1R - 0234

GENERAL CORRESPONDENCE

YEAR(S): 2006 - 2010

PLAINS PIPELINE

IR 234
Gen. Cor.
2006

June 27, 2006

Mr. Ben Stone
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Plains Pipeline Product Fluid Recovery System Update
Denton Station Release Site
SE ¼, NE ¼ of Section 14, Township 15 South, Range 37 East
Lea County, New Mexico

IR-234

Dear Mr. Stone:

Please find attached for your approval the Product Fluid Recovery System Update, dated June 2006, for the Denton Station release site located in Section 14 of Township 15 South and Range 37 East of Lea County, New Mexico. The Product Fluid Recovery System Update details site activities to be conducted to upgrade the product recovery system currently on-site.

Should you have any questions or comments, please contact me at (505) 441-0965.

Sincerely,

Camille Reynolds

Camille Reynolds
Remediation Coordinator
Plains All American Pipeline

Cc: Larry Johnson, NMOCD, Hobbs Office

Enclosure

ENVIRONMENTAL PLUS, INC.
CONSULTING AND REMEDIAL CONSTRUCTION

ENVIRONMENTAL PLUS, INC.

27 June 2006

Mr. Ben Stone
Environmental Engineer
New Mexico Oil Conservation Division
1120 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Plains All American Pipeline, L.P.
Denton Station (Ref. #2003-00338) – Product Fluid Recovery System

Dear Mr. Stone:

In compliance with Section VII, Recommendations, Item #6, of the *2005 Annual Monitoring Report*, Environmental Plus, Inc., (EPI) on behalf of Plains All American Pipeline, L.P., (Plains Pipeline, L.P.) submits this proposal for a new product fluid recovery system for the above referenced project.

EPI and Plains Pipeline, L.P., have researched several alternative production recovery systems for the Denton Station. Among the various systems considered were Submersible Pumps, Abanki PetroXtractor (belt skimmer), Eductor Pumping and Active Remediation. After careful consideration, it was concluded an Active Remediation System was the best alternative for this site. Details of the system and reasons for this conclusion are addressed as follows:

Active Remediation System

Although the former recovery system operated for several years, problems plagued the Ferret QED pneumatic skimmer system. Consequently, lessons were learned about how a similar system should be designed and operated. Primary faults in the system were plugging of inlet orifices, outlet tubing, biofouling of pumps and inadequate design/construction of the infrastructure. To offset these concerns, EPI proposes the installation of an active remediation system utilizing a different type of product skimmer system and modifications to the infrastructure.

An F.A.P. Plus™ Pump (TR-516) and High Viscosity Skimmer (TR-70410), manufactured by Product Recovery Management, will be installed in groundwater monitoring wells MW-5 and MW-7 and a proposed product recovery well (MW-17). Although the New Mexico Oil Conservation Division (NMOCD) has given approval to plug and abandon WW-1, it is now considered a prime candidate for a fourth skimmer system due to the larger diameter casing, depth of water and proximity to groundwater monitoring well MW-1. As previously discussed, it is anticipated the cone-of-depression effect created by the four (4) skimmer units (MW-5, MW-7, MW-17 and WW-1) will induce migration of product fluid from both groundwater monitoring wells MW-1 and MW-3. However, due to changing downhole conditions noted in

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groundwater monitoring well MW-1 (i.e., increase in water volume and decrease in production fluid) have made it a potential candidate for a fifth skimmer system if needed. However, a smaller skimmer unit would have to be installed due to limited water depth.

The proposed pump and skimmer units are configured differently than the Ferret QED skimmers. The unit comes in two (2) separate sections allowing the pump, located above the skimmer in the well bore, to be free of contact with any fluids. The pump is capable of producing a net positive suction head (NPSH) of seventeen (17) inches of mercury for the recovery of viscous products and operation in deep wells to two hundred (200) feet. The NPSH directly applied to the skimmer will help prevent plugging of the inlet orifice and coiled tubing.

The skimmer is a single unit composed of five (5) integral elements; a) bypass unit, b) hydrophobic element, c) density float, d) coiled tubing and e) hollow stainless steel rod. The bypass unit, hydrophobic element and density float are designed to free float up and down the hollow steel rod a maximum distance of three (3) feet in response to fluctuating fluid levels. Should a skimmer unit be installed in MW-1, the skimmer would be limited to a vertical distance of twenty-four (24) inches. After downhole installation, the inlet orifice located at the top of the hydrophobic element will be situated at the product fluid/water interface. Product fluid enters the inlet orifice, traverses the coiled tubing to the bottom of the hollow steel rod where it is pumped into the receiving tank. Both the oversized inlet orifice and coiled tubing are capable of handling product fluid with a viscosity greater than 80 SSU (~ equivalent to #6 heating oil). Should product fluid rise more than two (2) inches above the inlet orifice, the bypass unit will allow the excess fluid to enter the skimmer directly. Pumping capacity of the pump is from ten (10) to fifteen (15) gallons per hour (gph) dependent on total discharge head (TDH) and air pressure.

Essentially the proposed active remediation system is an upgraded version of the Ferret QED pneumatic skimmer system. The existing infrastructure [polyvinyl chloride (PVC) piping, fittings, couplings, individual and centralized header systems, etc.] will be utilized wherever physical conditions of the piping permit. Existing fluid and air tubing will be entirely replaced with new tubing. Both the air and fluid tubing will be continuous in length from the well head to point of terminus [i.e., heavy duty polyethylene (HDPE) tank or compressor building]. Due to lack of bury depth and deteriorated condition, the two (2) inch diameter PVC piping from the well head on WW-1 to the centralized header system will be replaced. Piping systems will be contoured to allow smooth transition into header systems, HDPE tank and control panels to prevent crimping of fluid and air tubing. The well head system on WW-1 will also be replaced as it is inadequate to handle new equipment both downhole and at the well head.

The existing centralized header system located near the compressor building will be slightly modified, repaired and reinforced. Modifications will consist of adding wyes and conduit piping for air and fluid tubing. New two (2) and four (4) inch diameter Schedule 40 PVC piping will be installed from the centralized header to the compressor building and HDPE tank, respectively.

A new door with an explosion proof window will be installed in the air compressor building. The air compressor will be centralized in the building. This will provide adequate room for an air header system manufactured to handle air regulators and tubing. The light switch will be converted from inside to outside the building for safety concerns. The electrical system for the

compressor building equipment will require little modification. Three (3) water level probes will be installed in the HDPE tank and connected to a level control panel in the compressor building to prevent overflow of fluids.

Upon installation of the new product recovery well (MW-17), a steel box and concrete pad will be constructed to form a vault for the well head. A two (2) inch diameter Schedule 40 PVC conduit pipe will be installed from the vault to the existing piping from groundwater monitoring well MW-3. After connecting the two (2) lines, the air and fluid tubing will be inserted through the piping from the vault into the centralized header with termination at either the HPDE tank or compressor building.

Should you have any technical questions or concerns, please contact me at (505) 394-3481 or via e-mail at dduncan@envplus.net. All official correspondence should be submitted to:

Ms. Camille Reynolds
Remediation Coordinator
Plains All American Pipeline, L. P.
3112 West Highway # 82
Lovington, New Mexico 88260

(505) 396-3341 (officer)
(505) 441-0965 (cellular)
cjreynolds@paalp.com

Sincerely,

David P. Duncan
Civil Engineer

cc: Camille Reynolds
File