



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 8 New Bond Street, Worcester MA 01606 • 508-792-7650

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January 12, 2016

Casella Waste Systems, Inc.
25 Greens Hill Lane
Rutland, VT 05701

Attention: John Casella,
President

Re: IRA Conditional Approval
Southbridge Landfill
165 Barefoot Road
Southbridge, MA
RTN 2-0019678

Dear Mr. Casella:

The Massachusetts Department of Environmental Protection (“MassDEP”) has reviewed the Immediate Response Action (“IRA”) Plan, submitted to MassDEP on December 22, 2015, for the above-referenced Site. The IRA Plan was prepared by Tighe & Bond, Inc. and submitted by Jeffrey Arps, Licensed Site Professional of Record (LSP No. 4589) for this release condition.

On October 23, 2015, Casella Waste Systems, Inc., on behalf of Southbridge Recycling & Disposal Park, Inc. (collectively, “SRDP” or “you”) notified MassDEP of a two-hour reporting condition for detections of chlorinated volatile organic compounds (CVOCs) and 1,4 dioxane exceeding the applicable Reportable Concentrations (RCGW-1) in three private drinking water wells on H. Foote Road in Charlton, Massachusetts near the Southbridge Landfill, as required by 310 CMR 40.0311(6). Specifically, 1,4-dioxane was determined to be present in private drinking water wells at 65 H. Foote Rd., 74 H. Foote Rd., and 81 H. Foote Rd. at concentrations of 1.5 micrograms per liter ($\mu\text{g/L}$), 0.82 $\mu\text{g/L}$, and 0.43 $\mu\text{g/L}$, respectively, above the RCGW-1 of 0.3 $\mu\text{g/l}$. Concentrations of CVOCs exceeding the RCGW-1 were also detected in the private well at 65 H. Foote Road, and concentrations below the RCGW-1 were detected in the well at 81 H. Foote Road. In accordance with 310 CMR 40.0006, detections of contaminants in a private water supply well are considered a Condition of Substantial Release Migration (“SRM”); detections of contaminants in a residential well are also considered a Critical Exposure Pathway (CEP).

Pursuant to 310 CMR 40.0412 (1), releases under the “Two Hour” notification provisions require an IRA. Under 310 CMR 40.0412 and 40.0414, notification of a release of oil and/or

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hazardous material to a residential well requires an IRA to eliminate, prevent or mitigate CEPs. On October 23, 2015, MassDEP provided verbal approval to conduct an IRA deemed necessary to address the notification conditions detailed above, in accordance with 310 CMR 40.0420. The verbal IRA approval included the following requirements:

- Immediately notify the Charlton Board of Health and affected individual property owners of the detections of CVOCs and/or 1,4-dioxane in the private drinking water wells;
- Immediately provide bottled water to the residents living at the properties identified with any detections of CVOCs and/or 1,4-dioxane to eliminate/mitigate a CEP;
- Resample impacted private drinking water wells;
- Identify and sample all private drinking water wells for CVOCs located within a 500 foot radius of any detection of CVOCs or 1,4-dioxane in private wells; and
- Collect representative 24-hour indoor air samples to assess indoor air risks associated with TCE detected in the private wells.

Immediate Response Actions have been performed under the verbal IRA approval and pursuant to follow-up communications between MassDEP, Casella Waste Systems, Inc., and Mr. Arps as the LSP of Record. These actions are described in the IRA Plan submitted on December 22, 2015, including the results of additional sampling beyond the initial three locations.

The written IRA Plan provides detail for continued response actions at the Site. Specifically, the IRA Plan proposes the following actions will be taken at the Site in response to this notification condition:

- Quarterly sampling of the potable wells that were previously sampled and with the potential for additional wells based on pending results of current sampling efforts. Samples will be submitted to an analytical laboratory for VOC analysis using US EPA Method 522, using MassDEP Compendium of Analytical Methods (CAM) protocols. Potable wells where laboratory analysis results in J-qualified data will be resampled and the usability of the data verified by third-party data validation. Further, the IRA Plan states that following two consecutive rounds of non-detect results at the reporting limit, SRDP will remove those locations from the ongoing quarterly potable well sampling program;
- Continue regular monitoring and maintenance of the point of entry treatment (POET) system installed at 65 H. Foote Rd., including replacement of a respective granulated activated carbon unit (GAC) in the event that mid-point or effluent sampling indicates breakthrough is occurring; and
- Additional groundwater investigation and assessment through installation of a monitoring well couplet to be located southwest of the Landfill, adjacent to Barefoot

Rd., and two shallow bedrock wells to be installed west of the existing Landfill as shown in the IRA Plan. Following installation of the monitoring wells, groundwater samples will be submitted to an analytical laboratory for VOC analysis by EPA Method 8260C (using 8260 SIM for 1,4-dioxane). Subsequently, sampling of these monitoring wells will be conducted in conjunction with the current quarterly landfill monitoring program.

Pursuant to 310 CMR 40.0420(2), MassDEP approves of the IRA Plan subject to the following conditions:

1. The private well at 33 Ayers Rd. must be included on the list of properties to be sampled, referenced in Table 3 of the IRA Plan, unless this private well has been properly and officially decommissioned. In addition, any other private wells located within 500 feet of a monitoring well with detections of tetrachloroethylene (PCE), trichloroethylene (TCE), or their associated breakdown products using EPA Method 524.2 ("select VOCs") must be added to the list of private wells to be sampled quarterly;
2. All private wells sampled as part of the quarterly sampling plus any potable wells added to the list either due to pending results, the expansion of the 500-foot radius, or newly constructed private wells must be analyzed for the VOCs previously required by MassDEP as referenced in the IRA Plan. Specifically, in addition to analysis for 1,4-dioxane using EPA Method 522, you must sample and analyze for;
3. Any private wells within 500 feet of any new detections that are not currently on the list of properties to be sampled, referenced in Table 3 of the IRA Plan, must be immediately sampled and added to the quarterly sampling list to be sampled for the select VOCs, including 1,4 dioxane. In addition, any newly constructed private wells within any 500-foot sampling radius must be added to the quarterly sampling list;
4. Even though bottled water has been provided for locations where sampling and analysis indicated the presence of a Critical Exposure Pathway as defined in the MCP, you must evaluate the feasibility the elimination, prevention, and/or mitigation of CEPs, including installation of POET systems and/or provision of municipally supplied water to residents before the IRA shall be considered complete, in accordance with 310 CMR 40.0427(1)(c);
5. Any of the quarterly potable well samples resulting in analytical data results with a J-qualifier must be resampled within 72 hours of receipt of laboratory analytical reports by you or the LSP of Record for the Site. If resampling indicates a second J-value qualified detection, you will conduct a data usability evaluation by third-party validation. For samples where J-qualified data is not negated by data validation after repeat analysis, sampling frequency of the well will be performed monthly, or you may immediately provide bottled water to prevent a potential CEP.

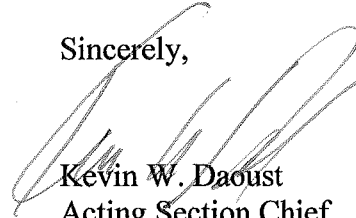
6. Quarterly and/or monthly potable well sampling for the above-referenced analyses shall be performed until such time that the IRA is considered complete in accordance with 310 CMR 40.0427. Please also be aware that you will need to continue the residential monitoring program under the Authorization to Operate a Landfill (BWP SW 10) Southbridge Sanitary Landfill Phase VII – Cell 7.4 Stage I, regardless of IRA completion;
7. For detections of Tentatively Identified Compounds (TICs), you must follow current MassDEP requirements as outlined in the MassDEP CAM;
8. Concentrations of 1,4-dioxane have been detected in monitoring wells located adjacent to the Landfill. Additional groundwater investigation shall be performed commensurate with the conservative and mobile nature of 1,4-dioxane, the complexity of the underlying fractured bedrock aquifer, and sensitivity of potential impacts to drinking water wells to determine the degree of hazard posed by the Site, whether remedial actions are required to contain or control the migration of contaminants, and to determine in removal or containment actions are appropriate, pursuant to 310 CMR 40.0414(1). In particular, the extent of groundwater contamination from the landfill shall be determined to the west and southwest of the Southbridge Landfill with the installation of overburden and bedrock monitoring wells, at a minimum, to assess potential impacts to potable wells. Alternatively, you may include potable wells located to the west and southwest nearest to the Southbridge Landfill as part of the quarterly potable well sampling. A plan for additional groundwater assessment shall be provided in the next IRA Status Report, subject to MassDEP approval.

In addition, MassDEP received an “Environmental Site Assessment Workplan” on November 25, 2015, proposing assessment of the bedrock aquifer between the landfill and the impacted residences on H. Foote Road and Eleanor Drive. Results of the proposed assessment shall be provided to MassDEP in the IRA Status Report following completion of the proposed assessment.

9. In addition to meeting the public notification requirements of 310 CMR 40.1403(3)(b) and 310 CMR 40.1403(10), detections of contaminants in any sampled private drinking water well will be communicated verbally to the affected resident, associated Town Board of Health, and MassDEP within 24 hours. Communication shall be documented in the following IRA Status Report to be submitted to MassDEP. In addition, if you should decide to voluntarily provide bottled water or point-of-entry treatment to any other home(s), this decision shall be communicated to MassDEP within 24 hours.

MassDEP appreciates your continued cooperation in this matter. If you have any questions, please do not hesitate to contact me at the letterhead address or by telephone at (508) 767-2805.

Sincerely,



Kevin W. Daoust
Acting Section Chief
Emergency Response
Bureau of Waste Site Cleanup

MEB/KWD
[IRA/APWRIT-ER]

ecc: Mary Jude Pigsely, Regional Director, MassDEP-CERO
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John Kronopolous, Deputy Regional Director, BAW, MassDEP-CERO
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Southbridge Board of Health
Southbridge Town Manager
Charlton Board of Health
Charlton Board of Selectmen
Sturbridge Board of Health
Sturbridge Board of Selectmen
Tracy Markham; SRDP, Inc.
Samuel Nicolai; Casella Waste Systems, Inc.
Gary Magnuson, LSP
Jeffrey Arps, LSP
Nicole Roy; Sanborn, Head & Associates, Inc.

cc: Database Entry

2-0019678 – Marlborough– IRA Conditional Approval