

Textron, Inc.
Former Gorham Manufacturing Facility, Providence, RI
Remedial Action Completion Report: Phase II Area – Mashapaug Inner Cove,
Phase III Area – Northeast Upland And Parcel C
Project No.: 3652160001
February 12, 2016



APPENDIX D
AIR AND DUST MONITORING RESULTS



SUMMARY OF PERIMETER AIR MONITORING RESULTS

July 29-July 31

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
29-Jul	0.030
30-Jul	0.034
31-Jul	0.004

Station B-3	
Date	Daily Average Concentration (mg/m ³)
29-Jul	0.016
30-Jul	0.023
31-Jul	0.011

Station B-2	
Date	Daily Average Concentration (mg/m ³)
29-Jul	0.021
30-Jul	0.044
31-Jul	0.014

Station B-4	
Date	Daily Average Concentration (mg/m ³)
29-Jul	0.025
30-Jul	0.040
31-Jul	0.009



SUMMARY OF PERIMETER AIR MONITORING RESULTS

August 3 - August 7

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
3-Aug	0.016
4-Aug	0.023
5-Aug	0.012
6-Aug	0.004
7-Aug	0.003

Station B-3	
Date	Daily Average Concentration (mg/m ³)
3-Aug	0.005
4-Aug	0.001
5-Aug	0.002
6-Aug	
7-Aug	0.003

Station B-2	
Date	Daily Average Concentration (mg/m ³)
3-Aug	0.009
4-Aug	0.021
5-Aug	0.013
6-Aug	0.006
7-Aug	0.008

Station B-4	
Date	Daily Average Concentration (mg/m ³)
3-Aug	0.014
4-Aug	0.018
5-Aug	0.010
6-Aug	0.002
7-Aug	

Concentration Threshold Limit= 0.29 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

August 10 - August 14

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
10-Aug	0.010
11-Aug	no readings- heavy rain
12-Aug	0.019
13-Aug	0.005
14-Aug	0.007

Station B-3	
Date	Daily Average Concentration (mg/m ³)
10-Aug	0.013
11-Aug	no readings- heavy rain
12-Aug	NR
13-Aug	NR
14-Aug	NR

Station B-2	
Date	Daily Average Concentration (mg/m ³)
10-Aug	0.015
11-Aug	no readings- heavy rain
12-Aug	0.025
13-Aug	0.011
14-Aug	0.021

Station B-4	
Date	Daily Average Concentration (mg/m ³)
10-Aug	0.007
11-Aug	no readings- heavy rain
12-Aug	0.016
13-Aug	
14-Aug	0.005

Concentration Threshold Limit= 0.15 mg/m³

Station B-3 was not responding. New unit will be delivered to the site Monday 17-Aug



SUMMARY OF PERIMETER AIR MONITORING RESULTS

August 17 - August 22

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
17-Aug	0.024
18-Aug	0.029
19-Aug	0.014
20-Aug	0.014
21-Aug	no readings- light rain
22-Aug	0.024

Station B-3	
Date	Daily Average Concentration (mg/m ³)
17-Aug	0.025
18-Aug	0.002
19-Aug	0.002
20-Aug	0.000
21-Aug	no readings- light rain

Station B-2	
Date	Daily Average Concentration (mg/m ³)
17-Aug	0.036
18-Aug	0.043
19-Aug	0.027
20-Aug	0.023
21-Aug	no readings- light rain

Station B-4	
Date	Daily Average Concentration (mg/m ³)
17-Aug	0.020
18-Aug	0.032
19-Aug	0.019
20-Aug	0.019
21-Aug	no readings- light rain

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

August 24 - August 29

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
24-Aug	no readings- light rain
25-Aug	0.012
26-Aug	0.028
27-Aug	0.011
28-Aug	no work performed onsite
29-Aug	0.011

Station B-3	
Date	Daily Average Concentration (mg/m ³)
24-Aug	no readings- light rain
25-Aug	0.001
26-Aug	0.003
27-Aug	0.007
28-Aug	no work performed onsite
29-Aug	0.002

Station B-2	
Date	Daily Average Concentration (mg/m ³)
24-Aug	no readings- light rain
25-Aug	0.019
26-Aug	0.040
27-Aug	0.021
28-Aug	no work performed onsite
29-Aug	0.017

Station B-4	
Date	Daily Average Concentration (mg/m ³)
24-Aug	no readings- light rain
25-Aug	0.013
26-Aug	0.028
27-Aug	0.009
28-Aug	no work performed onsite
29-Aug	0.005

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

August 31 - September 04

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
31-Aug	0.043
1-Sep	0.048
2-Sep	0.057
3-Sep	0.075
4-Sep	0.000

Station B-3	
Date	Daily Average Concentration (mg/m ³)
31-Aug	no readings - equipment error
1-Sep	no readings - equipment error
2-Sep	no readings - equipment error
3-Sep	no readings - equipment error
4-Sep	no readings - equipment error

Station B-2	
Date	Daily Average Concentration (mg/m ³)
31-Aug	0.054
1-Sep	0.020
2-Sep	0.087
3-Sep	0.070
4-Sep	0.027

Station B-4	
Date	Daily Average Concentration (mg/m ³)
31-Aug	0.045
1-Sep	0.050
2-Sep	0.059
3-Sep	0.076
4-Sep	0.000

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

September 07 - September 12

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
7-Sep	Labor Day- No work
8-Sep	0.041
9-Sep	0.017
10-Sep	no readings- rain
11-Sep	no readings- light rain
12-Sep	no readings- ground saturated from rain

Station B-3	
Date	Daily Average Concentration (mg/m ³)
7-Sep	Labor Day- No work
8-Sep	0.041
9-Sep	0.018
10-Sep	no readings- rain
11-Sep	no readings- light rain
12-Sep	no readings- ground saturated from rain

Station B-2	
Date	Daily Average Concentration (mg/m ³)
7-Sep	Labor Day- No work
8-Sep	no readings- device error
9-Sep	0.018
10-Sep	no readings- rain
11-Sep	no readings- light rain
12-Sep	no readings- ground saturated from rain

Station B-4	
Date	Daily Average Concentration (mg/m ³)
7-Sep	Labor Day- No work
8-Sep	no readings- device error
9-Sep	0.003
10-Sep	no readings- rain
11-Sep	no readings- light rain
12-Sep	no readings- ground saturated from rain

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

September 14 - September 19

Project:	Phase II, III and Parcel C Cap	Client:	Textron
Project Location:	333 Adelaide Avenue, Providence RI	Engineer:	Amec Foster Wheeler
		Contractor:	Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
14-Sep	0.006
15-Sep	0.012
16-Sep	0.017
17-Sep	0.022
18-Sep	0.034
19-Sep	0.000

Station B-3	
Date	Daily Average Concentration (mg/m ³)
14-Sep	0.008
15-Sep	no readings- device error
16-Sep	0.015
17-Sep	0.026
18-Sep	0.042
19-Sep	0.021

Station B-2	
Date	Daily Average Concentration (mg/m ³)
14-Sep	0.012
15-Sep	0.014
16-Sep	0.020
17-Sep	0.052
18-Sep	0.092
19-Sep	0.000

Station B-4	
Date	Daily Average Concentration (mg/m ³)
14-Sep	0.006
15-Sep	0.003
16-Sep	0.000
17-Sep	0.022
18-Sep	no readings- device error
19-Sep	0.021

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

September 21 - September 26

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
21-Sep	0.002
22-Sep	0.007
23-Sep	0.012
24-Sep	0.016
25-Sep	0.011
26-Sep	0.003

Station B-3	
Date	Daily Average Concentration (mg/m ³)
21-Sep	no readings- device error
22-Sep	0.005
23-Sep	0.007
24-Sep	0.012
25-Sep	0.009
26-Sep	0.005

Station B-2	
Date	Daily Average Concentration (mg/m ³)
21-Sep	0.002
22-Sep	0.012
23-Sep	0.020
24-Sep	0.020
25-Sep	0.015
26-Sep	No Excavation in Cove

Station B-4	
Date	Daily Average Concentration (mg/m ³)
21-Sep	0.002
22-Sep	0.009
23-Sep	0.008
24-Sep	0.015
25-Sep	0.013
26-Sep	No Excavation in Cove

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

September 28 - October 03

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
28-Sep	0.012
29-Sep	0.005
30-Sep	Rain- No Recording
1-Oct	Rain- No Recording
2-Oct	Rain- No Recording
3-Oct	Rain- No Recording

Station B-3	
Date	Daily Average Concentration (mg/m ³)
28-Sep	0.014
29-Sep	0.007
30-Sep	Rain- No Recording
1-Oct	Rain- No Recording
2-Oct	Rain- No Recording
3-Oct	Rain- No Recording

Station B-2	
Date	Daily Average Concentration (mg/m ³)
28-Sep	0.017
29-Sep	0.010
30-Sep	Rain- No Recording
1-Oct	Rain- No Recording
2-Oct	Rain- No Recording
3-Oct	Rain- No Recording

Station B-4	
Date	Daily Average Concentration (mg/m ³)
28-Sep	0.016
29-Sep	0.011
30-Sep	Rain- No Recording
1-Oct	Rain- No Recording
2-Oct	Rain- No Recording
3-Oct	Rain- No Recording

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

October 05 - October 10

Project:	Phase II, III and Parcel C Cap	Client:	Textron
Project Location:	333 Adelaide Avenue, Providence RI	Engineer:	Amec Foster Wheeler
		Contractor:	Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
5-Oct	0.009
6-Oct	0.008
7-Oct	0.010
8-Oct	0.000
9-Oct	0.000**
10-Oct	No Sat Work

Station B-3	
Date	Daily Average Concentration (mg/m ³)
5-Oct	0.009
6-Oct	0.017
7-Oct	0.015
8-Oct	0.018
9-Oct	0.009**
10-Oct	No Sat Work

Station B-2	
Date	Daily Average Concentration (mg/m ³)
5-Oct	0.015
6-Oct	0.019
7-Oct	0.017
8-Oct	0.020
9-Oct	0.008
10-Oct	No Sat Work

Station B-4	
Date	Daily Average Concentration (mg/m ³)
5-Oct	0.010
6-Oct	0.008
7-Oct	0.01
8-Oct	0.013
9-Oct	0.016
10-Oct	No Sat Work

Concentration Threshold Limit= 0.15 mg/m³

** Units died half way through the work day. Dust was monitored visually.
 No visual appearance of dust leaving the site noted throughout the day.



SUMMARY OF PERIMETER AIR MONITORING RESULTS

October 12 - October 17

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
12-Oct	Columbus Day- no work
13-Oct	Rain- no meters
14-Oct	0.008
15-Oct	0.004
16-Oct	0.008
17-Oct	No Sat Work

Station B-3	
Date	Daily Average Concentration (mg/m ³)
12-Oct	Columbus Day- no work
13-Oct	Rain- no meters
14-Oct	0.017
15-Oct	0.016
16-Oct	0.023
17-Oct	No Sat Work

Station B-2	
Date	Daily Average Concentration (mg/m ³)
12-Oct	Columbus Day- no work
13-Oct	Rain- no meters
14-Oct	0.013
15-Oct	0.012
16-Oct	0.018
17-Oct	No Sat Work

Station B-4	
Date	Daily Average Concentration (mg/m ³)
12-Oct	Columbus Day- no work
13-Oct	Rain- no meters
14-Oct	0.009
15-Oct	0.009
16-Oct	0.016
17-Oct	No Sat Work

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

October 19 - October 24

Project:	Phase II, III and Parcel C Cap	Client:	Textron
Project Location:	333 Adelaide Avenue, Providence RI	Engineer:	Amec Foster Wheeler
		Contractor:	Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
19-Oct	0.001
20-Oct	0.007
21-Oct	0.004
22-Oct	0.006
23-Oct	0.008
24-Oct	No Meter

Station B-3	
Date	Daily Average Concentration (mg/m ³)
19-Oct	0.021
20-Oct	0.021
21-Oct	0.004
22-Oct	0.016
23-Oct	0.028
24-Oct	0.028

Station B-2	
Date	Daily Average Concentration (mg/m ³)
19-Oct	0.010
20-Oct	0.023
21-Oct	0.005
22-Oct	0.005
23-Oct	0.013
24-Oct	0.013

Station B-4	
Date	Daily Average Concentration (mg/m ³)
19-Oct	0.000
20-Oct	0.016
21-Oct	0.003
22-Oct	0.014
23-Oct	0.011
24-Oct	0.011

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

October 26 - October 31

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station B-1	
Date	Daily Average Concentration (mg/m ³)
26-Oct	Monitoring Complete at Parcel C. Soil is graded and covered with seeding.
27-Oct	
28-Oct	
29-Oct	
30-Oct	
31-Oct	

Station C-3	
Date	Daily Average Concentration (mg/m ³)
26-Oct	0.010
27-Oct	0.024
28-Oct	0.011
29-Oct	0.010
30-Oct	0.017
31-Oct	0.000

Station C-2	
Date	Daily Average Concentration (mg/m ³)
26-Oct	0.015
27-Oct	0.003
28-Oct	0.016
29-Oct	0.008
30-Oct	0.010
31-Oct	0.000

Station C-4	
Date	Daily Average Concentration (mg/m ³)
26-Oct	0.002
27-Oct	0.019
28-Oct	0.014
29-Oct	0.004
30-Oct	0.001
31-Oct	0.008

Concentration Threshold Limit= 0.15 mg/m³



SUMMARY OF PERIMETER AIR MONITORING RESULTS

November 09 - November 14

Project:	Phase II, III and Parcel C Cap	Client:	Textron
Project Location:	333 Adelaide Avenue, Providence RI	Engineer:	Amec Foster Wheeler
		Contractor:	Charter

Station C-1	
Date	Daily Average Concentration (mg/m ³)
9-Nov	Monitoring Complete at Parcel C. Soil is graded and covered with seeding.
10-Nov	
11-Nov	
12-Nov	
13-Nov	
14-Nov	

Station C-3	
Date	Daily Average Concentration (mg/m ³)
9-Nov	0.016
10-Nov	0.020
11-Nov	Note 1
12-Nov	Note 1
13-Nov	0.020
14-Nov	0.032

Station C-2	
Date	Daily Average Concentration (mg/m ³)
9-Nov	0.007
10-Nov	0.025
11-Nov	Note 1
12-Nov	Note 1
13-Nov	0.008
14-Nov	0.005

Station C-4	
Date	Daily Average Concentration (mg/m ³)
9-Nov	0.000
10-Nov	Note 2
11-Nov	Note 1
12-Nov	Note 1
13-Nov	0.004
14-Nov	Note 2

Concentration Threshold Limit= 0.15 mg/m³

1. No air monitoring. Site damp from rain events 11/11 and 11/12.
2. Connection issue to the server. No readings recorded.



SUMMARY OF PERIMETER AIR MONITORING RESULTS

November 16 - November 20

Project:	Phase II, III and Parcel C Cap	Client:	Textron
Project Location:	333 Adelaide Avenue, Providence RI	Engineer:	Amec Foster Wheeler
		Contractor:	Charter

Station C-1	
Date	Daily Average Concentration (mg/m ³)
16-Nov	Monitoring Complete at Parcel C. Soil is graded and covered with seeding.
17-Nov	
18-Nov	
19-Nov	
20-Nov	

Station C-3	
Date	Daily Average Concentration (mg/m ³)
16-Nov	0.033
17-Nov	Note 1
18-Nov	0.010
19-Nov	Note 1
20-Nov	Note 1

Station C-2	
Date	Daily Average Concentration (mg/m ³)
16-Nov	0.033
17-Nov	Note 1
18-Nov	0.007
19-Nov	Note 1
20-Nov	Note 1

Station C-4	
Date	Daily Average Concentration (mg/m ³)
16-Nov	No Monitoring. North portion of site is graded and covered with seeding.
17-Nov	
18-Nov	
19-Nov	
20-Nov	

Concentration Threshold Limit= 0.15 mg/m³

1. No air monitoring. Site damp from rain events.



SUMMARY OF PERIMETER AIR MONITORING RESULTS

November 23 - November 27

Project: Phase II, III and Parcel C Cap	Client: Textron
Project Location: 333 Adelaide Avenue, Providence RI	Engineer: Amec Foster Wheeler
	Contractor: Charter

Station C-1	
Date	Daily Average Concentration (mg/m ³)
23-Nov	Monitoring Complete at Parcel C. Soil is graded and covered with seeding.
24-Nov	
25-Nov	
26-Nov	
27-Nov	

Station C-3	
Date	Daily Average Concentration (mg/m ³)
23-Nov	0.009
24-Nov	0.020
25-Nov	Note 1
26-Nov	Note 1
27-Nov	Note 1

Station C-2	
Date	Daily Average Concentration (mg/m ³)
23-Nov	0.003
24-Nov	0.013
25-Nov	Note 1
26-Nov	Note 1
27-Nov	Note 1

Station C-4	
Date	Daily Average Concentration (mg/m ³)
23-Nov	No Monitoring. North portion of site is graded and covered with seeding.
24-Nov	
25-Nov	
26-Nov	
27-Nov	

Concentration Threshold Limit= 0.15 mg/m³

1. No air monitoring. Off-site for Thanksgiving Holiday.