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Track Summary – BWON

Training Classes – February 19 – 21, 2020

BWON Fundamentals – Implementing a Comprehensive BWON Program

BWON Auditing for Experts

Breakout Presentations – Thursday February 20, 2020

On-Going BWON Compliance Concerns

A Wastewater Solution for an Air Pollution Problem

BWON Auditing

BWON Masterclass

Benzene Waste Operations NESHAP In the FLIR Age

Vapor Lock Scrubber Technology Reducing Carbon Usage for BWON Compliance and Temporary Tank Storage

Downstream Confirmation of Benzene Loading

BWON Process and Best Practices

Detailed Agenda Continues on Next Page

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BWON – Breakout Presentations

BWON Breakout Room 402 – Thursday February 20, 2020

- **10:30 AM – 11:00 AM**
 - **On-Going BWON Compliance Concerns – Ken Garing – Ken Garing & Associates**
 - Compliance issues with the BWON requirements have evolved since the regulation was introduced in the 90's. In the early 2000's, numerous deficiencies, ranging from the identification of regulated waste streams to the proper operation of control equipment, resulted in enhanced BWON requirements being included in the refinery global consent decrees. Since that time, a tremendous amount of work has been directed to this effort and the refining sector has made great strides in improving compliance with the BWON regulation. Mr. Garing will present his thoughts on where current efforts could be focused to further improve compliance.
- **11:00 AM – 11:30 AM**
 - **A Wastewater Solution for an Air Pollution Problem – Todd Lusk – SLR Consulting**
 - The regulatory requirements for managing benzene- and VOC-laden streams from wastewater treatment units require refineries to implement vapor control technologies that are often expensive to implement and/or operate. This session presents another option – the VOC BioTreat™ process, an alternative control technology that utilizes unit operations already in place at most wastewater treatment facilities and can substantially reduce the costs associated with BWON compliance. The presentation will provide information on the necessary steps to evaluate, model, test, and implement the VOC BioTreat™ process, and will describe case studies to support the economic and environmental benefits.
- **11:30 AM – 12:00 PM**
 - **BWON Auditing – Bart Leininger – Ashworth Leininger Group**
 - The National Emission Standard for Benzene Waste Operations (BWON or Subpart FF) is a complex regulation that is difficult to assess in the context of a due diligence assessment. These assessments are conducted within compressed schedules, essential documentation is typically limited or unavailable, and the liabilities for non-compliance are significant. Given the complexity of the BWON regulation, even a seasoned practitioner can miss a significant compliance issue, which could result in a costly corrective actions and potential enforcement

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BWON – Breakout Presentations

exposure for a new owner. Further complicating the due diligence are Subpart FF enhanced requirements mandated in Consent Decrees. Assessing compliance with these enhanced requirements is just as important as compliance with the regulation itself. Given this complex backdrop, Subpart FF assessment during a due diligence must have a laser focus on those requirements of most importance for the acquisition. This presentation draws upon the presenter's experience in performing detailed Subpart FF assessments in the context of a due diligence and from litigation related to BWON compliance. The presentation uses case study examples to illustrate key areas of inquiry that should be part of the assessment and provides helpful and practical recommendations for evaluating key aspects of a Subpart FF compliance program. This presentation will also be of interest to BWON professionals with ongoing operations as it provides a "mental checklist" of areas of potential exposure in their BWON compliance program.

- **12:00 PM – 12:30 PM**
 - **BWON Masterclass – Ruth Benning – 4C Marketplace**
 - Abstract Coming Soon.
- **12:30 PM – 1:30 PM Lunch Break in the Exhibit Hall**
- **1:30 PM – 2:00 PM**
 - **Benzene Waste Operations NESHAP In the FLIR Age – Calvin Niss – Trihydro**
 - By now, most petroleum refineries and chemical plants that are affected facilities have mature Benzene Waste Operations NESHAP (BWON) and Consent Decree compliance programs. Affected petroleum refineries and chemical plants should have a reasonable and accurate accounting of their total annual benzene and uncontrolled benzene waste generation rates. If this is the case, then BWON compliance at these facilities should focus on effective benzene emission controls (i.e. complying with NESHAP waste management standards). Pursuant to rule requirements, these standards are straight– forward and include installing controls, completing periodic inspections, repairing equipment if necessary, and reporting deficiencies. This presentation will focus on a review of the current equipment standards. We will also discuss recent enforcement actions and EPA's use of a forward looking infrared (FLIR) camera to look for volatile organic compound (VOC) leaks from wastewater treatment waste management units.
- **2:00 PM – 2:30 PM**
 - **Vapor Lock Scrubber Technology Reducing Carbon Usage for BWON Compliance and Temporary Tank Storage – Sean Kirkpatrick – Vapor Point, LLC**
 - Vapor Point's VaporLock™ control technology has been utilized within many areas of BWON operations, while also providing for the elimination of other HAPs such as Hydrogen Sulfide and Ammonia. Common applications include API Sumps and Separators, Dissolved Air/Nitrogen Floatation Systems, Tank Vent Emissions Controls, Sludge Processing Operations, Vacuum Truck and Frac Tank Controls and we have even designed equipment for the complete by–pass of existing sump systems.

BWON – Breakout Presentations

- **2:30 PM – 3:00 PM**
 - **Downstream Confirmation of Benzene Loading – Bruce Douglas – Trinity Consultants**
 - Downstream flow rates and concentrations can reflect the characteristics of the total wastewater throughput managed at the facility, where all seweraged wastewaters have come together into one stream. Experience indicates that downstream characterization can provide the most accurate values for facility wastewaters. However, the BWON citations emphasize the need to characterize wastes upstream, at the points of generation (POGs), because the rule-writers were concerned that benzene could volatilize from the waste as it flowed through the waste management system. Thus, the TAB quantification must be based on the upstream POG characterizations. It is valuable to assess the accuracy of POG results by comparing the downstream values with the sum of upstream POG values in the seweraged streams. Although benzene is dynamic in a refinery sewer system—potentially volatilizing or transferring between the oil and water phases—it is reasonable to expect downstream loadings to be similar to the values derived from summing POG numbers. Agreement in the upstream–downstream evaluation lends confidence to the TAB quantification, the 6BQ or 2–Mg quantification (if needed), and the overall claim of the facility that the BWON wastes were properly identified.
- **3:00 PM – 3:30 PM Break to Enjoy the Exhibit Hall Refreshments**
- **3:30 PM – 4:00 PM**
 - **BWON Compliance Sampling – Chad Vogeles – Think Environmental**
 - Abstract Coming Soon.
- **4:00 PM – 5:00 PM Panel**

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BWON – Training Classes

Training Classes – Wednesday February 19, 2020

- **Room 416AB 8:00 AM – 12:00 PM**
 - **BWON Fundamentals – Implementing a Comprehensive BWON Program – Trihydro Corporation – Calvin Niss & Erin Novini**

Training Classes – Friday February 21, 2020

- **Room 416A 8:00 AM – 5:00 PM**
 - **BWON Auditing for Experts – Ken Garing, Steve Probst, 4C Marketplace, Cal Niss, Trihydro**

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