIT
2. Setup pressure recording chart and digital gauge

### Conduct Pressure Monitoring

1. Ensure surface gauges are configured properly
2. Record surface tubing pressure data for 96 hrs, Pressure readings will be taken every minute.
  - a. Bottomhole pressures will be calculated and compiled for the test
3. Put well back into service for normal operation.

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

COMMENTS

Action 31627

## COMMENTS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID: 247130
	Action Number: 31627
	Action Type: [C-103] NOI General Sundry (C-103X)

## COMMENTS

Created By	Comment	Comment Date
cchavez	SUNCO WDW-1: Alternate Fall-Off Test Procedure- Reservoir Pressure Evaluation Test due to low injection volume and well economics.	6/11/2021

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 31627

**CONDITIONS**

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID: 247130
	Action Number: 31627
	Action Type: [C-103] NOI General Sundry (C-103X)

**CONDITIONS**

Created By	Condition	Condition Date
cchavez	None	6/11/2021