

February 10, 2017

Mr. Chris Swain
Environmental Specialist
Bureau of Remediation and Waste Management
Maine Department of Environmental Protection
17 State House Station
Augusta ME 04333

**Subject: Monthly Progress Report – January 2017
Orrington Remediation Site
Orrington, Maine**

Dear Mr. Swain:

This Monthly Progress Report is submitted to Maine Department of Environmental Protection (DEP) in compliance with reporting requirements in the Board of Environmental Protection (BEP) Order (Order) effective April 3, 2014 for the Orrington Remediation Site (Site) in Orrington, Maine, which incorporates, with modifications, the Compliance Order issued by the DEP dated November 24, 2008. This Report covers the period from **January 1 – 31, 2017**, and is submitted on behalf of Mallinckrodt US LLC.

If you have any questions regarding this report please feel free to contact me at 314-281-5947.

Sincerely,



Kathy Zeigler
Remediation Program Manager

cc: (all electronic copies)
Patricia Duft – Mallinckrodt US LLC
Susanne Miller – Maine DEP, Bangor
Audrey Snowden – Orrington Town Library
Paul White – Town of Orrington
David Wright – Maine DEP

**MONTHLY PROGRESS REPORT
ORRINGTON REMEDIATION SITE
Orrington, Maine
January 2017**

Report Date: February 10, 2017

This Monthly Progress Report is submitted to the Maine Department of Environmental Protection (DEP) documenting the activities completed by Mallinckrodt US LLC (Mallinckrodt) and/or its representatives at the Orrington Remediation Site (the Site) along with a description of upcoming activities.

A discussion of all tasks and actions completed during the reporting period toward achieving compliance with the Order

- Held monthly conference call with DEP on Jan 4 and met with DEP on Jan 19, 2017 to discuss various groundwater related topics.
- Submitted an updated schedule for the Orrington Remediation Site to DEP at the Jan 19 meeting.
- Submit a Revised Winter Erosion & Sedimentation Control Plan to DEP on Jan 16, 2017.
- The on-site DEP oversight inspector continued to participate in weekly construction meetings in which current activities as well as a two-week look ahead are discussed.
- Continued operation of the perimeter air monitoring system and meteorological station, including quarterly calibration, and submitted weekly PAM reports to DEP. Quarterly calibration of the system was completed the week of Jan 23, 2017.
- Continued operation of the on-site lab in compliance with DEP certification.
- Continued stockpile management of excavated materials and loading railcars for off-site shipment.
- Permitting (Upland)
 - No new activity.
- Short-Term Comprehensive Monitoring Plan (Draft ST CMP submitted Apr 12, 2016)
 - The Short-Term CMP includes monitoring of potential remediation impacts as well as ongoing groundwater monitoring, quarterly IES monitoring, and annual monitoring of Landfill 5.
 - DEP comments were received Jan 13, 2017 and were discussed with DEP at the Jan 19 meeting.
- Landfill Ridge Area (CMI Plan Rev 1 - Oct 28, 2015; DEP Conditional Approval - Dec 10, 2015)
 - Continued to maintain erosion and sediment control measures.
 - Continued preparation of the Landfill Ridge CMI Closure Report.
- Landfill 1
 - Continued preparing the Draft Landfill 1 CMI Plan including a work plan for additional field work.
- Landfill 2 (CMI Plan – Rev 1, Oct 7, 2016, Addendum 1 Nov 29, 2016)
 - No new activity.
- Landfills 3, 4 and 5 (CMI Plan – Rev 1, May 26, 2016; DEP Approval, Jul 12, 2016)
 - Continued to inspect and maintain winter erosion control measures.
- Plant Area
 - Continued developing the Draft Plant Area CMIP.

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- Scrap Metal Yard (CMI Plan – Rev 1, Jun 22, 2016; DEP Conditional Approval, Jul 22, 2016)
 - Continued to inspect and maintain winter erosion control measures.
- Southerly Stream (CMI Plan – Rev 1, Oct 14, 2016; DEP Approval Nov 7, 2016)
 - Completed the bypass installation.
 - Began implementation of the remedial action including confirmation sampling and backfilling activities.
- Northern Drainage Ditch (CMI Plan – Rev 1, Aug 23, 2016; DEP Approved upon submittal; Final Addendum 1 Oct 27, 2016;)
 - Continued implementation of the remedial action including confirmation sampling and backfilling activities.
- Southern Cove (Draft CMI Plan, Jun 8, 2016; DEP Comments Aug 26 & Sept 27, 2016)
 - Continued discussions with DEP regarding post-dredging sampling.
 - Continued preparing responses to DEP comments on the Draft Southern Cove CMI Plan and Draft Contractor Work Plans.
- Groundwater
 - Continued preparation of Ferry Road Current Conditions Assessment report.
 - Submitted the 3rd quarter 2016 groundwater monitoring report to DEP on Jan 20, 2017.
 - Interim Extraction System (IES):
 - Submitted the 3rd quarter 2016 IES operations report to DEP on Jan 13, 2017.
 - Continue operation of extractions wells and quarterly monitoring and reporting.
 - Three-dimensional Groundwater Model (submitted Feb 22, 2016)
 - Received DEP comments on the GW Model report on Jan 6, 2017.
 - Pre-Design Groundwater Control Work Plan for Landfills 3, 4, 5 (DEP CAL Sept 18, 2015)
 - Submitted a summary of physical observations, analytical data, and hydraulic testing data from recent investigations in the Landfills 3-5 area to DEP on Jan 12, 2017
 - Submitted water level elevations from the Landfills 3-5 area to DEP on Jan 16.
 - Presented Landfills 3-5 data and preliminary findings to MEDEP during the meeting on Jan 19.
- Groundwater Treatment Plant (GWTP) Operation
 - Collected mercury compliance samples from Outfall 001 (3x/week with analysis per USEPA Method 1631) and Outfall 002 (one sample per discharge day with analysis per USEPA Method 245.1) for analysis by Katahdin Analytical Labs.
 - Continued monthly Outfall 001 effluent monitoring and reporting (volatiles, semivolatiles, herbicides and manganese) per the MEPDES permit requirements for a “new wastestream” to address additional water being treated in the GWTP from remedial construction activities.
 - The Scrap Metal Yard remediation is complete and there is no more construction water from this area, therefore the “new wastestream” monitoring required for this area is complete.
 - The Northern Drainage Ditch work began and January was month 2 of the “new wastestream” (construction water) monitoring required for this area.

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- The average daily plant discharge flow was approximately 51,000 gpd with 247,691 gallons of construction-related water.
- Shipped 10 cubic yards of nonhazardous filterpress cake to EQ (US Ecology) in MI on Jan 17, 2017.
- Submitted the December 2016 NetDMR to DEP on Jan 11 and Toxsheet and Effluent Mercury Test Report forms to DEP on Jan 12, 2017.
- Replaced MW601 pump and repaired riser.
- Completed routine GWTP maintenance activities.
- Other Site Activities
 - Completed routine site maintenance activities

A detailed summary of all results of sampling, tests, shipments from the Site and other data received by Mallinckrodt in the prior (previous month) reporting period pursuant to this Order

- Routine operational data is reported on the DMR per the MEPDES Permit.
- Air monitoring and meteorological data is collected continuously by the perimeter air monitoring system and stored in the computer system. Weekly reports are submitted to DEP.
- Quarterly groundwater monitoring data and Interim Extraction System monitoring data is reported in quarterly reports and EGAD EDDs to DEP.
- Validated EGAD EDDs and laboratory reports are submitted to DEP via the automated database system or the ftp site (for large laboratory reports) as they are available.
 - Submitted water quality data from newly-installed monitoring wells in the Landfills 3-5 area was submitted Jan 12, 2017.
 - Submitted surface water quality data was submitted Jan 12, 2017.
 - Submitted 4th quarter December 2016 IES monitoring data and EGAD EDDs to DEP on Jan 13

A discussion of all tasks and actions scheduled for the coming reporting period including the date for initiating and completing such activities including percent completion where applicable.

- Hold monthly conference call with DEP on Feb 1 and meet with DEP via WebEx on Feb 22, 2017 to discuss Plant Area and Southern Cove topics.
- Continue operation of the perimeter air monitoring system and weekly PAM reports to DEP.
- Continue operation of the on-site lab in compliance with DEP certification.
- Continued stockpile management of excavated materials and loading railcars for off-site shipment.
- Permitting (Upland)
 - No activity planned
- Short-Term Comprehensive Monitoring Plan (Draft ST CMP April 12, 2016)
 - Initiated monitoring of the Scrap Metal yard in accordance with the Draft Short-Term CMP and discussions at the Jan 19 meeting with DEP.
 - Respond to DEP comments on the Draft Short-Term CMP

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- Landfill Ridge Area (CMI Plan Rev 1, Oct 28, 2015; DEP CAL, Dec 10, 2015)
 - Continue inspections and maintenance of erosion and sediment control measures.
 - Submit the Landfill Ridge Area Closure Report
 - Respond to any DEP questions regarding the Landfill Ridge CMI Closure Report.
- Landfill 1
 - Continue developing the remedial design and the work plan for additional field work.
- Landfill 2 (CMI Plan – Rev 1, Oct 7, 2016, Addendum 1 Nov 29, 2016)
 - Receive DEP Approval of the Landfill 2 CMI Plan Rev 1 and Addendum 1.
 - Begin implementation of the remedial action including preparing the area for the excavation work and possibly beginning the sheet pile installations.
 - Final restoration is expected to be complete by early summer 2017.
- Landfills 3-5 (CMI Plan – Rev 1, May 26, 2016; DEP Approval July 12, 2016)
 - Continue inspections and maintenance of caps and erosion and sediment control measures.
 - Complete final restoration in Spring 2017.
- Plant Area
 - Submit the Draft Plant Area CMI Plan which will include work plans for additional sampling and construction of TSSA #3.
- Scrap Metal Yard (CMI Plan – Rev 1, June 22, 2016; DEP CAL, July 22, 2016)
 - Continue inspections and maintenance of caps and erosion and sediment control measures.
 - Complete final restoration in Spring 2017.
- Southerly Stream (CMI Plan – Rev 1, Oct 14, 2016; DEP Approval Nov 7, 2016)
 - Continue implementation of the remedial action including confirmation sampling and backfilling.
 - Construction is expected to be completed in Spring 2017 including final restoration of both the northern and southern segments of the Southerly Stream.
- Northern Drainage Ditch (CMI Plan – Rev 1, Aug 23, 2016; DEP Approved upon submittal; Final Addendum 1 Oct 27, 2016;)
 - Complete construction of the remedial action including confirmation sampling and backfilling.
 - Construction and final restoration is expected to be completed in Spring 2017.
- Southern Cove (Draft CMI Plan, Jun 8, 2016; DEP Comments, Aug 26 & Sept 27, 2016)
 - Submit responses to DEP comments on the Draft Southern Cove CMI Plan and the Draft Construction Plan and Environmental Monitoring Plan
 - Continue discussions with DEP on confirmation sampling issues and submit a revised Sampling Protocol to DEP.
 - Coordinate with USACE and NMFS on permit application reviews
 - Construction in the dry is expected to start late Summer 2017. The start date for in-water work will be established in agency permits.
- Groundwater
 - Submit report summarizing Ferry Road Current Conditions to DEP.
 - Interim Extraction System (IES):
 - Continue operation of extractions wells and quarterly monitoring and reporting.

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- Three-dimensional Groundwater Model (Feb 22, 2016)
 - Submit a follow-up to DEP regarding the GW model, addressing the written comments as well as discussions during the meeting with DEP on Jan 19.
- Pre-Design Groundwater Control Work Plan for Landfills 3, 4, 5 (DEP CAL Sept 18, 2015)
 - Discuss the completion of the pre-design work with DEP based on discussions during the Jan 19 meeting.
- Groundwater Treatment Plant (GWTP) Operation
 - Continue compliance sampling of Outfall 001 and 002 as described above.
 - Submit February 2017 NetDMR and Toxsheet and Effluent Mercury Test Report forms to DEP.
 - Continue winter maintenance activities and routine GWTP maintenance.
- Other Site Activities
 - Complete routine site maintenance activities.

Tasks not completed as required, original and revised completion dates, reasons for delay, actions taken to minimize the delay and any other problems or anticipated problems

- None

The quantity of waste shipped to the various disposal locations

- Shipped 10 cubic yards of nonhazardous filterpress cake to EQ (US Ecology) in MI on Jan 17, 2017.
- As of the end of **January 2017**:
 - Leach Field: Soil excavation and off-site disposal is complete.
 - A total of 14 railcars, containing 1379 tons of non-hazardous Leach Field soils, have been shipped offsite to the Republic disposal facility in Niagara Falls, New York.
 - Landfill Ridge: Soil excavation and off-site disposal is complete.
 - A total of 564 railcars, containing over 55,158 tons of non-hazardous Landfill Ridge soils, have been shipped offsite to the Republic disposal facility in Niagara Falls, New York or the Stablex disposal facility in Quebec, Canada.
 - Scrap Metal Yard:
 - 46 railcars of Scrap Metal Yard soils were shipped in January 2017.
 - A total of 413 railcars, containing over 40,300 tons of non-hazardous Scrap Metal Yard soils, have been shipped offsite to the Republic disposal facility in Niagara Falls, New York or the Stablex disposal facility in Quebec, Canada.
 - Northern Drainage Ditch:
 - 76 railcars of Northern Drainage Ditch soils were shipped in January 2017.
 - A total of 111 railcars, containing over 10,500 tons of non-hazardous Scrap Metal Yard soils, have been shipped offsite to the Republic disposal facility in Niagara Falls, New York.

Additional information regarding the progress of the work

- None