Winchendon Landfill Site Observation – January 28, 2022

| То: | Brian Croteau, DPW Director |
|-------|--|
| FROM: | Aaron Sabbs, PE, Tighe & Bond |
| COPY: | Tracy Murphy, Director of Planning and Development & Acting Planning Agent |
| | Alex Fagnand, PE, Tighe & Bond |
| DATE: | February 18, 2022 |
| | |

On January 28, 2022, Aaron Sabbs from Tighe & Bond visited the Winchendon Landfill (hereby referred to as the "Site") to monitor the grading and shaping activities of the Landfill Closure Project. The Site, which is located at 580 River Street, is the former Mabardy Landfill. It is owned and operated by W.L. French Corporation (Operator) as the Winchendon Landfill. As part of the Landfill Closure Project, the Massachusetts Department of Environmental Protection (MassDEP) has permitted the acceptance of up to 415,000 cubic yards of COMM 97-001 material as defined by MassDEP Policy. In accordance with Condition 13 of the Landfill Closure Agreement between the Town and the Operator, the Site was reviewed for compliance with the following documents:

- Corrective Action Design permit approval issued on September 23, 2020 and Corrective Action Design Plans prepared by Langdon Environmental, LLC, dated June 2019 and revised October 2019.
- Initial Operations Plan, by Langdon Environmental, LLC, dated January 2021, revised to include temporary rip rap settling area.

Landfill Operations

General landfill operations appeared to comply with best practices and the Corrective Action Design. While on site, material was placed and spread by bulldozer in the general area of Section B-B of Sheet C-5 of the Corrective Action Design, within the limits designated for initial placement.

Stormwater and Erosion

Stormwater conveyances have been constructed per the Initial Operations Plan as revised to include a temporary rip rap settling area. This plan was submitted to MassDEP under a Major Permit Modification (BWP SQ 11). A swale, including check dams, has been constructed from the temporary stormwater basin to the temporary settling area. Overflow from the temporary stormwater basin runs to the settling area with a PVC culvert running beneath the access road. The swale from the northern section of the site to the temporary stormwater basin has not yet been constructed.

The swale had previously experienced significant sediment buildup and damage from heavy rainfall. The Operator has rebuilt portions of the swale and check dams, including installing additional rip rap to remedy the damage. The swale will require continued maintenance and cleaning, as sediment is still visible within the swale and settling area. The swale and settling area were full of snow at the time of the site visit.

Erosion control was present along the northern, southern, and western edges of the site. There were no noted deficiencies in the erosion control.

Material Accepted

Tighe & Bond reviewed the attached Net Daily Summary Report received for the month of January, which details the total tonnage and number of loads of material received by the facility. As indicated in Table 1 below, a total of 28,064.80 tons of material was received in January, which results in 456,483.67 tons remaining of the total 788,500 tons permitted. Based on a utilization factor of 1.9 tons per cubic yard of soil, the total volume received in January was 14,770.95 cubic yards, which results in 240,254.56 cubic yards remaining. This represents about 58% of the total permitted volume remaining.

| Table 1 - Cumulative Material Received | | | |
|--|------------------------------------|---|--|
| <u>Month-Year</u> | <u>Material Received</u> (tons) | <u>Material Received</u> (cubic yards) | |
| Before Feb-21 | 12,764.15 | 6,717.97 | |
| Feb-21 | 32,224.28 | 16,960.15 | |
| Mar-21 | 26,702.78 | 14,054.09 | |
| Apr-21 | 22,376.79 | 11,777.26 | |
| May-21 | 26,096.58 | 13,735.04 | |
| Jun-21 | 24,834.48 | 13,070.78 | |
| Jul-21 | 16,002.93 | 8,422.59 | |
| Aug-21 | 13,708.12 | 7,214.80 | |
| Sep-21 | 32,160.64 | 16,926.65 | |
| Oct-21 | 29,375.34 | 15,460.71 | |
| Nov-21 | 30,332.79 | 15,964.63 | |
| Dec-21 | 37,372.65 | 19,669.82 | |
| Jan-21 | 28,064.80 | 14,770.95 | |
| Total | 332,016.33 | 174,745.44 | |
| Remaining | 456,483.67 | 240,254.56 | |

The DEP permit limits the number of loads received to 64 per day without special Town permission. There were no days in January in which the number of loads received was greater than 64.

Enclosed are photographs summarizing the items observed during the site visit.

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Photo 1 – Eastern slope and access road.



Photo 2 – Temporary stormwater overflow catch basin.



Photo 3 – Swale and check dams between temporary stormwater basin and temporary rip rap settling area.



Photo 4 – Swale between temporary stormwater basin and temporary rip rap settling area.



Photo 5 - Temporary rip rap settling area.



Photo 6 – Material placed and graded in the central area of the site.



Photo 7 – Representative view of erosion control on the western limits of the Site.



Photo 8 – Southwestern slope and erosion control.



Photo 9 – Grading at monitoring well.



Photo 10 – Existing slope and erosion control at the southern limits of the Site.

Gross/Tare/Net Daily Summary

Order: by Job Type: All From 01/01/2022 to 01/31/2022

| 01/03/2022 | x 1 | | N. (T |
|--|-------|-----------|----------|
| Job Name | Loads | Net | Net Ton |
| ARE - 161 First St Cambridge (C20-007-1-B) | 3 | 137,480 | 68.74 |
| Allston Yards - BOL (C21-010-1-B) | 1 | 74,000 | 37.00 |
| 15 Bennett St, Somerville, MA (T21-0018-1-B) | 3 | 188,460 | 94.23 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 6 | 401,580 | 200.79 |
| Colony Mill Market 222 West St Keene, NH (T21-0. | 6 | 310,360 | 155.18 |
| Butler Pond Quincy (T21-0380-1-M) | 12 | 586,740 | 293.37 |
| 01/03/2022 Totals | 31 | 1,698,620 | 849.31 |
| 01/04/2022 | | | |
| Job Name | Loads | Net | Net Ton: |
| Allston Yards - BOL (C21-010-1-B) | 1 | 67,840 | 33.92 |
| 15 Bennett St, Somerville, MA (T21-0018-1-B) | 3 | 211,140 | 105.57 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 10 | 687,480 | 343.74 |
| Colony Mill Market 222 West St Keene, NH (T21-0. | 3 | 149,900 | 74.95 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 195,080 | 97.54 |
| 01/04/2022 Totals | 21 | 1,311,440 | 655.72 |
| 01/05/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| 15 Bennett St, Somerville, MA (T21-0018-1-B) | 3 | 231,500 | 115.75 |
| Lowell Sweepings (T21-0141-1-M) | 5 | 267,680 | 133.84 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 12 | 862,340 | 431.17 |
| Ragon Inst Cambridge Group I-1 I-2 (T21-0147-1-N | 4 | 284,560 | 142.28 |
| Butler Pond Quincy (T21-0380-1-M) | 2 | 86,600 | 43.30 |
| 01/05/2022 Totals | 26 | 1,732,680 | 866.34 |
| 01/06/2022 | | | |
| Job Name | Loads | Net | Net Tons |
| ARE - 161 First St Cambridge (C20-007-1-B) | 2 | 54,540 | 27.27 |
| 15 Bennett St, Somerville, MA (T21-0018-1-B) | 2 | 139,860 | 69.93 |
| Lowell Sweepings (T21-0141-1-M) | 6 | 416,000 | 208.00 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 12 | 884,640 | 442.32 |
| Seaport Parcel L5 (T21-0228-1-M) | 4 | 297,920 | 148.96 |
| Colony Mill Market 222 West St Keene, NH (T21-0. | 5 | 276,420 | 138.21 |
| 01/06/2022 Totals | 31 | 2,069,380 | 1,034.69 |
| 01/07/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| Ragon Inst Group II-1 (T21-0147-1-B) | 13 | 958,160 | 479.08 |
| Seaport Parcel L5 (T21-0228-1-M) | 4 | 294,960 | 147.48 |
| 01/07/2022 Totals | 17 | 1,253,120 | 626.56 |
| 01/10/2022 | | | |
| Job Name | Loads | Net | Net Tons |

Report Date 2/7/2022

Gross/Tare/Net Daily Summary

Order: by Job Type: All From 01/01/2022 to 01/31/2022

| | From 01/01/2 | 022 to 01/31/2022 | |
|---|--------------|-------------------|----------|
| Ragon Inst Group II-1 (T21-0147-1-B) | 13 | 888,220 | 444.11 |
| Seaport Parcel L5 (T21-0228-1-M) | 4 | 295,000 | 147.50 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 211,800 | 105.90 |
| 01/10/2022 Totals | 21 | 1,395,020 | 697.51 |
| 01/12/2022 | | | |
| Job Name | Loads | Net | Net Tons |
| Allston Yards - BOL (C21-010-1-B) | 15 | 1,019,800 | 509.90 |
| Allston Yards - MSR (C21-010-1-M) | 2 | 143,900 | 71.95 |
| Residences at 1800 Boylston (T21-0087-1-B) | 12 | 900,780 | 450.39 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 10 | 691,900 | 345.95 |
| Seaport Parcel L5 (T21-0228-1-M) | 6 | 410,560 | 205.28 |
| Butler Pond Quincy (T21-0380-1-M) | 2 | 100,480 | 50.24 |
| 01/12/2022 Totals | 47 | 3,267,420 | 1,633.71 |
| 01/13/2022 | | | |
| Job Name | Loads | Net | Net Tons |
| Allston Yards - BOL (C21-010-1-B) | 20 | 1,502,860 | 751.43 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 20 | 1,463,240 | 731.62 |
| Seaport Parcel L5 (T21-0228-1-M) | 6 | 445,240 | 222.62 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 194,140 | 97.07 |
| 01/13/2022 Totals | 50 | 3,605,480 | 1,802.74 |
| 01/14/2022 | | | |
| Job Name | Loads | Net | Net Tons |
| Allston Yards - BOL (C21-010-1-B) | 12 | 896,920 | 448.46 |
| Residences at 1800 Boylston (T21-0087-1-B) | 8 | 609,220 | 304.61 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 9 | 663,220 | 331.61 |
| Seaport Parcel L5 (T21-0228-1-M) | 6 | 434,680 | 217.34 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 190,240 | 95.12 |
| 01/14/2022 Totals | 39 | 2,794,280 | 1,397.14 |
| 01/17/2022 | | | |
| Job Name | Loads | Net | Net Tons |
| Allston Yards - BOL (C21-010-1-B) | 17 | 1,188,320 | 594.16 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 8 | 567,300 | 283.65 |
| Seaport Parcel L5 (T21-0228-2-M) | 5 | 337,140 | 168.57 |
| 01/17/2022 Totals | 30 | 2,092,760 | 1,046.38 |
| 01/18/2022 | | | |
| Job Name | <u>Loads</u> | Net | Net Tons |
| Logan Term E 3000 cuyd Gov Is (T19-0353-4-M) | 10 | 729,040 | 364.52 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 10 | 749,540 | 374.77 |
| New Salem St Culvert Wakefield (T21-0260-1-B) | 18 | 1,270,960 | 635.48 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 216,700 | 108.35 |
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Logan Airport Runway 14-32 (T22-1005-1-M)

616,000

308.00

Gross/Tare/Net Daily Summary

Order: by Job Type: All From 01/01/2022 to 01/31/2022

| 01/18/2022 Totals | 51 | 3,582,240 | 1,791.12 |
|---|-------|-----------|----------|
| 01/19/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| Logan Term E 3000 cuyd Gov Is (T19-0353-4-M) | 12 | 966,720 | 483.36 |
| Residences at 1800 Boylston (T21-0087-1-B) | 12 | 867,360 | 433.68 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 11 | 781,480 | 390.74 |
| New Salem St Culvert Wakefield (T21-0260-1-B) | 12 | 876,960 | 438.48 |
| Butler Pond Quincy (T21-0380-1-M) | 3 | 175,320 | 87.66 |
| Logan Airport Runway 14-32 (T22-1005-1-M) | 10 | 674,040 | 337.02 |
| 01/19/2022 Totals | 60 | 4,341,880 | 2,170.94 |
| 01/20/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| Allston Yards - BOL (C21-010-1-B) | 11 | 729,300 | 364.65 |
| Logan Term E 3000 cuyd Gov Is (T19-0353-4-M) | 10 | 787,600 | 393.80 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 12 | 913,360 | 456.68 |
| New Salem St Culvert Wakefield (T21-0260-1-B) | 10 | 728,800 | 364.40 |
| 26 South St, Somerville (T21-0359-1-B) | 8 | 426,200 | 213.10 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 253,100 | 126.55 |
| Logan Airport Runway 14-32 (T22-1005-1-M) | 9 | 647,100 | 323.55 |
| 01/20/2022 Totals | 64 | 4,485,460 | 2,242.73 |
| 01/21/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| Allston Yards - BOL (C21-010-1-B) | 12 | 807,780 | 403.89 |
| Logan Term E 3000 cuyd Gov Is (T19-0353-4-M) | 11 | 848,020 | 424.01 |
| 5 Washington Street (T20-0270-1-B) | 2 | 110,140 | 55.07 |
| Union 346 (T21-0025-2-B) | 7 | 493,300 | 246.65 |
| 26 South St, Somerville (T21-0359-1-B) | 4 | 197,360 | 98.68 |
| Butler Pond Quincy (T21-0380-1-M) | 3 | 169,760 | 84.88 |
| Boston Sci Hanscom Bedford 1000 cuyd (T22-1001- | 11 | 801,960 | 400.98 |
| Logan Airport Runway 14-32 (T22-1005-1-M) | 10 | 686,920 | 343.46 |
| 01/21/2022 Totals | 60 | 4,115,240 | 2,057.62 |
| 01/24/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| Allston Yards - BOL (C21-010-1-B) | 4 | 275,580 | 137.79 |
| GLX (T18-0354-4-M) | 5 | 335,640 | 167.82 |
| Logan Term E 3000 cuyd Gov Is (T19-0353-4-M) | 10 | 747,600 | 373.80 |
| 5 Washington Street (T20-0270-1-B) | 4 | 199,700 | 99.85 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 11 | 794,360 | 397.18 |
| Seaport Parcel L5 (T21-0228-1-M) | 4 | 265,880 | 132.94 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 195,480 | 97.74 |
| Boston Sci Hanscom Bedford 1000 cuyd (T22-1001- | 9 | 581,020 | 290.51 |
| Logan Airport Runway 14-32 (T22-1005-1-M) | 10 | 642,980 | 321.49 |
| | | | |

Gross/Tare/Net Daily Summary

Order: by Job Type: All From 01/01/2022 to 01/31/2022

| 01/24/2022 Totals | 61 | 4,038,240 | 2,019.12 |
|---|-------|-----------|----------|
| 01/25/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| Logan Term E 3000 cuyd Gov Is (T19-0353-4-M) | 10 | 784,720 | 392.36 |
| MassPort Terminal B-C Connector (T19-0449-1-M) | 14 | 1,003,580 | 501.79 |
| Union 346 (T21-0025-2-B) | 8 | 606,560 | 303.28 |
| Ragon Inst Group II-1 (T21-0147-1-B) | 17 | 1,174,660 | 587.33 |
| Butler Pond Quincy (T21-0380-1-M) | 2 | 100,840 | 50.42 |
| Meridan CT Catch Basin Cleanings (T22-6015-1-M) | 10 | 456,960 | 228.48 |
| 01/25/2022 Totals | 61 | 4,127,320 | 2,063.66 |
| 01/26/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| Logan Term E 3000 cuyd Gov Is (T19-0353-4-M) | 4 | 327,160 | 163.58 |
| MassPort Terminal B-C Connector (T19-0449-1-M) | 10 | 705,560 | 352.78 |
| Union 346 (T21-0025-2-B) | 8 | 621,660 | 310.83 |
| Residences at 1800 Boylston (T21-0087-1-B) | 12 | 822,240 | 411.12 |
| Bridge Street Reconstruction (T21-0305-1-B) | 10 | 685,660 | 342.83 |
| 215 Canal Street Lawrence (T21-0346-1-M) | 8 | 558,940 | 279.47 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 192,160 | 96.08 |
| Meridan CT Catch Basin Cleanings (T22-6015-1-M) | 6 | 281,900 | 140.95 |
| 01/26/2022 Totals | 62 | 4,195,280 | 2,097.64 |
| 01/27/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| MassPort Terminal B-C Connector (T19-0449-1-M) | 20 | 1,383,540 | 691.77 |
| Bridge Street Reconstruction (T21-0305-1-B) | 2 | 130,840 | 65.42 |
| Logan Airport Terminals B-C (T21-0323-1-M) | 11 | 807,040 | 403.52 |
| 215 Canal Street Lawrence (T21-0346-1-M) | 7 | 509,300 | 254.65 |
| Butler Pond Quincy (T21-0380-1-M) | 3 | 141,240 | 70.62 |
| Meridan CT Catch Basin Cleanings (T22-6015-1-M) | 2 | 100,980 | 50.49 |
| 01/27/2022 Totals | 45 | 3,072,940 | 1,536.47 |
| 01/28/2022 | | | |
| Job Name | Loads | Net | Net Ton |
| MassPort Terminal B-C Connector (T19-0449-1-M) | 17 | 1,214,040 | 607.02 |
| Logan Airport Terminals B-C (T21-0323-1-M) | 12 | 864,100 | 432.05 |
| 215 Canal Street Lawrence (T21-0346-1-M) | 5 | 345,380 | 172.69 |
| Butler Pond Quincy (T21-0380-1-M) | 4 | 224,520 | 112.26 |
| Eversource 5 Myrtle St Taunton (T22-1014-1-B) | 3 | 207,660 | 103.83 |
| Meridan CT Catch Basin Cleanings (T22-6015-1-M) | 2 | 95,100 | 47.55 |
| 01/28/2022 Totals | | | |

Gross/Tare/Net Daily Summary

Order: by Job Type: All From 01/01/2022 to 01/31/2022

 Loads
 Net Tons

 Grand Total
 820
 56,129,600
 28,064.80