



TC Energy – Our Safety Journey

IPLOCA September 2023



Our Journey - Timeline



2010 we adopt Zero is Real

Safety becomes a Value in 2015

Safety

Safe every day, all the time

Integrity

Do the right thing

Responsibility

Focus on what matters

Collaboration

Play as one team

Life Saving Rules in 2016

**LIFE
SAVING
RULES**

2022 we introduce Human and Organizational Performance



TC Energy's Life Saving Rules - Summary

Life Saving Rules Commitment Statement:

"As a TC Energy employee or contractor performing work on behalf of TC Energy, I will adhere to the Life Saving Rules and all company procedures to ensure the safe operation of facilities, the protection of personnel, our environment, our customers and the people of the communities in which we do business"

The Life Saving Rules:

We will

- 1. Drive safely and without distraction**
- 2. Use the appropriate Personal Protective Equipment**
- 3. Conduct a pre Job Safety Analysis (JSA)**
- 4. Work with a valid work permit when required**
- 5. Obtain authorization before entering a confined space**
- 6. Verify isolation before work begins**
- 7. Protect ourselves against a fall when working at heights**
- 8. Follow prescribed lift plans and techniques**
- 9. Control excavations and ground disturbances**

The logo for Life Saving Rules features the words "LIFE", "SAVING", and "RULES" stacked vertically in a large, bold, blue sans-serif font. The word "SAVING" is partially obscured by a graphic of an orange and white traffic cone, which is positioned behind the letter "A".

Our Journey with HOP

1

Remember
error is
normal

2

Enable
learning by
removing
blame

3

Consider
how context
influences
behaviour

4

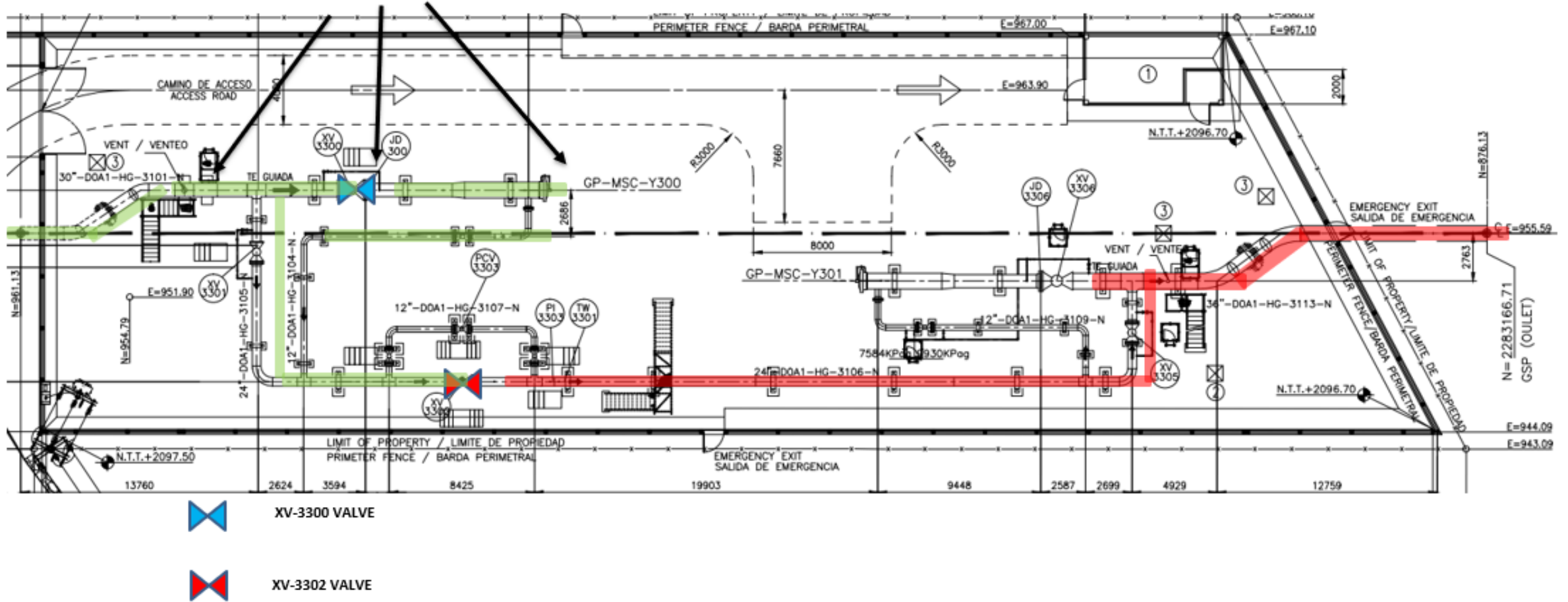
Focus
consciously
on learning

5

Respond
with
positive
intention



Gas Release Points



El Cardonal PCS Layout

El Cardonal - Learnings

Root Cause Analysis

- Gas handling, LOTO and General Work Permit procedures
 - Simultaneous operations (SIMOPS)
 - Review LOTO revision and approval process
- Process Safety
 - Update Philosophy of Operations
 - Logic of control, pressure transmitter calibration and maintenance mode
- Alignment procedures and competency/qualification program
 - Curricula, training material and evaluations
 - Location specific critical information
- Risk based qualification process for MBU
- Other
 - Limit personnel on site presence

Learning Team – Frontline Workers

- Insufficient or no time to plan
- Procedures are complicated and / or contradictory
- Communications between the teams is poor and often too late. Lack of Collaboration

So what have we done?

01

Identify hazards using the energy wheel.

02

Use the concept of high-energy to identify the stuff that kills you (STKY).

03

Ensure that there are adequate controls in place to prevent serious injuries and fatalities.

04

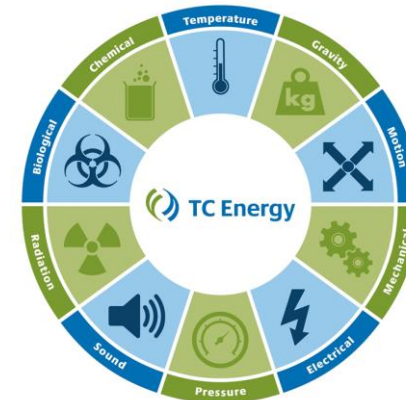
Use this knowledge in essential activities such as pre-job briefs, observations, stop work, and event learning.

Energy based safety



Co-ordination Committees

STOP Work Authority App



Energy-Based Safety (Extended)

TOPICS:

- Energy wheel (30 min)
- High-Energy and Direct Controls (30 mins)
- Excellent Pre-Job Briefs (30-min)
- Managing Change and Stop Work (30-min)

Intended Audience:
Front-Line Employees

Total Duration: 2 hours



Energy-Based Safety for Leaders and Managers

TOPICS:

- Energy wheel deep dive (60 min)
- High-Energy and Direct Controls (30 mins)
- Excellent Pre-Job Briefs (30-min)
- Energy-Based Safety Observations (30-min)
- Managing Change and Stop Work (30-min)
- Safety Classification and Learning (SCL) Model (60-min)

Intended Audience:
Leaders and managers

Total Duration: 4 hours

01

People make mistakes

02

Blame fixes nothing

03

Context drives behavior

04

Learning & improving is vital

05

How we respond matters



Continue on the Journey

Today, we have sites without site specific instructions for high risk tasks.

Reality, we work in a high risk environment and learning to fail safely takes time and commitment.

I am 100% Commitment & will give my teams the resources and support they need to fail safely!

Any
1.1
Questions