BMI COMPLEX CAMU/PLANT SITE
AIR QUALITY MONITORING WORK PLAN
For CAMU Excess Capacity Filling

Prepared for:

BASIC REMEDIATION COMPANY
HENDERSON, NEVADA

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1.0 INTRODUCTION

Basic Remediation Company (BRC) anticipates that it will accept compatible wastes from potential third parties (such as Syngenta, Tronox, or Timet) into its Corrective Area Management Unit (CAMU) Phases IV and V. This air monitoring work plan will be used to assess any off-site impacts due to such waste placement into the CAMU. Source companies will prepare and implement their own work plans associated with gathering, loading, and hauling activities.

This activity is anticipated to begin after January 15, 2010 and will last for an indeterminate amount of time. The chemical profile of the waste material is unknown; therefore this work plan proposes to collect air quality data for all chemicals of concern (COCs) collected during the BMI Phase IIIA, IIIB, and IIIC air monitoring programs, appropriately modified once the source materials are firmly identified. BRC will submit a short addendum to this work plan for approval, discussing the specific chemicals of concern that will actually be monitored, at least one week prior to waste placement.

The purpose of conducting this task is to determine if the waste material placement activities from potential waste sources to the CAMU Phases IV and V are in-fact releasing emissions and consequently impacting the ambient air in the vicinity of the activities. This work plan scope is to collect ambient air samples from two locations, one upwind and one downwind of the CAMU Phases IV and V where the waste material will be deposited. The proposed primary upwind site is located at the southwest corner of the CAMU area, with a secondary location proposed at the southeast corner of the CAMU site. The secondary site has been proposed due to site activities that may limit access to the primary location during the waste material placement. The proposed downwind site is located on the northern-most boundary of the CAMU site. These three locations have been selected due to their location with respect to the waste material storage locations and prevailing wind patterns.

Data collected from the monitoring sites will be used to determine if waste material placement activities are impacting ambient air quality and will be evaluated against the EPA Region 3 risk-based concentrations (RBC) (April 2006), EPA Region 9 preliminary remediation goals (PRG) (October 2004), and EPA Region 6 human health medium-specific screening levels (MSSL) (March 2008). Additionally, an upwind/downwind statistical analysis will be conducted using on-site meteorological data to confirm upwind/downwind locations and corresponding data from each location to evaluate if hauling and placement of waste material are releasing chemical emissions and impacting air quality.

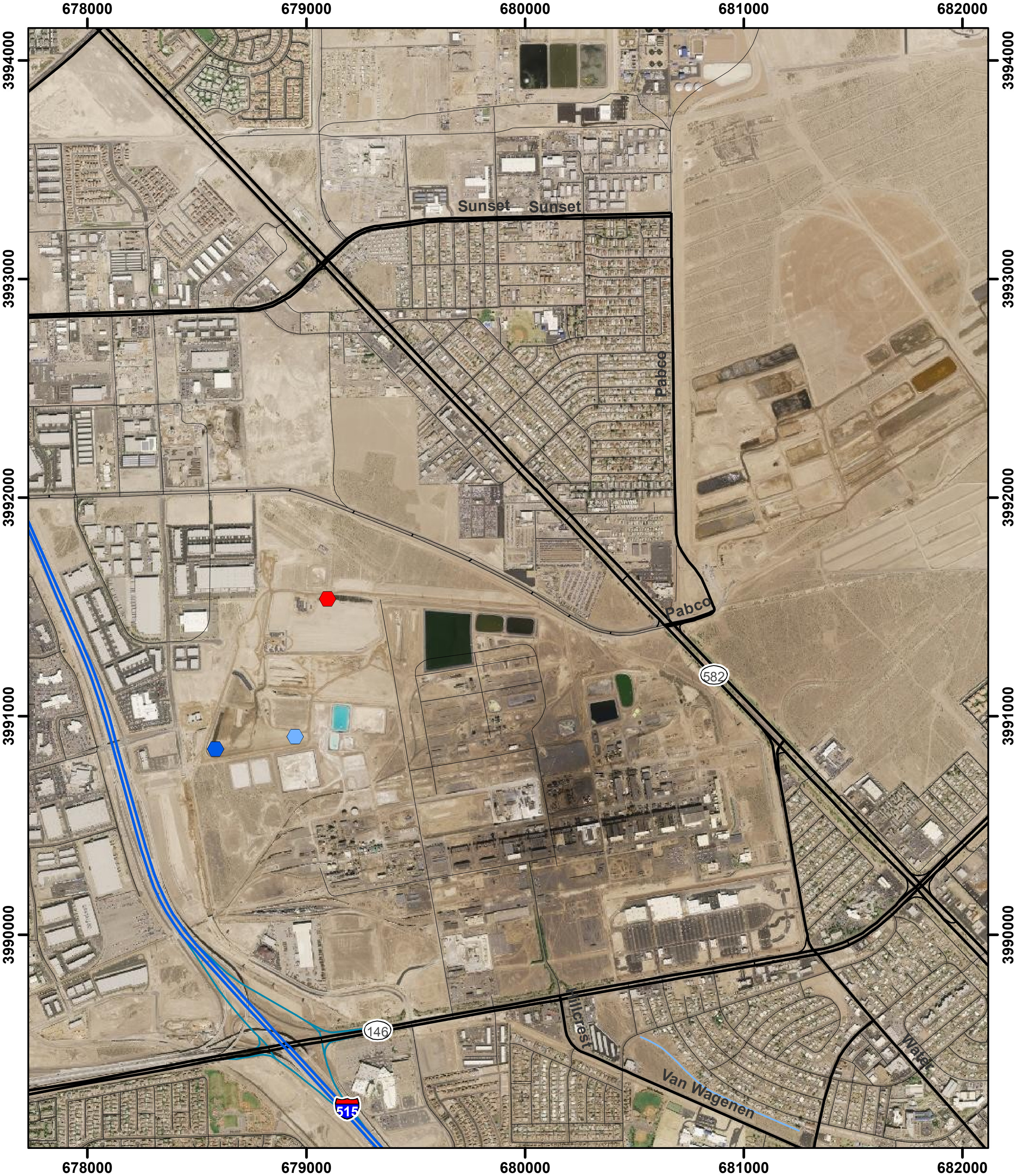
2.0 AIR SAMPLING APPROACH

The proposed air quality monitoring will consist of air monitoring upwind and downwind of the CAMU Phases IV and V to evaluate emissions from waste material hauling activities. The proposed air monitoring schedule will be to collect two sets of 24-hour samples twice per week for as many weeks as the waste placement activities continue. If waste placement activities are conducted on a less-than 24-hour schedule, the air sample collection time will be adjusted to conform to the time of waste placement, so as to avoid downward bias of the results due to dilution. Each set of samples will be collected and analyzed for all potential COCs consisting of: organochlorine pesticides, dioxins/furans, volatile organic compounds, total suspended particulate (TSP), metals, and asbestos as described in the BRC *Perimeter Air Monitoring Plan* (PAMP) (October 2008) and *Revised Draft BMI Complex Air Quality Monitoring Project – Phase III – Summary of Sampling Approach and Chemicals of Concern at Eastside and CAMU Areas* (Tetra Tech October 2008) and modified by the modification to this work plan to be submitted to the NDEP one week prior to the sampling activity. This modification will propose a sub-set of the COC's consistent with the waste profile to be placed in the CAMU once the source materials are firmly identified.

2.1 SITE SELECTION AND LOCATIONS

The proposed upwind sites are located at southwest corner (primary) and southeast corner (secondary) of the CAMU area. Primary and secondary locations have been identified due to the potential site access issues. If the primary upwind site becomes inaccessible it will be relocated to the secondary site. The proposed downwind site is located near the northern boundary of the CAMU area. These two locations have been selected due to their location with respect to waste material placement, site access and safety, and prevailing wind patterns.

Each monitoring station will be configured to collect ambient air samples for a continuous sample period whose duration will be consistent with waste placement activities, not to exceed 24-hours for any sampling event. Quality assurance samples will also be collected and consists of field blanks on a frequency of 10 percent (one in 10 samples). Field blanks will be analyzed for all analytical parameters discussed above. The BMI Complex CAMU/Plant Site air monitoring station locations are presented in Figure 1.



CAMU Area Air Monitoring Locations

- CWH-01P (Upwind) Primary
- CWH-01S (Upwind) Secondary
- CWH-02 (Downwind)

Source: http://www.terraserver.com
Date of image: March 2009

0 1,000 2,000 4,000 Feet

L.Niell Tetra Tech 12/2009

BMI Complex
Henderson, NV

Figure 1

CAMU Area
Material Waste Hauling
Air Monitoring Locations

2.2 SAMPLING EQUIPMENT SPECIFICATIONS AND OPERATION

All sampling parameters are consistent with the PAMP and Phase III monitoring and each of the two identical air-sampling stations will be constructed and the sampling equipment at each site of the two sites will consist of:

- Three identical polyurethane foam (PUF) hi-volume federal reference method (FRM) samplers designed to collect samples on three PUF cartridges for analysis of organic compounds contained in the U.S. Environmental Protection Agency (EPA) compendium methods TO-4, TO-9 and TO-13

- One portable BGI PQ100 low-volume FRM (PQ100) sampler designed to collect samples on 47mm Teflon filters for analysis of total suspended particulate (TSP) and total metals contained in the U.S. EPA compendium methods IO-3.3 X-Ray Florescence

- One SKC Model 224-PCXR8 (SKC) low-volume sample pump designed to collect samples on mixed cellulose ester (MCE) filters for analysis of asbestos using National Institute for Occupational Safety and Health (NIOSH) Method 7400 for phase contrast microscopy

- One Honda EB 6500 gasoline-powered generators (or equivalent) at the downwind site and upwind

Tetra Tech will assemble and calibrate the PUF, PQ100, and SKC air samplers prior to sample collection and after equipment had been serviced or rechargeable batteries have been changed. All samplers will be calibrated using National Institute of Standards and Testing (NIST) or other authoritative reference certified equipment.

Samples will be collected, handled, stored, and analyzed using U.S. Environmental Protection Agency (EPA) Compendium Methods TO-4A, TO-9A, TO-13A, I.O. 2.1/3.3, and NIOSH Method 7400. All sample collection and handling will be performed by qualified Tetra Tech air monitoring personnel.

Tetra Tech staff will be on-site for approximately one to two days to install the temporary monitoring stations and program samplers. After the initial sample collection event, Tetra Tech staff will be onsite to remove the samples. This process will be repeated for all collection events over the duration of the sampling period. At the completion of the monitoring effort, Tetra Tech staff will disassemble and remove the stations and all sampling equipment.

Air samples will be collected at the established monitoring stations for the analysis of site related chemicals including organochlorine pesticides, Polychlorinated Dibenzo-p-dioxins (PCDDs), Polychlorinated Dibenzo-p-furans (PCDFs), Polychlorinated biphenyls (PCBs), VOCs/SVOCs, TSP, metals, and asbestos fibers using EPA methods listed above. Field blanks will be collected on a frequency of 10 percent (one in 10 samples) for quality control purposes. Upon completion of each sample event, the samples and associated information will be recorded on chain-of-custody (COC) sheets and submitted to the respective laboratories for analysis. The COC will include the sample identification number, sample location, sample time, beginning and ending flow rate (to calculate sample volume) and the required analysis.

A summary of sample collection, sample handling, and analysis specification procedures is provided in Table 1.

2.3 SAMPLE NOMENCLATURE

All samples collected at the BMI Complex will be given a sample ID according to the sample location and sample date as follows:

- CMH-01P-011810 (where WMH denotes CAMU Material Hauling location, 01 denotes primary upwind site, and 011810 denotes that sample was collected on January 18, 2010)

- CMH-01S-011810 (where WMH denotes CAMU Material Hauling location, 01 denotes secondary upwind site, and 011810 denotes that sample was collected on January 18, 2010)

- CMH-02-011810 (where WMH denotes waste Material Hauling location, 02 denotes downwind site, and 011810 denotes that sample was collected on January 18, 2010)

TABLE 1
BMI COMPLEX CAMU/ PLANT SITE AIR QUALITY MONITORING PARAMETER SUMMARY

Air Quality Analytical Parameter	Equipment Manufacturer/ Model	Air Sample Media	Sample Frequency/ Sample Events	Sample locations	Sample Handling Temperature / hold time	Laboratory/ Analytical Method
Organochlorine Pesticides (TO-4A)	Tisch Environmental/ TE-1000	Polyurethane foam cartridge/102 mm quartz fiber filter	24hr. cont. sample/twice per week/indeterminate	Upwind/OFF-03 Downwind/OFF-04	<4°C/7 days	Air Toxics Ltd./EPA Method TO-4A
PCDDs/PCDFs (TO-9A)	Tisch Environmental/ TE-1000	Polyurethane foam cartridge/102 mm quartz fiber filter	24hr. cont. sample/twice per week/indeterminate	Upwind/OFF-03 Downwind/OFF-04	<4°C/7 days	Frontier Ltd./EPA Method TO-9A
VOCs/SVOCs (TO-13A)	Tisch Environmental/ TE-1000	Polyurethane foam cartridge/102 mm quartz fiber filter	24hr. cont. sample/twice per week/indeterminate	Upwind/OFF-03 Downwind/OFF-04	<4°C/7 days	Air Toxics Ltd./EPA Method TO-13A
TSP/Metals	BGI, Inc./PQ100	47mm Teflon fiber filter	24hr. cont. sample/twice per week/indeterminate	Upwind/OFF-03 Downwind/OFF-04	None/30 days	Chester Labnet/ EPA Method IO-2.1; EPA Method IO-3.3
Asbestos	SKC, Inc. 224-PCXR8	25mm mixed cellulose ester filter	24hr. cont. sample/twice per week/indeterminate	Upwind/OFF-03 Downwind/OFF-04	None/N/A	AES Laboratory/ NIOSH 7400

Notes:

<	=	less than	NIOSH	=	National Institute of Safety and Health
°C	=	degree Celsius	N/A	=	not applicable
cont.	=	continuous	OFF-03	=	off-site/upwind location 03
EPA	=	U.S. Environmental Protection Agency	OFF-04	=	off-site/downwind location 04
hr	=	hour			

3.0 SUMMARY OF ANALYTICAL RESULTS

The air quality monitoring data collected will be compared to EPA Region 3 risk-based concentrations (RBC) table (April 2006), EPA Region 9 preliminary remediation goals (PRG) table (October 2004), and EPA Region 6 human health medium-specific screening levels (MSSL) table (March 2008) to determine if ambient concentrations exceed criteria. In most cases the RBC, PRG, and MSSL were either identical or very close in chemical concentration.

3.1 UPWIND AND DOWN WIND ANALYSIS

Tetra Tech has developed an approach for the quantification of upwind versus downwind air quality monitoring data collected during prior air monitoring at the CAMU area. The objective of the upwind/downwind evaluation is to determine and confirm which sample is representative of the upwind location and which sample is representative of the downwind location. The corresponding sample results will be evaluated to determine if downwind concentrations exceed upwind concentrations.

The upwind/downwind evaluation will be conducted using meteorological data and data collected at sites CMH-01P (or CMH-01P) and CMH-02. Meteorological data including wind speed and direction will be measured continuously at the on-site meteorological monitoring station operated by Tetra Tech near the Eastside entrance gate.

The general approach for conducting the upwind/downwind evaluation consists of the following steps:

- Determine predominant wind directions
- Assign upwind/downwind stations
- Compare upwind/downwind results
- Determine those air sample results that exceeded either the RBC or PRG screening criteria
- Conduct a statistical analysis using a parametric (t-test) and nonparametric (Wilcoxon signed-rank test) paired difference tests to determine if downwind concentrations are significantly greater than upwind concentrations

A summary of results will be presented in an air quality data summary report. The report will contain the following information:

- Summary of monitoring activities
- Significant site-related events and sampling anomalies

- Summary of each analytical method used and associated chemical compounds for each of the sample locations
- analytical results and upwind/downwind analysis
- Evaluation of COC concentrations to appropriate RBC, PRG, or MSSL screening criteria

4.0 REFERENCES

Basic Remediation Company 2006. "*Perimeter Air Monitoring Plan for Soil Remediation Activities, BMI Upper and Lower Ponds and Ditches, Clark County, Nevada*." August 2006. Revised 2008.

Occupational Safety and Health Administration. 1994. *"Asbestos and Other Fibers by PCM."* August 1994

U.S. EPA 1999. *"Compendium Method TO-4A Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using High Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD)"*

U.S. EPA 1999. *"Compendium Method TO-9A Determination Of Polychlorinated, Polybrominated And Brominated/Chlorinated Dibenzo-p-Dioxins And Dibenzofurans In Ambient Air."* January 1999.

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U.S. EPA 1999. *"Compendium Method IO-3.3 Determination of Metals in Ambient Particulate Matter Using X-Ray Fluorescence (XRF) Spectroscopy."* June 1999.