



workers on site, consisting mostly of local crews for day-to-day operations but also buttressed by "A-Team" crews for reformer and capital projects. During major turnarounds, BrandSafway's crew topped 580.

# **Award winning performance**

"In the past 11 years, we've logged more than 4.5 million man-hours and have had zero recordable incidents," says White. "All the while, we've improved productivity by creating numerous efficiencies, thanks to our focus on process and procedures."

In 2010, White performed an audit and gap analysis of BrandSafway's fledgling relationship with the refinery and implemented a site safety management system based on the Occupational Safety and Health Administration (OSHA) Voluntary Protection Program (VPP). The VPP is the highest level of safety recognition available. VPP has three levels of achievement: DEMONSTRATION, MERIT and STAR, with STAR as the highest level.

BrandSafway attained VPP STAR status at the Louisiana refinery in October 2015. The team also received a Meritorious Safety Performance award from the National Petrochemical & Refiners Association for zero recordable incidents, and the refinery itself nominated BrandSafway for a Gulf Coast Safety Council Annual Contractor's Safety Excellence Award.



### **Safety commitment**

"Leadership from management and employee commitment are essential to an exceptional safety performance," said BrandSafway Site Manager Chris Dapprich. "Our safety culture is a direct result of employees taking ownership of the program, upper management giving us the support and resources needed to be successful – not to mention excellent communication with each other and the client. It's true teamwork; everyone owns safety.

BrandSafway Project Manager Bret Himel notes that, "In the past decade, our responsibilities at the plant grew, and a lot of the work we completed was beyond an ordinary scope of work. The VPP program disciplines we practice have helped us navigate many obstacles. Our team consistently rises meet every challenge."



### **Increased productivity**

A convenient byproduct of an award-winning safety performance is increased productivity. "Our experience at the refinery proves that by following a good safety plan, you also work more productively," says White.

Himel described a coke drum project at the refinery that perfectly illustrates how having a good plan increases productivity.

## **Coke drum maintenance**

"Coke drums, fractional distillation towers and other vessels beyond 90 feet are out of scope for regular maintenance," he says. "We brought in an A-Team that focuses on scaffold and insulation for coke drums. Their experience allowed everyone to work safely and more efficiently."

"A coke drum requires a crew of 18 to 20 people," said BrandSafway Site Office Manager Jessica LaTour. "We don't want to pull workers from our day-to-day capital project crew, so bringing in an A-Team makes good logistical sense. In addition, we have an entire planning and engineering department that understands the requirements of tall structures and distributing loads."

The coke drum at the refinery needed 11 levels of scaffold, both outside and inside the drum. The project scope included removing old insulation, shell inspection, carbon arc gouging to remove flawed material, welding repair and installing new insulation. BrandSafway also provided forced

draft blowers for ventilation at the bottom and top ingress and egress points, as well as fire and hole watches.

### Access plan

To erect the scaffold, the BrandSafway team staged material on a concrete floor with ample space and a good line of sight for flag and radio communication with the crane operator. Three skip pans would be used to lift material, allowing the erection crew to work out of the pan until it was empty, with the next fully loaded pan staged and ready to hook up. Every scaffold level featured a landing deck for skip pans on the west side of the structure. Erecting the scaffold took a little over a month and was completed a day early.

# "Our experience at the refinery proves that by following a good safety plan, you also work more productively"

"We saved a lot time by having a landing deck on every level," said Himel. "This meant the insulators could work more efficiently since they didn't have to pass or rope down trash bags of old insulation. Workers could just carry them to the landing deck and load up the pan. To install the new insulation, the crew could grab whatever they needed from the level where they were working. They didn't have to wait for the crane to bring up materials or deal with congested landing areas.

### Thinking ahead

"You have to think five steps ahead," said White. "The higher you work, it gets progressively more challenging to move people and materials. You can't have people standing around waiting for supplies, and it's impractical to pass materials 100 feet up using a chain line of people. Also, when working at height, you must guard against falls and falling objects and establish a secure perimeter. A lot of planning goes into working on very tall structures."

The team also managed safety risks of gouging inside the drum. Gouging uses a high-amperage arc to create molten metal and blows it away using compressed air. The process generates a plume of sparks 10 to 20 feet long – a fire hazard to be managed. The team opted to double-wrap all wooden planks and toe boards with fire-retardant blankets.

"We have to understand the whole scope of work so we can plan for any eventuality," said Himel. \(\begin{align\*}
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# **Value Proof**

Project: Light crude refinery

Location: Louisiana

Start Date: September 2010

Completion Date: 2021

Scope of Work: Plant-wide turnarounds, daily maintenance, capital projects,

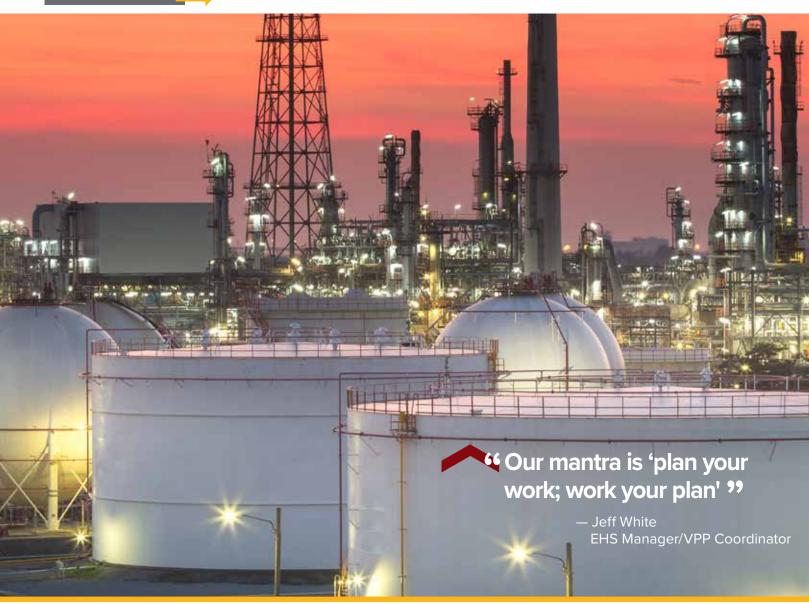
annual reformer turnarounds and other major projects

Products/Services: Systems™ Scaffold, tube and clamp scaffold, swing stage, hoists, shoring, insulation, removable covers, coatings, refractory, intumescent fireproofing,

hole watch/fire watch, general labor services

Safety Record: 11 years and 4.5 million hours without a recordable incident





BrandSafway Global Support Center 600 Galleria Parkway SE, Suite 1100 Atlanta, GA 30339

Toll free: 800 558 4772

