



ANTERO
RESOURCES

Battlement Mesa Natural Gas Development Plan

Meeting #8

Emergency Response and Pad Security Plan

(Begin with Part 2 of Environmental Program)

October 27, 2009

BMOGC Meeting Series – Brief Overview



- July 1st – Introductory Meeting (define future mtgs and public involvement process)
- July 29th - Pad Locations, Facilities, and Setbacks
- August 5th - Surface Use Agreement
- August 19th - Drilling Schedule and Pace
- September 2nd - Traffic Plan
- September 16th – Drilling, Completion, and Water Management Plan
- October 7th – Environmental Program (Part 1 - Air Quality)
- **October 21st - Environmental Program (Part 2)**
 - **Emergency Response Plan and Pad Security Plan**
- **November 4th – Post Drilling and Completion Operations and Interim Reclamation**

(All meetings are open to the public and times are posted in *Grand Valley Echo* and on battlementmesacolorado.com website)

What is an Emergency?



What is an emergency?

- It is an unexpected event that demands immediate attention and has or could cause:
 - Harm to people
 - Damage to property or the environment
 - Loss of process or profit
 - Negative impact on corporate image and reputation

Definition of an Emergency



- For the purposes of this plan an emergency is considered to be any hazardous or potentially hazardous situation presenting danger to personnel, the environment or property.
- If there is any doubt as to whether a hazardous situation constitutes an emergency, then it must be treated as an emergency.
- Several broad categories of emergencies that may occur in relation to the Piceance E & P Operations:
 - Gas Leak
 - Fire/explosion
 - Spill/Release of Hazardous Liquids
 - Injury/Illness to Personnel
 - Major Property Damage
 - Natural Events (wildfires, flooding, earth slippage)
 - Third Party Damage (machinery impact)

Emergency Response Objectives



The objectives of this ERP are to:

- Control or limit any effect that an emergency or potential emergency may have on any personnel, properties or the environment.
- Facilitate appropriate emergency response.
- Ensure that vital information is readily available to emergency response personnel.
- Ensure compliance with all applicable laws and regulations

Emergency Response Principles



Emergency Response Principles are:

- Protect lives (personnel, responders, public).
- Rescue and treat casualties.
- Minimize environmental impacts.
- Minimize damage to company, public and private property.
- Effectively use the combined resources of Antero, mutual aid partners, the government and other external services.
- Provide factual information to news media and other stakeholders on a timely basis.
- Preserve records and evidence for use in post-incident investigations.
- Protect shareholder value

Classification of an Emergency



In the event of an emergency, a category of Minor, Serious or Major is allocated.

Minor Emergency

- A minor emergency is one that can be satisfactorily handled by company personnel and does not affect or threaten parties beyond the scope of the direct operations. Minor injuries to onsite personnel. Public safety is not threatened. Environmental impacts confined to the location. No external assistance needed.

Serious Emergency

- A serious emergency is one that has implications beyond the control of local personnel. It would generally involve parties outside the direct scope of the operations including government agencies and outside contractors. Recordable and/or lost time injuries to multiple persons on site. Limited environmental impacts off-site and no long term effects. Potential or actual threat to public safety. Little risk of reputational damage or media coverage.

Major Emergency

- A major emergency is an incident having major safety, environmental, governmental, economic or public welfare implications. Multiple lost time injuries or a fatality to on site personnel. Public health and/or safety has been or is threatened. Long term environmental effects expected. Environmental impacts are extended off site. Outside responders are involved. Major property damage. Media coverage expected and potential reputational damage.

Incident Command System



The Incident Command System:

- Is a standardized, on-scene, all-hazard incident management concept.
- Allows its users to adopt an integrated organizational structure to match the complexities and demands of single or multiple incidents without being hindered by jurisdictional boundaries.

Why ICS?



Weaknesses in incident management before ICS were due to:

- Lack of accountability.
- Poor communication.
- Lack of a planning process.
- Overloaded Incident Commanders.
- No method to integrate interagency requirements.

Using management best practices, ICS helps to ensure:

- The safety of responders and others.
- The achievement of tactical objectives.
- The efficient use of resources.

ICS Mandates



Homeland Security Presidential Directives

Post-9/11 Established:

- National Incident Management System (NIMS)
- National Response Plan (NRP)

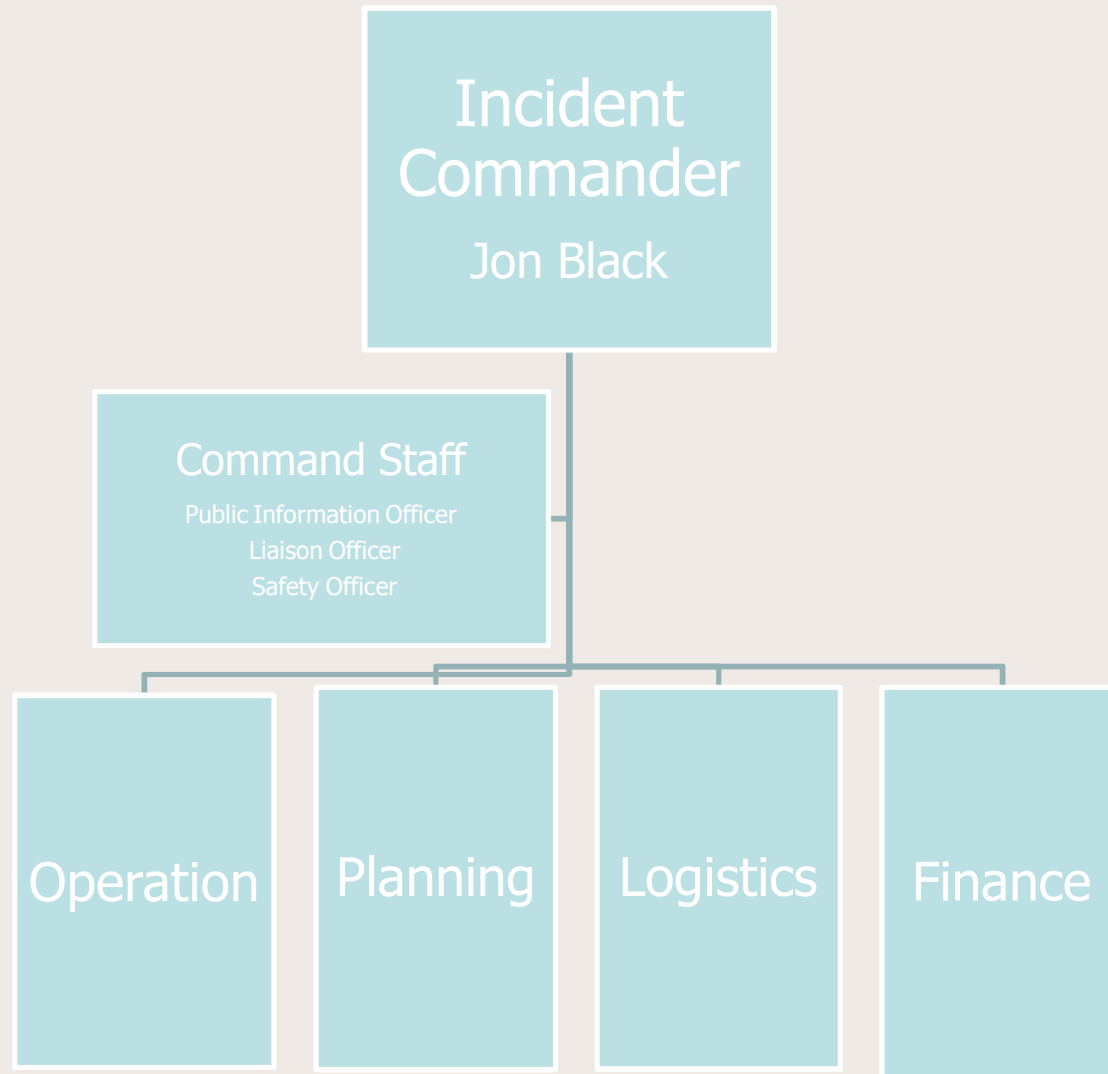
(**Both mandate the use of ICS by private industry as well as public entities)

– Hazardous Materials Incidents

- Superfund Amendments and Reauthorization Act (SARA) – 1986
- Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120
HAZWOPER

– State and Local Regulations

Antero Resources ICS



Emergency Response Procedures



General Principles

- Assess the situation
- Establish Priorities - 1st Safety of People
 - 2nd Protect the Environment
 - 3rd Protect Equipment
- Determine Immediate Threats
- Control the Situation - control the hazard, control the site
- Summon Help - when needed; notify management
- Limit risks

ERP Review continual evaluation

- The Operations Manager will convene an annual review meeting to review this plan, the training undertaken, emergency exercises conducted and to consider any updates or revisions to the plan based on legislative changes, industry trends, experience and best practice.

Public Water Intakes



- In the event that a liquid release threatens to adversely impact the quality of the Colorado River as a public water supply, public utilities and agencies which draw water from this source will be contacted immediately by either Antero or by the Garfield County Emergency Management Agency (GCEMA). Antero will coordinate with GCEMA and will not take the lead in making these contacts. These contacts are being compiled by GCEMA currently and will be made available to Antero upon completion as indicated by GCEMA.

Post Emergency Procedures



- The Incident Commander will give the "All Clear" when the initial response and emergency activities have been completed. Depending on the incident, this will define the beginning of the next phase which may include remediation and restoration activities.
- A critical review of the incident will be held as soon as practical after an incident or exercise in order to define any deficiencies in the plan or response and develop and implement associated corrective actions.

OSHA Accident Notification



OSHA Accident Notification

- Verbal and/or written notification must be made to OSHA within 8 hours when:
 - A fatality occurs, or
 - The immediate hospitalization of three or more employees due to an injury or exposure, or
 - The hospitalization of three or more employees within a one month period after an injury or exposure has occurred.

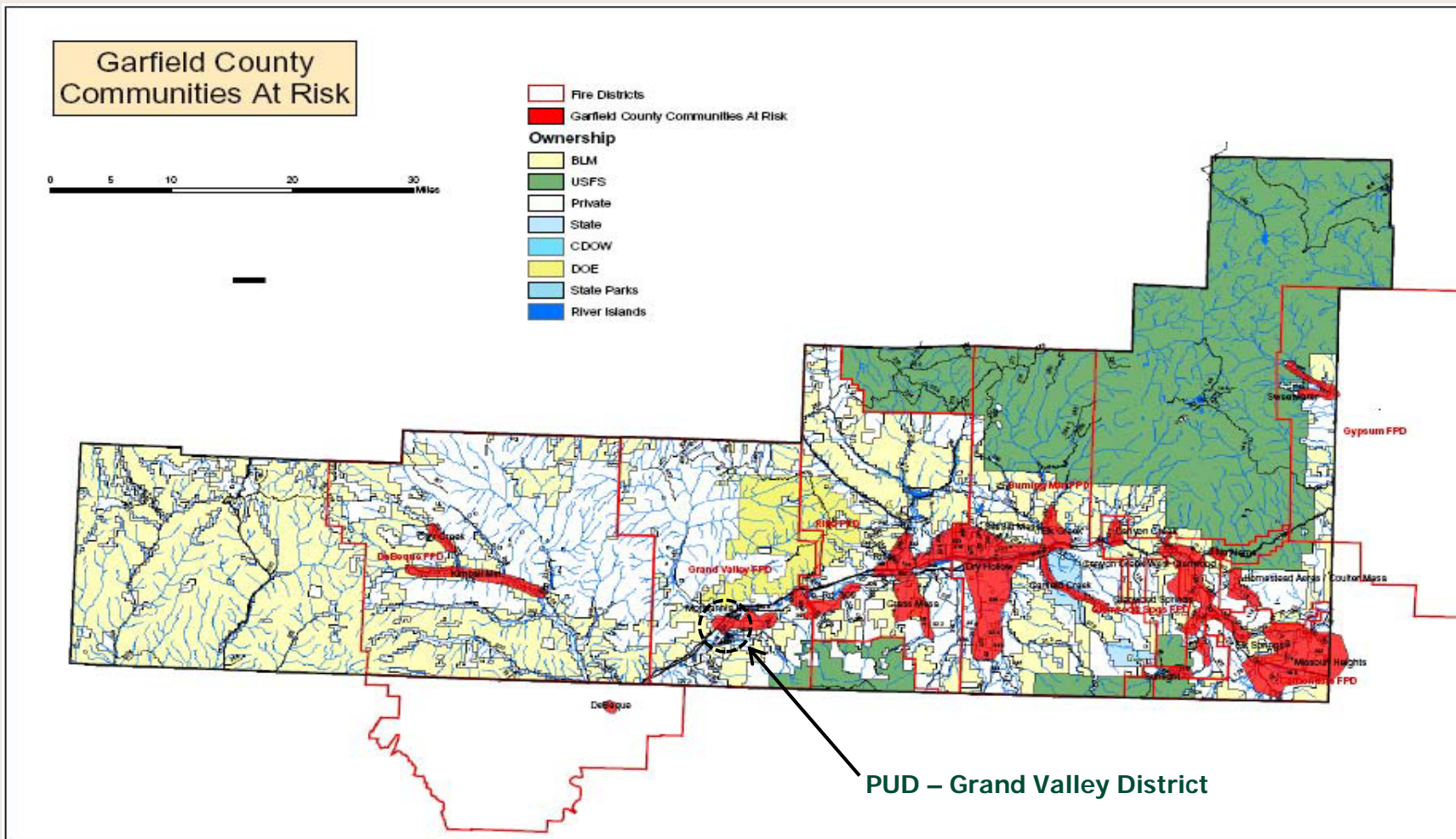


Emergency Response Provisions

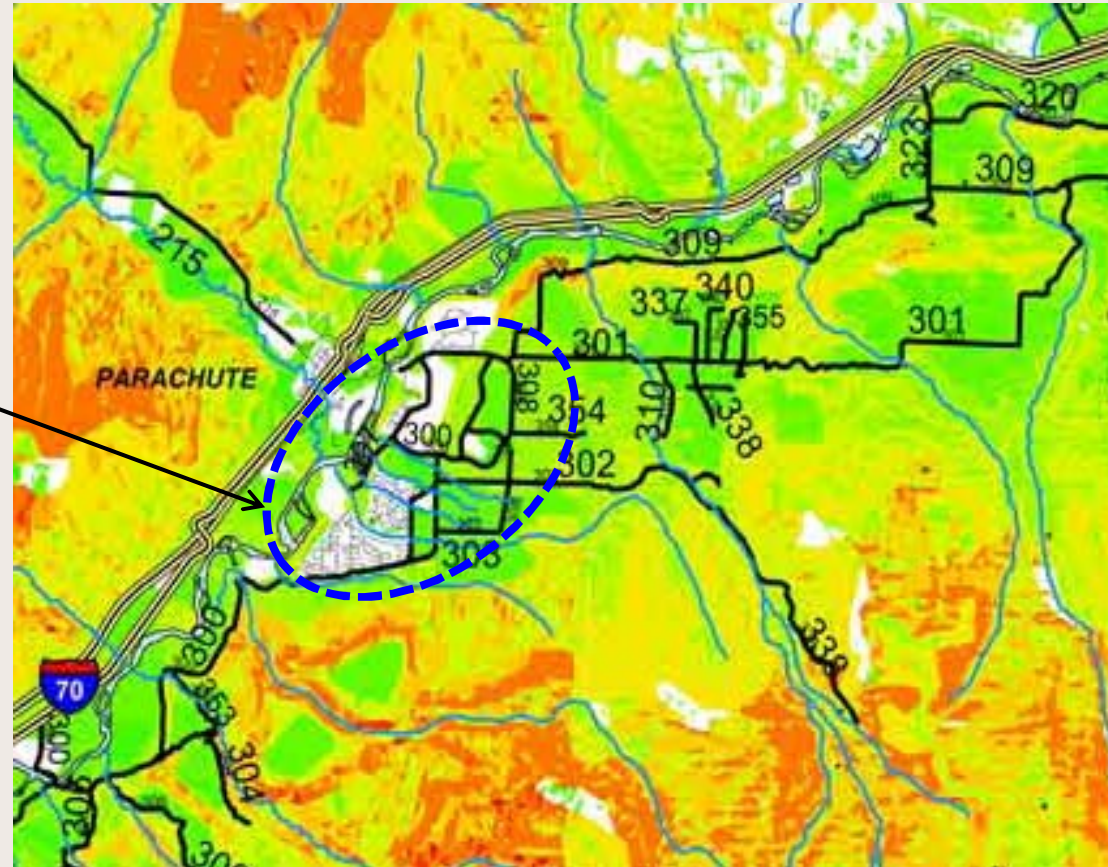
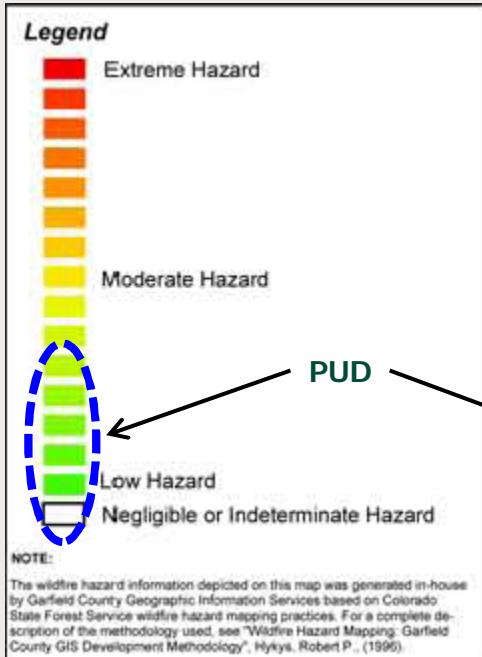
An Emergency Response Trailer (9'x20') is equipped and located at the Antero Rifle Office. It is equipped with a variety of tools, equipment and supplies for spills and releases primarily but can also be used as a mobile Command Post. It contains the following:

- Fire extinguishers
- Flashlights
- Tool kit
- Hand tools (shovels, rakes, sledge hammers, pry bars, brooms)
- Cable/chain hoists, ropes, chains, etc.
- Fence posts and drivers, surveyors flagging
- Barricade tape, traffic cones, portable signs with markers
- Sampling equipment (jars, container, vials, spatulas, spoons, etc.)
- Light plant
- Booms, kitty litter, 12 bags of floor dry, absorbent materials (pads, logs)
- Office supplies (pads, field notebooks, pens/pencils/markers, clipboards, page protectors)
- Area maps, river and drainage maps, SPCC Plan, Emergency Response Plan, Incident Command forms and displays, etc.
- PPE (hats, gloves, glasses, boots, waders, tyvek coveralls, hearing protection, etc.)
- Four Gas Detector, Draeger Tube and Pump
- First Aid Kit and Medical Supplies
- Water, Meals Ready to Eat,
- Sanitation and Decontamination (soap, hand wash, degreasing liquids, wipes, towels, toilet paper, eye washes, sanitizer, medical waste bags, etc.)
- 4 containment drums with lids, 1 roll of drum liners, 3 rolls of visqueen, 2 tarps
- Life jackets, life lines, safety lines,

Community Wildfire Prevention Plan: GARCO



Wildfire Hazard Study Garfield County





Well Site and Facility Security

Essential Security Considerations for Hydrocarbon Recovery Operations

- **Access Control.** Access Control is the management of who goes where and when.
- **Video Surveillance.** Video Surveillance is used to maintain a record of activity in critical areas and, when placed in clear view, deter acts of crime or vandalism.
- **Intrusion Detection and Alarms.** Intrusion alarm systems are designed to give early detection of unauthorized entry in order to protect inventory, cash, and people.
- **Alarm Monitoring.** Alarm monitoring involves the systematic processing of alarm signals and associated dispatch of local authorities. A variety of technologies are available for communicating signals to and from dedicated Monitoring Centers including digital, cellular, high security and, in the case of extremely remote installations, satellite transmission.
- **Critical Point Monitoring.** Alarm signals can be transmitted if critical process temperatures, pressures, fluid levels, gas emission, or other equipment performance indicators fall outside of prescribed control limits. The early warning of process problems allows corrective action to minimize downtime and safety hazards.
- **Remote Accessibility.** Through TCP/IP WAN, intranet, or dial-up connection, remote locations can be checked from any PC equipped with the appropriate software. For example, the security state of distant compressor stations or unmanned wellheads can be evaluated centrally, eliminating the need to dispatch staff members for site inspections.

Well Site and Facility Security



- Antero Resources well site security
- Provisions for signage and notifications on all sites
- Visual warning signs
- Lock-out systems
- Well site fencing
- Enclosed and secured surface production equipment
- Daily physical checks
- Maintaining logs, records databases
- Remote sensing and telemetry
- Remote camera systems - 24 hr facility surveillance

Question and Answer Session