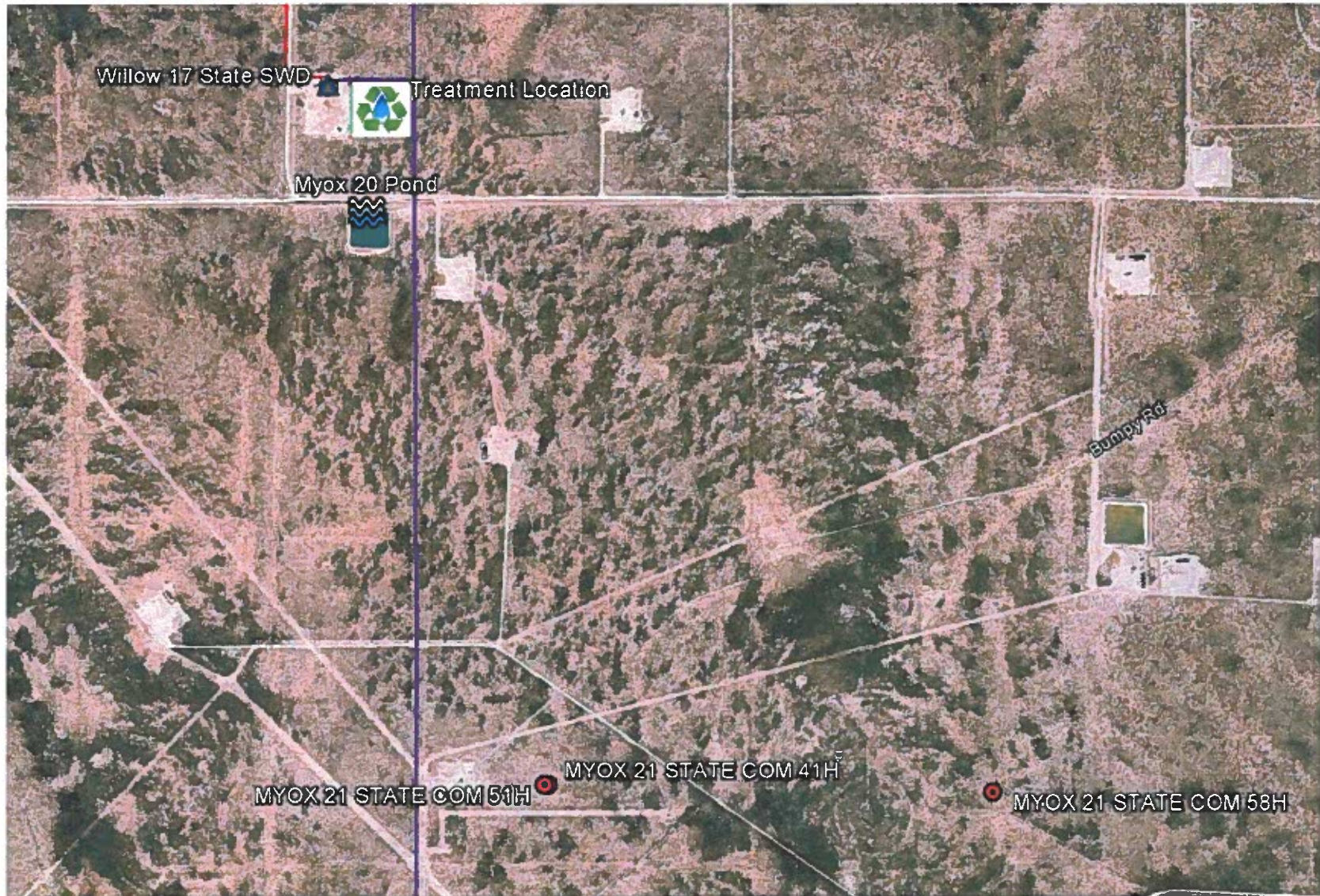
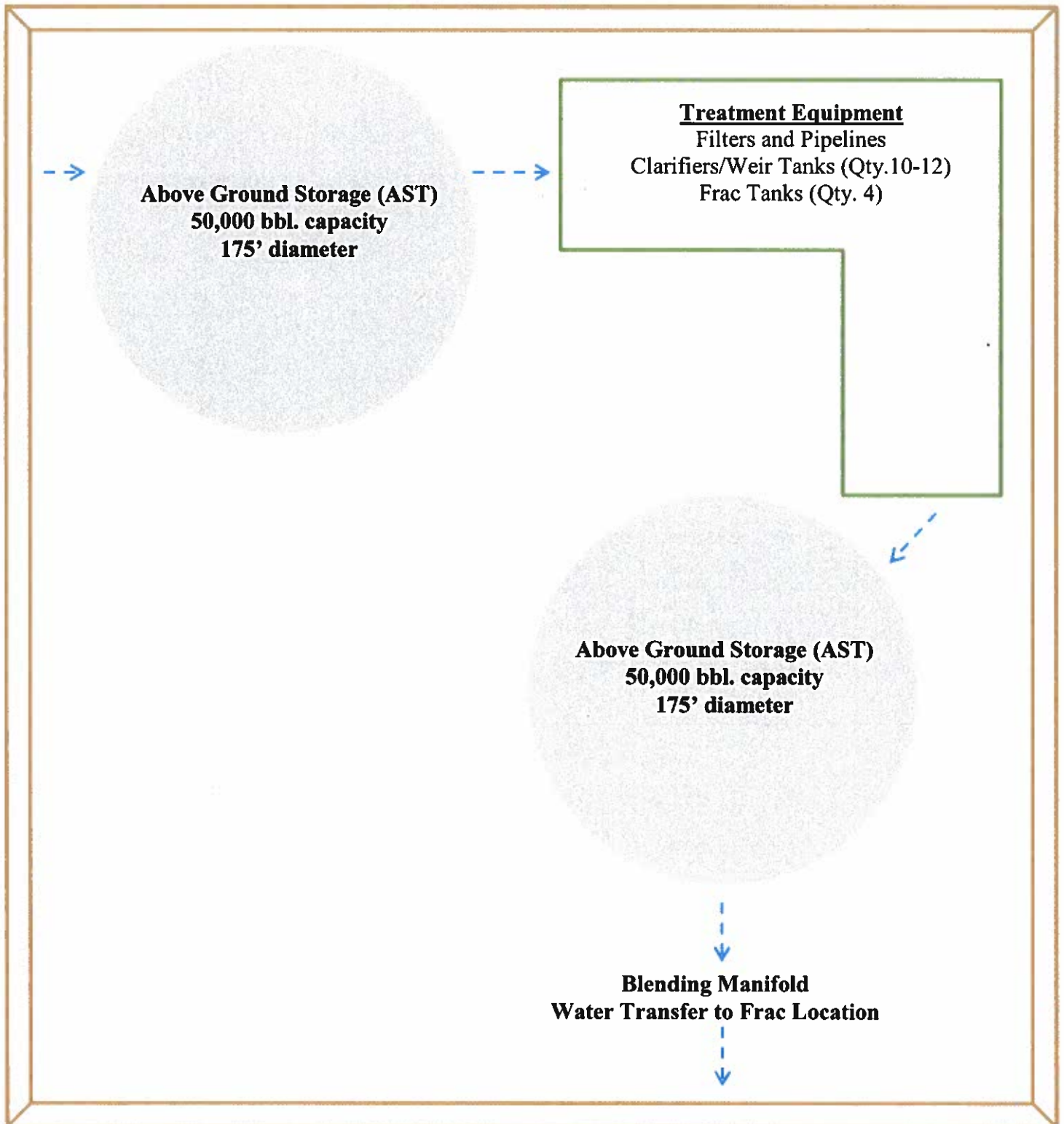


Map Overview



500' x 500' x 3' pad (East of and adjacent to Willow 17 State SWD)



CONCHO RECYCLED PRODUCED WATER SYSTEM OVERVIEW

Water will be sent from the Willow 17 State SWD to the adjacent location and into the 50,000 bbl Buffer AST. Water will flow from the Buffer AST to the treatment system consisting of chemical treatment to reduce bacteria, total iron, H₂S, TPH and TSS.

From there, the water will flow into a series of clarifier/solids control tanks and then through a series of weir tanks and final filtration before flowing into the 50,000 bbl Treated Water AST.

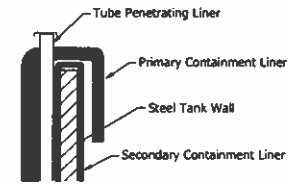
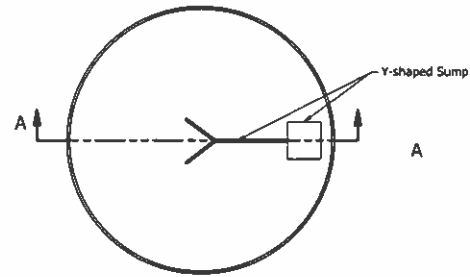
Both the Buffer Tank and the Treater Water Tank will be double lined with 30 mil LLDPE liners equipped with an automated leak detection system. Both tanks will be placed on a protective cushion.

The entire treatment area including tanks, treating systems and blending manifold will be located inside a bermed tank pad. The bermed tank pad will have capacity for the total volume of fluids stored and handled at the facility with sufficient additional capacity to include a significant rainfall event.

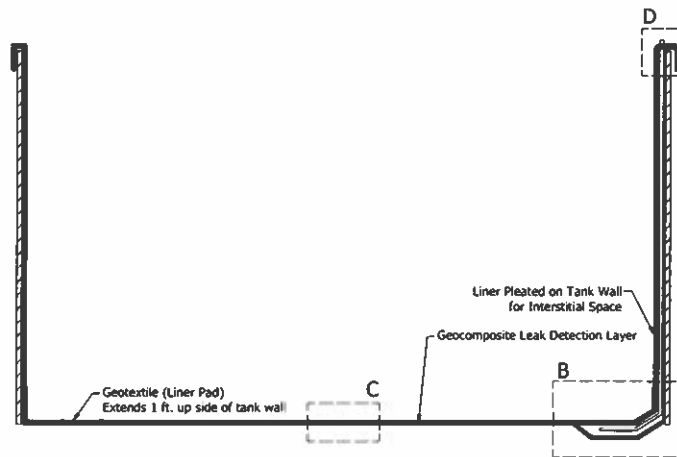
The facility will be manned and monitored at all times during operation.

Used filters will be stored in a roll-off bin located inside the bermed tank pad and will be disposed of at an approved facility.

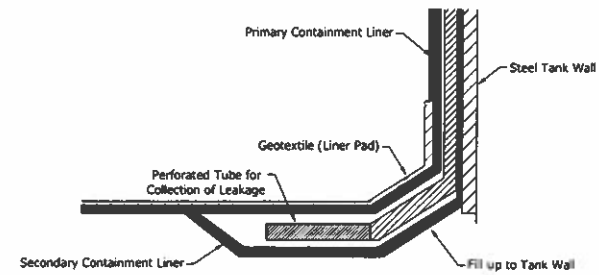
WWS DOUBLE-LINED FRAC WATER TANK SYSTEM



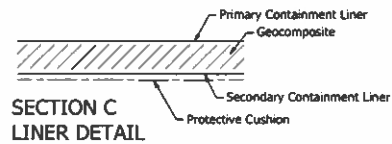
SECTION D
TUBE DETAIL



VIEW A-A
TANK DETAIL



SECTION B
SUMP DETAIL



SECTION C
LINER DETAIL

LUCID
DRAFTING & DESIGN LLC
sarah@luciddrafting.com 307.752.7388

REVISION HISTORY				
REV	DESCRIPTION	DATE	BY	
1	INITIAL DWG	10/29/2015	SES	

TITLE	
Double-Lined Frac Tank System	
CUSTOMER	
PROJECT/JOB	
WWS Double-Lined Tank System	
APPROVAL	
DRAFTER	DATE
SES	10/28/2015



SIZE	DWG NO	REV
C	LDD15-WWS-02	1
SHEET 1 OF 1		



TECHNICAL DATA SHEET

Geomembrane LLDPE Smooth

Solmax International Inc., 2801 Boul. Marie-Victorin, Varennes, Qc, Canada, J3V 1P7
Tel: (450) 929-1234 Fax: (450) 929-2550 www.solmax.com

PROPERTY	TEST METHOD	FREQUENCY ⁽¹⁾	UNIT Imperial	Solmax 830-7000
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SPECIFICATIONS

Thickness (Nominal $\pm 10\%$) (4)	ASTM D-5199	Every roll	mils	30.0
Resin Density	ASTM D-1505	1/Batch	g/cc	< 0.926
Melt Index - 190/2.16 (max.)	ASTM D-1238	1/Batch	g/10 min	1.0
Sheet Density	ASTM D-1505	Every 2 rolls	g/cc	< 0.939
Carbon Black Content	ASTM D-4218	Every 2 rolls	%	>2.0 / <3.0
Carbon Black Dispersion	ASTM D-5596	Every 6 rolls	Category	Cat. 1 & Cat. 2
Oxidative Induction Time - STD OIT (min. avg.)	ASTM D-3895	1/Batch	min	100
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls		
Strength at Break			ppi	97
Elongation at Break			%	750
2% Modulus (max.)	ASTM D-5323	Per formulation	ppi	1,800
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	lbf	14
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	lbf	36
Dimensional Stability	ASTM D-1204	Every 6 rolls	%	± 2
Multi-Axial Tensile (min.)	ASTM D-5617	Per formulation	%	30
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation		
STD OIT (min. avg.)	ASTM D-3895		%	35
HP OIT (min. avg.)	ASTM D-5885		%	60
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation		
HP-OIT (min. avg.)	ASTM D-5885		%	35

SUPPLY SPECIFICATIONS (Roll dimensions may vary $\pm 1\%$)

Roll Dimension - Width	-	ft	22.3
Roll Dimension - Length	-	ft	1,000
Area (Surface/Roll)	-	sf	22,300

NOTES

1. Testing frequency based on standard roll dimensions and one batch is approximately 180,000 lbs (or one railcar).

4. The minimum average thickness is $\pm 10\%$ of the nominal value.

2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.

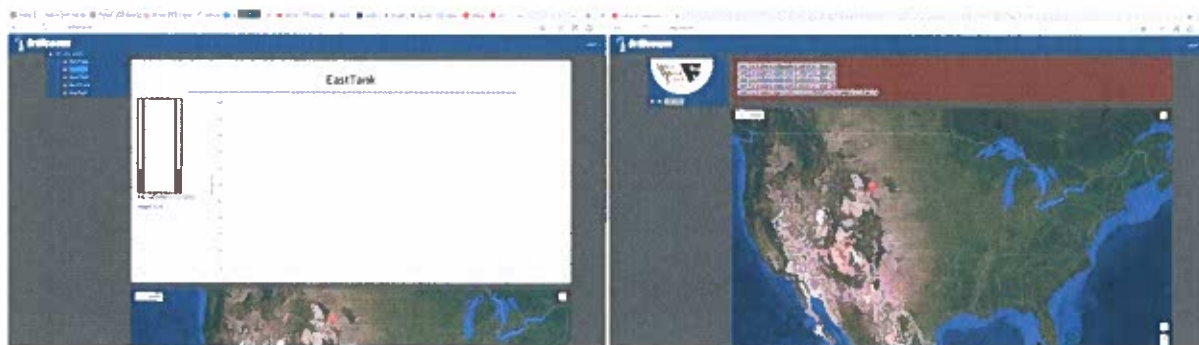
* All values are nominal test results, except when specified as minimum or maximum.

* The information contained herein is provided for reference purposes only and is not intended as a warranty of guarantee. Final determination of suitability for use contemplated is the sole responsibility of the user. SOLMAX assumes no liability in connection with the use of this information.



Tank Monitoring System With Pump

The tank monitoring system provided by Well Water Solutions is designed around functionality and affordability. This solution allows the end user to remotely monitor their above ground tanks levels as well as monitor for leaks in the primary holding liner. The steel reinforced tanks are lined with a leak prevention barrier with an inner holding liner for storage of waste water. The dual liner provides additional protection for environmental incidents and the detection system alerts the customer upon detection of a breach in the inner liner allowing for repairs to the holding system. The TMS system also provides for a sampling pump that allows the customer to pull a sample from the detection layer for testing to determine if an actual leak has occurred. With any holding system, condensation occurs between holding and protection layers and the Well Water Solutions TMS system provides a system that allows for accurate detection and prevention. The TMS system also provides levels to the end user so that holding tanks can be managed remotely and accurately without physical inspection of the tanks. This reduces labor, expense, and safety issues that can arise from on site verification. Alerts can be triggered via SMS or email to specified account users determined by the customer. These users can be adjusted, changed, or added to with short notice as needed. A physical HMI on location gives an accurate graphical representation of tank levels and a seven day history for reference. A seven day history of leak detection alerts is also provided should any occur. The system can also be remotely viewed from a remote computer with a connection to the internet. Remote access is password protected and defined by the end user. The system is completely solar and does not rely on any localized power to operate. Well Water Solutions is proud to present you the Tank Monitoring System that simplifies your operation and reduces costs at the same time.



District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-147
Revised April 3, 2017

Recycling Facility Only

Type of action: ☐ Permit ☒ Registration ☐ Modification ☐ Closure ☐ Other (explain) _____

Be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: COG Operating LLC (For multiple operators attach page with information) OGRID #: 229137
Address: 600 W. Illinois Ave. Midland, Texas 79707
Facility or well name (include API# if associated with a well): Willow 17 State SWD #1
OCD Permit Number: _____ (For new facilities the permit number will be assigned by the district office)
U/L or Qtr/Qtr P Section 17 Township 25 S Range 28 E County: Eddy
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Recycling Facility:**
Location of recycling facility (if applicable): Latitude 32.124341 Longitude -104.101518 NAD83
Proposed Use: ☐ Drilling* ☒ Completion* ☐ Production* ☐ Plugging*
**The re-use of produced water may NOT be used until fresh water zones are cased and cemented*
☐ Other, requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on groundwater or surface water.
☒ Fluid Storage
☒ Above ground tanks ☐ Activity permitted under 19.15.17 NMAC explain type _____
☐ Activity permitted under 19.15.36 NMAC explain type: _____ ☐ Other explain _____
☐ Closure Report (required within 60 days of closure completion): ☐ Recycling Facility Closure Completion Date: _____

3.
Variances:
Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.
Check the below box only if a variance is requested:
☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.
If a Variance is requested, it must be approved prior to implementation.

4.
Operator Application Certification:
I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.
Name (Print): Tim Reed Title: Water Resource Analyst
Signature: Tim Reed Date: 08/02/18
e-mail address: treed@concho.com Telephone: 432-688-6634

5.
OCD Representative Signature: _____ Approval/Registration Date: _____
Title: _____ OCD Permit Number: _____
☐ OCD Conditions _____
☐ Additional OCD Conditions on Attachment _____