

STAR TRACK RAILCAR CONTAINMENT SYSTEM: BEALE AIR FORCE BASE, CALIFORNIA



OBJECTIVE

To provide Beale AFB with a rail containment system that meets Federal EPA and California EPA SPCC regulations for four (4) 20,000 gallon rail tankers of jet fuel. The specification called for containment of up to 150% of a single fuel tanker (30,000 gallons), while providing for the safe release of rainwater.

The surface mounted StarTrack rail containment system was ideal for this requirement. Track Pans were installed in 20' lengths (10' wide) providing 2,200 square foot of catchment surface under the rail cars. All eleven (11) sets of Track Pans were tied together with a 6" to 8" diameter "collection" system designed to direct captured fluids to a 216 cubic foot Clarifier. An Imbititive Technologies passive shut off system was installed in the final stage of the clarifier, which will safely capture any hydrocarbons passing through the system and shut down the clarifier in the event of a large fuel spill. A 33,000g reservoir was positioned adjacent to the clarifier to receive excess rainwater in the event of a major storm or capture any large fuel spills. Construction time of 5 days!

ADVANTAGES

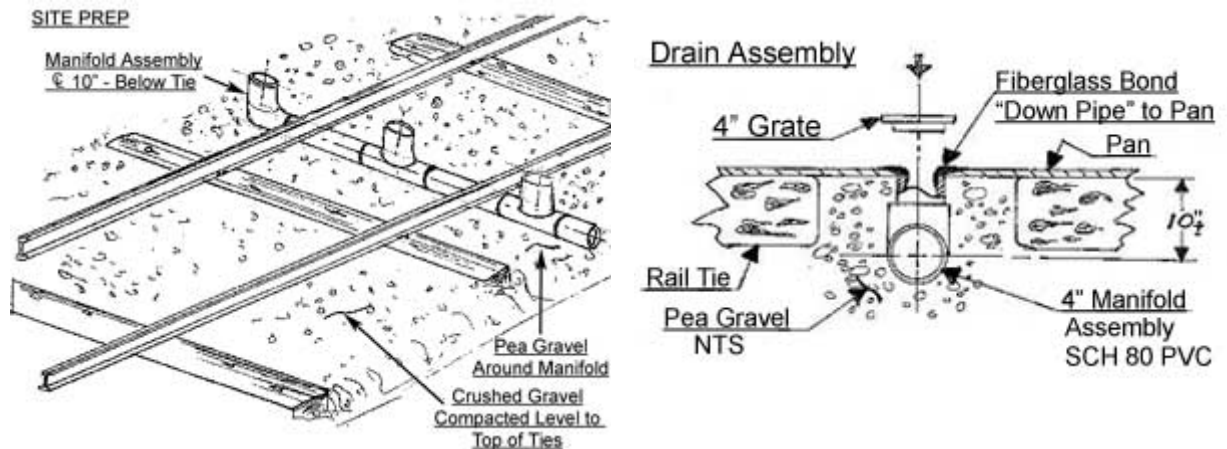
- Meets EPA SPCC code requirements for rail secondary containment systems.
- Surface mounted: No need to remove or replace tracks! Pans sit on top of rail ties and below crown of track; fit tight against rails and are secured with special fasteners. Easy to remove for future maintenance of tracks.
- Little site or operations disruption. Smaller systems can be installed in a day. If required, a tanker can be off-loaded during construction.
- Does not impact integrity of rail support structure. Collector manifolds (if required) are installed in 18" troughs between the ties every 20'. This design does not impact the support structure of the track and is easy to install.
- Usable in both hot and cold climates. Not subject to cracking like concrete. Non-conductive surface. UV resistance for long life.
- ¼" thick fiberglass construction provides superior strength and excellent corrosion resistance. Several resin options for severe chemical applications. Non-slip surface can be applied should foot traffic be a concern.

PRODUCT DESCRIPTION

Track Pans: StarTrack Containment Pans are manufactured from high strength, corrosion resistant fiberglass. Each system consists of sets of three, low profile, 4" high x 20' long pans. A complete set protects a section of track 20' long by 10' wide. The center pan contains approximately 250 gallons while the two outer pans provide approximately 125 gallons each for a total of 500 gallons. Center pan is fitted on site and snaps into position for tight fit.



Collector Manifolds: Each of the pans in a three pan set is connected to the other two pans via a 6" collector manifold (shown below) which carries rainwater and spilled fluids to one side of the track. An 18" trench is created between the rail ties every 20' by removing the gravel. Railroad engineers have approved this approach as not impacting the load bearing structure of the track. Once positioned the trench is backfilled with pea gravel and the manifold is epoxied to the floor of each pan to create a closed loop system. Fluids from the 6" collector manifolds enter an 8" collection pipe that runs parallel to the track carrying the fluids to the clarifier (shown at bottom).



Clarifier & Reservoir: The clarifier uses three stages A, B, & C to separate rainwater from contaminants. Area C employs Imbibitive Technology's "passive shutdown system". This technology employs imbibiter beads, developed by Dow Chemical, which swell up and shut off the outflow. Excess rainwater or large fuel spills are retained in the adjacent 33,000 gallon reservoir for later processing.

