

September 16, 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, Galleria North and Sunset North Sub-Areas, Henderson, Nevada

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 Galleria North and Sunset North sub-areas. The Galleria North and Sunset North sub-areas are two of several sub-areas of the BMI Common Areas (Eastside) located in Clark County, Nevada. The Galleria North and Sunset North sub-areas are 144.3 and 44.3 acres, respectively (Figure 1). Portions of the Galleria North sub-area are located outside of any known areas used for any waste disposal associated with the BMI Common Areas; however, the remainder of the Galleria North sub-area and all of the Sunset North subarea are within the area used for waste disposal.

The conclusion that remediation of soil at each of the sub-areas is needed is based on the findings of the field investigations carried out in accordance with the Sampling and Analysis Plans (SAPs) for the Galleria North and Sunset North sub-areas. The overall goal of this RAWP is to present a cleanup strategy for the sub-areas that effectively reduces, to the extent feasible, the human health risks associated with the identified soil in the impacted areas of these sub-areas. 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 sub-areas, with some location-specific modifications based on conceptual site model (CSM) considerations. These are areas associated with 1) elevated asbestos levels, 2) chemical concentrations above comparison levels in random and/or judgmental (other than dioxins/furans) samples collected at the sub-areas, and 3) dioxins/furans concentrations above comparison levels in judgmental samples collected at the sub-areas. Residential comparison levels were used for the Galleria North sub-area, while worker comparison levels were used for the Sunset North sub-area since this sub-area is planned for commercial development only. Figure 1 identifies the sample locations and constituents triggering the proposed remediation at the sub-areas.

The proposed remediation areas associated with elevated asbestos levels and chemical concentrations (except for dioxins/furans at judgmental locations) above comparison levels were

developed based on a Thiessen or Voronoi map overlaid across the sub-areas. 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 and chemical concentrations (other than dioxins/furans for judgmental locations). 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 are two sample locations with elevated asbestos levels within the Sunset North sub-area, and none within the Galleria North sub-area. The proposed remediation polygon areas for these elevated asbestos levels are shown on Figure 1.

There are 22 locations with dioxins/furans concentrations above comparison levels in random sample locations and/or chemical concentrations (other than dioxins/furans) above comparison levels in samples collected at the Galleria North sub-area, and one within the Sunset North sub-area (co-located with one of the samples with elevated asbestos levels). Each of these proposed remediation polygon areas (contiguous polygons have been merged) are shown on Figure 1.

There are three exceptions to the polygon remediation areas based on CSM considerations. One of these is a lead exceedance (greater than 400 mg/kg) at location GNC1-JS09, which is a judgmental sample. Because this is a sample associated with a debris pile, it is likely an isolated occurrence. Therefore, the proposed remediation is similar to that for dioxins/furans exceedances at judgmental samples as described below. The other two locations are from samples collected within the beta ditch. Therefore, the proposed remediation area is a segment of the ditch, to a width of 50 feet, that extends to half the distance to the ditch samples to the north and south of each exceedance location.

There are 12 locations with dioxins/furans concentrations above comparison levels in judgmental samples collected at the Galleria North sub-area, and none within the Sunset North sub-area. For these exceedance locations, a 50 × 50 foot remediation area is proposed. Each of these remediation areas are shown on Figure 1.

Ten locations have elevated levels of chemicals collected from a subsurface sample. The majority of these were elevated levels of arsenic; however, because subsurface (and maybe surface) conditions may be consistent with the deeper alluvium soils, which have higher levels of arsenic in background soils, no remediation is proposed for these locations. Three of these deeper locations had elevated levels of radionuclides. Although there is no CSM reason for there to be subsurface radionuclides in the absence of surface radionuclides, localized remediation of these deeper locations will be conducted. A 10 × 10 foot remediation area is proposed. Each of these remediation areas are shown on Figure 1.

Confirmation Sampling

Following remediation, confirmation surface soil sampling will be collected at the original sample location for the polygon and ditch remediation areas. For the 50 × 50 foot remediation areas, confirmation samples will be collected from the four corners and center of the remediation area. For the 10 × 10 foot deep excavation remediation areas, one confirmation sample will be collected at the bottom center of each excavation. Proposed confirmation 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 sub-areas. The receptors identified to be evaluated in the risk assessment will be consistent with the proposed development of the sub-areas.

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 each sub-area. 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 – Galleria North and Sunset North Sub-Areas Proposed Remediation Areas

Figure 2 – Galleria North and Sunset North Sub-Areas Confirmation Sample Locations

Table 1 – Proposed Confirmation Sample Analyses

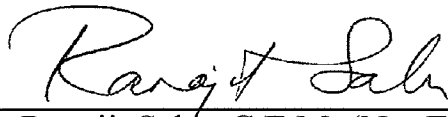
References

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.



September 16, 2009

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



FIGURE 1

GALLERIA NORTH AND SUNSET NORTH SUB-AREAS PROPOSED REMEDIATION AREAS

Prepared by: MKJ (ERM) Date: 09/16/09

Job No: 060276
 FILE: GISBRCCL_301NPAWFIGURE_1.MXD

BMI Common Areas (Eastside)
Clark County, Nevada

Surface Soil Exceedances

- Non-Exceedances
- TCDD and/or Other Chemicals
- TCDD Only
- Asbestos Exceedance

Other Symbols

- Galleria North and Sunset North Sub-Areas
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Ditches
- Exceedances in Subsurface Soil

Proposed Remediation Areas (19.5 Acres)



Legend

- Galleria North and Sunset North Sub-Areas
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Ditches
- Confirmation Sample Location
- Proposed Remediation Areas (19.5 Acres)

Scale

400 200 0 200 400 Feet

FIGURE 2

GALLERIA NORTH AND SUNSET NORTH SUB-AREAS CONFIRMATION SAMPLE LOCATIONS

BMI Common Areas (Eastside)
Clark County, Nevada

Prepared by
MKJ (ERM)

Date
09/16/09

FILE: GIS\BRC\GNC_NORTH\FIGURE_2.MXD

JOB No. 006276
Basic Remediation Company

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

Area	Sample Location	Northing	Easting	Latitude	Longitude	Depth	Analyses
1	SNC2-JD04C	26727306.01459	830496.36599	36.06911	-114.99344	0	Metals; Asbestos
2	SNC2-BB16C	26727874.76586	830750.54923	36.07067	-114.99256	0	Asbestos
3	GNC2-JD01C	26728020.11468	830570.64763	36.07107	-114.99317	0	Metals
4	GNC2-JS06C	26728134.87933	831981.55380	36.07136	-114.98839	0	Perchlorate
5	GNC2-BC20C	26728319.71751	832298.74695	36.07186	-114.98732	0	Dioxins/Furans; PCB Congeners
6	GNC2-JD07C	26728670.65773	831993.88618	36.07283	-114.98834	0	Dioxins/Furans; PCB Congeners
7	GNC2-JD09C	26729041.11568	831843.01899	36.07385	-114.98884	0	SVOCs; PAHs
8	GNC2-BE20C	26728965.30583	832317.70973	36.07364	-114.98724	0	Dioxins/Furans; PCB Congeners; Metals
9	GNC2-JP01C	26728087.06321	832626.24265	36.07122	-114.98621	0	Dioxins/Furans; PCB Congeners; Metals
10	GNC2-BC23C	26728278.51090	833409.85441	36.07173	-114.98356	0	Dioxins/Furans; PCB Congeners
	GNC2-JP04C	26728214.84999	833125.55008	36.07156	-114.98452	0	Dioxins/Furans; PCB Congeners; Metals
11	GNC2-BE22C	26729055.38172	832953.79927	36.07387	-114.98509	0	Dioxins/Furans; PCB Congeners
12	GNC2-BC24C	26728489.77046	833830.99086	36.07231	-114.98213	0	Dioxins/Furans; PCB Congeners
	GNC2-BD25C	26728648.28891	834146.10247	36.07274	-114.98106	0	Dioxins/Furans; PCB Congeners
13	GNC2-BC26C	26728425.42355	834592.30800	36.07212	-114.97955	0	Dioxins/Furans; PCB Congeners
	GNC2-BD26C	26728655.05143	834491.22848	36.07275	-114.97989	0	Dioxins/Furans; PCB Congeners
14	GNC2-JB03C	26728073.92981	834879.02000	36.07115	-114.97859	0	Dioxins/Furans; PCB Congeners; Metals
15	GNC2-BC28C	26728293.56175	835361.87079	36.07174	-114.97695	0	Dioxins/Furans; PCB Congeners
	GNC2-BD28C	26728550.65853	835404.55165	36.07245	-114.97680	0	Dioxins/Furans; PCB Congeners
	GNC2-JA12C	26728423.08781	835497.36388	36.07209	-114.97649	0	Dioxins/Furans; PCB Congeners
	GNC2-JA13C	26728639.72508	835316.29392	36.07269	-114.97710	0	Dioxins/Furans; PCB Congeners
16	GNC2-BD29C	26728767.96884	835638.78032	36.07304	-114.97601	0	Dioxins/Furans; PCB Congeners
	GNC2-BE29C	26728971.70533	835541.71204	36.07360	-114.97633	0	SVOCs; PAHs
LEAD 1	GNC2-JS09C	26728762.29547	832107.03703	36.07308	-114.98796	0	Metals
	GNC2-JS09NE	26728787.81317	832130.46152	36.07315	-114.98788	0	Metals
	GNC2-JS09NW	26728787.81317	832080.46152	36.07315	-114.98805	0	Metals
	GNC2-JS09SE	26728737.81317	832130.46152	36.07302	-114.98788	0	Metals
	GNC2-JS09SW	26728737.81317	832080.46152	36.07302	-114.98805	0	Metals
TCDD 1	GNC2-JS10C	26728800.48602	832276.16660	36.07319	-114.98738	0	Dioxins/Furans; PCB Congeners
	GNC2-JS10NE	26728825.48602	832301.16660	36.07325	-114.98730	0	Dioxins/Furans; PCB Congeners
	GNC2-JS10NW	26728825.48602	832251.16660	36.07325	-114.98747	0	Dioxins/Furans; PCB Congeners
	GNC2-JS10SE	26728775.48602	832301.16660	36.07312	-114.98730	0	Dioxins/Furans; PCB Congeners
	GNC2-JS10SW	26728775.48602	832251.16660	36.07312	-114.98747	0	Dioxins/Furans; PCB Congeners
TCDD 2	GNC2-JP02C	26728163.79319	833768.48750	36.07141	-114.98235	0	Dioxins/Furans; PCB Congeners
	GNC2-JP02NE	26728188.79320	833793.48750	36.07148	-114.98226	0	Dioxins/Furans; PCB Congeners
	GNC2-JP02NW	26728188.79320	833743.48750	36.07148	-114.98243	0	Dioxins/Furans; PCB Congeners
	GNC2-JP02SE	26728138.79320	833793.48750	36.07134	-114.98226	0	Dioxins/Furans; PCB Congeners
	GNC2-JP02SW	26728138.79320	833743.48750	36.07134	-114.98243	0	Dioxins/Furans; PCB Congeners
TCDD 3	GNC2-JB05C	26728623.85168	833715.26643	36.07268	-114.98252	0	Dioxins/Furans; PCB Congeners
	GNC2-JB05NE	26728648.85168	833740.26643	36.07274	-114.98243	0	Dioxins/Furans; PCB Congeners
	GNC2-JB05NW	26728648.85168	833690.26643	36.07275	-114.98260	0	Dioxins/Furans; PCB Congeners
	GNC2-JB05SE	26728598.85168	833740.26643	36.07261	-114.98243	0	Dioxins/Furans; PCB Congeners
	GNC2-JB05SW	26728598.85168	833690.26643	36.07261	-114.98260	0	Dioxins/Furans; PCB Congeners
TCDD 4	GNC2-JB04C	26728320.65151	833898.07829	36.07184	-114.98191	0	Dioxins/Furans; PCB Congeners
	GNC2-JS04NE	26728342.67024	833922.15851	36.07190	-114.98182	0	Dioxins/Furans; PCB Congeners
	GNC2-JS04NW	26728342.67024	833872.15851	36.07190	-114.98199	0	Dioxins/Furans; PCB Congeners
	GNC2-JS04SE	26728292.67024	833922.15851	36.07176	-114.98182	0	Dioxins/Furans; PCB Congeners
	GNC2-JS04SW	26728292.67024	833872.15851	36.07176	-114.98199	0	Dioxins/Furans; PCB Congeners
TCDD 5	GNC2-JB10C	26728452.93002	834150.74509	36.07220	-114.98105	0	Dioxins/Furans; PCB Congeners
	GNC2-JB10NE	26728477.93002	834175.74510	36.07227	-114.98096	0	Dioxins/Furans; PCB Congeners
	GNC2-JB10NW	26728477.93002	834125.74510	36.07227	-114.98113	0	Dioxins/Furans; PCB Congeners
	GNC2-JB10SE	26728427.93002	834175.74510	36.07213	-114.98096	0	Dioxins/Furans; PCB Congeners
	GNC2-JB10SW	26728427.93002	834125.74510	36.07213	-114.98113	0	Dioxins/Furans; PCB Congeners

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Area	Sample Location	Northing	Easting	Latitude	Longitude	Depth	Analyses
TCDD 6	GNC2-JP05C	26728076.80754	834250.69056	36.07116	-114.98072	0	Dioxins/Furans; PCB Congeners
	GNC2-JP05NE	26728101.80755	834275.69056	36.07123	-114.98063	0	Dioxins/Furans; PCB Congeners
	GNC2-JP05NW	26728101.80755	834225.69056	36.07123	-114.98080	0	Dioxins/Furans; PCB Congeners
	GNC2-JP05SE	26728051.80755	834275.69056	36.07110	-114.98063	0	Dioxins/Furans; PCB Congeners
	GNC2-JP05SW	26728051.80755	834225.69056	36.07110	-114.98080	0	Dioxins/Furans; PCB Congeners
TCDD 7	GNC2-JS17C	26728119.87590	835357.32541	36.07126	-114.97697	0	Dioxins/Furans; PCB Congeners
	GNC2-JS17NE	26728143.75467	835381.06153	36.07133	-114.97689	0	Dioxins/Furans; PCB Congeners
	GNC2-JS17NW	26728143.75467	835331.06153	36.07133	-114.97706	0	Dioxins/Furans; PCB Congeners
	GNC2-JS17SE	26728093.75467	835381.06153	36.07119	-114.97689	0	Dioxins/Furans; PCB Congeners
	GNC2-JS17SW	26728093.75467	835331.06153	36.07119	-114.97706	0	Dioxins/Furans; PCB Congeners
TCDD 8	GNC2-JS15C	26728407.66896	835065.44051	36.07206	-114.97795	0	Dioxins/Furans; PCB Congeners
	GNC2-JS15NE	26728432.66896	835090.44051	36.07213	-114.97787	0	Dioxins/Furans; PCB Congeners
	GNC2-JS15NW	26728432.66896	835040.44051	36.07213	-114.97804	0	Dioxins/Furans; PCB Congeners
	GNC2-JS15SE	26728382.66896	835090.44051	36.07199	-114.97787	0	Dioxins/Furans; PCB Congeners
	GNC2-JS15SW	26728382.66896	835040.44051	36.07199	-114.97804	0	Dioxins/Furans; PCB Congeners
TCDD 9	GNC2-JP03C	26728619.52236	835082.72721	36.07264	-114.97789	0	Dioxins/Furans; PCB Congeners
	GNC2-JP03NE	26728644.52236	835107.72721	36.07271	-114.97781	0	Dioxins/Furans; PCB Congeners
	GNC2-JP03NW	26728644.52236	835057.72721	36.07271	-114.97797	0	Dioxins/Furans; PCB Congeners
	GNC2-JP03SE	26728594.52236	835107.72721	36.07257	-114.97781	0	Dioxins/Furans; PCB Congeners
	GNC2-JP03SW	26728594.52236	835057.72721	36.07257	-114.97798	0	Dioxins/Furans; PCB Congeners
TCDD 10	GNC2-JB09C	26728799.23216	834846.32194	36.07314	-114.97869	0	Dioxins/Furans; PCB Congeners
	GNC2-JB09NE	26728824.23216	834871.32194	36.07321	-114.97860	0	Dioxins/Furans; PCB Congeners
	GNC2-JB09NW	26728824.23216	834821.32194	36.07321	-114.97877	0	Dioxins/Furans; PCB Congeners
	GNC2-JB09SE	26728774.23216	834871.32194	36.07307	-114.97860	0	Dioxins/Furans; PCB Congeners
	GNC2-JB09SW	26728774.23216	834821.32194	36.07307	-114.97877	0	Dioxins/Furans; PCB Congeners
TCDD 11	GNC2-JS16C	26728835.94867	834975.41993	36.07324	-114.97825	0	Dioxins/Furans; PCB Congeners
	GNC2-JS16NE	26728860.94867	835000.41994	36.07331	-114.97816	0	Dioxins/Furans; PCB Congeners
	GNC2-JS16NW	26728860.94867	834950.41994	36.07331	-114.97833	0	Dioxins/Furans; PCB Congeners
	GNC2-JS16SE	26728810.94867	835000.41994	36.07317	-114.97816	0	Dioxins/Furans; PCB Congeners
	GNC2-JS16SW	26728810.94867	834950.41994	36.07317	-114.97833	0	Dioxins/Furans; PCB Congeners
TCDD 12	GNC2-JS07C	26728886.20879	835249.89217	36.07337	-114.97732	0	Dioxins/Furans; PCB Congeners
	GNC2-JS07NE	26728911.20880	835274.89217	36.07344	-114.97723	0	Dioxins/Furans; PCB Congeners
	GNC2-JS07NW	26728911.20880	835224.89217	36.07344	-114.97740	0	Dioxins/Furans; PCB Congeners
	GNC2-JS07SE	26728861.20880	835274.89217	36.07330	-114.97724	0	Dioxins/Furans; PCB Congeners
	GNC2-JS07SW	26728861.20880	835224.89217	36.07330	-114.97740	0	Dioxins/Furans; PCB Congeners
Deep 1	SNC2-JP04C	26726766.80015	831280.73630	36.06762	-114.99079	10	Radionuclides; Metals
Deep 2	GNC2-BD25C	26728648.28891	834146.10247	36.07274	-114.98106	13	Radionuclides; Metals
Deep 3	GNC2-JP07C	26728681.92511	834689.40079	36.07282	-114.97922	4	Radionuclides; Metals