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April 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 – March 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 **March 1 – 31, 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
March 2015

Report Date: April 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 March 4, 2015 to discuss site activities associated with the Order.
   - Met with MEDEP on March 12, 2015 to discuss the draft Landfills 1 & 2 Phase II Pre-Design Work Plan, draft Southern Cove Pre-Design Work Plan, revised Baseline Schedule, draft current condition assessment submittals, and other data collection and reporting topics.
   - Submitted a Revised Baseline Remediation Schedule to MEDEP on March 13, 2015.
   - Received a request from MEDEP for Oversight Inspector funding on March 18, 2015 along with the 3rd quarter (revised) and 4th quarter expense summaries.
   - Received responses to Site Review Requests from the Maine Department of Marine Resources (3/5/15) and the Penobscot Indian Nation (3/6/15).
   - Responded to the Department of Health and Human Services (DHHS) audit report for the certification of the use of the DMA on-site as an approved laboratory on March 2, 2015, and received DHHS comments on March 29, 2015.
   - Facility Dismantling Plan
     - Submitted Phase 7 Air Monitoring EDD reports to MEDEP on March 11, 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 the last required item in the Conditional Approval for Landfill Phase 1 WP (Attachment A for the Landfill Gas Probes) to MEDEP on March 12, 2015.
   - Southern Cove
     - Submitted the response to MEDEP comments and the revised Southern Cove Pre-Design Work Plan to MEDEP on March 25, 2015.
   - Comprehensive Monitoring Plan
     - Received MEDEP comments on the Work Plan for Current Conditions Assessment in the Ferry Road Area (Feb 18, 2015) on March 27, 2015.
   - Groundwater
     - Completed the 1st quarter 2015 groundwater sampling event the week of March 16, 2015.
     - Collected grab groundwater samples from the five extraction wells on March 16, and submitted for laboratory analysis of mercury, chloropicrin, VOCs, and chloride.
     - Recorded manual and transducer water levels at extraction wells and nearby monitoring wells on March 16.
     - Downloaded and reviewed pressure transducer data, and assessed water level elevations during operation of the interim extraction well system.
     - Submitted the February Interim Extraction System Operation summary and associated EGAD EDD to MEDEP on March 19, 2015.
     - Reviewed operation information for the interim extraction system, and adjusted extraction rates based on observations.
     - Continued updates to the three-dimensional groundwater model.

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ORRINGTON REMEDIATION SITE
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- Groundwater Treatment Plant (GWTP) Operation
  - Submitted the February eDMR to MEDEP on March 13, 2015 which included a summary of the chloropicrin results previously discussed.
  - 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 March 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.
  - Shipped approximately 12 cubic yards of used Mersorb and one cubic yard of unused powdered Mersorb (from former wastewater treatment plant operations), four maverick packs of filter press sludge and six packs of spent Mersorb/ granular activated carbon (from current GWTP operations) to EQ's hazardous waste disposal facility in Michigan.
  - Held a conference call on March 20, 2015 with Woodard & Curran, Geosyntec, CDM and Mallinckrodt to discuss contact water that may be generated during remedial activities.
- 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:
     - February Interim Extraction System Operation summary and EDD - March 19, 2015.
     - Phase 7 Air Monitoring EDD reports - March 11, 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 April 1, 2015 to discuss activities associated with the Order.
   - Meet with MEDEP on April 30/May 1, 2015 to discuss the Logistics Work Plan, Landfill Ridge CMIP (Design), and the Plant Area Phase I PD Work Plan.
   - Receive and review responses to Site Review Requests from the various agencies.
   - Submit the Logistics Work Plan to MEDEP on April 15, 2015.
   - Respond to the DHHS comments received on March 29, 2015 regarding the DMA certification.
   - Respond to any questions from MEDEP concerning the draft HASP Framework (May 2014).

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- Facility Dismantling
  - 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)
  - The Submit a Phase 7 Data Transmittal including confirmatory sampling results from the Leach Field and Nitromethane Area as well as the air monitoring data.
  - 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.
  - Continue adjustments to interim extraction well system as needed.
  - Respond to any comments from MEDEP on the Operation Summary or EDD transmittals for the Interim Extraction Well program.
- Comprehensive Monitoring Plan (CMP)
  - Respond to MEDEP comments received March 27, 2015 on the Current Conditions Assessment of Ferry Road Work Plan.
  - Receive MEDEP comments on the Current Conditions Assessment of Landfill 2 Work Plan.
  - 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
  - Submit the CMIP (remedial design) for the Landfill Ridge Area to MEDEP on April 15, 2015.
- 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).
  - Respond to MEDEP comments on the draft Landfills 1 & 2 Phase II Pre-Design Work Plan dated Feb 27, 2015.
- Southern Cove
  - Respond to MEDEP final comments, if any, on the revised Southern Cove Pre-Design Work Plan submitted March 25, 2015.
- Plant Area
  - Submit draft Plant Area Pre-Design Phase I Work Plan to MEDEP for review on April 3, 2015.
- 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.
  - Submit March 2015 eDMR to MEDEP.
  - Submit the 2014 Annual Hazardous Waste Report and Universal Waste Reporting Form to MEDEP and USEPA (due date to be determined upon receipt of the Orrington Annual Hazardous Waste Report form from 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**
   - None. Future dates will be tracked against the revised Baseline Schedule dated March 13, 2015.

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5. **The quantity of waste shipped to the various disposal locations**
   - Approximately 12 cubic yards of used Mersorb – EQ, Michigan
   - one cubic yard of unused powdered Mersorb – EQ, Michigan
   - Four maverick packs of filter press sludge – EQ, Michigan
   - Six maverick packs of spent Mersorb/ granular activated carbon – EQ, Michigan

6. **Additional information regarding the progress of the work**
   - None.