

Spruce Creek RWF 24-4 Pit

Facility ID 414573 | Location ID 334777

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 Spruce Creek RWF 24-4 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 the composite inlet stream of each lined pit will provide representative analytical results.

B. LOCATION DESCRIPTION

The Spruce Creek RWF 24-4 facility is located within Section 4, Township 7 South, Range 94 West in Garfield County (facility ID 414573, location ID 334777, lat. 39.46379, long. -107.89567). A facility diagram is attached for reference. The facility consists of a 73,238 barrel capacity lined produced water pit, produced water storage tanks, oil storage tanks, natural gas wells, and a skim tank.

C. PRODUCED WATER SAMPLING PROTOCOL

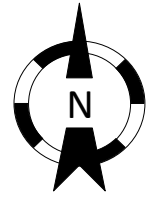
In accord with COGCC Rule 909.j.(1) produced water samples will be collected from the inlet produced water pipeline entering the pit and analyzed for the properties and constituents listed below. A list of wells that send produced water to the Spruce Creek RWF 24-4 Pit is included in Section D (“Well List”) below.

- pH
- Specific conductance
- Total dissolved and suspended solids (TDS and TSS)
- Alkalinity (total, bicarbonate, and carbonate as CaCO₃)
- 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 (C₆ to C₁₀) and total extractable hydrocarbons (C₁₀ to C₃₆)
- BTEX compounds (benzene, toluene, ethylbenzene, and xylenes)
- Radium (226Ra and 228Ra)

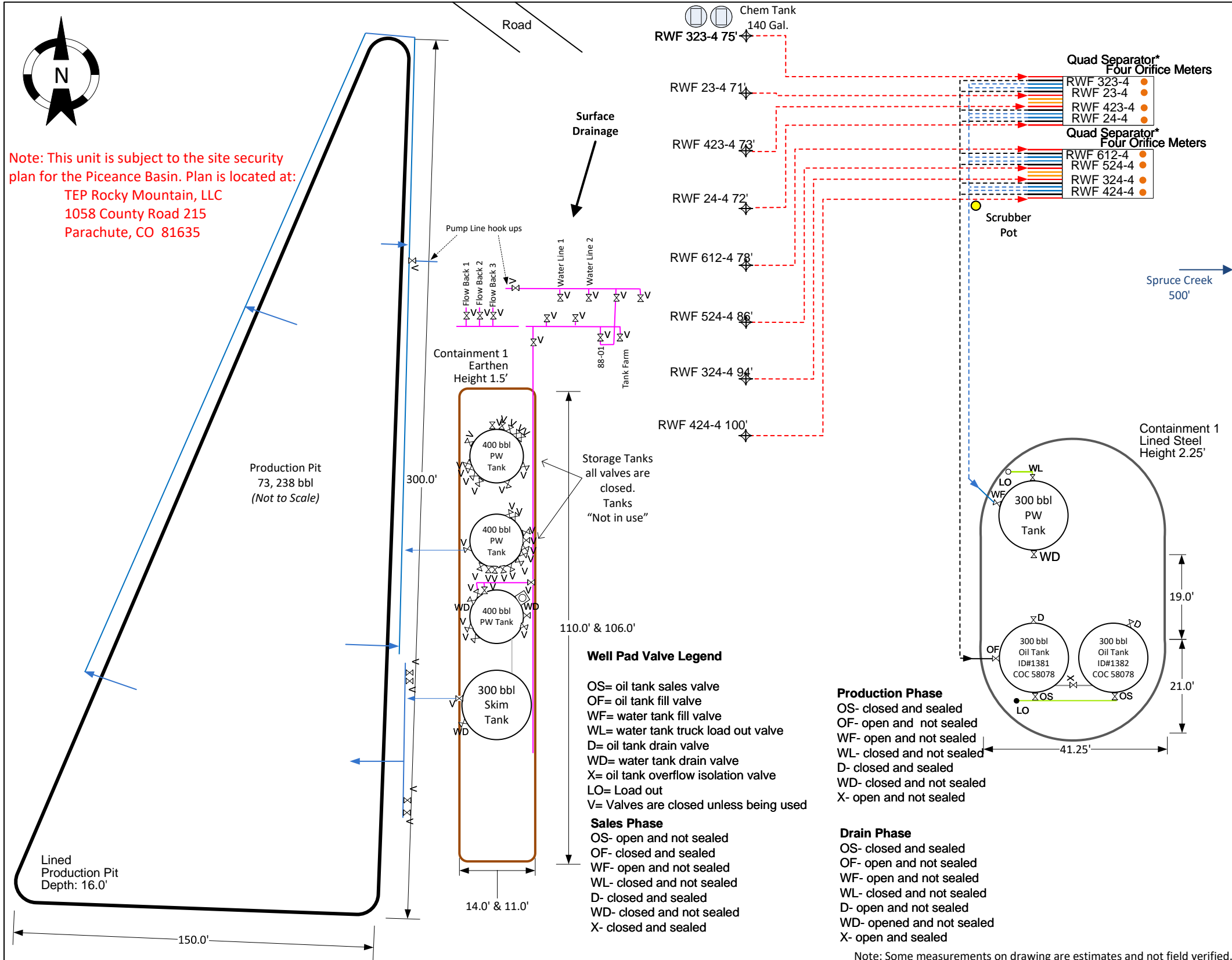
In accord with COGCC Rule 909.j.(3) analytical results will be submitted to the COGCC via Form 43.

D. WELL LIST

The Spruce Creek RWF 24-4 Pit is not currently receiving produced water. A list of wells sending water to this pit will be provided and a sample will be collected once the pit is actively receiving produced water.



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



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
LO= Load out
V= Valves are closed unless being used
- 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

- Production Phase**
OS- closed and sealed
OF- open and not sealed
WF- open and not sealed
WL- closed and not sealed
D- closed and sealed
WD- closed and not sealed
X- open and not sealed

- Drain Phase**
OS- closed and sealed
OF- open and not 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

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



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
RWF 24-4

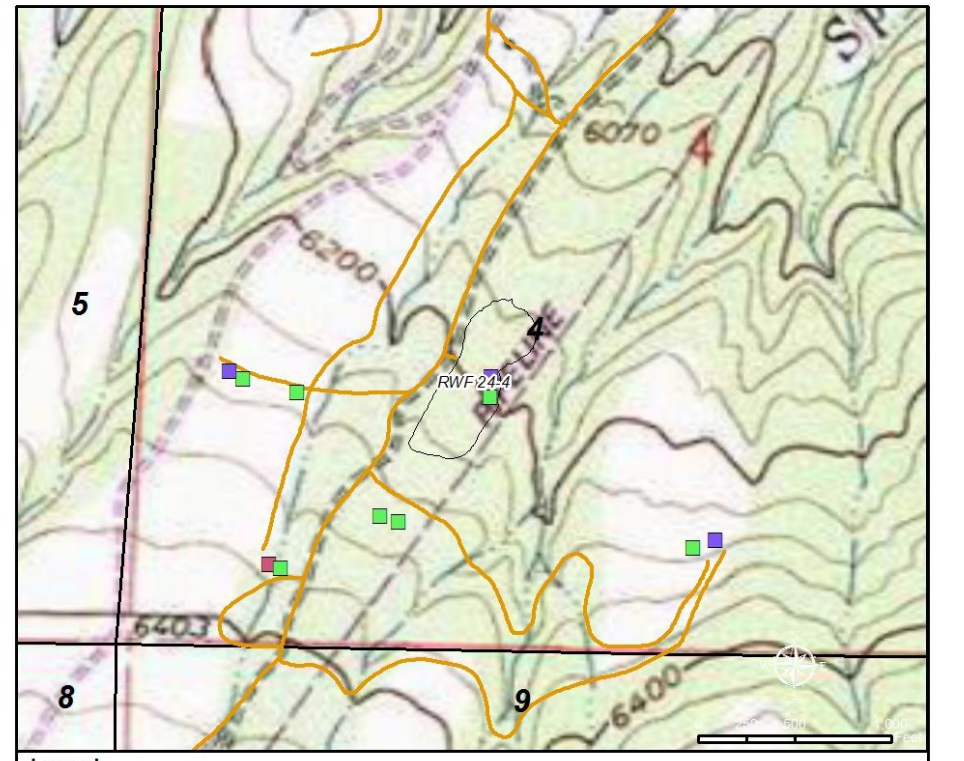
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DATE:	3/4/2022
SCALE:	NONE

Facility Diagram
TEP Rocky Mountain, LLC – South Rulison
RWF 24-4
Latitude: 39.463562 Longitude: -107.895363
NE ¼ SW ¼ S4 T7S R94W
COC# 58078
Garfield County, CO

Legend

- Water Dump Line
- Flowline
- Oil Dump Line 1
- Oil Dump Line 2
- Oil Dump Line 3
- Oil Dump Line 4
- Gas Sales Line
- Unload Line
- Overflow Line
- Vent Line
- Manifold Line
- Load Line
- Tank Heater
- Well Head
- Drip Tank
- Valve
- Load Out Valve
- Gas Facility Measurement Point
- Thermal Electrical Generator
- HTU = Heat Trace Unit
- HTP = Heat Trace Pump

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



Legend

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- Separators and DeHy
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- Tanks Only
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SPCC Facility Location Map
RWF 24-4