



**RUSH SOUTH**

**PHA-HAZOP LETTER**



October 21, 2019

City of Aurora  
15151 E. Alameda Parkway  
Aurora, CO 80012

RE: PHA-HAZOP for Multi-Well Pads with Individual Separation

To Whom it May Concern:

I attest that as the engineer of record, a Process Hazard Analysis consisting of a Hazard Operability Study (PHA-HAZOP) has been performed and the recommendations thereof incorporated in the design. Further, applicable recommendations have been incorporated in the Emergency Response Plan and Aurora Fire Rescue training.

For well site facilities to be used in the City of Aurora, Colorado, a PHA-HAZOP was facilitated by Cyndee R. Clouse, a certified facilitator, and conducted by a multi-disciplined team for the "Multi-Well Pad Facility with Individual Separation". This was performed on January 29, 2018. While the facility design being evaluated does not fall under Process Safety Management (PSM) pursuant to OSHA 29 CFR 1910.119, the PHA-HAZOP process was similar. This study consisted of a risk assessment utilizing methodology commonly used while conducting a Process Hazard Analysis (PHA) with a Layers of Protection Analysis (LOPA).

If factors specific to the Rush South 4-65 location require minor adjustments to the PHA-HAZOP, the City will be notified of those adjustments as they are incorporated into the facility design.

I am a Mechanical Engineer and received my Bachelor of Science from the University of New Mexico in December 1996. I am the **Engineer of Record** for the Applicant's projects in the City of Aurora, Colorado. Further, as an employee of ConocoPhillips Company, a Delaware Corporation, I am exempt from Colorado Revised Statutes (CRS) 12-120 by CRS 12-120-203 (c).

Cyndee R. Clouse is the Certified Facilitator for the Applicant's projects in the Niobrara and is currently an Engineering Supervisor for ConocoPhillips. The list below describes her credentials including her PHA Certification (copy attached).

- BS Chemical Engineering University of North Dakota
- 30 years of Engineering Experience in the Oil & Gas, Refining, & Coal Industry
- PHA Team Leader Certification from PrimaTech – July 2009 (certificate attached)
- LOPA Certification from ConocoPhillips – December 2010 (certificate attached)
- Subject Matter Expert/Technical Authority on Risk & PHA Facilitation from 2010 to Present
- Conducted PHA/LOPA Assessments across the United States including PSM and Non-PSM Facilities

If you have any questions or need anything further, please contact me at (303)268-3727.

Respectfully,

A handwritten signature in black ink, appearing to read "Michael H. Mead", written in a cursive style.

Michael H. Mead  
Mechanical Engineer  
Project Engineering Supervisor  
Engineer of Record

**PrimaTech**  
*Specialists in Risk, Safety and Reliability*

# Certificate of Achievement

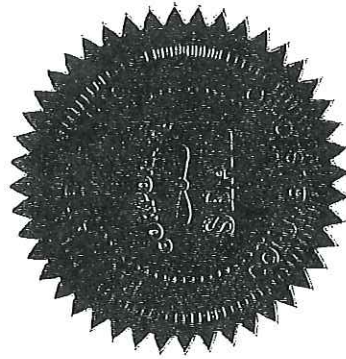
*Cyndee Clouse*

has attended the course

**Process Hazard Analysis (PHA)  
for Team Leaders**

Presented in:

**Houston, Texas  
July 20-24, 2009**



*Douglas Ferguson*  
Instructor: Mr. Doug Ferguson

The above participant has been awarded 3.5 continuing education units (CEU)s for completing this course.

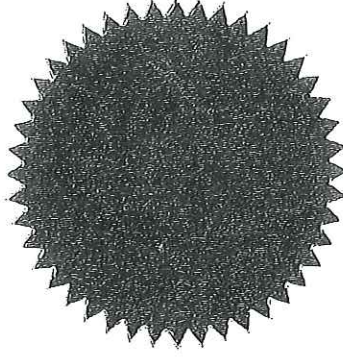
*This certifies that....*

**CYNDEE CLOUSE**

*has successfully completed the LOPA (Layers of Protection Analysis\*)  
training course on December 2-3, 2010 in Houston, Texas*

*In recognition whereof, 12.0 Professional Development Hours or 1.2 Continuing Education Units are awarded.*

 **ConocoPhillips**



  
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Instructor - Dave Cones  
Operations Excellence Program Auditor  
ConocoPhillips

**Course ID: RMT0100**

\* Training content based on the ConocoPhillips Refining Required Standard, HSE-93-RS-3 (REP 3-8-1) Layers of Protection Analysis