Environmental Management Plan – Slope Stabilization Project

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Rob Fiander, P.Eng.

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1 Introduction

Saint John Mail Processing Plant

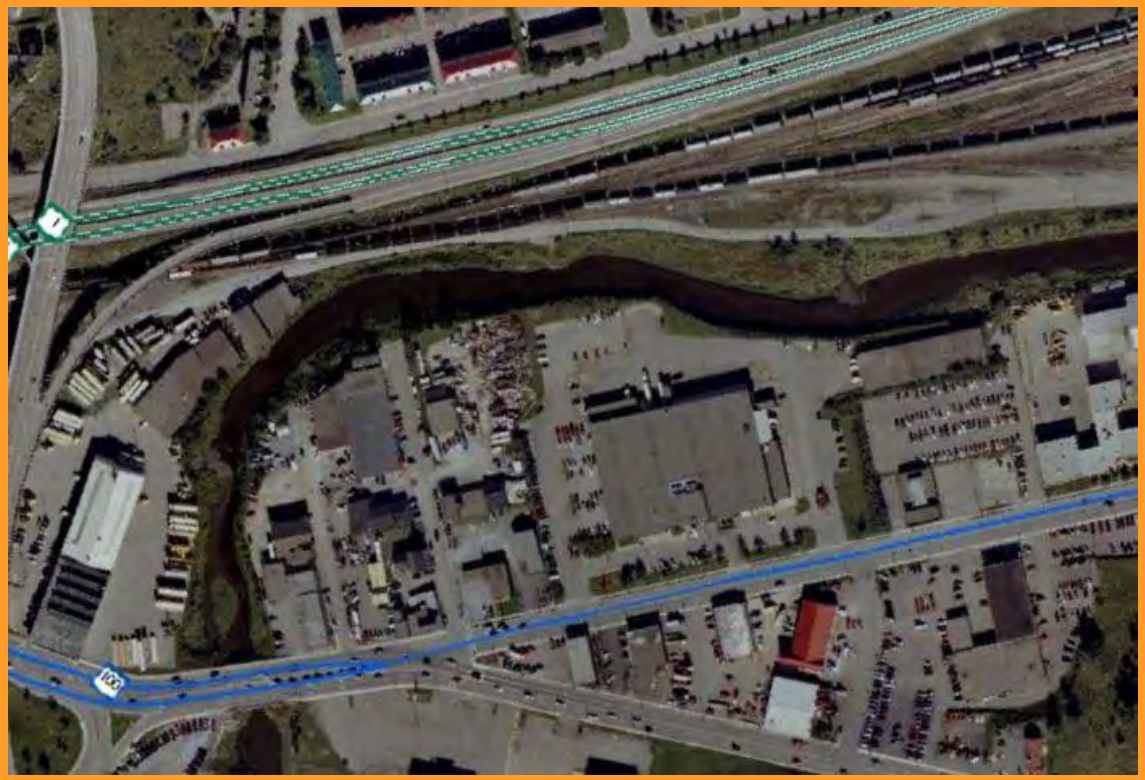
Primary mail processing operation in New Brunswick

MPP constructed in the late 1960s – early 1970s

Former location of sawmill, lumber yard and creosote wood treatment facility

Contamination from historical use

Timber crib retaining wall located on the bank of Marsh Creek



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2 Background

Creosote contamination identified in 1996

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2 Background

Creosote contamination found in 1996

Waterloo Barrier sheet pile cut-off wall installed in 1998-1999

Groundwater monitoring and recovery ongoing

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2 Background

Creosote contamination found in 1996

Waterloo Barrier sheet pile cut-off wall installed in 1998-1999

Groundwater monitoring and recovery ongoing

Local failure in 2013

Slope stabilization project initiated in 2013-2014

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3 Strategies

Environmental Management Plan

Management Goals

- **Maintain continuity in mail operations**
- **Maintain Waterloo Barrier**
- **Mitigate risks**

Management Strategies

- **Design**
- **Construction**

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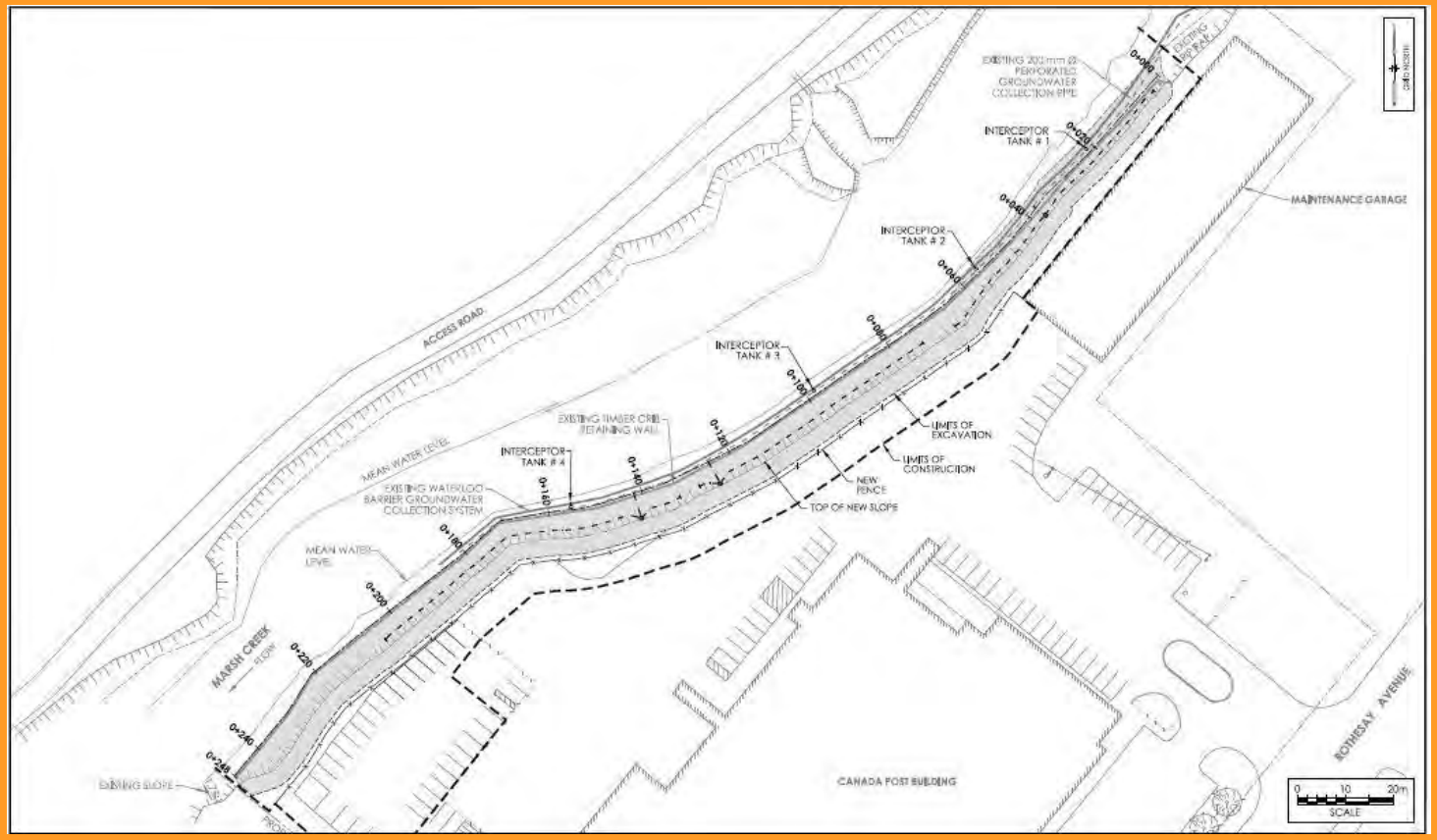
3 Strategies



Design

- Establish construction zone and controls
- Maintain function & access to Waterloo Barrier

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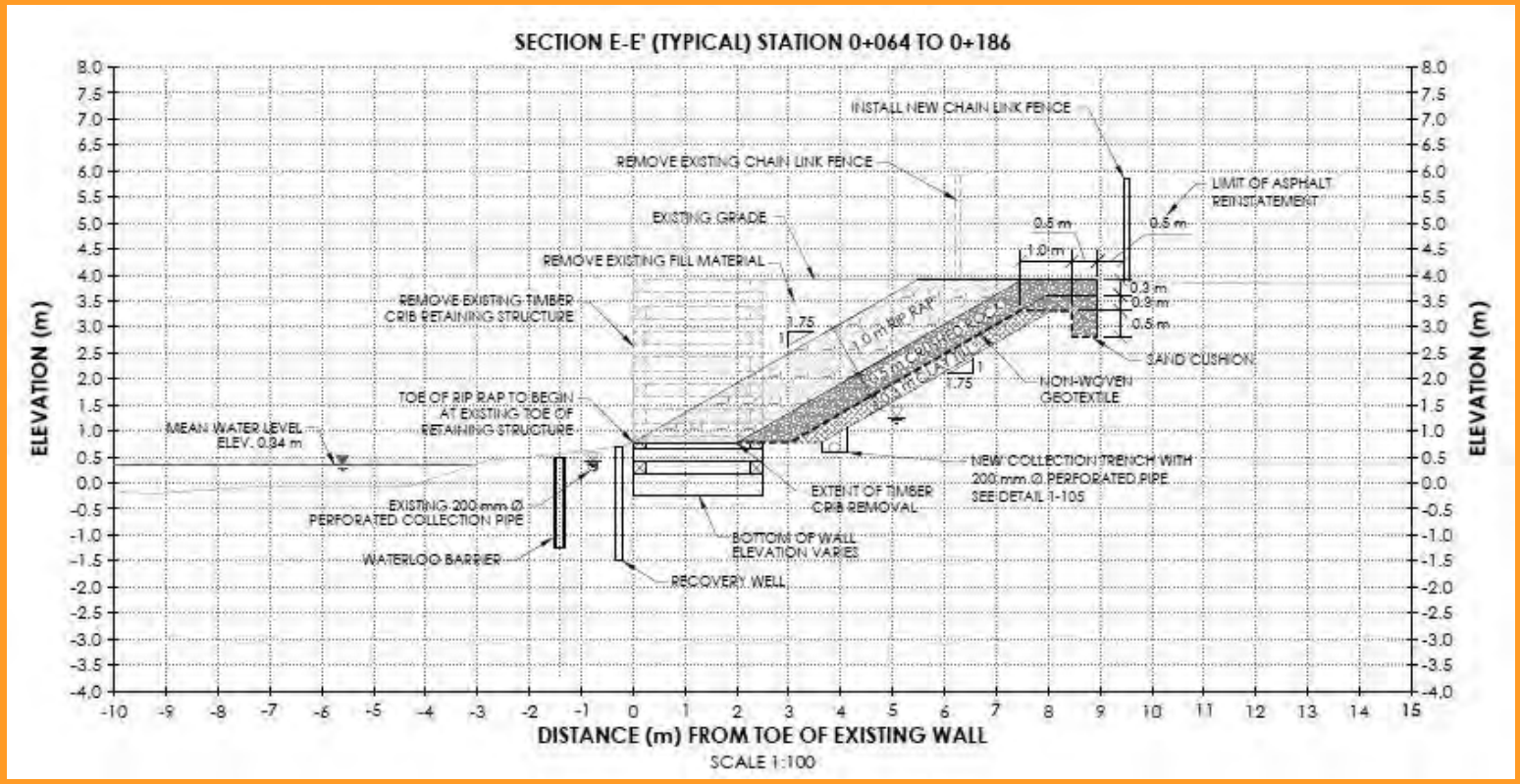
3 Strategies



Design

- Promote drainage
- Minimize surface water interactions

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3 Strategies

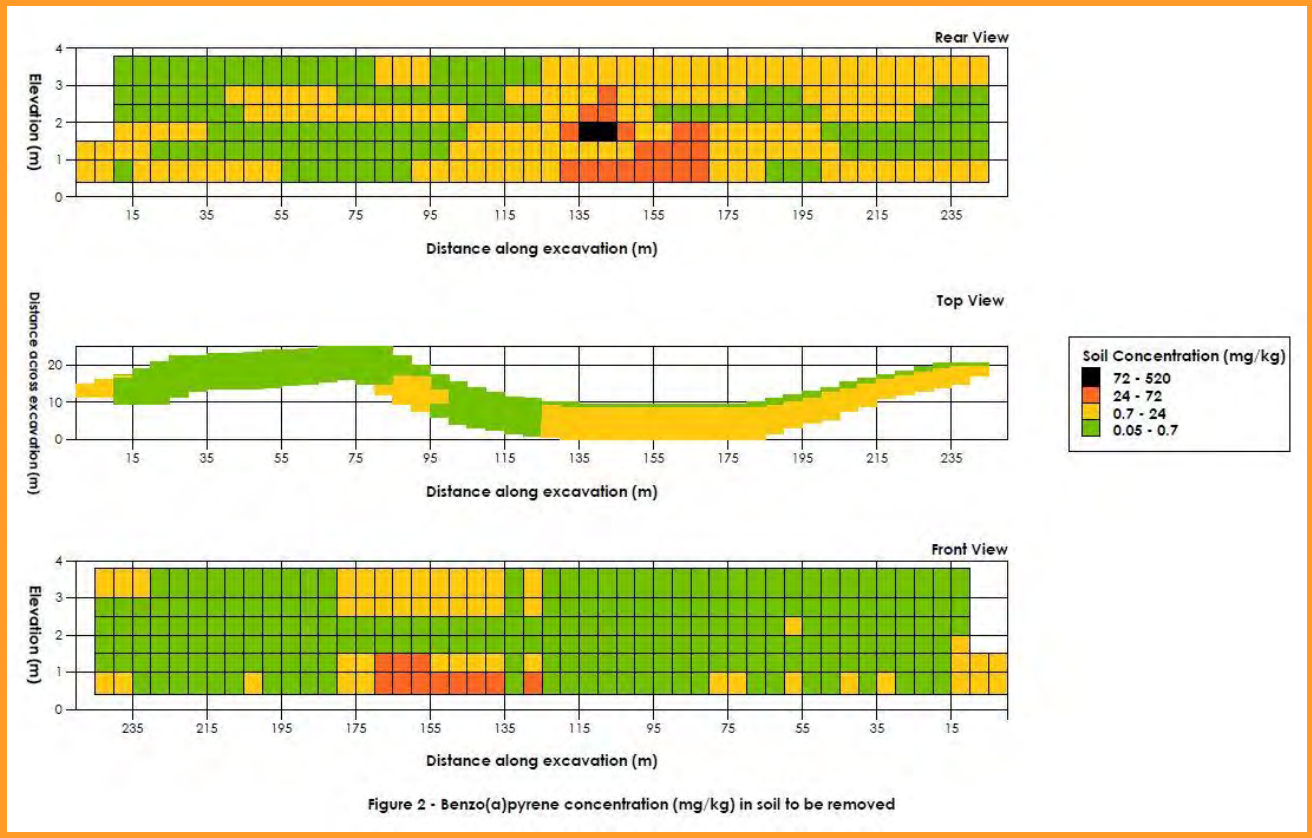

Figure 2 - Benzo(a)pyrene concentration (mg/kg) in soil to be removed

Construction - Waste Management Plan

- Waste streams
- Soil sampling and testing program
- Waste classifications
- ~ 9300 MT

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3 Strategies

Construction - Environmental Protection Plan

- **Procedures**
- **Contingency Plans**
- **Monitoring Plans**

Environmental Protection Plan - Procedures

- Erosion and siltation controls
- Equipment decontamination
- Creosote timbers and excavation management
- Vapour, dust and particulate management
- Dewatering and groundwater management
- Management of waste

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3 Strategies

Construction - Environmental Protection Plan

- **Procedures**
- **Contingency Plans**
- **Monitoring Plans**

Environmental Protection Plan – Monitoring Plans

- Surface water
- Groundwater
- Air
- Noise

- **Air Monitoring Protocol**
- Point surveys
- Sample collection

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4 Implementation

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4 Implementation

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4 Implementation

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4 Implementation

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4 Implementation

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4 Implementation

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5 Conclusions

Strategies

- **Design**
  - **Establish construction zone & controls √**
  - **Maintain function & access to Waterloo Barrier √**
  - **Promote drainage √**
  - **Minimize surface water interactions √**
- **Construction**
  - **Waste management plan √**
  - **Environmental protection plan √**

- WMP → cost savings
- EPP → protection
- Monitoring → limited, if any impact

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6 Extras

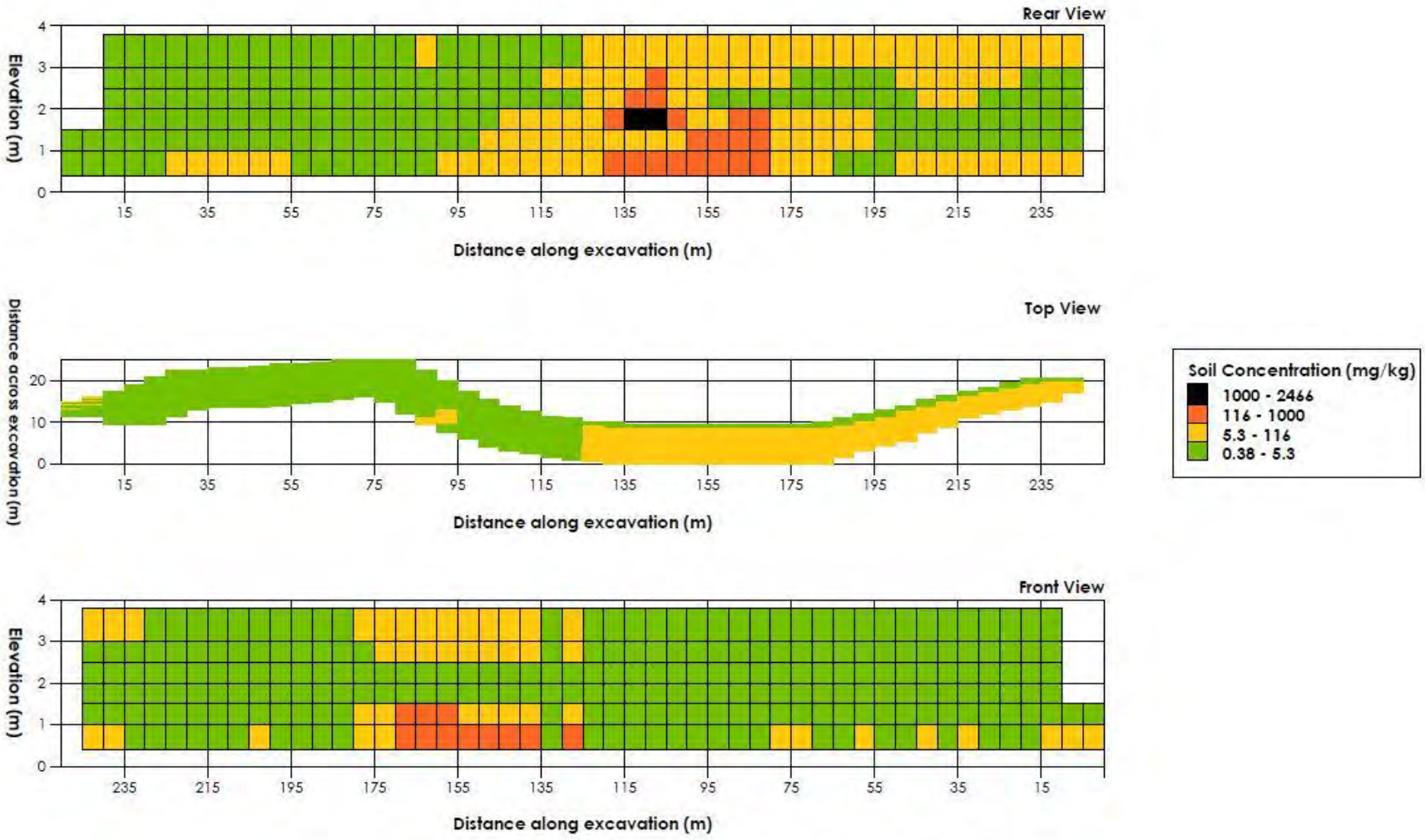

Figure 3 - B(a)P TPE concentration (mg/kg) in soil to be removed

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6 Extras

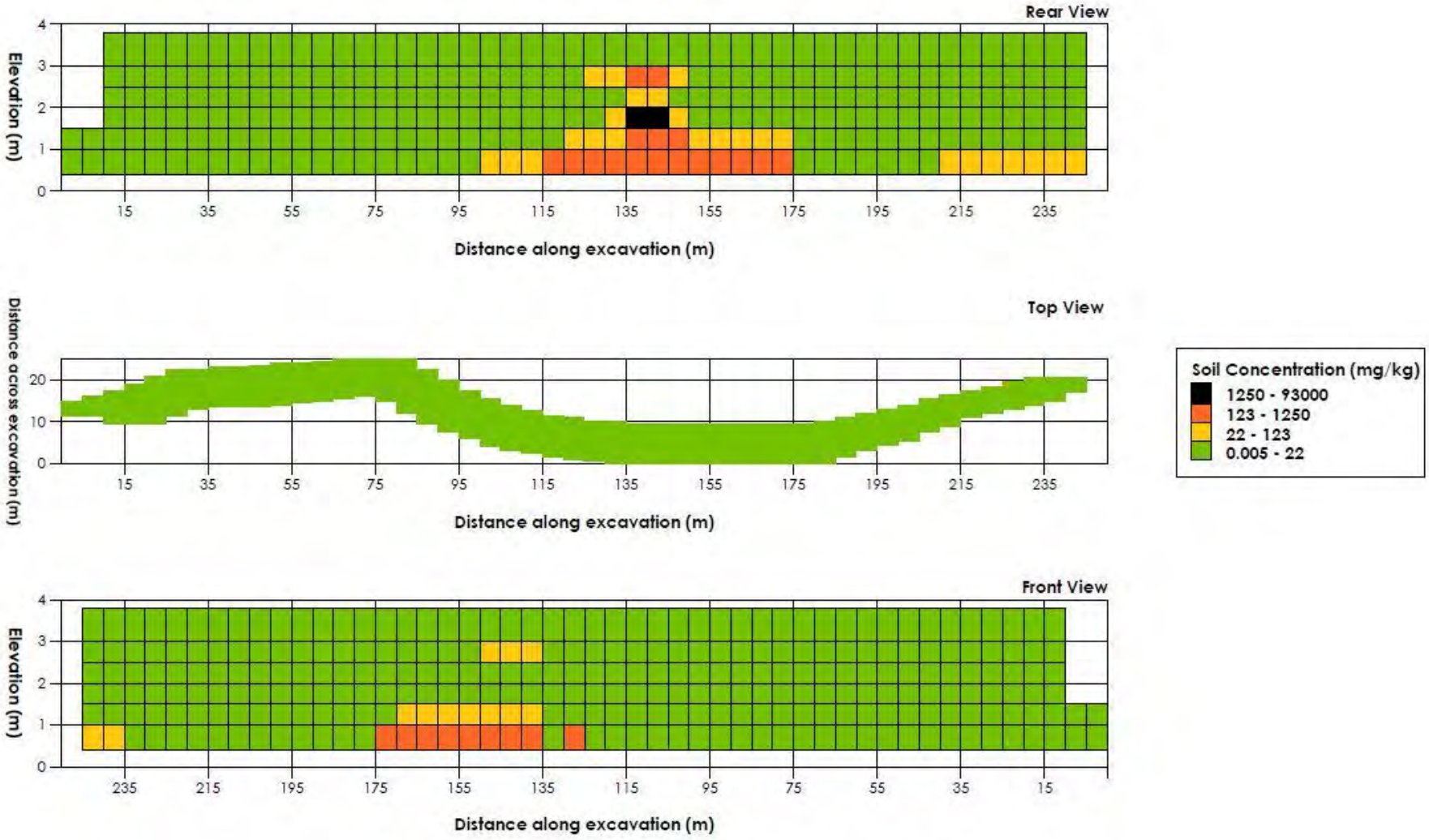

Figure 4 - Naphthalene concentration (mg/kg) in soil to be removed

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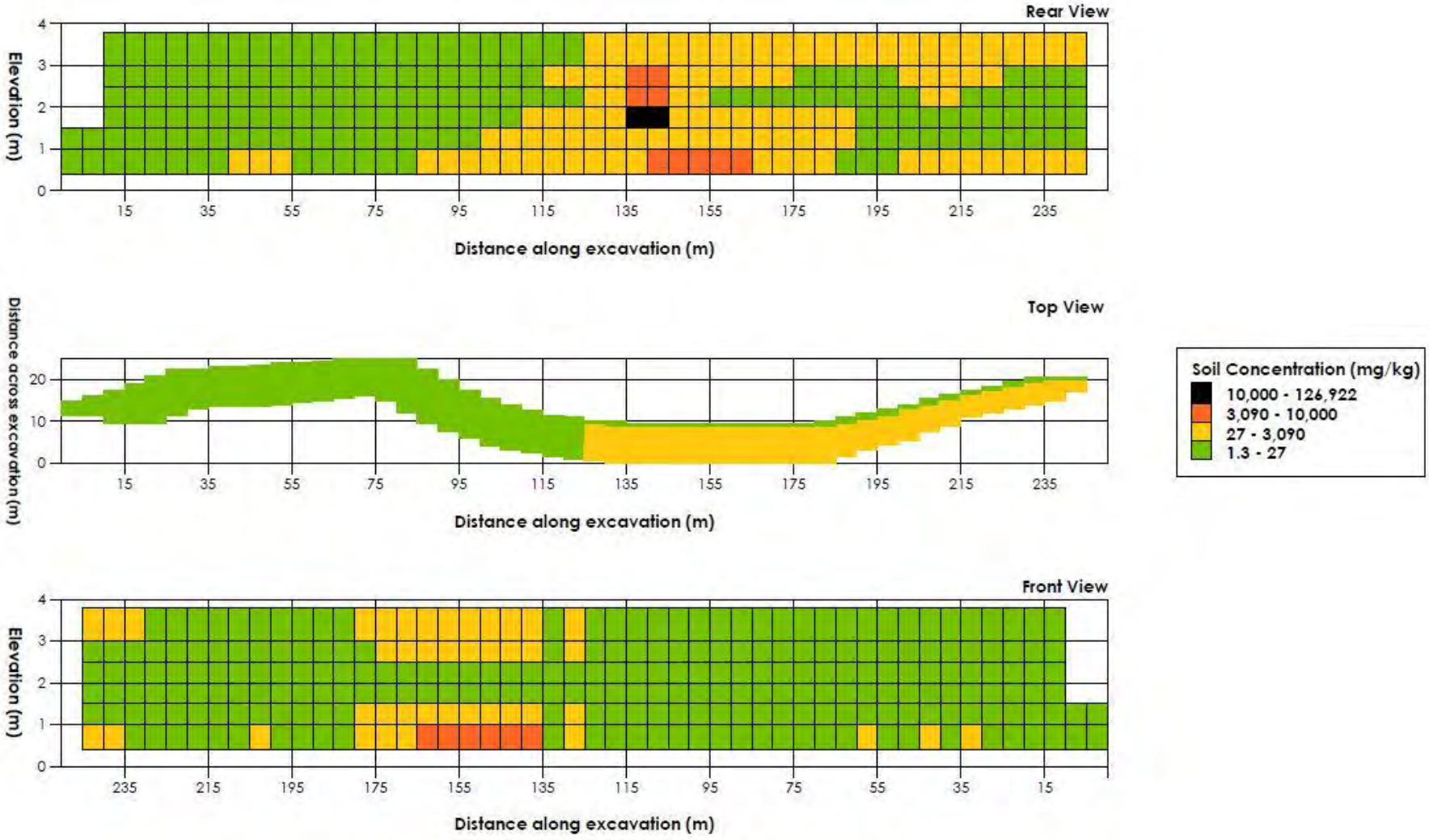

Figure 5 - Total PAH concentration (mg/kg) in soil to be removed

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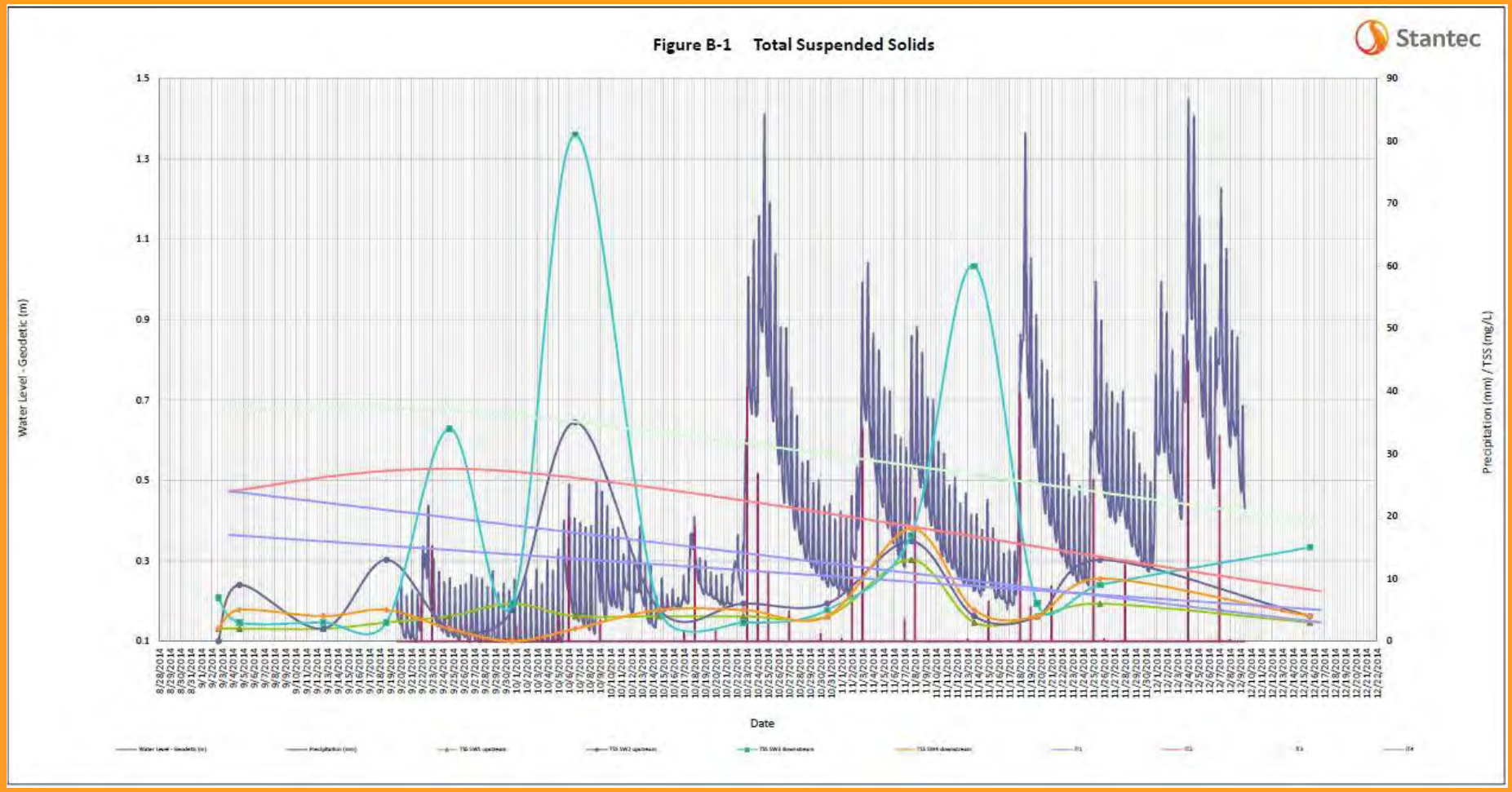

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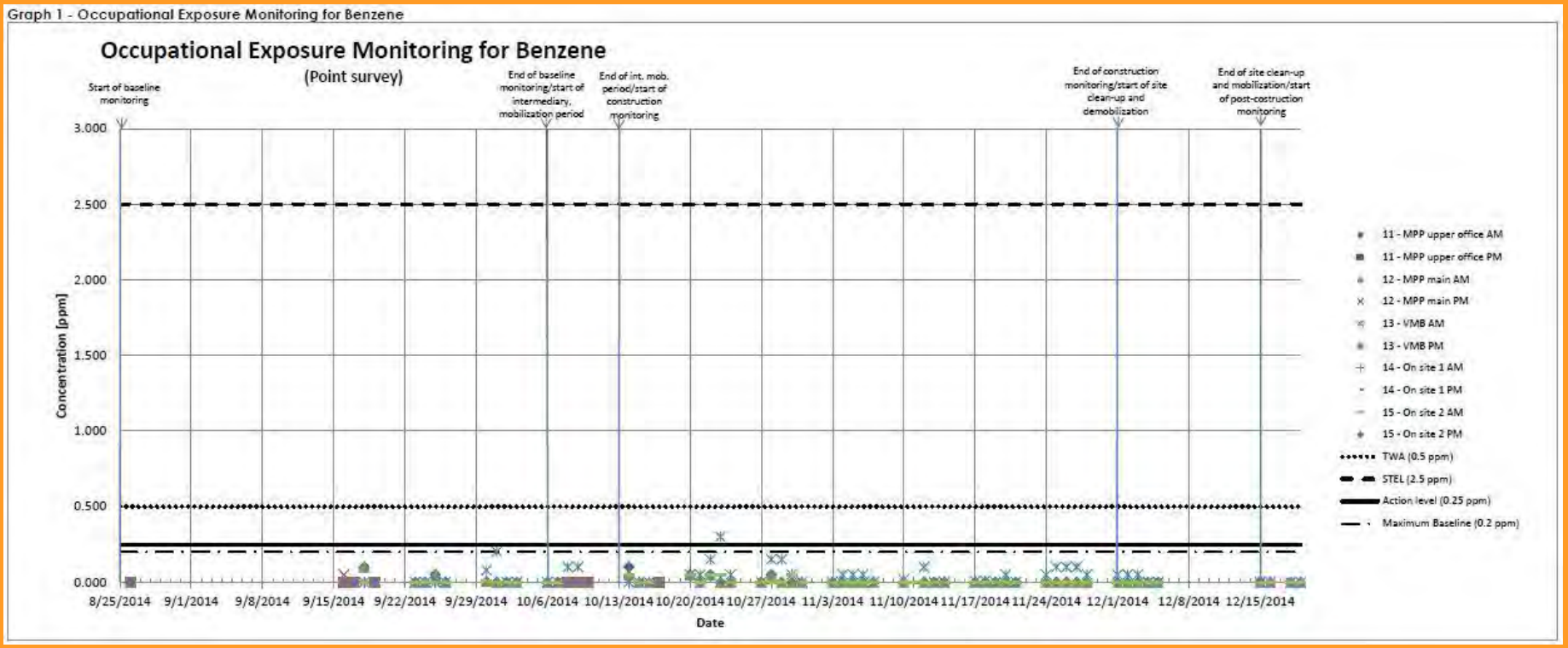
6 Extras

Graph 1 - Occupational Exposure Monitoring for Benzene



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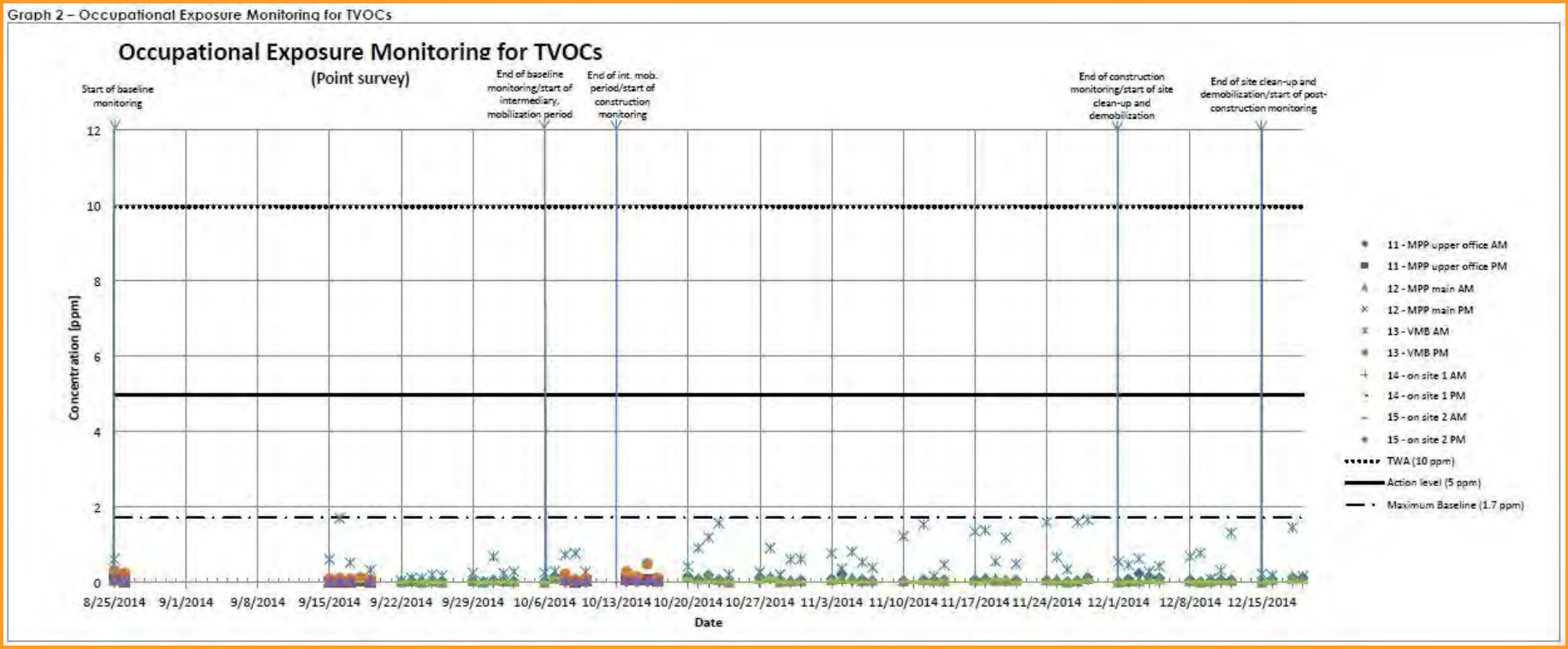
6 Extras

Graph 2 – Occupational Exposure Monitoring for TVOCs



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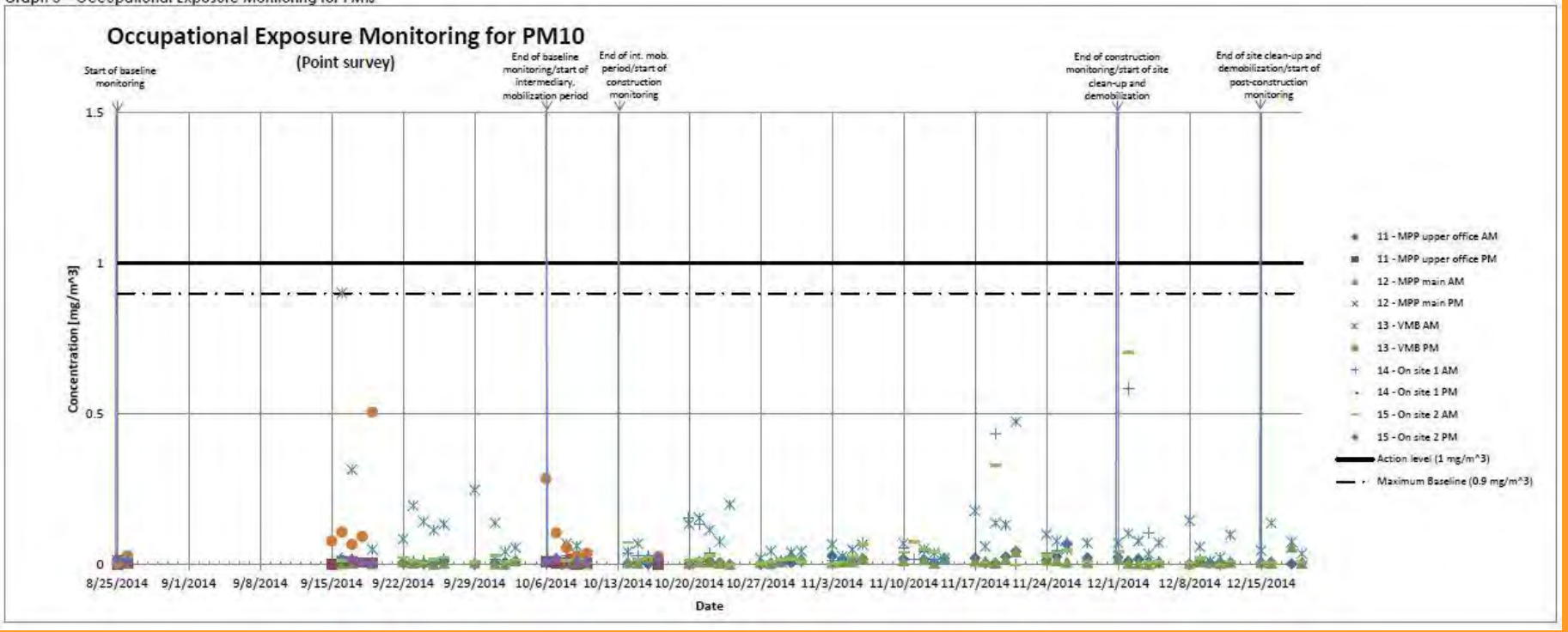
Graph 3 – Occupational Exposure Monitoring for PM10



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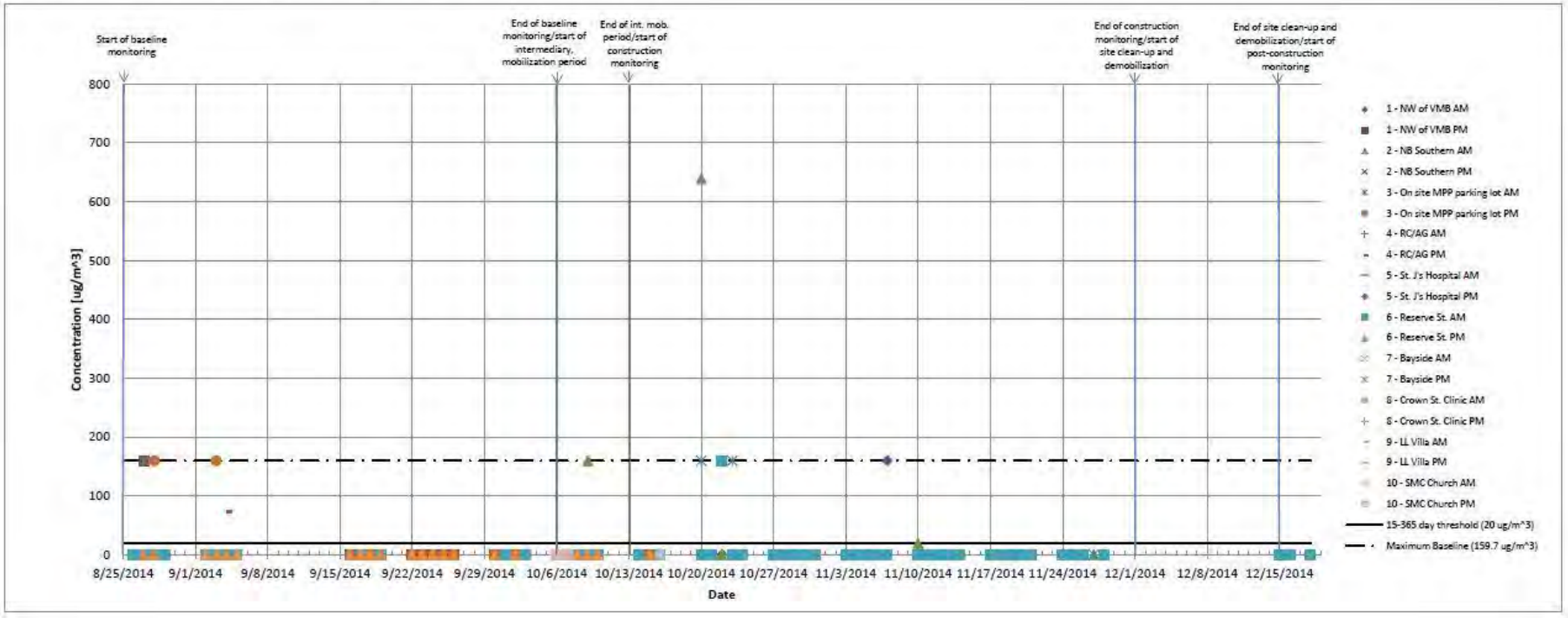
Graph 1 – Ambient Air Quality Monitoring for Benzene (Point surveys)



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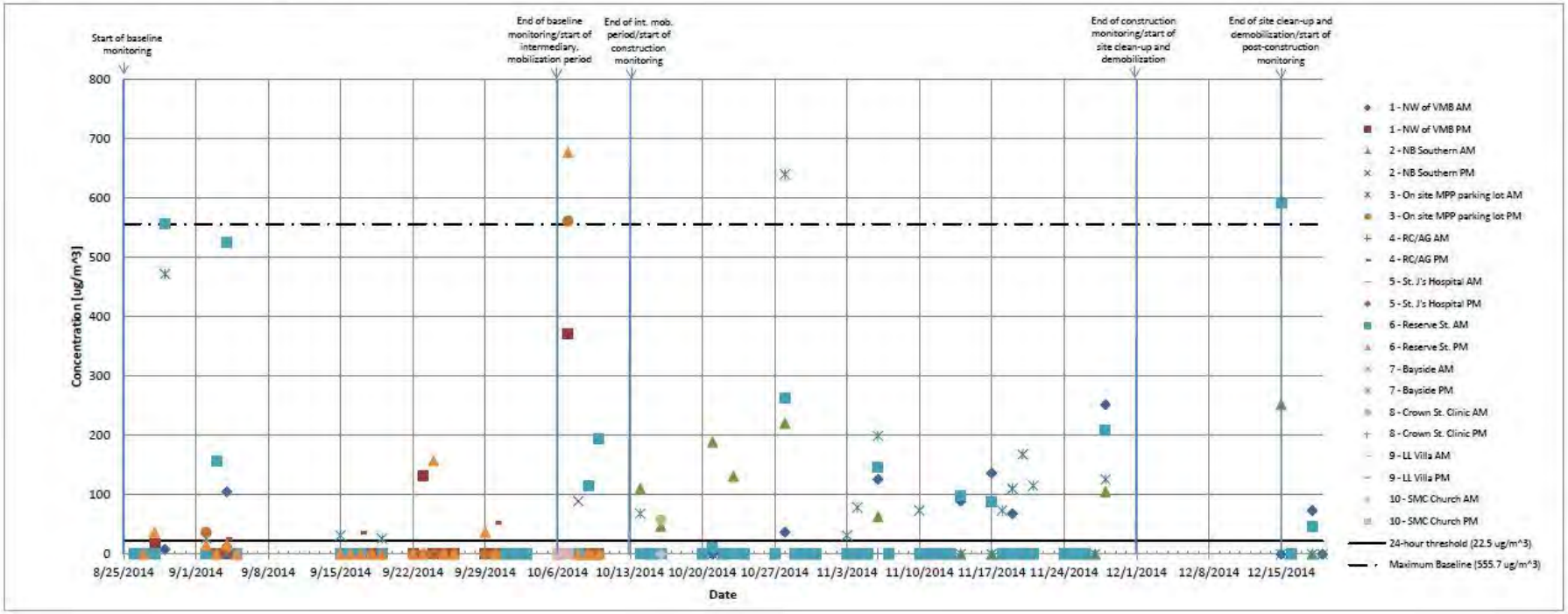

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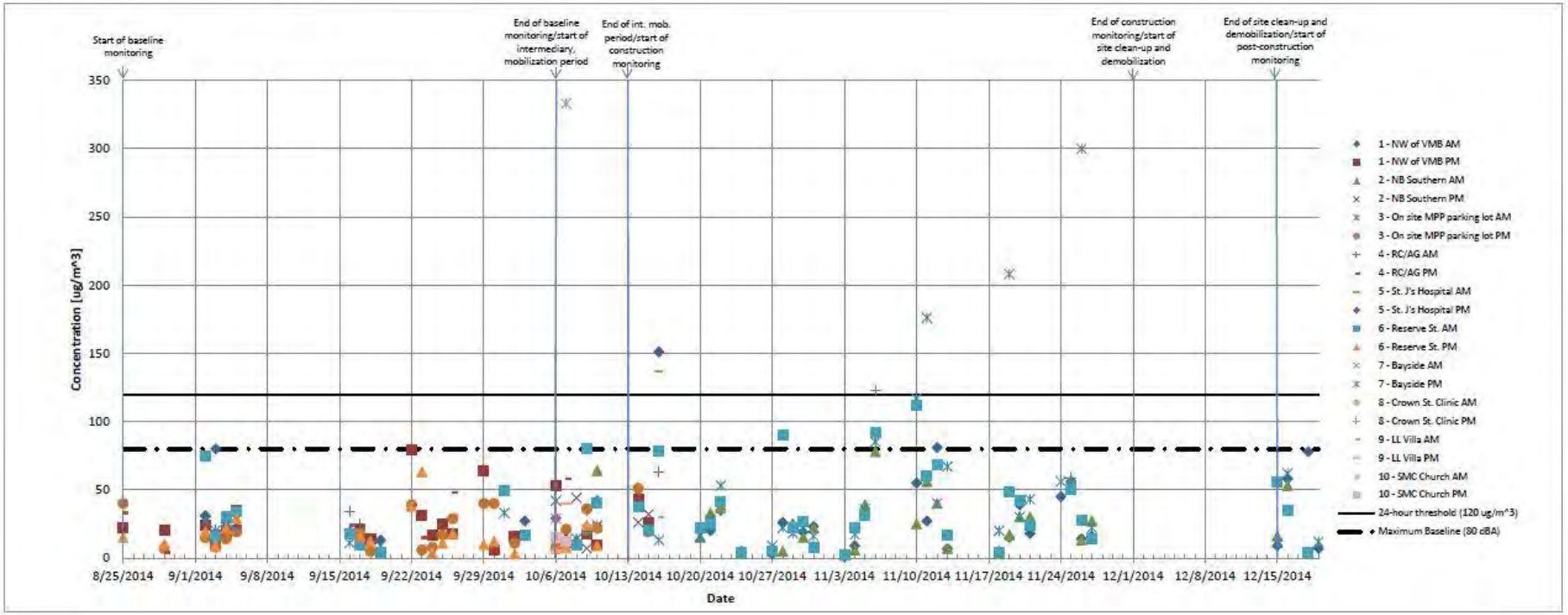
Graph 4 – Ambient Air Quality Monitoring for TSP



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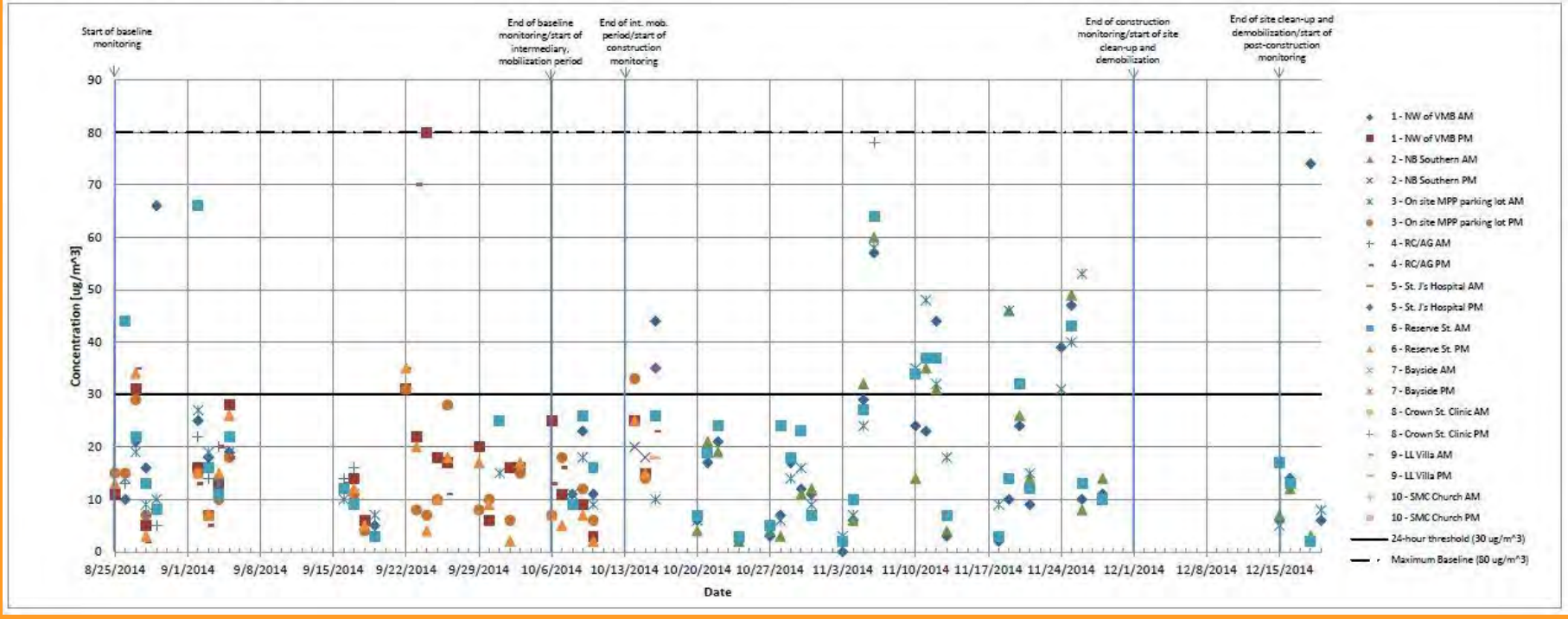
Graph 3 – Ambient Air Quality Monitoring for $PM_{2.5}$



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6 Extras