

# GV 88-1 Frac Pit

Facility ID 421196

## 909.j.(6) Alternative Sampling Plan

---



### A. INTRODUCTION

TEP Rocky Mountain LLC (“TEP”) has prepared this Alternative Sampling Plan for director approval per COGCC Rule 909.j.(6) for the GV 88-1 Frac Pit. TEP has extensive water reuse and recycle infrastructure to utilize produced water from approximately 7,000 natural gas wells in the Piceance Basin for hydraulic fracturing of new natural gas wells, primarily in Garfield and Rio Blanco Counties. Twenty-eight (28) lined produced water pits are part of this infrastructure. Due to the very large number of individual actively producing wells it is impractical to sample produced water from each well. However, since proximate wells are producing from the same, or similar, formations, collecting and analyzing produced water from each lined pit will provide representative analytical results.

### B. LOCATION DESCRIPTION

The GV 88-1 facility is located within Section 1, Township 7 South, Range 95 West in Garfield County (facility ID 421196, lat. 39.463829, long. -107.944592). A facility diagram is attached for reference. The facility consists of a 58,699 barrel capacity lined produced water pit.

### C. PRODUCED WATER SAMPLING PROTOCOL

In accord with COGCC Rule 909.j.(1) produced water samples will be collected from the inlet produced water pipeline entering the pit and analyzed for the properties and constituents listed below. A list of wells that send produced water to the GV 88-1 Frac Pit is included in Section D (“Well List”) below.

- pH
- Specific conductance
- Total dissolved and suspended solids (TDS and TSS)
- Alkalinity (total, bicarbonate, and carbonate as CaCO<sub>3</sub>)
- Major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, and phosphorus)
- Major cations (calcium, iron, magnesium, manganese, potassium, and sodium)
- Other elements (barium, boron, selenium, and strontium)
- Naphthalene
- Total petroleum hydrocarbons (“TPH”) as total volatile hydrocarbons (C<sub>6</sub> to C<sub>10</sub>) and total extractable hydrocarbons (C<sub>10</sub> to C<sub>36</sub>)
- BTEX compounds (benzene, toluene, ethylbenzene, and xylenes)
- Radium (226Ra and 228Ra)

In accord with COGCC Rule 909.j.(3) analytical results will be submitted to the COGCC via Form 43.

### D. WELL LIST

The GV 88-1 Frac Pit is not currently receiving produced water. A list of wells sending water to this pit will be provided for approval once the pit is actively receiving produced water.



**Well Pad Valve Legend**

OS= oil tank sales valve  
 OF= oil tank fill valve  
 WF= water tank fill valve  
 WL= water tank truck load out valve  
 D= oil tank drain valve  
 WD= water tank drain valve  
 X= oil tank overflow isolation valve  
 Y= oil tank maintenance valve  
 Z= oil tank vapor isolation valve

**Production Phase**

OS- closed and sealed  
 OF- open and sealed  
 WF- open and not sealed  
 WL- closed and not sealed  
 D- closed and sealed  
 WD- closed and not sealed  
 X- open and sealed  
 Y- closed and sealed  
 Z- open and not sealed

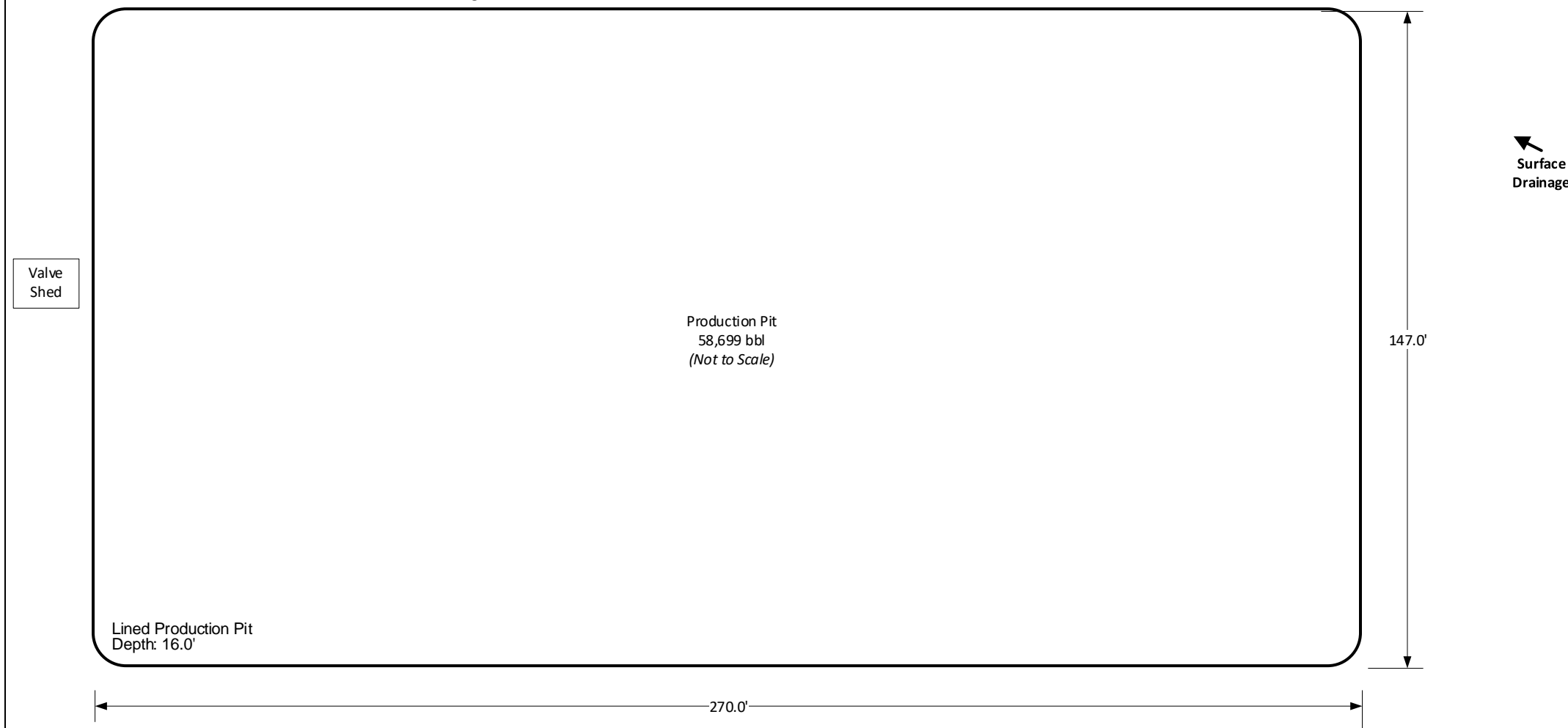
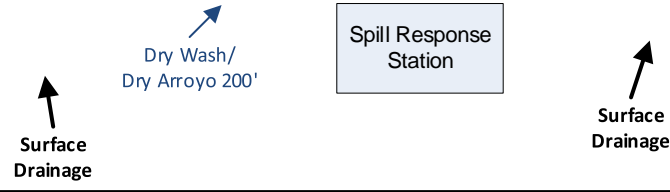
**Sales Phase**

OS- open and not sealed  
 OF- closed and sealed  
 WF- open and not sealed  
 WL- closed and not sealed  
 D- closed and sealed  
 WD- closed and not sealed  
 X- closed and sealed  
 Y- closed and sealed  
 Z- open and not sealed

**Drain Phase**

OS- closed and sealed  
 OF- open and sealed  
 WF- open and not sealed  
 WL- closed and not sealed  
 D- open and not sealed  
 WD- opened and not sealed  
 X- open and sealed  
 Y- closed and sealed  
 Z- open and not sealed

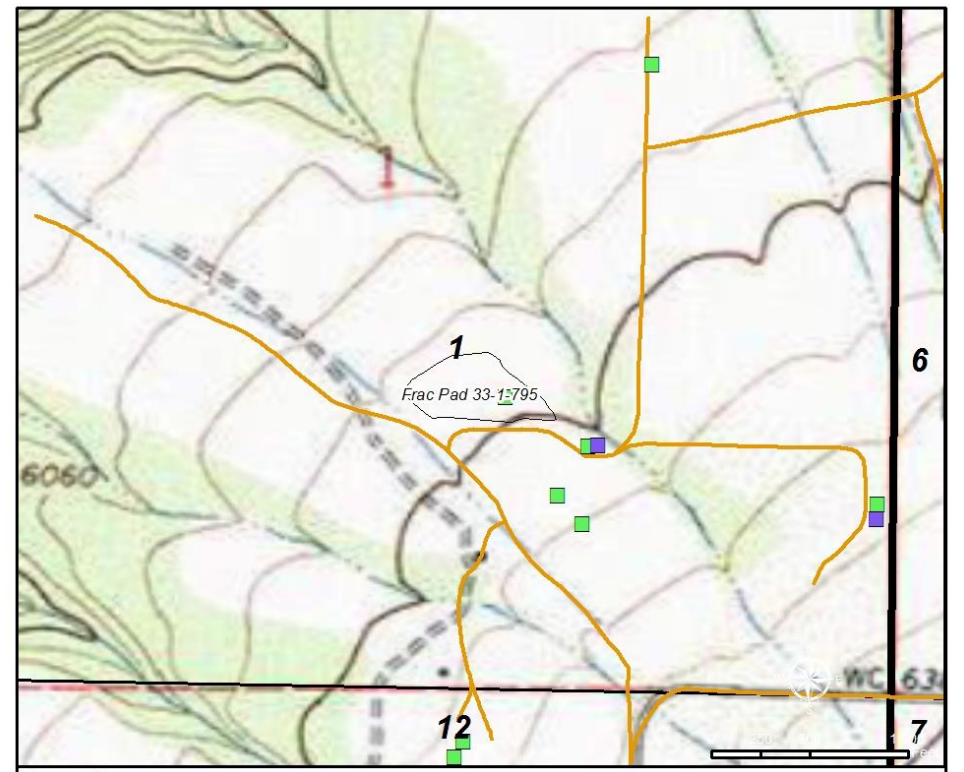
Note: This unit is subject to the site security plan for the Piceance Basin. Plan is located at:  
 TEP Rocky Mountain, LLC  
 1058 County Road 215  
 Parachute, CO 81635



**Legend**

- Sep, DeHy and Tanks
- Separators Only
- Separators and DeHy
- Separators and Tanks
- Tanks Only
- TEP Producing Well
- Existing Road
- Existing Pad

TEP Rocky Mountain, LLC  
 SPCC Facility Location Map  
 Frac Pad 33-1-795



**Legend**

- Sep, DeHy and Tanks
- Separators Only
- Separators and DeHy
- Separators and Tanks
- Tanks Only
- TEP Producing Well
- Existing Road
- Existing Pad

SPCC Facility Location Map  
 Frac Pad 33-1-795

Facility ID	
DRAWN BY:	TG
DATE:	7/9/2020
SCALE:	NONE

**Facility Diagram**  
 TEP Rocky Mountain, llc – South Parachute  
 Frac Pad 33-1-795 (aka GV 88-1 PW Pit)  
 Latitude: 39.463829 Longitude: -107.944592  
 NWSE Section 1 Township 7S Range 95W  
 COC# 00000  
 EU Number: 0000000  
 Garfield County, CO

**Legend**

- Water Dump Line
- Flowline
- Oil Dump Line
- Oil Dump Line 2
- Oil Dump Line 3
- Oil Dump Line 4
- Gas Sales Line
- Overflow Line
- Vent Line
- Manifold Line
- Load Line
- Valve
- Drip Tank
- Load Out Valve
- Well Head

Dotted lines denote underground pipes. All lines denote 2" steel pipe, unless otherwise noted. Valves on separator not shown.

Note: Some measurements on drawing are estimates and not field verified.