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Weekly Perimeter Air Monitoring Summary

Client:	**Massachusetts Department of Conservation and Recreation**
Location:	**Pittsfield, Massachusetts**
Period:	**9/8/25 – 9/14/25**

On behalf of the Massachusetts Department of Conservation and Recreation (MassDCR), AECOM Technical Services, Inc. (AECOM) has prepared this data summary for the Bel Air Dam remediation site (the "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data was collected during the reporting period at the Site in accordance with the Perimeter Air Monitoring Plan (PAMP) prepared by AECOM (2025). Remedial activities are planned for a 4-day work week, Monday through Thursday, however, occasional work on Fridays may occur to maintain the project schedule.

Scope

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to document ambient air quality conditions at the fenceline and ensure that the measures used to control potential fugitive emissions are effective. The monitoring program consists of the following real-time monitoring and constituent-specific sampling:

- Real-time continuous monitoring for total volatile organic compounds (TVOCs) and particulate matter 10 microns or less (PM_{10}) performed at four (4) fixed air monitoring stations (AMS) at the sediment processing area and two (2) mobile AMS upwind and downwind of the sediment removal activities during work hours.
- Routine instantaneous hand-held monitoring for TVOCs, PM_{10}, and mercury vapor, as well as observational monitoring for odor and visible dust conducted routinely during periods of construction activities.
- Chemical-specific sampling for naphthalene using Summa™ canisters and analyzed in accordance with EPA TO-15. Samples are collected at each AMS for 24-hour periods once per week during sediment removal in the northern portion of the river.
- Continuous meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day, 7 days per week.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert and Action Levels, and the mercury vapor and chemical-specific sampling results are compared to Acceptable Air Concentrations (AACs) developed for the Site. The Action Levels and AACs are defined in the following tables:

- **Table 1**: Site-Specific Alert and Action Levels; and
- **Table 2**: Acceptable Air Concentrations.

Real-Time Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six (6) AMS. In addition, hand-held monitoring for TVOCs, PM_{10}, and mercury vapor was conducted, as well as observational odor and visible dust assessments.

During the report period, the TVOC, PM_{10}, and mercury vapor concentrations remained less than the Action Levels, there were no off-Site odor complaints, and no observations of visible dust moving off-Site. The results of the real-time air monitoring are presented in the following tables:

- **Table 3:** Real-Time TVOC and PM_{10} Concentrations Summary;
- **Table 4:** Daily Maximum Hand-held Concentrations Summary; and
- **Table 5:** Weekly Alert and Action Level Event Summary.

Naphthalene Sampling Summary

Chemical-specific sampling for naphthalene is conducted at each of the six (6) AMS for 24-hour periods once per week during sediment removal activities in the northern portion of the work zone. Samples are shipped to the analytical laboratory for USEPA TO-15 analysis. The results of sampling are provided following receipt from the analytical laboratory and are included in the following table:

- **Table 6**: Naphthalene Sampling Results Summary.

Meteorological Conditions and Site Map

Meteorological monitoring summaries and a Site map for the report period are included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map(s).

Table 1: Site-Specific Alert and Action Levels

Target Constituent	Alert Level	Action Level
TVOC (15-minute average or instantaneous concentration)	One (1) concentration > 1.0 ppm	Two (2) concentrations > 1.0 ppm
PM_{10} (15-minute average or instantaneous concentration)	One (1) concentration > 150 µg/m^3	Two (2) concentrations > 150 µg/m^3
Mercury Vapor (Instantaneous concentration)	Not Applicable	One (1) concentration > 0.05 µg/m^3
Odor (Instantaneous observation related to Site activities)	Not Applicable	On-Site odor > 3 or public complaints that are verified to be related to construction
Visible Dust (Instantaneous observation related to Site activities)	Not Applicable	Observation of visible dust moving off-Site

Definitions:
TVOC – Total volatile organic compounds
ppm – Parts per million
PM_{10} – Respirable particulate matter
µg/m^3 – Micrograms per cubic meter

Table 2: Acceptable Air Concentrations

COC	AAC µg/m^3	Project Goal µg/m^3
PM_{10}	150	120
Mercury Vapor	0.05	--
Naphthalene	1.43	1.14

Definitions:
AAC – Acceptable Air Concentration
COC – Chemical of concern
PM_{10} – Particulate matter with a diameter of 10 micrometers or less in diameter.
µg/m^3 – Micrograms per cubic meter

Notes:
- Project Goal is defined as an internal project goal equal to 80% of the AAC.

Table 3: Real-Time TVOC and PM_{10} Concentrations Summary

Date	AMS-1		AMS-2		AMS-3		AMS-4		AMS-A		AMS-B	
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)
Mon 9/8/25	0.0	11.3	0.0	23.8	0.0	8.1	0.0	4.3	0.1	5.3	0.0	8.9
Tue 9/9/25	0.0	13.0	0.0	25.8	0.0	6.7	0.0	3.0	0.0	3.4	0.0	3.9
Wed 9/10/25	0.0	14.8	0.0	27.1	0.0	7.5	0.0	5.0	0.1	4.4	0.0	9.7
Thu 9/11/25	0.0	22.8	0.0	29.0	0.0	10.2	0.0	5.6	0.1	8.6	0.0	8.9
Fri 9/12/25	0.2	17.4	0.0	21.3	0.0	17.9	0.0	9.9	0.1	11.5	0.0	14.4
Weekly Summary												
Weekly Maximum	0.2	22.8	0.0	29.0	0.0	17.9	0.0	9.9	0.1	11.5	0.0	14.4
Weekly Average	0.0	11.6	0.0	15.9	0.0	5.3	0.0	3.4	0.0	2.4	0.0	2.2
Project Summary												
PTD Average	0.0	27.1	0.0	36.8	0.0	25.9	0.0	24.9	0.0	22.8	0.0	20.4

Definitions:

AMS – Air Monitoring Station
TVOC – Total Volatile Organic Compounds
ppm – Parts per million
PM_{10} – Particulate Matter 10 micrometers or less
$\mu g/m^3$ – Micrograms per cubic meter
PTD – Project-to-date
ND – No Data
NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- AMS reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Project-to-date average PM_{10} concentrations are compared to the PM_{10} AAC to evaluate the effectiveness of the perimeter air monitoring program with relation to particulates. Compliance will be determined at the end of the project.
- Project-to-date average PM_{10} concentrations are calculated from 6/23/25 through the end of the reporting period.
- Baseline results are not included in project-to-date averages.

Table 4: Daily Maximum Hand-Held Concentrations Summary

Date	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Mercury Vapor ($\mu g/m^3$)	Odor (0-8)	Visible Dust (Yes/No)
Mon 9/8/25	0.1	8	0	0	No
Tue 9/9/25	0.0	23	0	0	No
Wed 9/10/25	0.0	19	0	0	No
Thu 9/11/25	0.0	33	0	0	No
Fri 9/12/25	0.0	24	0	0	No

Definitions:

TVOC – Total Volatile Organic Compounds
ppm – Parts per million
PM_{10} – Particulate Matter 10 micrometers or less
$\mu g/m^3$ – Micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held data represents instantaneous concentrations unless stated otherwise.

Table 5: Weekly Alert and Action Level Event Summary

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration	Comments/Explanation
TVOC (ppm)	NA	NA	NA	NA	NA	TVOC concentrations remained less than the Alert and Action Levels.
PM_{10} ($\mu g/m^3$)	NA	NA	NA	NA	NA	PM_{10} concentrations remained less than the Alert and Action Levels.
Mercury Vapor ($\mu g/m^3$)	NA	NA	NA	NA	NA	Mercury vapor concentrations remained less than the Action Level.
Odor (0-8)	NA	NA	NA	NA	NA	Odor observations remained less than the Action Level.
Visible Dust	NA	NA	NA	NA	NA	There were no observations of visible dust moving offsite.

Definitions:

AMS – Air Monitoring Station
HH – Hand-Held Location
TVOC – Total Volatile Organic Compounds
ppm – Parts per million
PM_{10} – Particulate Matter ≤ 10 microns in diameter
$\mu g/m^3$ – Micrograms per cubic meter
mph – Miles per hour
ND – No Data
NA – Not Applicable

Notes:

- AMS-reported data represent 15-minute block average concentrations.
- Observations represent instantaneous conditions unless stated otherwise.

Table 6: Naphthalene Sampling Results Summary

Date	AAC (µg/m³)	Project Goal (µg/m³)	AMS-1 (µg/m³)	AMS-2 (µg/m³)	AMS-3 (µg/m³)	AMS-4 (µg/m³)	AMS-A (µg/m³)	AMS-B (µg/m³)	Dup (µg/m³)
Wed 5/21/25	--	--	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*
Tue 7/22/25	--	--	*0.205*	*0.205*	*0.205*	*0.098*	*0.205*	*0.205*	--
Wed 7/30/25	--	--	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	--
Tue 8/5/25	--	--	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*
Wed 8/13/25	--	--	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	--
Tue 8/19/25	--	--	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	--
Wed 8/27/25	--	--	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	*0.205*	--
Thu 9/4/25	--	--	TBD[1]	TBD[1]	TBD[1]	TBD[1]	TBD[1]	TBD[1]	TBD[1]
Mon 9/8/25	--	--	TBD[1]	TBD[1]	TBD[1]	TBD[1]	TBD[1]	TBD[1]	TBD[1]
Project Summary									
PTD Average	1.43	1.14	0.205	0.205	0.205	0.187	0.205	0.205	--

Definitions:

AMS – Air Monitoring Station
AAC – Acceptable Air Concentration
PEL – Permissible Exposure Limit
MDL – Method Detection Limit
TBD – To Be Determined
PTD – Project-To-Date
µg/m³ – Micrograms per cubic meter
Bold – Results reported above the MDL
Italics – Compound was analyzed for, but not detected above the MDL (estimated as ½ the MDL)
NA – Not Applicable
ND – No Data

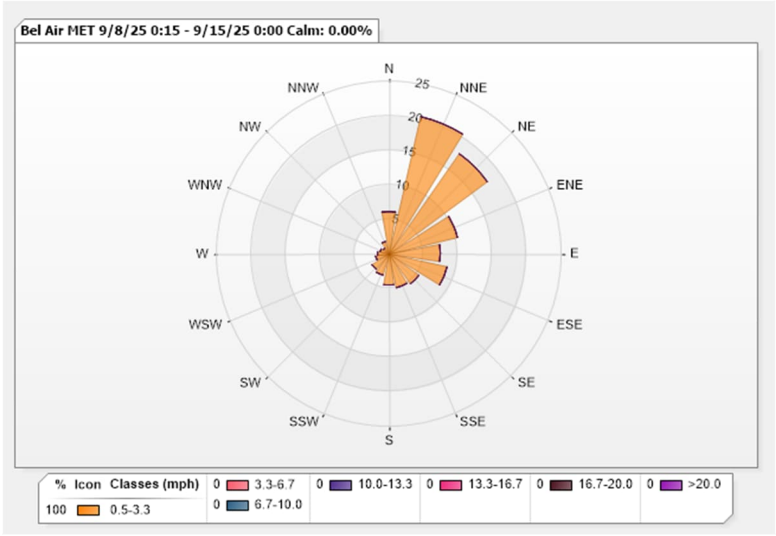
Notes:

- Samples are placed in the field at the start of the work activities and collected prior to the start of the following day, unless otherwise stated. The sample date listed represents the day the sample was started.
- Baseline results are not included in project-to-date averages.
- Duplicate samples are collected once per month at AMS-1.

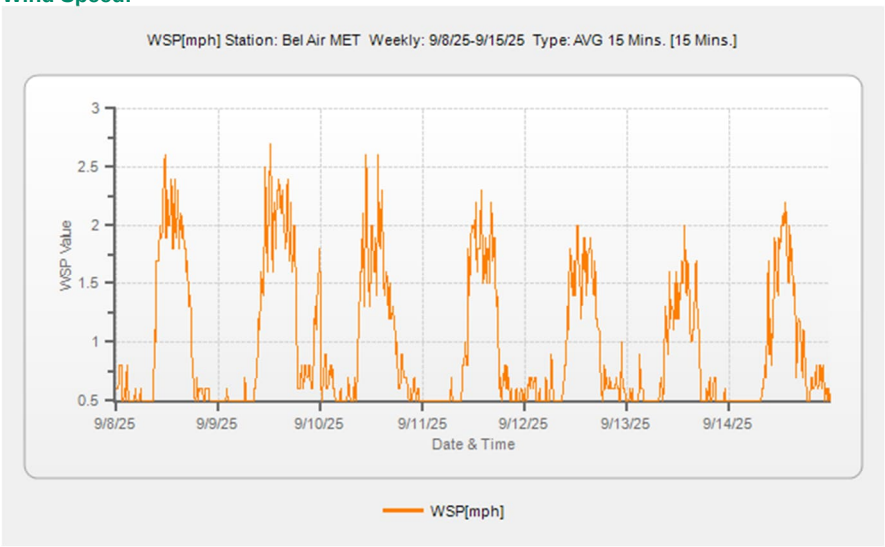
[1] Samples are pending analysis and results will be reported once available from the laboratory.

Figure 1: Meteorological Summaries

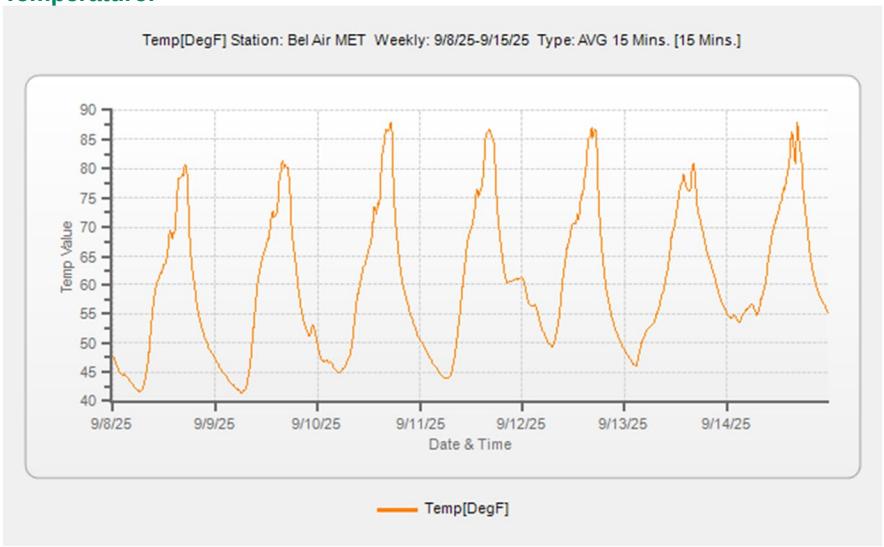
Wind Rose:



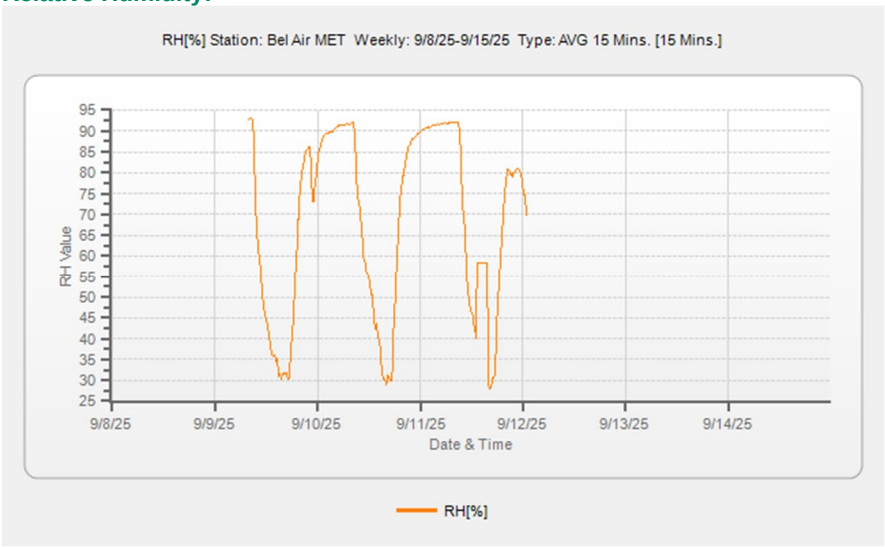
Wind Speed:



Temperature:



Relative Humidity:



Note: Periods of relative humidity data missing due to an instrument malfunction.

Figure 2: Site Map (9/8/25 – 9/12/25)

