BMI COMPLEX INDUSTRIAL PLANT SITE
AIR QUALITY MONITORING WORK PLAN
(*revised*)

Prepared for:

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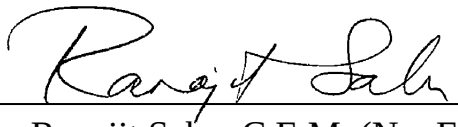
I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.



Dr. Ranajit Sahu, C.E.M. (No. EM-1699, Exp. 10/07/2009) Date

BRC Project Manager

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1.0 INTRODUCTION

Basic Remediation Company (BRC) tasked Converse Consultants (Converse) and Tetra Tech EM Inc. (Tetra Tech) to complete a short-term 4-week air sampling project to evaluate air pollutant emissions from the Basic Management Incorporated (BMI) plant sites located at the BMI Industrial Complex, located in Henderson, Nevada. This air sampling project is a follow-up work plan associated with air monitoring currently being conducted according to 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).

The goal of this air monitoring sub-project is to evaluate air quality impacts from nearby chemical plants located at the BMI industrial complex. Due to the close proximity of the plants and potential chemically-tainted material stockpiles at the plants, air quality monitoring stations currently operating at the Eastside and Corrective Unit Management Area (CAMU) areas may be impacted by the plant emissions. The purpose of conducting this task is to determine if plant emissions are in-fact impacting the air samples collected at the Eastside and CAMU areas. This work plan scope is to collect ambient air samples from two locations, one upwind and one downwind of the plants. The proposed upwind site is located at the Basic Water Company reservoirs, approximately 1 mile southeast of the BMI industrial complex. The proposed downwind site is located on the south-west side of Boulder Highway between Warm Springs Road and Water Street. These two locations have been selected due to their location with respect to the plant locations and prevailing wind patterns. In addition, the proposed downwind location is set away from the BMI haul roads and city streets to minimize potential contamination from these areas.

Data collected from the sampling sites will be used to verify if in-fact plant emissions are impacting the Eastside and CAMU area air monitoring results and once a determination has been made, current air quality monitoring program parameters at the Eastside and CAMU areas may be modified.

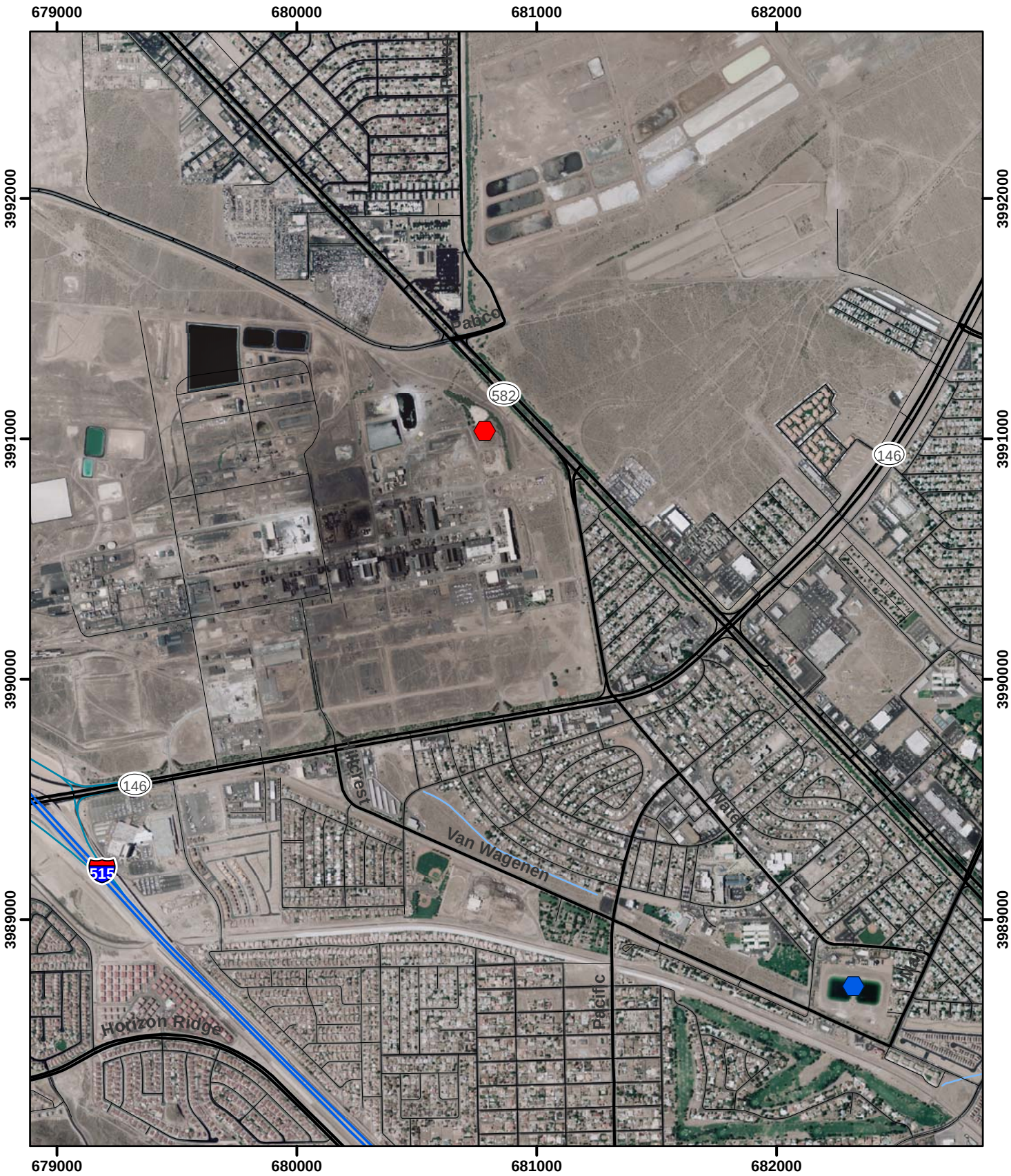
2.0 AIR SAMPLING APPROACH

The proposed air quality monitoring will consist of air monitoring upwind and downwind of the BMI plant sites to evaluate plant emissions. The proposed air monitoring schedule will be to collect two sets of 10-hour samples twice per week for 4 weeks resulting in 16 sets of air samples. Each set of samples will be collected and analyzed for organochlorine pesticides, dioxins/furans, volatile organic compounds, total suspended particulate (TSP), metals, and asbestos as described in the PAMP. The 16 sets of air samples will consist of 8 pairs of upwind and downwind samples.

2.1 SITE SELECTION AND LOCATIONS

The proposed upwind site is located at the Basic Water Company reservoir approximately 1 mile southeast of the BMI industrial complex. The proposed downwind site is located on the southwest side of Boulder Highway between Warm Springs Road and Water Street. These two locations have been selected due to their location with respect to the plants and prevailing wind patterns. In addition, the proposed downwind location is set away from the BMI haul roads and city streets to minimize potential contamination from these areas.

Each sampling station will be configured to collect ambient air samples for a continuous 10-hour sample period. Exact sample dates and times will need to be established, but the preliminary approach is to begin collecting samples in mid-June 2009, presuming approval of this work plan by June 5, 2009. 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 plant site air monitoring station locations are presented in Figure 1.



Location

- Downwind Location
- Upwind Location

0 750 1,500 3,000 Feet

Source: http://keck.library.unr.edu/data/naips/naips.htm

L.Niell Tetra Tech 4/2009

BMI Complex
Henderson, NV

Figure 1

BMI Plant Site
Air Monitoring Locations

2.2 SAMPLING EQUIPMENT SPECIFICATIONS AND OPERATION

The sampling parameters are based on the PAMP 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 (if required)

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.

The sampling approach proposed by Tetra Tech will be to collect 10-hr samples twice per week from approximately 7:00 A.M. to 5:00 P.M. over a four week period beginning mid-June 2009. Air quality monitoring parameters will also be consistent with the BMI Complex Phase III air monitoring approach. 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 sampling personnel.

Tetra Tech staff will be on-site for approximately one to two days to install the temporary sampling 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 eight (8) sample collection events over the

duration of the four-week sample 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. 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:

- OFF-03-061609 (where OFF denotes plant off-site location, 03 denotes upwind site, and 061609 denotes that sample was collected on June 16, 2009)

- OFF-04-061609 (where OFF denotes plant off-site location, 04 denotes downwind site, and 061609 denotes that sample was collected on June 16, 2009)

TABLE 1
BMI COMPLEX INDUSTRIAL 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	10hr. cont. sample/twice per week for 4 weeks	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	10hr. cont. sample/twice per week for 4 weeks	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	10hr. cont. sample/twice per week for 4 weeks	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	10hr. cont. sample/twice per week for 4 weeks	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	10hr. cont. sample/twice per week for 4 weeks	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 sample data collected at the off-site locations represents a wide range of chemical compounds as presented in the PAMP. All sample data 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 this short-term air sampling project at the BMI Complex Site. The objective of the upwind/downwind evaluation is to evaluate if the BMI plant site emissions are impacting the Eastside and CAMU air quality monitoring data.

The upwind/downwind evaluation will be conducted using meteorological data and data collected at sites OFF-03 and OFF-04. 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 to show percent increase from upwind to downwind location

A summary of results will be presented in a technical memorandum. Each analytical method and associated chemical compounds will be presented for each of the sample locations and upwind/downwind analysis and analytical results will be compared to the appropriate screening criteria to determine potential impacts from BMI plant site emissions.

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.

U.S. EPA 1999. "Compendium Method TO-13A Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Ambient Air Using Gas *Chromatography/Mass Spectrometry (GC/MS.*" January 1999.

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