Message

From: Choi, Sangsook [choi.sangsook@epa.gov]
Sent: 2/8/2017 8:33:09 PM
To: Cullen, Raymond [cullen.raymond@epa.gov]
Subject: FW: Requested write up
Attachments: FROM IHWPQ204@arcelormittal.com.pdf

Ray,

Background info from ArcelorMittal Indiana Harbor.
I also forwarded to Ryan.

From: Barnett, Thomas R [mailto:Thomas.Barnett@arcelormittal.com]
Sent: Wednesday, February 08, 2017 1:58 PM
To: Choi, Sangsook <choi.sangsook@epa.gov>
Cc: Benoit, Simonne T <Simonne.Benoit@arcelormittal.com>
Subject: Requested write up

Sangsook, per your request.

Thomas Barnett | Manager, Environmental Technology
ArcelorMittal Indiana Harbor LLC.
ArcelorMittal USA LLC

Environmental Department | 3001 Dickey Road, Sta. 001
East Chicago, IN 46312

T +219 399 2380 | **M** +219 313 1605 | **F** +219 399 3211 | www.arcelormittal.com

---

From: Barnett, Thomas R
Sent: Friday, January 27, 2017 4:11 PM
To: sean.f.fitzgerald@uscg.mil
Cc: 'Beslow, Mike' <beslow.mike@epa.gov>; Benoit, Simonne T <Simonne.Benoit@arcelormittal.com>
Subject: Requested write up

Sean, Mike, provided below is the requested write-up of implementation of the action plan and next step in regards to the oil sheen releases from Outfall 009/010, and activities to date at Outfall 001.

Attached are statements of man hours and equipment expended on these efforts to date from National, and Kenny Manta.

Re: Detailed plan of actions ArcelorMittal Indiana Harbor has initiated to identify the source of the intermittent short discharges of oil like material to Outfalls 009/010, including incident description, actions taken to date, resources on scene, and possible plant sources. In addition, addressing what plan of action will be taken if current actions do not result in a cessation of the discharges. Activities at Outfall 001 are also discussed.

Background: On Tuesday, January 10th mid-morning the ore bridge operator at No. 3/4 Blast Furnaces reported significant amounts of oil in the Indiana Harbor Ship Canal. This information was relayed to Tom Barnett, Manager, and Environmental Technology. Mr. Barnett immediately went down to Outfall 009/010 which consists of: the noncontact cooling water discharge from the Power House, Boiler House, Sinter Plant, and a portion of the Blast Furnaces. Because these outfalls, are predominantly once through noncontact cooling water with no treatment, we always keep one hard

boom and one soft boom in place in case we should have a spill that enters these sewers. Mr. Barnett noted that a significant amount of black oil had been captured within the soft boom (approximately 6'x8'). Weather conditions that day were strong winds out of the south (up to fifty miles per hour), and heavy rain. Mr. Barnett witnessed a significant amount of oil coming down (moving north) the Ship Canal at this time. It was believed that the oil within the soft booms was associated with the large amount of oil coming down the canal being captured in the combined outfall discharge. The Indiana Harbor On-Site Response Organization (OSRO), National Industrial Maintenance (National), was immediately called out for containment and recovery activities. Two additional booms were put in place (one hard, one soft). The second extra hard boom was positioned on a diagonal from the lift bridge bumper to an attachment point to the south of the two outfalls. USCG and USEPA came to the site to collect water and sediment samples. From January 14th-19th, minimal staining of the containment booms was noted. Friday the 20th, staining of the boom was noted. Mr. Barnett pulled a sample of the oil accumulated in the boom, which was sent for FTIR fingerprint analysis the following week. National also conducted a boom replacement. (see attachment 1 for a log of equipment and National activities). From January 21-23, there was no evidence of staining.

Sampling: On 1/10 a sample of this black material was collected. This was sent for FTIR fingerprint analysis later that week. Later that week, USEPA attempted to collect sediment samples using a ponar dredge to attempt to collect sediment samples. They sampled in front of Outfall #009 and #010 and only collected gravel, sampled downstream of 009/010 which had no smell or oil visual appearance , and upstream of 009/010 sediment which had a petroleum odor and oil appearance. Indiana Harbor received split samples, and the oil portion was extracted from upstream sediment and sent for FTIR fingerprint analysis. Also on 1/21, another sample of material collected on the booms was sent for FTIR fingerprint analysis.
At the time of the incident there was no reason to believe that the material being collected on the booms was from our operations. Nevertheless, an investigation was started in the plant to determine if sources existed. This investigation began with a thorough examination of the plant sewer prints and discussion with plant personnel from key departments (Power House, Blast Furnace, Water Treatment).
On subsequent days, staining of the booms was noted, but no sheen was observed coming out of the outfalls. Throughout this entire period of time, booms were repositioned and replaced as needed on a daily basis, with focus on the replacement of soft absorbent booms.

Regarding Outfall 001: On Tuesday January 10th, and on subsequent days of that week, USEPA and the Coast Guard also visited this outfall, which consists of the discharge from Central Treatment plant, and East Chicago Tin, as well as roadway storm sewers. Mr. Barnett observed an oil sheen in the metal containment weir and some evidence of a sheen outside of the weir at Outfall 001, and instructed National to put two additional booms within the weir (one soft boom and one hard boom) . Additionally, National ran several hundred feet of hard boom with an 18 inch skirt on a diagonal from the edge of a former abandoned lift bridge to a point just north of the outfall. Since then this outfall has been inspected daily with the boom being replaced as necessary. Additionally, two days were spent using a vacuum truck (Kenny Manta Maintenance) in an attempt to suck up as much sheen as possible within the containment area. A vacuum truck also was dispatched to the site on 1/27.
On Tuesday, 1/24, at approximately 8:30 a.m. National personnel witnessed whitish material that turned to oil sheen coming out of the outfalls, and collecting on the booms. Mr. Barnett was notified, went down to the outfalls, and saw the tail end of this 15 minute event. At that point, National began vacuuming up the sheen from within the boom, and Mr. Barnett notified management and operations that somewhere in the plant this material was being released into a storm sewer. At that point, meetings were held with Operations and Utilities, USEPA, and the Coast Guard, and an action plan was discussed, and established. This event was called into the NRC. On Wednesday at 8:25 a.m., Thursday at 11:25 a.m., and again at 11:35 a.m. sheen was seen discharging for ten to fifteen minutes from the Outfalls. These events were also called into the NRC.
Two active operations and one inactive operation discharge to Outfalls 009 and 010 – the No. 4 Blast Furnace (non-contact cooling water), the Power House (non –contact cooling water), and the inactive Sinter Plant (non-contact cooling water). There are also several road manholes where surface run-off can enter this sewer system. Additionally, the Zinc Treatment Plant (No. 3 and 4 Blast Furnace water treatment system) discharges to Outfall 009.
An investigation was initiated by Environmental, Utilities, and Blast Furnace personnel into possible sources for this whitish oil sheen discharge to the outfalls. Sumps in the Blast Furnace were checked, and it was determined that these discharged north to the Terminal Lagoon, and oil reclamation facility, and not to 009/010 outfalls.

Activities at the Powerhouse, the focus of attention was on Powerhouse sumps that were known to discharge periodically to the flume located under the Powerhouse, and on to the Outfall. These sumps were inspected, identified, and cleaned out using vacuum trucks (Kenny Manta, see attached) over Tuesday night, Wednesday, and Thursday. These clean up efforts and inspections continue. An effort was also initiated to determine how to take the sump discharges out of the flume, and instead direct them north to the Terminal lagoon. As of Friday morning, 1/27, three of the sumps have been re-piped to the Terminal Lagoon.

On the 25 and 26th January Mr. Barnett, and Mr. Malinowski of Utilities also inspected a number of out of service buildings, including the shuttered Sinter Plant for evidence of any oily discharges to the sewer. One sump was found in the former Sinter Plant, but there was no evidence of oil. The basements of a number of buildings in this part of the plant were also investigated only to find no evidence of oil, no operational sumps, and no drains were found. Our in plant lubricant supplier, Shell Oil, had been provided with a sample of the material collected on the booms, and they are attempting to match it up with lubricants and oils used in the plant. FDIR analyses are also being done on the material collected.

Steps forward: At this point (Friday afternoon the 27th) we are still focusing our efforts on the Power Plant and the re-routing of as many sump discharges as possible to the Terminal Lagoon in an effort to eliminate these sumps as potential contributors to the releases noted at Outfall 009 and 010. As of now, we have three hard booms, and two soft booms in place at Outfall 009/010.

At the conclusion of this effort, we will determine if the intermittent discharges stop. We continue to communicate this effort to the operational and maintenance personnel in the plant, and the intermittent discharges that happened on Tuesday, Wednesday, Thursday and Friday were immediately conveyed to the plant in an effort to associate the discharge with some plant event. Meanwhile, we will continue to make every effort to completely contain any discharges out these Outfalls using multiple booms, sucker trucks, and boats.