

BW - 28

**GENERAL
CORRESPONDENCE**

YEAR(S):

2007 - Present

Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Monday, February 02, 2015 1:28 PM
To: 'wayne price'
Cc: John Sanders; Brad Stauffer; Bobby Sisson; Dan Gibson
Subject: RE: Minor Modification Request- Key Energy NM Brine Wells Subsidence Monitoring BW-19 & BW-28

Approved. Please retain this email as no hardcopy will be sent. Thanks.

Jim Griswold
Environmental Bureau Chief
EMNRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3465
email: jim.griswold@state.nm.us

-----Original Message-----

From: wayne price [<mailto:wayneprice77@earthlink.net>]
Sent: Monday, February 02, 2015 1:11 PM
To: Griswold, Jim, EMNRD
Cc: John Sanders; Brad Stauffer; Bobby Sisson; Dan Gibson
Subject: Minor Modification Request- Key Energy NM Brine Wells Subsidence Monitoring BW-19 & BW-28

Dear Jim,

This is to confirm our permit requirements for performing the required monitoring for Key's Brine well operations. The Carlsbad and Eunice Brine Well Subsidence Surveys have been completed. In order to satisfy and catch-up from the missed surveys, we are working with the previous surveyor to establish the original baselines.

Per our most recent communication, I fully understand your concern, thus we will agreed to perform 4 consecutive quarters in order to reestablished a baseline. Of course we have performed site visual surveys which will be noted in the annual report.

I had submitted a minor modification when we submitted the last annual report. It basically requested we be allowed to send the required surveys and a summary in the annual report. We also committed to an immediate notification if we saw a significant change, or a progressing trend.

We respectfully request approval.

Wayne Price-Price LLC

Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Thursday, April 24, 2014 2:45 PM
To: 'wayne price'
Cc: Mike Slaughter; Sam Blevins; Dan Gibson
Subject: RE: Brine Well Testing-Key Energy

That is acceptable.

Jim Griswold
Senior Hydrologist
EMNRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3465
email: jim.griswold@state.nm.us

-----Original Message-----

From: wayne price [<mailto:wayneprice77@earthlink.net>]
Sent: Thursday, April 24, 2014 2:30 PM
To: Griswold, Jim, EMNRD
Cc: Mike Slaughter; Sam Blevins; Dan Gibson
Subject: Brine Well Testing-Key Energy

Dear Jim,

We ran a successful MIT test in 2011, I assume we can maintain the every 5 years testing protocol, as long as the next test falls within the permit period. Our next test will be 2016, and permit expires 2018.

Please confirm if this is acceptable.

Wayne Price-Price LLC

Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Monday, March 31, 2014 8:05 AM
To: 'wayne price'
Cc: Mike Slaughter; Dan Gibson
Subject: RE: Key Energy BW-28 Eunice Brine WELL

Extension until 6/1/14 is approved.

Jim Griswold
Senior Hydrologist
EMNRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3465
email: jim.griswold@state.nm.us

-----Original Message-----

From: wayne price [<mailto:wayneprice77@earthlink.net>]
Sent: Sunday, March 30, 2014 9:02 AM
To: Griswold, Jim, EMNRD
Cc: Mike Slaughter; Dan Gibson
Subject: Key Energy BW-28 Eunice Brine WELL

Dear Jim,

The new permit requires a third party closure estimate to be supplied within 90 days of the effective date of the permit. Key Energy is requesting an extension and propose this information to be supplied in the annual report due June 01, 2014.

Wayne Price-Price LLC

Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Tuesday, July 30, 2013 1:58 PM
To: 'wayne price'
Cc: Mike Slaughter; Brian Kenne; Gonzales, Elidio L, EMNRD; Whitaker, Mark A, EMNRD; Brown, Maxey G, EMNRD
Subject: RE: Key Energy Eunice BW-28 5 year MIT

Please proceed with whatever arrangements must be made to facilitate the future testing. Be aware that the test as proposed will subject both the brine cavern and entry casing to pressure. If the combination is not able to sustain the static test pressure for the duration, then further testing will be needed to determine where any observable loss might be occurring. This may dictate removal of all tubing from the well, installation of a packer to isolate the well casing, and independent pressure testing. Thank you.

Jim Griswold
Senior Hydrologist
EMNRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3465
email: jim.griswold@state.nm.us

-----Original Message-----

From: wayne price [<mailto:wayneprice77@earthlink.net>]
Sent: Tuesday, July 30, 2013 9:10 AM
To: Griswold, Jim, EMNRD
Cc: Mike Slaughter; Brian Kenne
Subject: Key Energy Eunice BW-28 5 year MIT

Dear Jim,

Pursuant to our meeting in Santa Fe the other day, we would like to officially request that our next 5 year MIT, (schedule 2014) Key would be able to use the normal open to formation pressure test using either nitrogen or water, pressure up to approximately 300 psig, use a conventional chart recorder calibrated for 0-500 psig, use a maximum of 12 hour clock, hold pressure for 4 hours.

Please advise so we can make proper arrangements.

Wayne Price

Griswold, Jim, EMNRD

From: Gibson, Dan <dgibson@keyenergy.com>
Sent: Monday, October 01, 2012 7:15 AM
To: Griswold, Jim, EMNRD
Cc: Wayne Price (wayneprice77@earthlink.net); Molleur, Loren; Fisher, Robert
Subject: Draft Brine Well Permit

Jim:

Key Energy Services, LLC (Key) appreciates the opportunity to present comments on the proposed new permit for brine wells. While there are some portions of the proposed permit that we have concerns with (outlined below), our main concerns are with what is not contained in the permit. The draft permit does not contain many elements of the recently approved brine well permit for Key. Our permit includes the following conditions that we believe all new and existing permits should contain:

1. Siting and set-back requirements.
2. Ownership and control of the land.
3. Minimum depth requirements and maximum radius.
4. Adequate salt thickness and proper over-burden.
5. Proper development and operational controls, including double casing, double tubing, and a blanket control.
6. Cavity configuration determination by geophysical and other means such as calculations.
7. Minimum bonding of \$1-million dollars for all existing and new wells.
8. Groundwater monitoring.
9. Subsidence monitoring and reporting.
10. An "End of Life Requirement" and Annual Determination.

Key believes the industry and public are best served and protected with a single comprehensive permit that contains the elements of our new permit. We believe our new permit will allow the agency to identify, regulate, and if necessary, close wells that may pose unacceptable risks to both the industry and the public. It is difficult to justify expenditures for new facilities with the knowledge that risky operations may be continuing and that all such operations put all brine wells in New Mexico at risk.

Regarding specific portions of the proposed permit, Key offers the following:

Section 2.B.2 Solution Cavern Characterization Program. The proposed permit requires a demonstration that at least 90% of the calculated volume of salt removed based on injection/production to be accounted for by an approved geophysical method. Considering that by OCDs record review that the best survey to date accounted for 63% and typical surveys are under 5%, the proposed goal seems high. It is unclear what actions OCD will required or take if this goal is not obtained. We recommend that a calculated method also be accepted if approved by the agency.

Section 3. Annual Certification. The certification should only be based on available knowledge and good engineering and geological considerations.

Please contact me if you have any questions regarding these comments.

Daniel K. Gibson, P.G. | **Key Energy Services, Inc.** | Corporate Environmental Director

6 Desta Drive, Suite 4300, Midland, TX 79705 | o: 432.571.7536 | c: 432.638-6134 | e: dgibson@keyenergy.com

File Abstract**BW-28**

State Brine Well #1 API 30-025-33547

Eunice, NM

Key Energy Services

E-15-21S-37E (2 miles north of Eunice on east side of NM 248 [CR 18])

NOV issued on 8/14/07 due to expiration of permit.

Last permit renewal issued 3/7/08 with renewal date of 7/18/11. Signed by Jim Flynt of Key on 4/8/08.

State surface, state minerals

Completed 10/4/96 with casing depth of 1390 ft bgs (top of salt). Tubing depth 2074 ft bgs.

Originally Gold Star SWD, Inc. (Royce Crowell) Change to Yale E. Key, Inc. effective 4/20/01. Also acquired SWD Christmas #3 with API 30-025-10500 located in B-28-22S-37E. Change to Key Energy Services, LLC effective 2/20/07.

Freshwater purchased from City of Eunice.

Estimated 4M bbls of brine production resulting in 600,000 bbl cavern. Estimated cavern diameter 134 ft. Estimated D/H 0.0963.

11/6/08 brine well questionnaire reports 2,057,329 bbls between July 2001 and September 2008. Shoe depth 1344 ft bgs.

Recently filed Annual Report for 2009 places total brine production from April 2001 thru December 2009 at 435,916 bbls.

According to royalty group at SLO, from 4/20/01 thru December 2008 production of 479,629 bbls.

Permit renewal applications say brine is produced at a rate of 500 to 750 bbls/day (45,000 bbls/qtr).

Last sonar log on 5/20/09. Shoe depth 1350 ft. Max logged depth 1382 ft. Logged interval 32 ft with measured volume of 49.6 bbls.

Last casing MIT 5/21/09. With packer @ 1300 ft and pressured up to 300 psi, leaked 30 psi in 20 minutes. Reset packer to 1290 ft and 340 psi, held for 30 minutes.

Last formation MIT 12/19/06

Tubing depth over time:

Date	Depth
10/4/96	2074
7/11/98	1461
3/25/00	1402
4/14/00	1410
1/14/08	1445
11/6/08	2074
5/22/09	1701

Brine and freshwater analyses

Date	Fresh TDS	Brine TDS	Cl
2/15/10	467	261,000	154,000

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, July 20, 2016 3:26 PM
To: 'David.Alvarado@basicenergyservices.com'; 'gandy2@leaco.net';
'james@pabservicesinc.com'; 'Jerry@Pyotewatersystems.com';
'tboone@keyenergy.com'; 'Garymschubert@gmail.com'; 'tony@waternex.com'
Cc: Griswold, Jim, EMNRD; Whitaker, Mark A, EMNRD; Inge, Richard, EMNRD
Subject: New Mexico UIC Class III Brine Well MIT Scheduling with Completion by December 30, 2016

Ladies and Gentlemen:

UIC Class III Brine Wells:

Basic Energy Services: BW-002 (Last MIT: 8/28/2012)
Gandy Corporation: BW-004 (Last MIT: 10/18/2011) & BW-022 (Last MIT: 10/18/2011)
Key Energy Services, LLC: BW-028 (Last MIT: 9/10/2010)
Pyote: BW-027 (MITs on 2-Well System Last MIT: 2/25/2010) & BW-030 (Last MIT: 12/28/2010)
Standard Energy: BW-008 (Last MIT: 11/16/2010)
HRC: BW-031 (Last MIT: 8/13/2009)

Good afternoon. It is that time of year again to remind operators that their MITs for this season must be completed by 12/30/2016. The list of permittee names w/ associated brine wells are provided above and as in the past, the OCD District Offices (see information provided below) attempt to schedule MITs logistically based on their busy schedules. You must submit a signed [C-103 Form](#) describing your MIT for OCD District Office approval.

Please contact your OCD District Office (see contact info. below) to schedule your MITs based on the County that your wells reside.

Mark Whitaker ([Hobbs District Office](#))
Richard Inge ([Artesia District Office](#))

Operators are aware of the annual formation MIT (4-hr @ 300 psig or less depending on historical pressure and TD of well) and every 5-yrs. or after well workover. EPA MIT (30 min. @ 500 psig). Operators need to review well MIT records for the type of MIT it will run this year and inform the OCD District Office of any issues or concerns associated with this season's MIT.

Also, Permittees should review your Discharge Permits for expiration. If your permit has expired or will soon expire, please contact me to discuss your situation(s).

You may access your well information on OCD Online either by API# and/or Permit Number at:

<http://ocdimage.emnrd.state.nm.us/imaging/AEOrderCriteria.aspx> and
<http://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Wells.aspx>.

For information on New Mexico's UIC Program and training information, please go to:
<http://www.emnrd.state.nm.us/OCD/publications.html>.

Please contact me if you have questions. Thank you in advance for your cooperation in this matter.

Carl J. Chavez, CHMM

Environmental Engineer
Oil Conservation Division- Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Phone: (505) 476-3490
Main Phone: (505) 476-3440
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: www.emnrd.state.nm.us/oed

Why not prevent pollution, minimize waste, reduce operation costs, and move forward with the rest of the Nation? To see how, go to “Publications” and “Pollution Prevention” on the OCD Website.

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, January 02, 2008 11:01 AM
To: 'Patterson, Bob'
Cc: Price, Wayne, EMNRD; Perry, Mark; 'Blevins, Sam'
Subject: Key Energy Services, Inc. BWs #9, 19 & 28 MITs

Mr. Patterson:

The OCD is aware of possible problems with Key's brine wells. Could you please confer with your operators Mr. Mark Perry (BW-19) and Mr. Sam Blevins (BW-9 & 28) to provide the OCD with a final status report of the MITs (EPA 5-Yr. Casing MITs) that were scheduled for 12/2007? The current status is as follows:

BW-9 (well problem(s)/MIT status unknown)

BW-19 (latest MIT msg. from Mark Perry was that MIT failed)

BW-28 (latest MIT msg. from Sam Blevins was that Key was still pumping fluids) A C-141 dated 11/27/2007 indicated that there was a major release of brine fluid at the load line at the east end of the water station that ran down the lease road onto the Chevron State S #1 Unite D and that 275 bbls had been recovered by vacuum trucks. Terracon is developing a work plan.



The operator shall advise the Environmental Bureau, using **Form 103 (Sundry Notices and Reports on Wells)** of the date and time of any initial, five year or special MIT in order that such tests may be witnessed by bureau or

1/2/2008

district office personnel. Should an MIT indicate a leak in the well, the well must be shut-in until the leak is repaired.

The OCD would like to schedule a telephone conference call for Thursday, January 10, 2008 at 8:15 a.m. Please call Mr. Wayne Price's office at (505) 476-3490 so we may discuss the above issues. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/index.htm>
(Pollution Prevention Guidance is under "Publications")



Key Energy Services
6 Desta Drive
Suite 4400
Midland, Texas 79705

Telephone: 432.620.0300
Facsimile: 432.571.7173
www.keyenergy.com

November 29, 2007

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

Re: Release Notification and Corrective Action
Key Energy Services, Inc.

To Whom It May Concern:

Enclosed you will find the original Form C-141 for a release at Key's brine station in Eunice.

If you have any questions, please let me know.

Sincerely,

A handwritten signature in cursive script that reads "Robyn Miller".

Robyn Miller, CLA

Enclosure

cc: Pat Richards (2 copies)
State of New Mexico
District 1
1625 N. French Drive
Hobbs, New Mexico 88240

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Key Energy Services, Inc.	Contact	Sam Blevins
Address	2105 Ave O	Telephone No.	505-394-2581
Facility Name	Key Energy State "S" Brine and Water Station (BW-028)	Facility Type	Brine and Freshwater Station

Surface Owner	Millard Deck Trust	Mineral Owner	State of New Mexico	Lease No.	#1
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	15	21s	37e	See attached map				Lea

Latitude N32° 29' 02.2" Longitude W103° 09' 28.8"

NATURE OF RELEASE

Type of Release	Brine	Volume of Release	300bbls	Volume Recovered	275bbls
Source of Release	Load line valve left open by unidentified 3 rd party driver.	Date and Hour of Occurrence	11/24/07 09:00	Date and Hour of Discovery	11/24/07 09:00, Clarence Fyte (Chevron)
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Pat Richards, OCD		
By Whom?	Edward (Ted) Philley, Key Energy Services	Date and Hour	11/26/07 10:25		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Brine valve was left open at load line at east end of water station by 3rd party, line drained into diked area. Dike gave way and ran down lease road onto Chevron well location.

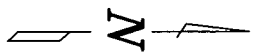
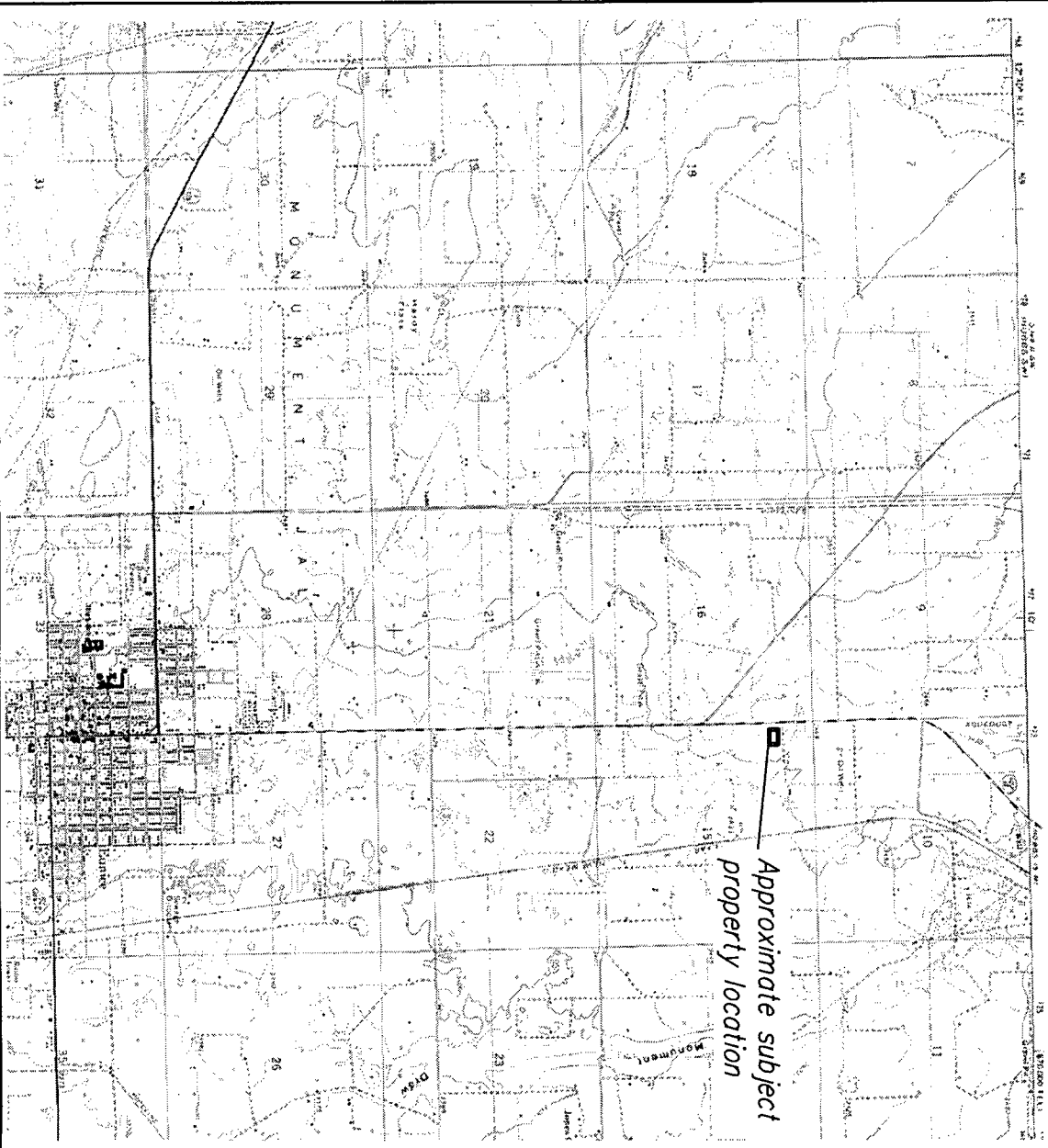
Describe Area Affected and Cleanup Action Taken.*

Affected lease road, Chevron State S #1 Unit D, Sec15-T21S-R37E well site and area surrounding. Recovered 275bbls with vacuum trucks. Terracon developing workplan.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Edward D. Philley</i>		OIL CONSERVATION DIVISION	
Printed Name: <i>Edward D. (Ted) Philley</i>		Approved by District Supervisor:	
Title: <i>Environmental Specialist II</i>		Approval Date:	Expiration Date:
E-mail Address: <i>TPhilley@KeyEnergy.com</i>		Conditions of Approval:	
Date: <i>11/27/07</i> Phone: <i>432-571-7141</i>		Attached ☐	

* Attach Additional Sheets If Necessary



0 2,000 4,000

Scale: 1"=4,000'

Note:
Base map is the Eunice, New Mexico
USGS 7.5 minute series topographic
maps (1969; photorevised 1979)

Site Location Map
Key Energy Discharge Plan BW-028
Near Eunice, New Mexico

Figure 1

Revisions
By: _____ Date: _____ Descr.: _____
By: _____ Date: _____ Descr.: _____
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Drawn: _____ MLV
Checked: _____ D.E.
Approved: _____ D.E.



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Serving the Southwest & Rocky Mountains