

Utility Public Safety Alliance (UPSA) 2018 National Meeting



APRIL 2017 HOME EXPLOSION in FIRESTONE, COLORADO:
***Notes and Opinions from an Outside
Regulatory Perspective***



COLORADO

Department of
Regulatory Agencies

Public Utilities Commission

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Why safety “culture” is important:



***Mark and Erin Martinez
with daughter***

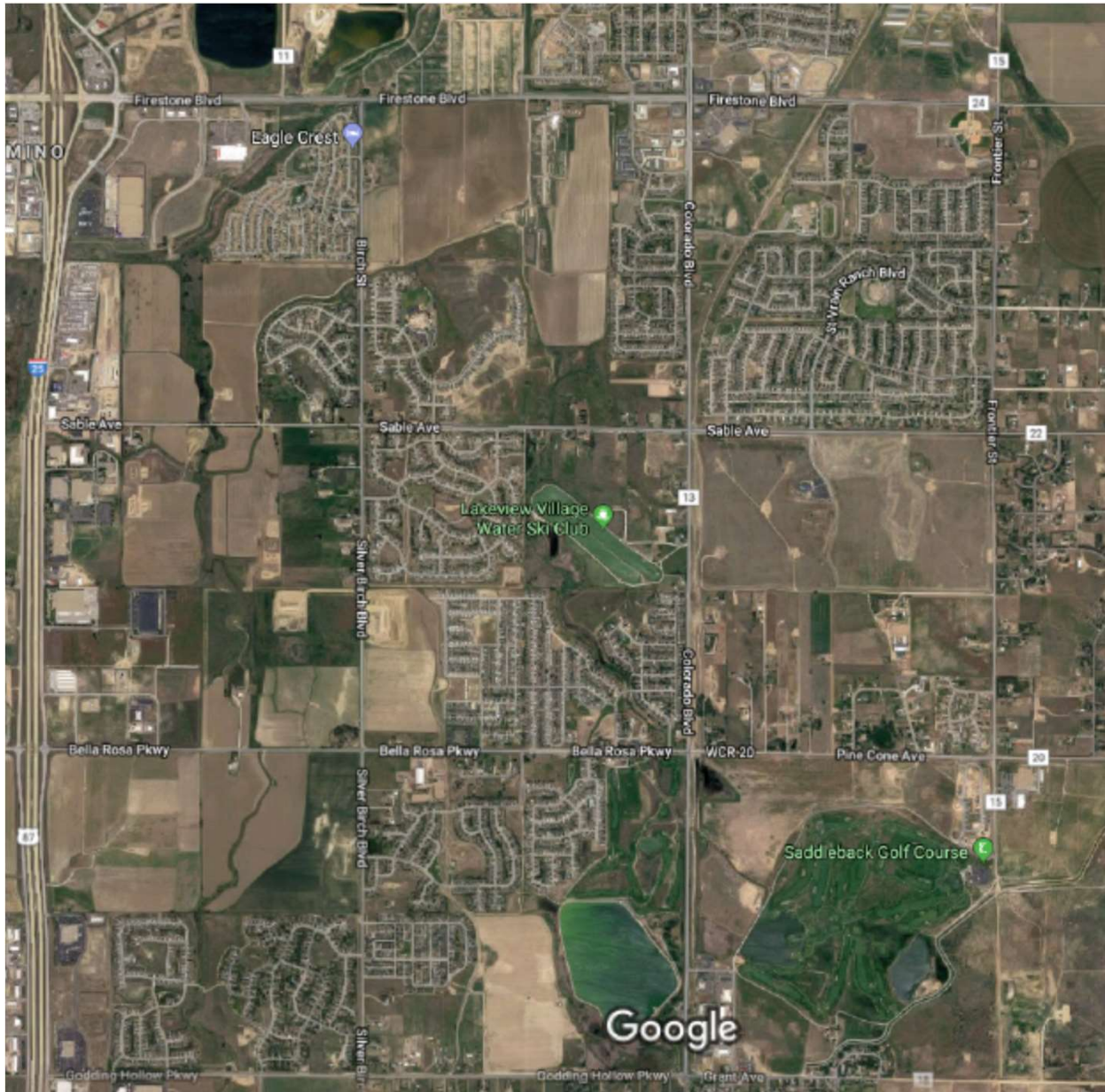


Background/Disclaimer:

- The Firestone home explosion investigation has implicated a release of hazardous (natural) gas from a production pipeline;
- The Colorado Public Utilities Commission's Hazardous Gas Pipeline Safety Program (COPUC PSP) oversees hazardous gas pipelines engaged in regulatory-defined "transportation": Gathering, Transmission, and Distribution pipelines
- While the COPUC PSP initially responded to the Firestone event and coordinated other regulatory responses with the Colorado Oil and Gas Conservation Commission (COGCC) and the U.S. DOT Pipeline and Hazardous Materials Safety Administration (PHMSA), the PSP was only an interested party to the investigation once it began in earnest.
- The "Notes and Opinions" expressed in this presentation are solely those of the PSP Chief and do not represent any official regulatory position in any active proceeding.

SAFETY REGULATION REALITY

- Three main areas of safety for regulatory purposes –
 - **Public Safety**
 - **Occupational Safety**
 - **Environmental Safety**
- Regulation ***MUST*** be segmented, granulated, and parsed so that (somewhat) consistent regulation can occur
- Some overlap between safety segments, but these overlaps are often confusing and sometimes contradictory
- “Safety Regulation” is not well understood, seen, or integrated into routine work and living environments/systems, i.e., “safety” is either engineered into the environment/system or it is an add-on with additional requirements, restrictions, equipment, and COST (time and \$\$)...
- SAFETY REGULATION AND HUMAN NATURE:
 - **Humans “acclimatize” to RISK/HAZARD and begin to accept it**
 - **Acceptance leads to new cost/benefit calculation of SAFETY**
 - **“SAFETY” starts being associated with other terms: “UNNECESSARY”, “COMPLICATED”, “FEAR-INVOKING”, “COSTLY”, “NUISANCE”, “HINDERANCE”...ETC.**
 - **Overt SAFETY costs are minimized**
 - **Embedded/related SAFETY practices are marginalized**
- **Safety regulation and regulators cannot (yet) regulate SAFETY CULTURE**



Firestone, Colorado



Subdivision Overview

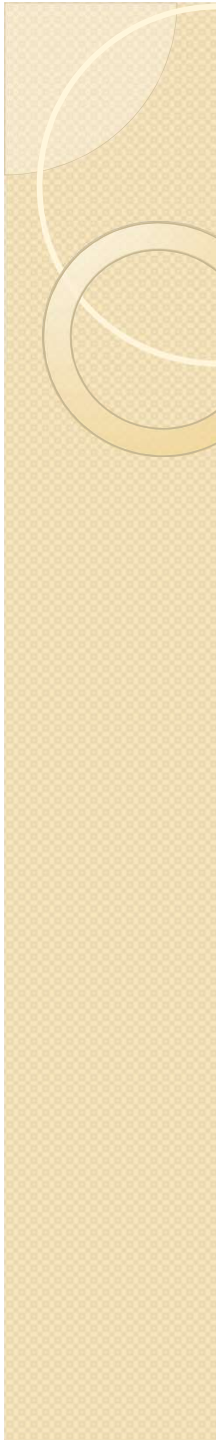


Destroyed home looking South



Wellpad looking North-West

Area of home and well



Twilight Avenue, Firestone, Colorado



Observations:

- The well and associated production pipelines existed there before the subdivision... complicating factors laying the foundation for disaster:
 - Well had multiple owner/operators during its operational lifetime
 - Oil and gas production environment dominated by contract employees
 - Community development environment dominated by local government conditions & politics
 - Subdivision development environment dominated by contractors
- At the request of the NTSB, a COPUC PSP investigation into the fate of former jurisdictional gathering pipelines in the area revealed that these had been abandoned and removed...why did the “flowline” remain, apparently abandoned, but not removed?
- Flowline MUST have been cut during subdivision development – likely multiple times

Opinions:

- Pipeline company certainly has the primary responsibility to understand the operational characteristics of all of its facilities, but pipeline companies are often fractured in their duties, i.e., “compliance” is separate from “engineering” is separate from “operations” ...making this difficult without the proper culture
- The development of housing subdivisions and other public and quasi-public infrastructure is often fractured in its approach, i.e., “parcel approval” is separate from “permitting” is separate from “Contractor A operations” is separate from “Contractor B operations,” etc.
- As with most disasters, the 2017 Firestone Home Explosion was triggered by one action, but had causality in many INACTIONS...
- This was a clear case of S.E.P. – “Somebody Else's Problem”
- It is difficult to change human nature and its acceptance of risk/hazard coupled with the drive for “efficiency”



Thanks for your time...

QUESTIONS or COMMENTS?

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