

Revised DRAFT - BMI Complex Air Quality Monitoring Project – Phase III – Summary of Sampling Approach and Chemicals of Concern at Eastside and CAMU Areas

Introduction and Objective

This Phase III work plan will be implemented in addition to the existing monitoring being conducted as part of Phase IIA. After the work envisioned in Phase III is completed, and assuming that the results are satisfactory, monitoring described below will be discontinued and Phase IIA will continue to be implemented through the end of the remediation activities.

Work Activities Covered

In short, the Phase III sampling approach will address focused data gathering for the following three Eastside and CAMU area activities:

1. Material hauling from the Eastside area via trucks
2. Excavation of the dry materials in the eastern portions of the Eastside area
3. Excavation of the slit trenches at the CAMU area

Approach

First, for each activity, BRC will collect 24-hour samples (except for Activity 1 as noted below) for organic compounds (using polyurethane foam (PUF)), TSP/metals, and asbestos at 2 air monitoring stations (one upwind and one downwind) to evaluate potential chemical emissions from these activities. The on-site meteorological station will be used to determine upwind/downwind relationships for the sample events. This sampling approach is consistent with the revised Perimeter Air Monitoring Plan (PAMP) dated October 2008. At each station PUF samples will be collected on 3 separate PUF media and analyzed for organic chemicals identified using the U.S. EPA Compendium Methods TO-4A, TO-9A, and, TO-13A. In addition, metals will be collected on Teflon filter media and analyzed using U.S. Compendium Method IO-3.3 X-Ray Fluorescence. Asbestos will be collected on Mixed Cellulose Ester and analyzed using NIOSH Method 7400.

For Activity 1, namely material hauling, since this activity will only occur at night, typically between 7 PM and 6 AM, the monitoring will cover these hours.

For Activity 2, BRC will collect 24-hour samples for organic compounds (using polyurethane foam (PUF)), TSP/metals, and asbestos at 2 air monitoring stations (one upwind and one downwind) to evaluate potential chemical emissions from this activity. The on-site meteorological station will be used to determine upwind/downwind relationships for the sample events. This sampling approach is consistent with the revised Perimeter Air Monitoring Plan (PAMP) dated October 2008. At each station PUF samples will be collected on 3 separate PUF media and analyzed for organic chemicals identified using the U.S. EPA Compendium Methods TO-4A, TO-9A, and, TO-13A. In addition, metals will be collected on Teflon filter media and analyzed using U.S. Compendium Method IO-3.3 X-Ray Fluorescence. Asbestos will be collected on Mixed Cellulose Ester and analyzed using NIOSH Method 7400.

For Activity 3, namely the slit trenches, additional volatile organic compounds (VOCs) may also be monitored as needed based on the following approach. Per the HASP VOC monitoring will be

conducted at the slit trench work area by health and safety personnel using a real-time photo ionization detector (PID). If at any time the work-area VOC concentration exceeds 5 parts per million (ppm) for 15 continuous minutes, 1 VOC sample will be collected at the CAMU downwind site for a 24-hr period using evacuated Summa Canisters and analyzed using EPA Compendium Method TO-15A. The 5 ppm action level is based on a short-term exposure limit of 5 ppm for benzene. As an additional level of protection, if VOC's are measured above the action level described above more than twice, an additional PID will be installed and operated at the CAMU perimeter for the remainder of the slit trench activity to evaluate off-site migration of VOCs. Mitigation measures to minimize VOC emissions from the work activities is discussed in the Waste Excavation Plan.

Monitoring Locations

The locations of the monitoring for Phase III will be as follows. In the revised PAMP, BRC has identified various air monitoring sites shown in Figure 1 of the PAMP. These sites have been pre-selected based on providing coverage of the work site, site remediation constraints such as safety, access, and the like. They include

- 11 Eastside area air monitoring locations
- 7 CAMU area air monitoring locations
- 2 off-site monitoring locations (across the haul road along Warm Springs Rd.)

Actual monitoring locations for the three Phase III work activities will be as follows:

- For Activity 1, sites OFF-1 and OFF-2
- For Activity 2, any pair of sites from the following: BMI-06, BMI-03, BMI-07, BMI-08 or BMI-11, depending on meteorological considerations
- For Activity 3, CAMU-02 and either CAMU-01 or CAMU-03, depending on meteorological considerations

Schedule

The following schedule is anticipated for Phase III monitoring.

Sampling will commence for Activity 1 on or about November 3, 2008 and will continue for 4 weeks. Each week, 2 sets of samples (one upwind and one downwind) will be collected. It is expected that results of sampling will become available after roughly 2 weeks. Thus, sampling will continue for 2 weeks while results are being reviewed by BRC and NDEP. Assuming that the results are satisfactory (i.e., no appreciable differences between upwind and downwind monitoring locations), sampling for Activity 1 will be discontinued and sampling for Activity 2 will commence roughly around December 1 on the same 2 sets of sample/week basis. Again, this sampling for Activity 2 will continue for 4 weeks, allowing time for results to be evaluated. Assuming that results are satisfactory, sampling will then commence for Activity 3. Sampling for Activity 3, on the same 2 samples/week basis (or VOC data collection, as needed), will last through the duration of Activity 3.

Reporting

Results from sampling at all activities will be shared with the NDEP as received. A formal data summary report will be completed after the all laboratory results are received and verified, for each Activity.