



August 27, 2009

Mr. Brian A. Rakvica, P.E.  
Nevada Division of Environmental Protection  
Bureau of Corrective Actions  
2030 E. Flamingo Road, Suite 230  
Las Vegas, Nevada 89119-0818

**Subject: Removal Action Work Plan for Soil, Southern RIBs Sub-Area, Henderson, Nevada, Revision 3**

Dear Brian:

Basic Remediation Company (BRC) appreciates the opportunity to submit this Removal Action Work Plan (RAWP) to address the remediation of impacted soil at the Southern RIBs sub-area. The Southern RIBs sub-area (hereinafter “the Site”) is one of several sub-areas of the BMI Common Areas (Eastside) located in Clark County, Nevada. The Site, with a revised northern boundary, encompasses an area of approximately 84.5 acres (Figure 1). The Site is located outside of any known areas used for any waste disposal associated with the BMI Common Areas; however, the eastern half of the Site comprises an area formerly used by the City of Henderson as Rapid Infiltration Basins (RIBs) associated with municipal wastewater treatment.

This revision of the RAWP, Revision 3, incorporates (1) comments received from the Nevada Division of Environmental Protection (NDEP), dated March 10, 2009, on Revision 0 of the RAWP; (2) comments received from the NDEP, dated March 13, 2009, on Revision 1 of the RAWP; (3) discussions between BRC and NDEP subsequent to receipt of these comments; and (4) revisions to the northern boundary adjacent to the Staging sub-area.

The conclusion that remediation of soil at each of the Sites is needed is based on the findings of the field investigations carried out in accordance with the Sampling and Analysis Plan (SAP) for the Southern RIBs sub-area. The overall goal of this RAWP is to present a cleanup strategy for the Site that effectively reduces, to the extent feasible, the human health risks associated with the identified soil in the impacted areas of the Site. All work will be completed under the direction of a State of Nevada Certified Environmental Manager.

### **Proposed Remediation Areas**

There are three different types of remediation areas proposed for the Site. These are areas associated with 1) elevated asbestos levels, 2) chemical concentrations above screening levels in samples along the northern Site boundary, and 3) chemical concentrations (primarily dioxins/furans) above screening levels in samples elsewhere on the Site. Figure 1 identifies the sample locations and constituents triggering the proposed remediation at the Site.

The proposed remediation areas associated with elevated asbestos levels were developed based on a Thiessen or Voronoi map overlaid across the Site. Voronoi maps are constructed from a series of polygons formed around each sample location. Voronoi polygons are created so that every location within a polygon is closer to the sample location in that polygon than any other sample location. These polygons do not take into account the respective concentrations at each sample location. These polygons were used as the basis for the areal extent of remediation for each of the locations with elevated asbestos levels. Elevated asbestos levels are generally defined as locations with any detected long amphibole fibers and/or locations with greater than five long chrysotile fibers. There is one location with elevated asbestos levels (SRC1-AH16). Therefore one polygon associated with elevated asbestos levels is proposed for remediation at the Site. This remediation area is shown on Figure 1.

There were six sample locations with elevated chemical concentrations along the northern Site boundary. Because the majority of the elevated chemical concentrations are found along the northern Site boundary, the eastern portion of this boundary (along the RIBs) was moved to the south, such that most of these sample locations are now located within the Staging sub-area. For the two remaining locations, a linear remediation area, which encompasses both of the sample locations with elevated chemical concentrations, is proposed. This remediation area extends along the northern Site boundary, to a width of at least 25 feet beyond both of the locations with elevated chemical concentrations. This remediation area is shown on Figure 1.

There are three other sample locations with elevated chemical concentrations, all with elevated dioxins/furans. Similar to the polygon remediation approach for asbestos above, the proposed remediation for sample location SRC1-AI19 for dioxins/furans is the entire polygon, as shown on Figure 1. The other two locations with elevated dioxins/furans are in an area east of the RIBs associated with historical site features/activities. Therefore, this entire area east of the RIBs is proposed for remediation. This area is shown on Figure 1.

### **Confirmation Sampling**

Following remediation, confirmation surface soil sampling will be collected at the original sample location for the polygon remediation area around sample location SRC1-AH16. Because additional samples collected around sample location SRC1-AI19 confirmed the presence of dioxins/furans in this area, confirmation samples will be collected at the original sample location and from four samples to the east, north, west, and south of this location. For the northern Site boundary remediation area, confirmation samples will be collected at the east and west edges of the remediation area, and along the north and south remediation edges at both original sample locations and mid-way between the two locations. For the area east of the RIBs, confirmation samples will be collected at the original sample locations within this area, and because this remediation area is bounded by berms, sidewall samples will be collected from halfway up the excavated berm at four sample locations. Proposed confirmation sample locations are shown on Figure 2.

As noted above, because the majority of the elevated chemical concentrations were found along the northern Site boundary, this boundary was moved to the south, such that these sample locations are now located within the Staging sub-area. In order to characterize the revised northern boundary, 15 sample locations, spaced 200 feet apart, are included in this RAWP. These proposed sample locations are shown on Figure 2.

Field activities will be conducted in accordance with applicable standard operating procedures (SOPs; BRC, ERM and MWH 2008). The BRC Quality Assurance Project Plan (QAPP; BRC and ERM 2009) and Health and Safety Plan (HASP; BRC and MWH 2005) prepared for the BMI Common Areas will be used for confirmation soil sampling. Table 1 presents the proposed analyte list for each of the confirmation sample locations.

Following collection and analysis of confirmation soil samples, the data will be discussed with the NDEP. If results are considered acceptable, a risk assessment will be conducted to evaluate the potential risks to future on-site human receptors at each Site. The receptors identified to be evaluated in the risk assessment will be consistent with the proposed development of the Site.

### **Schedule**

Once final approval of the RAWP is received from NDEP, field implementation activities can commence within two weeks. BRC will provide NDEP with at least two days notice prior to the initiation of field activities at the Site. It is anticipated that this work can be completed within one week, depending on field conditions. The confirmation soil samples will be submitted to the laboratories and placed on a standard turn around time.

### **Closing Remarks**

See attached for appropriate certification language and signature. Please direct any remaining questions or comments you may have to me at 626-382-0001.

Sincerely,

Basic Remediation Company



Ranajit Sahu, CEM  
Project Manager

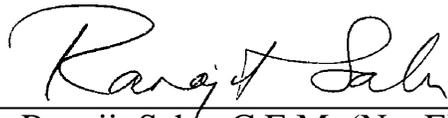
cc: Jim Najima, NDEP, BCA, Carson City, NV 89701

Attachments: Figure 1 – Southern RIBs Sub-Area Proposed Remediation Areas  
Figure 2 – Southern RIBs Sub-Area Confirmation Sample Locations  
Table 1 – Proposed Confirmation Sample Analyses

### **References**

- Basic Remediation Company (BRC) and MWH. 2005. BRC Health and Safety Plan, BMI Common Areas, Clark County, Nevada. October.
- Basic Remediation Company (BRC), ERM, and MWH. 2008. BRC Field Sampling and Standard Operating Procedures, BMI Common Areas, Clark County, Nevada. December.
- Basic Remediation Company (BRC) and ERM. 2009. BRC Quality Assurance Project Plan. BMI Common Areas, Clark County, Nevada. April.

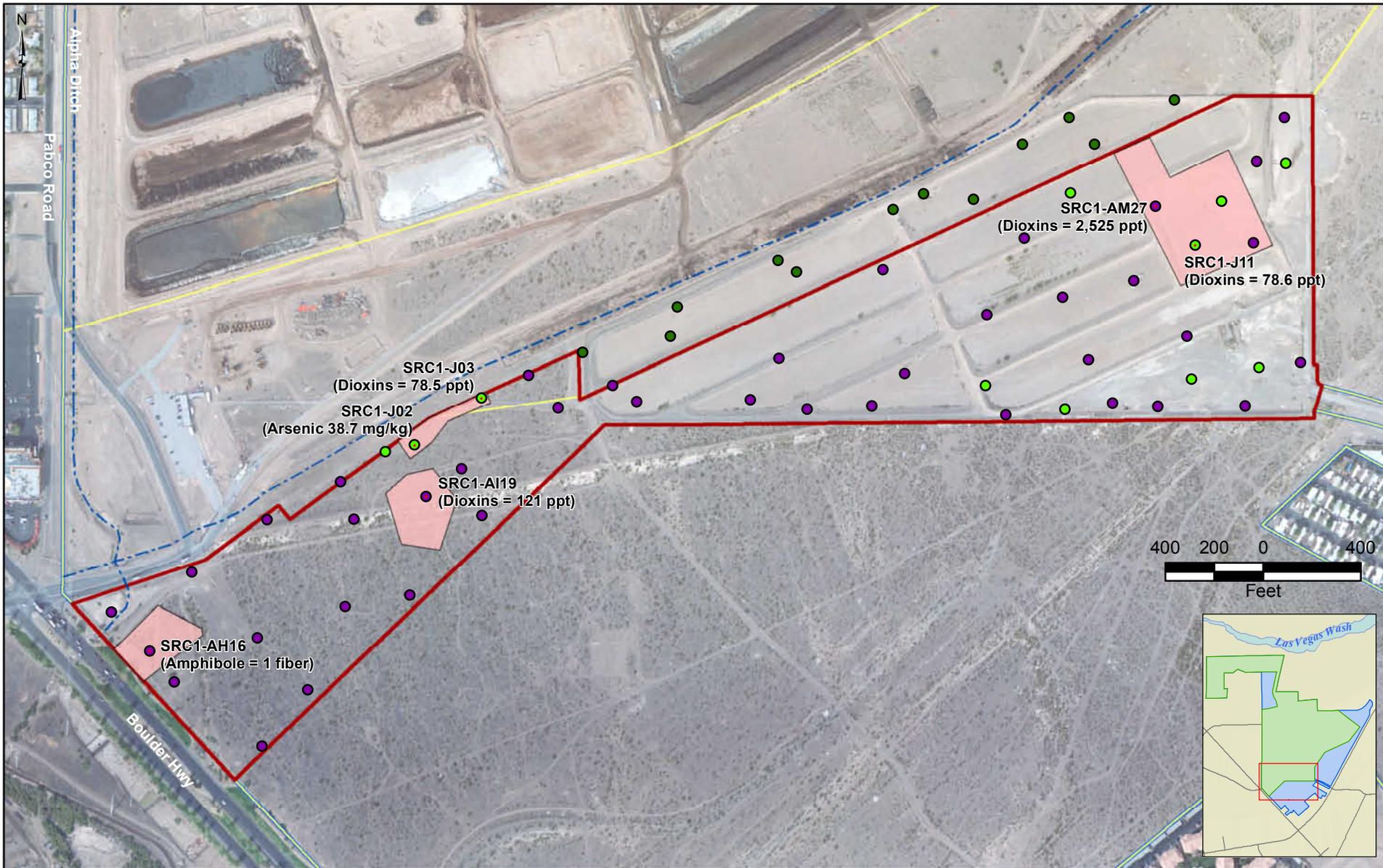
I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable 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.



August 27, 2009

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



- |   |   |   |
|---|---|---|
|  Southern RIBs Sub-Area  |  Southern RIBs Sub-Area Soil Samples |  Proposed Scrape Areas (8.1 Acres Total) |
|  Site AOC3 Boundary      |  Biased Sample Location (11)         |   |
|  Eastside Soil Sub-Areas |  Random Sample Location (40)         |   |
|   |  Off-Site Following Revised Boundary |   |
|   |  Potential Impacts Location          |   |

BMI Common Areas (Eastside)  
Clark County, Nevada

FIGURE 1

**SOUTHERN RIBS  
SUB-AREA PROPOSED  
REMEDATION AREAS**





**TABLE 1**  
**PROPOSED CONFIRMATION SAMPLE ANALYSES**  
**SOUTHERN RIBs SUB-AREA**  
**(Page 1 of 2)**

Area	Sample Location	Northing	Easting	Latitude	Longitude	Location Notes	Analyses
1	SRC2-AH16R	830774.2006	26720345.61	36.04998	-114.99264	--	Asbestos
2	SRC2-AI19C	831904.1573	26720976.36	36.0517	-114.9888	--	Dioxins/furans; PCB congeners
	SRC2-AI19E	831969.9361	26720931.72	36.05157	-114.98858	--	Dioxins/furans; PCB congeners
	SRC2-AI19N	831905.9098	26721039.56	36.05187	-114.9888	--	Dioxins/furans; PCB congeners
	SRC2-AI19S	831912.6494	26720857.59	36.05137	-114.98878	--	Dioxins/furans; PCB congeners
	SRC2-AI19W	831789.6515	26720970.48	36.05168	-114.98919	--	Dioxins/furans; PCB congeners
3	SRC2-J02E	831968.2841	26721320.19	36.05264	-114.98858	--	Dioxins/furans; PCB congeners; Metals
	SRC2-J02N	831827.7757	26721223.87	36.05238	-114.98906	--	Dioxins/furans; PCB congeners; Metals
	SRC2-J02S	831872.1979	26721159.39	36.0522	-114.98891	--	Dioxins/furans; PCB congeners; Metals
	SRC2-J02W	831815.4817	26721170.94	36.05223	-114.9891	--	Dioxins/furans; PCB congeners; Metals
	SRC2-J03E	832156.6346	26721385.04	36.05282	-114.98794	--	Dioxins/furans; PCB congeners; Metals
	SRC2-J03N	832120.0488	26721396.18	36.05285	-114.98806	--	Dioxins/furans; PCB congeners; Metals
	SRC2-J03S	832141.5231	26721350.05	36.05272	-114.98799	--	Dioxins/furans; PCB congeners; Metals
	SRC2-J03W	831991.4559	26721284.28	36.05254	-114.9885	--	Dioxins/furans; PCB congeners; Metals
4	SRC2-AL28C	835285.6839	26722013.95	36.05449	-114.97734	--	Dioxins/furans; PCB congeners
	SRC2-AM27C	834886.8917	26722161.8	36.0549	-114.97869	--	Dioxins/furans; PCB congeners
	SRC2-J11C	835049.373	26722003.85	36.05447	-114.97814	--	Dioxins/furans; PCB congeners
	SRC2-J13C	835154.8178	26722182.92	36.05496	-114.97778	--	Dioxins/furans; PCB congeners
	SRC2-J16SWall	834740.0882	26722390.2	36.05553	-114.97918	Sample to be collected halfway up the side of excavated berm	Dioxins/furans; PCB congeners
	SRC2-J17SWall	834894.0385	26722027.84	36.05454	-114.97867	Sample to be collected halfway up the side of excavated berm	Dioxins/furans; PCB congeners
	SRC2-J18SWall	835193.7851	26721931.81	36.05427	-114.97766	Sample to be collected halfway up the side of excavated berm	Dioxins/furans; PCB congeners
	SRC2-J19SWall	835058.4626	26722334.86	36.05538	-114.9781	Sample to be collected halfway up the side of excavated berm	Dioxins/furans; PCB congeners

**TABLE 1**  
**PROPOSED CONFIRMATION SAMPLE ANALYSES**  
**SOUTHERN RIBs SUB-AREA**  
**(Page 2 of 2)**

Area	Sample Location	Northing	Easting	Latitude	Longitude	Location Notes	Analyses
North Boundary	SRC2-J16	835114.7717	26722555.03	36.05598	-114.97791	--	Full Sub-Area Soil Analyte List
	SRC2-J17	834928.0611	26722467.9	36.05574	-114.97854	--	Full Sub-Area Soil Analyte List
	SRC2-J18	834560.8636	26722299.86	36.05529	-114.97979	--	Full Sub-Area Soil Analyte List
	SRC2-J19	834380.3767	26722214.28	36.05506	-114.9804	--	Full Sub-Area Soil Analyte List
	SRC2-J20	834199.8898	26722131.82	36.05483	-114.98101	--	Full Sub-Area Soil Analyte List
	SRC2-J21	834022.5147	26722046.24	36.0546	-114.98162	--	Full Sub-Area Soil Analyte List
	SRC2-J22	833838.916	26721962.22	36.05437	-114.98224	--	Full Sub-Area Soil Analyte List
	SRC2-J23	833656.8731	26721879.76	36.05415	-114.98286	--	Full Sub-Area Soil Analyte List
	SRC2-J24	833481.054	26721798.85	36.05393	-114.98345	--	Full Sub-Area Soil Analyte List
	SRC2-J25	833299.0112	26721713.28	36.0537	-114.98407	--	Full Sub-Area Soil Analyte List
	SRC2-J26	833115.4124	26721627.7	36.05347	-114.98469	--	Full Sub-Area Soil Analyte List
	SRC2-J27	832928.7018	26721540.57	36.05323	-114.98533	--	Full Sub-Area Soil Analyte List
	SRC2-J28	832741.9912	26721454.99	36.053	-114.98596	--	Full Sub-Area Soil Analyte List
	SRC2-J29	832562.1212	26721377.69	36.05279	-114.98657	--	Full Sub-Area Soil Analyte List
SRC2-J30	832502.9518	26721546.23	36.05325	-114.98677	--	Full Sub-Area Soil Analyte List	