

March 6, 2018
[Sent Via Email]

Karlene Fine
North Dakota Industrial Commission

RE: Andeavor - Renewable Energy Contract

Dear Ms. Fine,

In conjunction with Contract No. R-033-042, section 2b (Semi-Annual Report), Andeavor kindly submits the following information in compliance with Section 5.11 of the North Dakota Industrial Commission – Renewable Energy Development Program Policies.

Summary of Project

This project will provide the capability to co-process up to 5% of soybean oil, (16,800 gallons/day), with conventional crude diesel feedstock in the Andeavor Dickinson Refinery's existing Diesel Hydrotreater Unit.

The Project scope includes:

- Modification of an existing 1.26-million-gallon storage tank for storing soybean oil feed – this includes, tank internal cleaning, installing nitrogen blanketing to prevent soybean oil oxidation and installation of emergency pressure/vacuum relief.
- Modification of an existing crude oil truck unloading station for soybean oil service – this includes piping modifications and the electrical heat tracing and insulation of pipe and equipment.
- Installation of 1,100 feet of new 4" pipe, electrically heat traced and insulated, to route the soybean oil from the truck unloading station to the storage tank. And electrically heat trace and insulate 1,240 feet of existing 4" pipe to enable transfer of the soybean oil from tankage to the Diesel Hydrotreater Unit.
- Installation of a new control valve station and flow meter for soybean oil feed control to the existing Diesel Hydrotreater Unit
- Replacement of the reaction catalysts in the existing Diesel Hydrotreater Unit Reactors.

Summary of Work Completed To-Date

All the above work was completed in September 2017. Current plan is to receive soybean oil and commence co-processing operations in late March 2018, contingent on the EPA's approval of Andeavor's Renewable Diesel co-processing registration protocol.

Project Costs (as of January 31, 2018)

Amount	Category
\$ 2,409,155	Pipe, Valves & Fittings
804,946	Engineering Costs
503,065	Major Equipment
357,149	Professional Services
43,394	Other Materials
\$ 4,117,710	Spent to Date
482,290	Future Expenses
\$ 4,600,000	Total Project Cost