



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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August 9, 2017

MEMORANDUM

SUBJECT: Source Determination Analysis for River Bend Dehydrator Site

FROM: Eric Wortman, Permit Engineer, EPA Region 8 Air Program

TO: XTO Energy – River Bend Dehydrator Site Initial Part 71 Permit File

The 8/2/16 revised definition of a major source at 40 CFR 71.2 (81 FR 35622) states that “For onshore activities belonging to Standard Industrial Classification (SIC) Major Group 13: Oil and Gas Extraction, pollutant emitting activities shall be considered adjacent if they are located on the same surface site; or if they are located on surface sites within a quarter mile of one another (measured from the center of the equipment on the surface site) and they share equipment.” “Surface site” is given the same meaning as in 40 CFR 63.761, which defines a surface site as any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed. “Shared equipment includes, but is not limited to, produced fluids storage tanks, phase separators, natural gas dehydrators or emissions control devices.” The preamble explains that shared equipment generally means equipment “used to process or store the oil, natural gas or the byproducts of production.” (see 81 FR 35624/2)

In the initial part 71 permit application for the River Bend Dehydrator Site, XTO Energy (XTO) included emissions from the RBU 6-15E, RBU 7-15E, and RBU 11-15E wellsites. The RBU 6-15E wellsite is located on the same gravel pad within the property boundaries of the River Bend Dehydrator facility and is part of the same “surface site” as defined in 63.761. The RBU 7-15E and RBU 11-15E wellsites are located within a quarter mile of the River Bend Dehydrator Site, but are not located on the same surface site. Emissions equipment at the three wellsites each consist of a condensate storage tank, fugitive emissions, truck loading emissions, and various natural gas-fired process heaters. The RBU 11-15E wellsite also operates a small < 2.0 MMscfd dehydration unit. Natural gas produced from the RBU 6-15E, RBU 7-15E and RBU 11-15E wellsites enters a common low-pressure gathering pipeline that flows to the Tap 1 Compressor Station (Tap 1 CS), and eventually back to the River Bend Dehydrator Site for further processing before entering the sales pipeline. (see Figure 1 below)

The Tap 1 CS is also located within a quarter mile of the River Bend Dehydrator Site, but is not located on the same surface site. The Tap 1 CS receives natural gas from nearby wells (including RBU 6-15E, RBU 7-15E, and RBU 11-15E wellsites) and compresses the gas up to a pressure where it can enter the XTO-operated high-pressure gas gathering pipeline. The emission units at Tap 1 CS include two natural gas-fired reciprocating internal combustion engines, two condensate storage tanks, heat trace pneumatic pumps, natural gas-fired heaters, condensate truck loading emissions, and fugitive emissions. The compressed natural gas from Tap 1 CS discharges directly into the River Bend Dehydrator Site, where the natural gas is dehydrated to meet pipeline specifications before entering the sales pipeline. Emissions equipment at the River Bend Dehydrator facility consists of a 45 MMscfd dehydration unit, two

condensate storage tanks, truck loading emissions, fugitive emissions, and various natural gas-fired process heaters.

All sites—the River Bend Dehydrator Site, the Tap 1 CS, and the RBU 6-15E, RBU 71-5E, and RBU 11-15E wellsites—have the same two-digit SIC code 13 and are under common control.

This source determination analysis uses the River Bend Dehydrator facility’s surface site as the center site for the quarter-mile distance. (See 81 FR 35627/2-3; Response to Comments, Source Determination for Certain Emission Units in the Oil and Natural Gas Sector, at 71 “If there is any question remaining of which emitting activity should be the center point, such a determination is left to the discretion of the permitting authority.”) In this case, because the River Bend Dehydrator facility was a new operation at the time of the permit application—and would thus need a title V permit regardless of any adjacent surface sites—it is reasonable to use the dehydrator facility as the center site.

Based on the information in the permit application and the definition of “surface site” in 40 CFR 63.761, the RBU 6-15E wellsite is located on the same surface site as the River Bend Dehydrator facility, but the RBU 7-15E wellsite, RBU 11-15E wellsite, and the Tap 1 CS are on three other, separate surface sites within a quarter-mile radius of the center site. Because the RBU 6-15E wellsite is on the same surface site as the center site, it is adjacent to the center site and thus part of the same major source as defined in part 71. The RBU 7-15E wellsite, RBU 11-15E wellsite, and Tap 1 CS share the equipment at the River Bend Dehydrator facility. For example, the 45 MMscfd dehydrator at River Bend is used to dehydrate the natural gas discharged from the Tap 1 CS, which includes gas produced from the RBU 7-15E and RBU 11-15E wellsites. Accordingly, pursuant to 40 CFR 71.2, the River Bend Dehydrator facility has “shared equipment” with the RBU 7-15E wellsite, RBU 11-15E wellsite, and the Tap 1 CS. Therefore, the emission units located at the RBU 7-15E wellsite, RBU 11-15E wellsite, and the Tap 1 CS are adjacent to the River Bend Dehydrator Site under the revised definition of a major source. Because activities at the RBU 7-15E wellsite, RBU 11-15E wellsite, and the Tap 1 CS also share the same two-digit SIC code and are under common control, they are thus considered part of the same major source as defined in part 71.

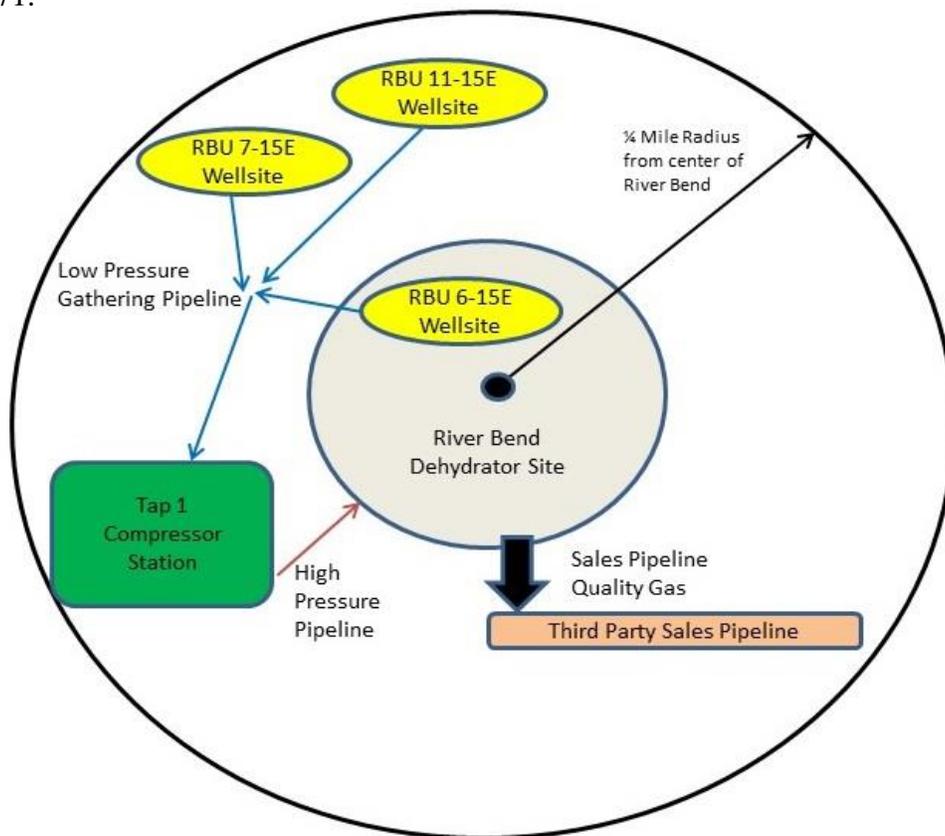


Figure 1. Flow Diagram of XTO Energy Natural Gas Production Operations – Uinta Basin, Utah
River Bend Dehydration Site, RBU 6-15E Wellsite, RBU 7-15E Wellsite, RBU 11-15E Wellsite, Tap 1 Compressor Station