



# GREEN PLAINS RENEWABLE ENERGY

## Corn Unload Dust Collection

**Client:** Green Plains Renewable Energy, Inc.  
**Location:** Work performed in Wood River, NE  
**Market(s) Served:** Ethanol, processing, renewable fuels

- Project Management
- Field Engineering

### PROFILE

### SERVICES

Green Plains Renewable Energy, Inc. is an ethanol producer based in Omaha, Nebraska with the current ethanol production capacity of approximately 790 MMGPY (spanning across 10 plants). At capacity, Green Plains produces approximately 2.2 million tons of distillers grains annually to be used as a high-protein, high-energy animal fodder and feed supplement. Corn oil is also a co-product of ethanol production.

Leading ethanol producer Green Plains gave EAD the opportunity to assist it with an expansion and redesign of the dust collection in its Wood River, NE grain-handling facility. The client recognized that grain dust was collecting in underground tunnels and truck unload bays in unsafe quantities. EAD substantially reduced the dust explosion hazard by designing new dust collection ducting and specifying air handling equipment to safely remove dust from equipment, truck bays and confined spaces.

The multidisciplinary design team included mechanical engineers and designers to specify and layout

equipment, electrical engineers to develop electrical power distribution, process engineers to ensure combustible dust safety and structural engineers to design support structure for new equipment and bridging over plant roads.

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