

March 6, 2015

Ms. Stacy Ladner  
Unit Manager  
Division of Oil & Hazardous Waste Facility Regulation  
Bureau of Remediation and Waste Management  
Maine Department of Environmental Protection  
17 State House Station  
Augusta ME 04333

**Subject: Monthly Progress Report – February 2015  
Orrington Remediation Site  
Orrington, Maine**

Dear Ms. Ladner:

This Monthly Progress Report is submitted to Maine Department of Environmental Protection (MEDEP) 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 MEDEP dated November 24, 2008. This Report covers the period from **February 1 – 28, 2015**, 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  
Director, Environmental Remediation

cc: Patricia Duft – Mallinckrodt US LLC  
Melanie Loyzim - Maine Department of Environmental Protection  
Paul White – Town of Orrington  
Audrey Snowden – Orrington Town Library

**MONTHLY PROGRESS REPORT  
ORRINGTON REMEDIATION SITE  
Orrington, Maine  
February 2015**

**Report Date: March 6, 2015**

This Monthly Progress Report is submitted to the Maine Department of Environmental Protection (MEDEP) 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.

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

- Held monthly conference call with MEDEP on February 4, 2015 to discuss activities associated with the Order.
- Send Site Review Requests for the remediation activities at the site to the following agencies: Maine Department of Fisheries & Wildlife, Maine Department of Marine Resources, Maine Historic Preservation Commission and Maine Department of Agriculture, Conservation, and Forestry Natural Areas Program.
- Received the audit report from the on-site assessment by the Department of Health and Human Services (DHHS) on February 9, 2015, the purpose of which was to evaluate the Direct Mercury Analyzer (DMA) as an on-site analytical lab.
- Met with the US Army Corps of Engineers (ACE), MEDEP and NRPA on February 10, 2015 to discuss permitting requirements for construction activities at the site.
- Facility Dismantling Plan
  - Completed sewer and water line installation for the restroom trailer and electrical terminations to all trailers.
  - Submitted a Phase 7 Data Transmittal to MEDEP including summary tables and EGAD EDDs for disposal shipments and building materials characterization data on February 18, 2015.
- Landfill Ridge Area
  - Continued development of the Corrective Measures Implementation Plan (CMIP), or remedial design, for the Landfill Ridge Area.
- Landfills 1-5
  - Submitted an Interim data transmittal to MEDEP on February 17, 2015 containing preliminary data from the Phase I Landfills Pre-Design Work Plan.
  - Submitted the Landfills 1 & 2 Phase II Pre-Design Work Plan to MEDEP February 27, 2015.
- Southern Cove
  - Received MEDEP comments on the Southern Cove Pre-Design Work Plan (Jan 5, 2015) on February 9, 2015.
  - Submitted additional data for the Southern Cove (collected by the court appointed Study Panel) to MEDEP on February 19, 2015.
- Comprehensive Monitoring Plan
  - Submitted the Work Plan for Current Conditions Assessment in the Landfill 2 Area to MEDEP on February 3, 2015.
  - Submitted the Work Plan for Current Conditions Assessment in the Ferry Road Area to MEDEP on February 18, 2015.

**MONTHLY PROGRESS REPORT  
ORRINGTON REMEDIATION SITE  
Orrington, Maine  
February 2015**

- Groundwater
  - Collected grab groundwater samples from five extraction wells on February 4, 2015, and submitted for laboratory analysis of mercury, chloropicrin, and chloride.
  - Downloaded and reviewed pressure transducer data, and assessed water level elevations during operation of the interim extraction well system.
  - Updated the elevation survey of several historical monitoring wells for use in the three-dimensional groundwater model.
  - Conducted grain size analysis of four soil samples collected during drilling activities in December 2014, for use in groundwater model.
  - Submitted a Data Transmittal to MEDEP for the Interim Extraction Well Program on February 5, 2015. Received MEDEP comments on February 13 and resubmitted EGAD EDD files to MEDEP on February 23 and 26, 2015.
  - Submitted the 4<sup>th</sup> Quarter 2014 Groundwater Monitoring Report to MEDEP and the Town of Orrington on February 6, 2015.
  - Submitted the 2015 Landfill 5 Annual Groundwater Monitoring Report to MEDEP and USEPA Region 1 on February 26, 2015.
  - Notified MEDEP the 1<sup>st</sup> quarter 2015 groundwater monitoring would start March 16, 2015
- Groundwater Treatment Plant (GWTP) Operation
  - Submitted the January eDMR to MEDEP on February 12, 2015.
  - 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.
  - Collected additional samples on February 4, 2015 for volatiles, semivolatiles, herbicides, and manganese in compliance with the “new waste stream” requirements in the MEPDES permit. Samples were sent to Katahdin for analysis.
  - Received the February 4 sample results on February 23, 2015 which showed chloropicrin in excess of the MEPDES permit limit. Previous chloropicrin results were well below the discharge limit as were previous results for samples collected prior to the last GAC treatment vessel. Per the general conditions of the permit, Woodard & Curran notified MEDEP (Tanya Hovell) within 24 hours of the exceedance and Mallinckrodt also notified Stacy Lander via voicemail on February 24, 2015.
  - Submitted additional samples (Eurofins, Katahdin’s subcontractor) for chloropicrin analyses:
    - The original Outfall 001 sample collected 2/4/15 (additional sample was still available at the analytical laboratory)
    - The Outfall 001 split sample collected on 2/4/15 and held on site (this sample exceeded hold times so results will be qualified by the laboratory);
    - An Outfall 001 sample collected on 2/24/15 (the day the exceedance was reported);
    - An Outfall 001 sample collected on 2/25/15 (subsequent to GAC change-out)
  - Changed out both beds of carbon (GAC vessels) with new virgin carbon on February 25, 2015.
  - Received Mutual Aid Agreements from Clean Harbors and the Orrington Fire Department.
  - Completed the 2014 Tier II Chemical Inventory Report and submitted electronic copies to the Maine Emergency Management Agency (MEMA) and Penobscot County Emergency Planning Committee (EMA) on February 17, 2015, a hard copy to the Orrington Fire Department on February 19, 2015, and the fee and fee Worksheet to the State of Maine on February 19, 2015.
  - Continued development of the 2014 Annual Hazardous Waste Report which will be completed when the Orrington Annual Hazardous Waste Report form is received from MEDEP, anticipated August 2015.

**MONTHLY PROGRESS REPORT  
ORRINGTON REMEDIATION SITE  
Orrington, Maine  
February 2015**

- Other Site Activities
  - Collected weather station data.
  - Completed routine maintenance activities.
  
- 2. **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. This will include the additional analyses for “new waste streams” as described above .
  - When applicable, weekly air monitoring data (Lumex readings) are provided to MEDEP via email.
  - Monthly weather station data is maintained electronically and available upon request.
  - Quarterly groundwater monitoring data is reported in the quarterly groundwater reports and/or the annual Landfill 5 monitoring report.
  - Analytical laboratory reports, including EGAD EDDs with minimum DEP required QA/QC, will be provided to MEDEP after the complete data package is received and validated. This data will generally be submitted in documents related to the specific investigation or remedial activity. Interim data submittals may also be provided as agreed upon by MEDEP and Mallinckrodt.
  - Data submittals this month included:
    - Phase 7 waste disposal and characterization data – February 18, 2015
    - Follow-up EGAD EDDs from the Interim Extraction Well program - February 23, 2015.
  
- 3. **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 MEDEP on March 4, 2015 to discuss activities associated with the Order.
  - Meet with MEDEP on March 12, 2015 to discuss the Phase II Landfills 1 & 2 Work Plans, comments on the Southern Cove Pre-Design Work Plan, current condition assessments and the draft revised schedule.
  - Review responses to Site Review Requests from the various agencies.
  - Submit a Revised Baseline Remediation Schedule to MEDEP reflecting adjusted review times and additional activities such as the current conditions work plans.
  - Respond to the DHHS audit report regarding the use of the DMA as an on-site analytical lab. (Submitted March 2, 2015)
  - Respond to any questions from MEDEP concerning the draft HASP Framework (May 2014).
  - Facility Dismantling
    - Submit a Phase 7 Data Transmittal including confirmatory sampling results from the Leach Field and Nitromethane Area as well as the air monitoring data.
    - Collect additional confirmation samples from the Leach Field excavations, backfill all excavations upon receipt of confirmation data below MPS criteria and complete final grading in the area. (weather permitting)
    - Clean concrete and place tarps on chlorate building and laboratory concrete pads (weather permitting).
  - Groundwater
    - Collect grab groundwater quality samples from extraction wells, according to the revised Interim Extraction Well Work Plan.
    - Conduct the 1<sup>st</sup> quarter groundwater monitoring event the week of March 16, 2015.
    - Respond to any further comments on the Data Transmittal for the Interim Extraction Well program.

**MONTHLY PROGRESS REPORT  
ORRINGTON REMEDIATION SITE  
Orrington, Maine  
February 2015**

- Comprehensive Monitoring Plan (CMP)
    - Respond to MEDEP comments on the Current Condition Work Plans for the Landfill 2 and/or Ferry Road Areas.
    - Receive MEDEP's assessment of data gaps for the Plant Area and Landfill 1 areas.
    - Respond to MEDEP comments on the Revised Sediment Prevention Plan (July 2014).
  - Landfill Ridge Area
    - Continue development of the CMIP (remedial design) for the Landfill Ridge Area
  - Landfills 1-5
    - Install the gas probes at Landfill 4 in accordance with the follow-up information submitted to MEDEP on January 21 and 28, 2015. (weather permitting).
    - Present the proposed Phase II activities to MEDEP on March 12, 2015 and respond to comments subsequently received on the Work Plan.
  - Southern Cove
    - Respond to MEDEP comments on the Southern Cove Pre-Design Work Plan received February 17, 2015.
    - Submit a Revised Southern Cove Pre-Design Work Plan to MEDEP.
  - Groundwater Treatment Plant (GWTP) Operation
    - Continue compliance sampling of Outfall 001 and 002 as described above.
    - Continue the expanded monitoring and reporting program under the "new waste stream" requirement in the MEPDES permit as described above.
    - Provide the results of the additional samples collected for chloropicrin to evaluate the apparent chloropicrin exceedance described above.
    - Submit February 2015 eDMR to MEDEP.
  - Other Site Activities
    - Complete routine maintenance activities.
    - Collect weather station data.
- 4. 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**
- The overall project schedule for design and remediation of each of the areas at the Site is being revised to reflect longer times for development and review of the various technical submittals. This revised schedule will be considered the new Baseline Schedule and will be submitted to MEDEP no later than March 17, 2015.
- 5. The quantity of waste shipped to the various disposal locations**
- None
- 6. Additional information regarding the progress of the work**
- None.