Remote Control Valve (RCV) Program and the Melvindale Incident

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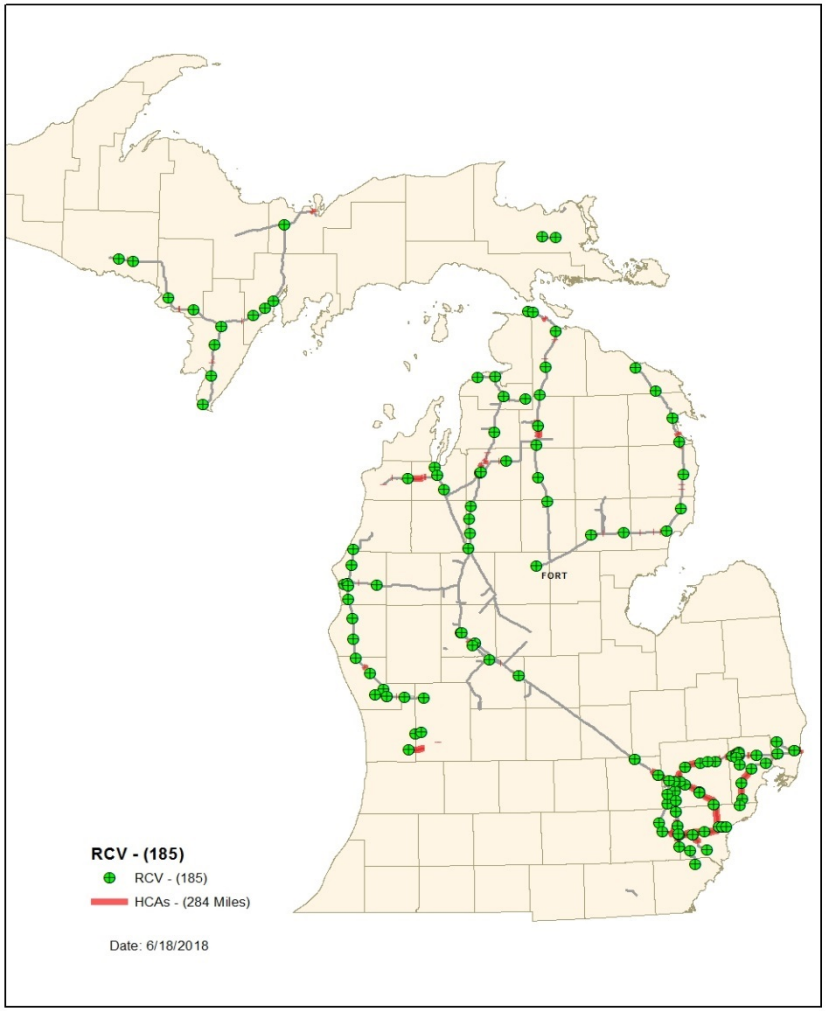
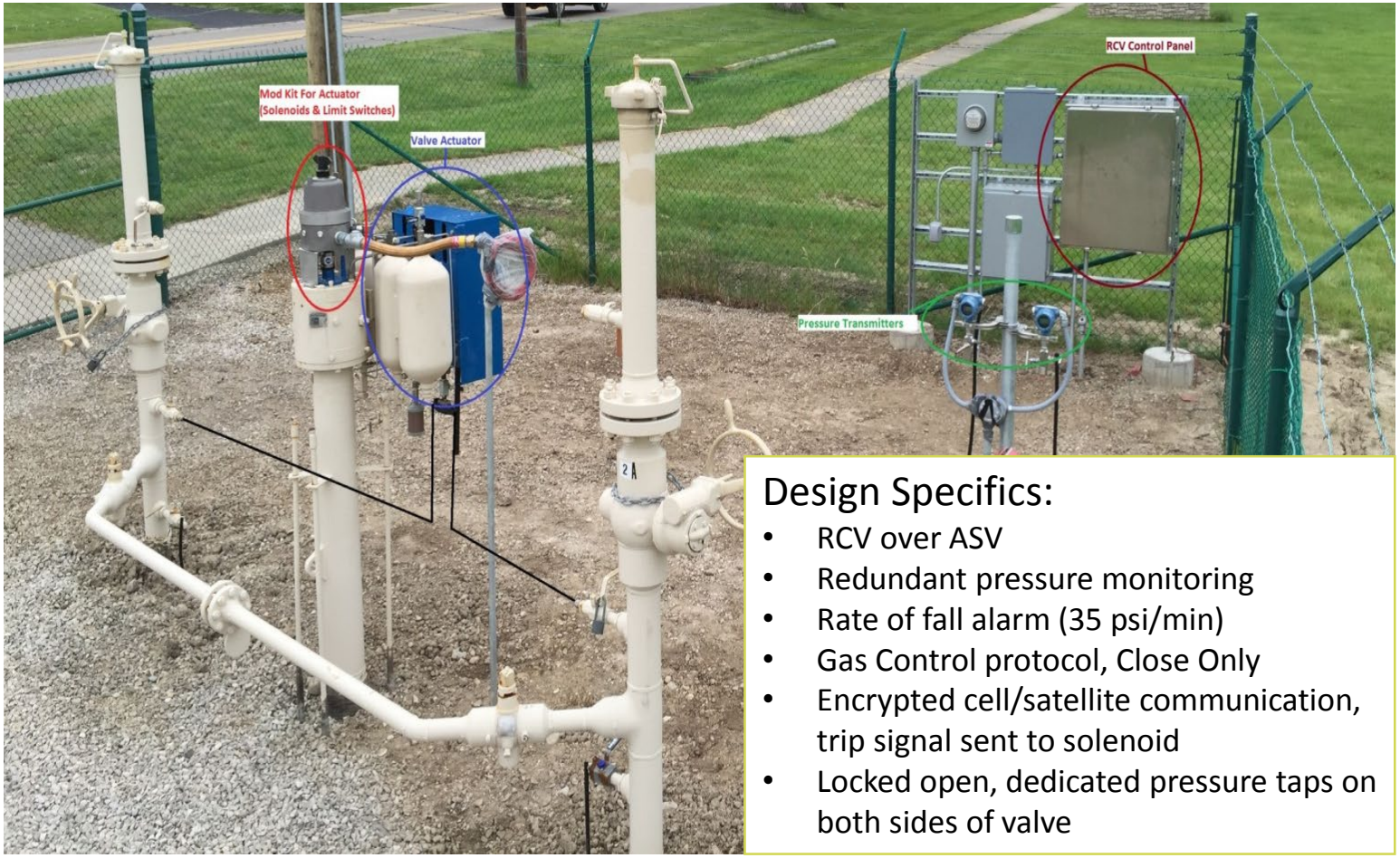
Agenda

- Remote Control Valve (RCV) Plan
- Design Concept
- Commissioning, Planning and Training
- Real Life Example – Melvindale Incident
- Accelerating the Program

DTE Gas identified 185 valves installed in our transmission system HCAs that required conversion to Remote Control Valves (RCV)



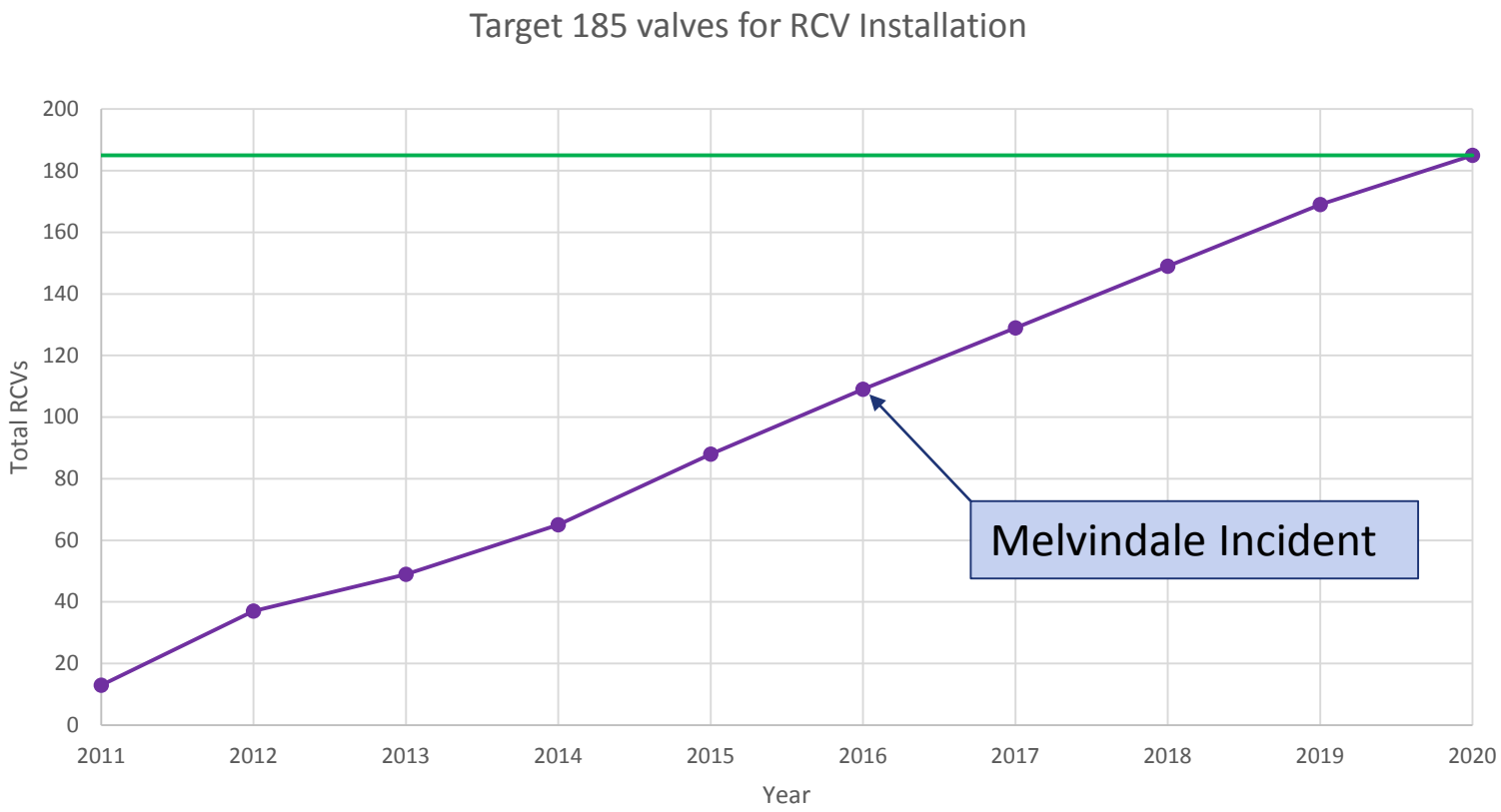
Components of a typical RCV installation include redundant pressure monitoring and gas control protocol



Design Specifics:

- RCV over ASV
- Redundant pressure monitoring
- Rate of fall alarm (35 psi/min)
- Gas Control protocol, Close Only
- Encrypted cell/satellite communication, trip signal sent to solenoid
- Locked open, dedicated pressure taps on both sides of valve

15 to 20 RCV installations were planned with a program completion date of 2020



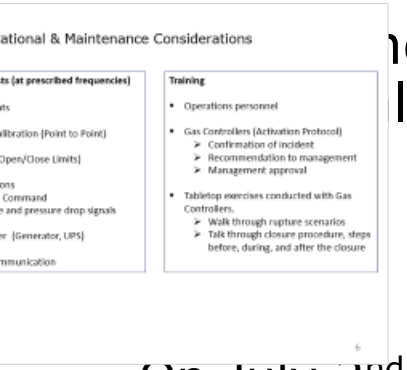
RCV Operational & Maintenance Considerations

Functionality Tests (at prescribed frequencies)

- Trip (set) points
- Instrument calibration (Point to Point)
- Valve Travel (Open/Close Limits)
- Communications
  - Remote Command
  - Pressure and pressure drop signals
- Back-up power (Generator, UPS)
- Security
- Encrypted communication

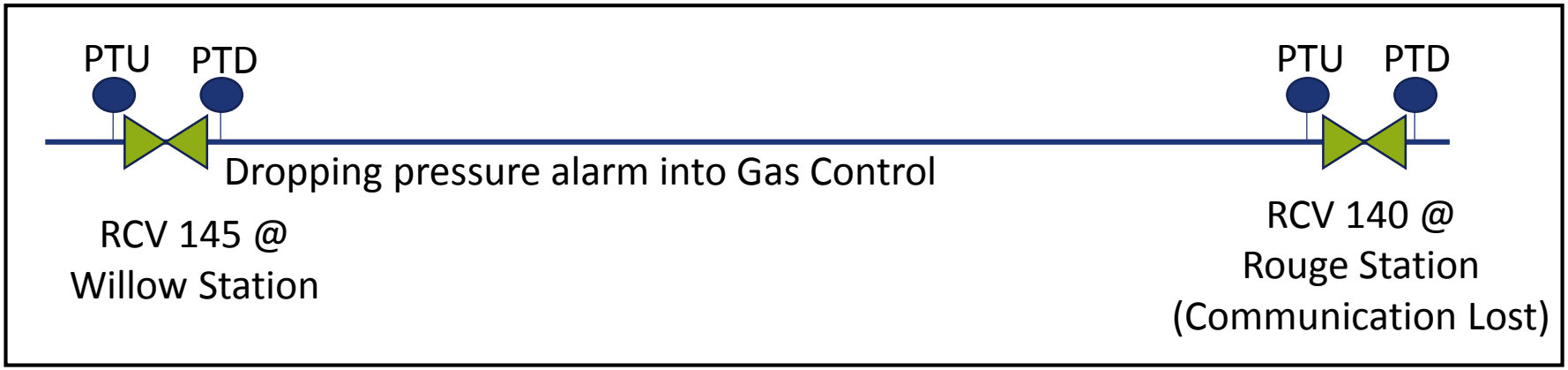
Training

- Operations personnel
- Gas Controllers (Activation Protocol)
  - Confirmation of incident
  - Recommendation to management
  - Management approval
- Tabletop exercises conducted with Gas Controllers.
  - Walk through rupture scenarios
  - Talk through closure procedure, steps before, during, and after the closure



ndale Incident proved the importance of the Remote lve Program

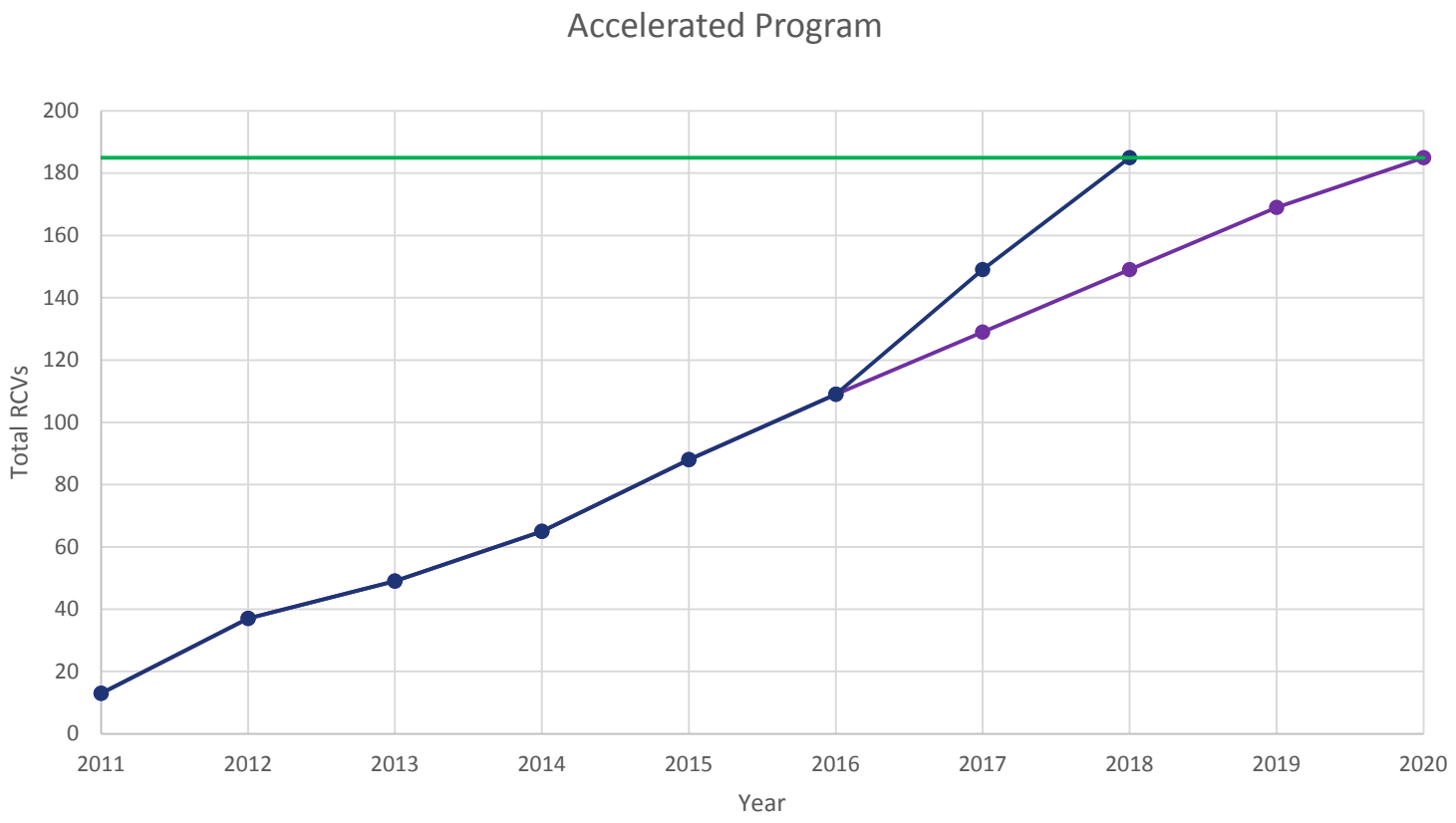
On July 2nd, 2016 at approximately 2:40 AM, a passenger vehicle turns the wrong way, breaks through a fence, and runs into an above grade riser at River Rouge Station in Melvindale, MI



Advanced planning provided Gas Control the training needed to make the necessary decisions

- Gas Control begins to see low pressures along the pipeline and begins to receive additional alarms at RCV 145 at Willow Station.
- A call is made to the supervisor and the decision to close the valve is made.
- Gas Control closes RCV 145 to stop gas flow into the pipeline.
- By utilizing the RCV, Gas Control was able to close the valve 75 minutes sooner than if we had to wait for a technician to arrive on site.
- Because of this quick reaction time, the closure of RCV 145 allowed the fire at Rouge Station to burn out sooner, minimizing property damage.

Because of the success of RCV 145, DTE accelerated the completion of the program from 2020 to 2018



Questions