


HUSKY ENERGY INC.

Waste Management Plan

2018 Superior Refinery Fire

Matt Turner
5/6/2018

Environmental Unit Leader	 Signature	<u>5/9/2018</u> Date
Operations Section Chief	 Signature	<u>5/9/2018</u> Date
Planning Section Chief	 Signature	<u>9 MAY 2018</u> Date
Incident Commander	 Signature	<u>5/9/2018</u> Date

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1. Objectives

1.1. Stream Identification

A stream requiring management can range from hazardous and non-hazardous wastes to streams in which hydrocarbon can be recovered and re-refined. Once individual streams are identified, it will be paramount to keep them separate from each other. Isolating streams will ensure proper management under this plan, the site-specific Emergency Response Plan, the Incident Action Plan, and the Asbestos Remediation Plan.

1.1.1. Known streams requiring management

- Asbestos Containing Material (ACM)
- Asphalt that is mixed with ACM, debris (metal, insulation etc.), and petroleum impacted soil
- #6 fuel oil and therminol
- Product inventory remaining in units
- All scoped waste from planned turnaround activities

1.1.2. Potential streams which would require management

- Chemicals from damaged containers (drums, totes, etc.)
- Any discovered or created streams (spills, new/altered work scopes, etc.)

1.2. Stream Storage

1.2.1. Wastes

Streams that are determined to be solid wastes (asphalt, debris, contaminated PPE, non-recoverable products, petroleum impacted soil etc.) will be disposed of off-site following DOT regulations as either non-hazardous waste or hazardous waste in accordance with RCRA regulations. Examples of storage containers for wastes include drums, totes, roll-off boxes and vacuum boxes. In accordance with the Asbestos Remediation Plan, all containers of ACM waste shipped off-site will be inspected by the licensed Wisconsin asbestos abatement contractor to ensure that the exteriors are asbestos free.

1.2.2. Recoverable/Recyclable Materials

Streams that are determined to be recyclable will be kept on-site in either a network of frac tanks or in the storage tank system of the facility. Frac tanks can be ordered with or without steam coils depending on what material will be stored inside them. Certain storage tanks (i.e. slop oil tanks) in the facility can also be used for the storage of streams for which hydrocarbons can be recovered but only after consulting with both the Operations Unit and Environmental Unit.

1.2.3. Water Needing Treatment

Due to the fire response efforts, a large amount of water containing firefighting foam compounds is currently present on-site that will ultimately need to be treated through the on-site Waste Water Treatment Plant (WWTP) and a granular activated carbon (GAC) system. This water is currently being stored in Ponds 2/3 & 4, the dike for tanks 106, 112 & 114, inside frac tanks, and inside Tank 45. With the WWTP and API Separator both operating, any contaminated water can be released at the on-site wash slab for processing and treatment through the API Separator, WWTP and GAC system.

1.3. Stream Management

Once individual streams have been properly identified, the focus will then turn towards their management. All management activities are to be done in accordance with the site-specific Emergency Response Plan, the Incident Action Plan, and the Asbestos Remediation Plan. Stream management will be done on a task-specific basis in conjunction with the Operations Section, the Environmental Unit, and the Wisconsin Licensed Asbestos Abatement Contractor as necessary. Barr Engineering and GHD will coordinate the documentation of any waste disposal that occurs.

All wastes will be transported off-site according to DOT and RCRA regulations. All hazardous wastes will be disposed of at a permitted TSDF in accordance with RCRA regulations.

Streams in which hydrocarbon can be recovered are to be managed along the following guidelines:

- Slop oil tanks and frac tanks with steam coils can be used for materials to be re-refined onsite
 - Flare KO material, recovered #6 fuel oil, gas oil, LCO, process de-inventory, etc.
- Frac tanks without steam coils for materials that do not require heating
 - Gasoline and diesel range products
- Tanker trucks to move material directly from the site to an off-site facility for recovery and treatment

2. Contact Information

- Waste Management Task Force Leader: Matt Turner
- Environmental Unit Leader: Dave Beattie
- Waste Water Treatment Plant Superintendent: Joe Amato
- Wisconsin Licensed Asbestos Abatement Contractor: In-Line Construction