

## Spotlight on Curtis Bay Terminal

### Message from Operations

RM recently executed a trenching project at the BP Brooklyn Terminal in NY. Our crew installed a **90 foot trench** at the terminal to put piping in the subsurface **to allow for future vehicular traffic** at the terminal. Our crew, which was comprised of Antea Consultants and Taconic Environmental Services, Inc., worked together to create a WRAT for the project and also a **Hazard Identification and Task Risk Assessment (HITRA)** prior to working in the field. The team created a Ground Disturbance and Hot Work permit for the project as well. Taconic provided an **air-knife which was used to uncover subsurface** features in compliance with the GD permit. The **piping, which houses GW, product and communication** lines for our recovery system, was **safely lowered below ground** as a result of this project.

– Nick Onufrak, BP RM PM



Dayton Terminal air stripper tower

## FROM THE FIELD . . .

Spotlight on Curtis Bay Terminal . . . The Curtis Bay team is getting ready to implement the final stages of remediation at the liquid transfer portion of the site. See the writeup on page 2 for more information.

**Consider This . . .** Spring cleaning is a perfect time to **inventory and cleanup the medicine cabinet**. According to the CDC, in 2008 more than 20,000 people died from **prescription drug overdose** in the US (nearly 15,000 involved prescription painkillers). In 2010, nearly **25% of US adults age 12 or older reported using prescription painkillers non-medically**. From 2004-2005, about 71,000 children 18 or younger were seen in emergency departments for medication poisonings. While nearly every major cause of death shows decreasing ratios, **drug overdoses are growing as prescription sales increase**, and unused pills are stored in the cabinet. Reasons for teen and adult overdose may include **severe pain**, a desire for a **“high,”** habit forming **addiction to anxiety/ pain/ sleep meds, depression**. Reasons for **toddlers and children may include curiosity, appearance of candy, desire to put something in mouth**. Keep all meds and vitamin supplements out of “reach” of curious toddlers, children and guests. Prescription painkillers and anxiety meds are extremely addictive – **talk with your teen about the drugs** in the cabinet and his/her curiosity. Meds that are expired or no longer used can be taken to a **medical waste drop off day** at your local waste collector. See also [www.cdc.gov](http://www.cdc.gov).

### Additional Resources

**BP RM HSSE Site** <https://wss2.BP.com/remediationmanagement/HSSE/default.aspx>

**SOCs Minute Resource Site** <http://socs.dataaccel.com/> (user ID: socs, Password: safety)

To comment, inquire or obtain information on any item in this publication, or to submit an item for publication, please contact May Marcinek at [mmarcinek@envirosolve.com](mailto:mmarcinek@envirosolve.com), 818.889.0090, or Sergio Morescalchi at [sergio.morescalchi@bp.com](mailto:sergio.morescalchi@bp.com), 925.275.3807.

### Contractor's

The **BP RM Dayton Terminal** team places great emphasis on **reporting everything**, from blisters to muscle soreness, and this conscientious reporting has **led to safer job procedures**. Each year a 2-man team spends 2 ½ days **raking out 6.95 tons of spent material** from an air stripper tower, and another 2 ½ days in prep and cleanup. While one person rakes the material out of a side opening in the tower, the other rides an aerial lift up and down to whack the tower and free up spent material, and then scoops up the material in a skid steer bucket and moves the material to a roll-off bin. Both jobs require **repetitive motion** and are **ergonomically intense**, and have been performed by the same personnel for a few years, with no injuries or incidents. However, this year, by the end of the 3rd day, the raker reported muscle soreness. **Although performed ergonomically correctly, the wet, cold weather and level of physical effort likely impacted the job to present the new hazard**. After discussing, the team implemented a change in procedure for future work: perform the job one month earlier, when the weather is warmer and dryer, and add a third person to back-up the raker. Says Parsons PM Anna Wieckowski, “This is why we report everything! **Because he felt comfortable reporting, we were able to develop a better procedure** and help prevent this, or worse, from happening again. It’s also a great reminder to consider the **effects of seasonal weather and level of physical effort required when developing WRATs and TSEAs**.” Please consider and share with your teams. – *Special thanks to BP PM Bruno Mancini, Parsons PM Anna Wieckowski, and the Dayton Parsons team!*

## @Traction

Recently several RM incidents and near misses were related to lack of communication or neglect of procedures. These included **lack of communication regarding:** equipment operation to ground personnel, proper spotting and signaling; **lack of understanding or communication regarding:** site procedures (personnel entered sites to work without proper notification), SPP (fuse tripped, no one was hurt); **ineffective:** third party communication (damage to well cover), oversight of well vault construction (led to exposure, damage and repairs); **neglect to perform:** proper driving standards (struck fixed object), new risk analysis when conditions changed. Consider and be sure all **new & current personnel understand** site policies & procedures.

# Spotlight on Curtis Bay Terminal

## The site

BP RM is currently performing remediation on two divested portions of the BP Curtis Bay Terminal (MD), including a **liquid transfer station sitting immediately on the waterfront**, and an asphalt plant. While the asphalt plant may still have several years of remediation efforts remaining, the RM team hopes to be finished with liquid transfer station activities in the next 5 years. The liquid transfer station stores and distributes non-food grade molasses, fertilizers and paraffin, but was formerly an Amoco mixed use facility. The team is **actively recovering LNAPL** utilizing both stationary and portable remediation systems.



Remediation system, loading rack, truck traffic

## Safety concerns

**Site workers.** The site actively promotes **open communication and stop work authority**, and stop work decisions are regularly **reinforced and affirmed by PMs** from the top down. All subcontractors undergo a rigorous safety training, review and verification process with URS, and as much as possible, the **same subcontractor personnel are always used**. Subs also participate in **developing TSEAs for their tasks**. URS personnel perform weekly O&M in teams of two, and site vehicles are equipped with multiple rows of safety lights and striping, to **increase worker visibility** on site. As an active third party site, the frequent SIMOPs activities are thoroughly planned.

**Site layout.** The small size and location of the remediation systems on an active third party property mean **visibility concerns** for vehicles and heavy equipment in the immediate vicinity. Traffic cylinders, extra-high cones and barricades are used to delineate the systems, provide more visibility and prevent vehicles from hitting the systems directly. Active tanks, berming and clustered structures provide **limited access** to many portions of the site, requiring special attention to safe driving, parking and backing skills (URS personnel maintain certification in the Smith System Defensive Driving course). Rows of active tanks create cold **wind corridors**, and the URS vehicle provides both transport and shelter.

**Summer.** FRC coveralls are required on site, and during east coast summer heat and humidity, site workers maintain **flexible schedules**, such as early morning starts and early afternoon finishes, in order to protect workers from the heat of the day. **Unlimited coolers of ice and water** are provided, and tool-box meetings at the start of work remind personnel about heat-related issues. **Safety stand downs** for summer heat are held as a preventative measure, and **stop work authority** is emphasized.

**Winter.** Winter concerns include **ice and wind**. With spray from the waterfront, rain (caught by the dikes), steam from the active facility (used to prevent liquids from freezing/ solidifying), and potential leaks from the active liquid transfer station, **ice can easily form**. When possible, equipment is deliberately located away from **areas identified as prone to icing**. Slip and trip hazards are **recognized and discussed** by personnel, with **alternate walking paths** designated as available.

## The system

The **stationary system** utilizes an air compressor, Xitech 8 station controller with **electronic shut off**, and multiple Xitech product only



Portable system on the waterfront

skimmer pumps. The controllers have been factory modified for use with two recovery tanks, allowing for **zone recovery** of product, so that one tank (and associated well pumps) can shut down on high level while the other continues to fill. The tanks utilize an inlet manifold with **check valves to prevent backflow**.

The **portable system**, designed for **easy transport** between areas of diminishing and increasing product concentrations, utilizes a Xitech, solar-powered, REM (remote) box, **single station electronic shut off**, and skimmer pumps. The solar panels charge a 12 volt Optima® dry cell battery to power the system, **replacing the original lead acid battery to eliminate acid spill** potential. Nylon product tubing from the wells to the tank inlet manifold is **secondarily contained using petroleum- and UV-resistant transparent tubing** (Superthane®). Concrete filled 5 gallon buckets (dead-men) are **fastened to the box to anchor it** against high winds.

**Skid mounted, double walled, portable product recovery tanks** use Xitech electronic **shut off float switches** to shut off the pump when the tank reaches 7/8 capacity. If weekly O&M determines the tank is at 5/8 full, the skimmer system is manually turned off and a BP certified disposal contractor is contacted. The high-float shut off is attached to the tank with a **safety-lock cam and groove pipefitting, allowing for easy removal** during monthly inspections and testing, and there are **emergency vents** on both the tank and interstitial space, and a **visual pop-up leak detection gauge** on the interstitial space. The **tanks are also grounded**.

With most of the product now recovered, the team is using geoprobes with laser-induced fluoroscopy to better delineate site groundwater and remaining product, in order to **evaluate additional final remediation strategies**, including a more aggressive skimming program versus an SVE or other system.



Portable system, cones, safety striping on truck

*Special thanks to BP PM Greg Miller, URS PM Eleanor Jennings, URS Lead Technician Brian Rogers, and the URS Curtis Bay O&M team!*