Basic Remediation COMPANY

TECHNICAL MEMORANDUM

To: Greg Lovato (NDEP)

From: Ranajit Sahu (BRC)

cc: Lee Farris (BRC)
Mark Jones (ERM)

Date: April 11, 2013

Subject: Technical Memorandum – Request for Inclusion of Supplemental Galleria Dr. Right-of-Way Areas into the Galleria Dr. Right-of-Way No Further Action Determination for, BMI Common Areas (Eastside), Clark County, Nevada

1. Introduction and Purpose

The Nevada Division of Environmental Protection (NDEP) granted a No Further Action Determination (NFAD) for the Galleria Dr. Right-of-Way (ROW), dated January 28, 2013, for purposes of construction of the Galleria Dr. roadway. The area for the Galleria Dr. ROW NFAD is shown on Figure 1. Subsequent to this NFAD additional areas have been identified that are needed for the Galleria Dr. ROW. These supplemental ROW areas are also shown on Figure 1 (those areas identified as 'Supplemental ROW West' and 'Supplemental ROW East' on this figure). The purpose of this Technical Memorandum is to have these supplemental ROW areas included within the existing Galleria Dr. ROW NFAD.[1]

This Technical Memorandum provides information regarding the data collected from the supplemental ROW areas. Sample locations within these supplemental ROW areas are shown on Figure 1 and in Table 1 (including sample-specific collection depths). Note that data collected within these supplemental ROW areas are from the same datasets for which the Galleria Dr. ROW data were obtained. Therefore, these supplemental ROW areas data have undergone the same level of data review and validation as the Galleria Dr. ROW data. Thus, the conclusions from the Galleria Dr. ROW report that the collected data are adequate in terms of quality for use in a risk assessment apply for the supplemental ROW areas data as well.

This Technical Memorandum provides the following:

[1] Note that these supplemental ROW areas are specifically for the development of Galleria Drive. Sample locations within both the supplemental NFAD request area, as well as the original Galleria Dr. ROW NFAD area that are ultimately planned for development for land use other than as a roadway will be re-evaluated in subsequent human health risk assessment and closure plans for the appropriate land use.

1. A summary of the data within the supplemental ROW areas (both soil and surface flux data);

2. A comparison of the metals and radionuclides data within the supplemental ROW areas to that from the Galleria Dr. ROW report; and

3. An update to the human health risk estimates with the inclusion of the supplemental ROW areas data into that used for the Galleria Dr. ROW report.

An electronic version of this Technical Memorandum, including original format files (MS Word and MS Excel) of all text, tables, and risk calculations are included on the compact disc (CD) in Attachment A. Also included in Attachment A is all data for the supplemental ROW areas, as well as TCDD toxicity equivalency (TEQ) calculations.

2. Supplemental ROW Areas Data Summary

Table 2 provides a matrix showing which analytical suite was analyzed for each of the soil samples collected from the supplemental ROW areas. These are consistent with those from the Galleria Dr. ROW report. Soil data for the supplemental ROW areas, including the number of instances in which chemical concentrations exceed comparison levels (see the Galleria Dr. ROW report for a discussion on comparison levels), are listed in Table 3. As shown in this table, there are no unusual chemical concentrations as compared to those used for the Galleria Dr. ROW report. That is, there are no chemicals, other than metals and radionuclides, that exceed their respective NDEP basic comparison levels (BCLs) for outdoor worker soil (NDEP 2013), and other than metals and radionuclides, only nitrate, perchlorate, and beta-BHC exceed their respective NDEP BCLs for protection of groundwater (LBCL).

A data summary for the flux chamber samples collected from the supplemental ROW areas is provided in Table 4. The asbestos data collected from the supplemental ROW areas and analytical sensitivities are presented in Table 5.

3. Statistical Comparison to Galleria Dr. ROW Data

To determine whether the metals and radionuclides data collected from the supplemental ROW areas are consistent with those from the Galleria Dr. ROW, comparisons were performed using the Quantile test, Slippage test, the t-test, and the Wilcoxon Rank Sum (WRS) test with Gehan modification. The same approach for this comparison was done as for the background comparisons as described in the Galleria Dr. ROW report. The results of this comparison are presented in Table 6. As shown in this table, all metals and radionuclides are consistent between the two datasets, therefore, further evaluations as discussed in this Technical Memorandum have

been performed with the combined datasets to demonstrate with the supplemental ROW areas warrant inclusion in the NFAD for the Galleria Dr. ROW.

4. Re-Calculation of Human Health Risk Estimates

For the chemicals of potential concern (COPCs) identified in the Galleria Dr. ROW report, 95 percent UCL concentrations were re-calculated using the combined supplemental ROW areas data and Galleria Dr. ROW data, in order to determine the human health risks associated with the entire Galleria Dr. ROW area.

The calculations of theoretical upper-bound ILCRs and non-cancer health effects for the entire Galleria Dr. ROW (that is, original Galleria Dr. ROW and supplemental ROW areas) are presented in Tables 7 and 8, for construction worker and maintenance (outdoor) worker receptors, respectively. The calculation spreadsheets for this Technical Memorandum are included in Attachment A. The risk estimates are based on reasonable maximum exposure scenarios, which results in estimates of the potential reasonable maximum, or high-end, risks associated with the entire Galleria Dr. ROW. The results are summarized below.

Similar to the Galleria Dr. ROW approach, surface flux data measurements are evaluated on a sample by sample basis, per NDEP requirements. Therefore, the risk estimates presented in Tables 7 and 8 include the maximum surface flux risk estimates, as discussed below. The calculation spreadsheets for the surface flux data measurements are included in Attachment A.

Because only a single long chrysotile fiber was detected within the supplemental ROW areas, asbestos risks were not re-calculated, rather the existing calculated asbestos risks are considered representative for the entire Galleria Dr. ROW area.

As shown in Tables 7 and 8, non-cancer hazard indices for the entire Galleria Dr. ROW are consistent with those for the previous Galleria Dr. ROW (0.53 vs. 0.56 for construction workers, and 0.096 vs. 0.096 for maintenance workers). Therefore, there are no changes to the conclusions of the human health risk assessment for non-cancer risk estimates. For cancer risk estimates, the results are consistent for construction workers (3×10^{-7} vs. 2×10^{-7}); however, risks estimates for maintenance workers increased slightly (4×10^{-6} vs. 1×10^{-6}). These risks are at the low end of the acceptable incremental cancer risk range (10^{-4} to 10^{-6}).

The increase in the cancer risk estimate for maintenance workers is primarily driven by the detection of dibromochloropropane (DBCP) in a single surface flux sample. This DBCP detection is an estimated result, that is, detected between the method detection limit and the sample quantitation limit. This kind of result (J flagged) has a higher degree of uncertainty

associated with it. In addition DBCP has not been detected in groundwater at the Eastside property, further questioning the actual presence of this chemical. If DBCP is removed from the risk estimates, the results are consistent for maintenance workers (1×10^{-6} vs. 1×10^{-6}).

5. Conclusions

BRC has prepared this Technical Memorandum to address additional areas have been identified that are needed for the Galleria Dr. ROW. These areas were identified subsequent to the Galleria Dr. ROW NFAD. The major findings of this Technical Memorandum are: data collected from the supplemental ROW areas are adequate and usable for their intended purpose; supplemental ROW areas data are consistent with those used in the original Galleria Dr. ROW; and construction worker and maintenance (outdoor) worker cancer and non-cancer risk estimates for the entire Galleria Dr. ROW are within or below the risk goals for the project. Therefore, BRC concludes that the inclusion of these supplemental ROW areas within the existing Galleria Dr. ROW NFAD is warranted, and requests that the NDEP re-issue the NFAD for the Galleria Dr. ROW to include these supplemental areas.

REFERENCES

Nevada Division of Environmental Protection (NDEP). 2013. User's Guide and Background Technical Document for Nevada Division of Environmental Protection (NDEP) Basic Comparison Levels (BCLs) for Human Health for the BMI Complex and Common Areas. January.

Attachments: Figure 1 – Supplemental Galleria Dr. Right-of-Way NFA Areas
Table 1 – Sample-Specific Collection Depths
Table 2 – Final Confirmation Soil Sample Locations and Analyses
Table 3 – Final Soil Dataset Results Summary
Table 4 – Soil Vapor Flux Sample Results Summary
Table 5 – Asbestos Results and Analytical Sensitivities
Table 6 – Comparison of Supplemental vs. ROW Data Summary
Table 7 – Chemical Risk Summary for Construction Worker Receptors with Supplemental Data
Table 8 – Chemical Risk Summary for Maintenance (Outdoor) Worker Receptors with Supplemental Data
Attachment A – Technical Memorandum Files, Database, and Calculation Spreadsheets

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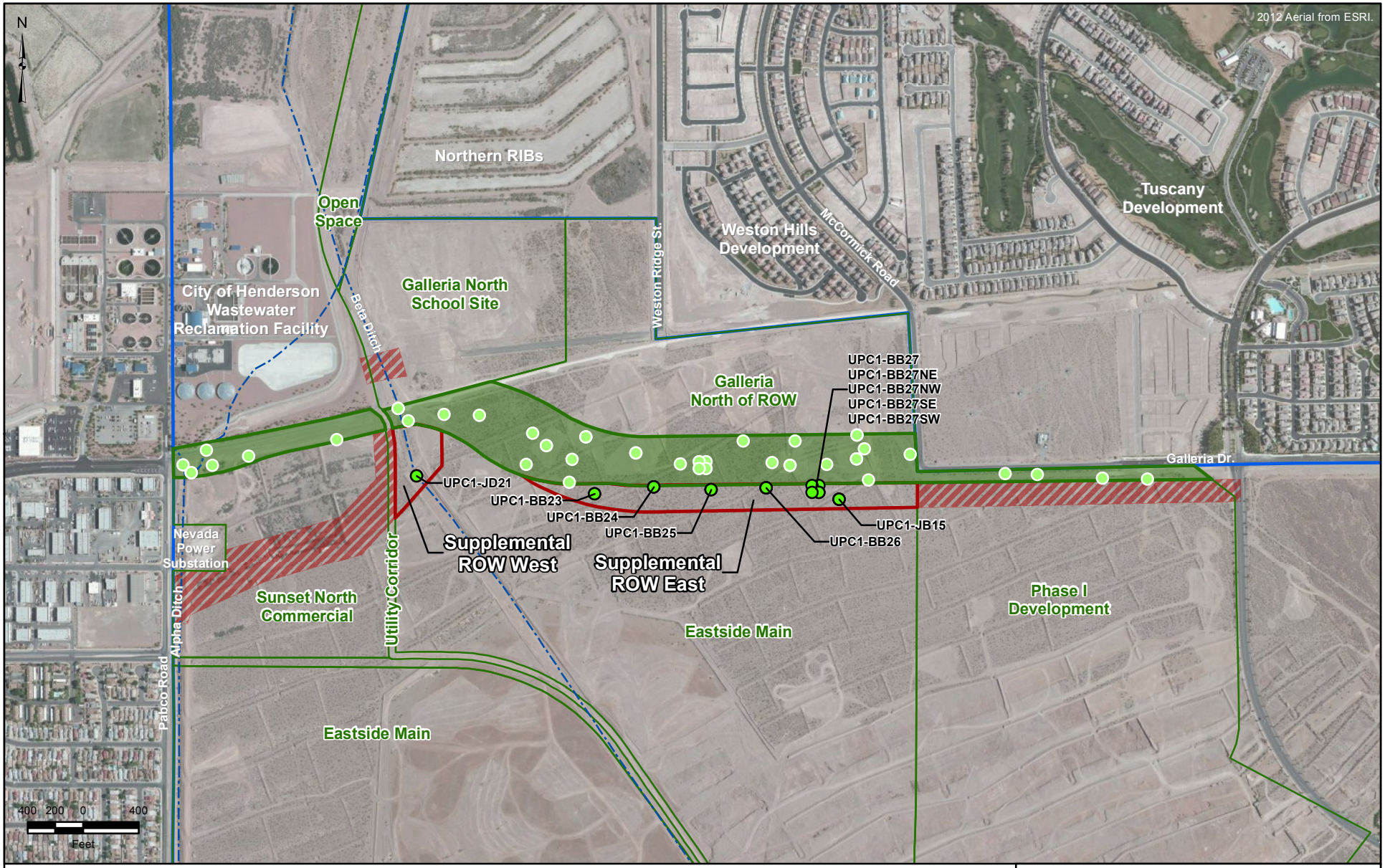
I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable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

April 11, 2013

Dr. Ranajit Sahu, C.E.M. (No. EM-1699, Exp. 10/07/2013) Date
BRC Project Manager

FIGURES



Site AOC3 Boundary

Eastside Soil Sub-Areas

Existing Galleria Dr. Right-of-Way NFA

Galleria Dr. ROW Supplemental Covered by Other Sub-Areas

Galleria Dr. ROW Supplemental NFA Boundary

Supplemental NFA Soil Sample Location

Existing NFA Soil Sample Location

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 1

SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY NFA AREAS

Basic Remediation COMPANY

Prepared by MKJ (ERM)	ERM	Date 04/11/13	JOB No. 0064276 FILE: GIS/BRC/GALLERIA_ROW/SUPPLEMENTAL-NFA.MXD

TABLES

TABLE 1
SAMPLE-SPECIFIC COLLECTION DEPTHS
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample Location	Sample Type	Grading Plan	Sample Depth 1	Sample Depth 2	Sample Depth 3
Initial Sampling Event					
UPC1-BB23	Random	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
UPC1-BB24	Random	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
UPC1-BB25	Random	Cut -3	0 (Fill/Surface)	3 (Subsurface)	13 (Subsurface)
UPC1-BB26	Random	Cut -4	0 (Fill/Surface)	4 (Subsurface)	14 (Subsurface)
UPC1-BB27	Random	-- 0	0 (Surface)	10 (Subsurface)	--
UPC1-JB15	Berm	Cut -3	0 (Fill/Surface)	3 (Subsurface)	13 (Subsurface)
UPC1-JD21	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
Confirmation/Supplemental Sampling Events					
UPC1-BB27NE	Supplemental	-- 0	0 (Surface)	--	--
UPC1-BB27NW	Supplemental	-- 0	0 (Surface)	--	--
UPC1-BB27SE	Supplemental	-- 0	0 (Surface)	--	--
UPC1-BB27SW	Supplemental	-- 0	0 (Surface)	--	--
UPC2-BB27	Confirmation	-- 0	0 (Surface)	--	--
UPC2-BB27NE	Confirmation	-- 0	0 (Surface)	--	--
UPC2-BB27SW	Confirmation	-- 0	0 (Surface)	--	--
UPC2-JE11	Supplemental	-- 0	0 (Surface)	--	--

Note: Because sample collection will be over a two to three foot depth interval, sample locations with an anticipated cut depth less than three feet only sampled at the surface and one post-grade subsurface depth.
Depths are in feet bgs (current grade).

TABLE 2
FINAL CONFIRMATION SOIL SAMPLE LOCATIONS AND ANALYSES
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 1)

Sample Location	Sample Depth	Sample Type	Scraped?	Asbestos	Alde-hydes	Dioxins	Gen Chem	Metals	OCPs	PAHs	PCBs	Rads	SVOCs	VOCs
UPC1-BB23	0	Initial		X	X	X	X	X	X	X	X	X	X	X
	12	Initial			X		X	X	X	X		X	X	X
UPC1-BB24	0	Initial		X	X	X	X	X	X	X	X	X	X	X
	12	Initial			X		X	X	X	X		X	X	X
UPC1-BB25	0	Initial		X	X	X	X	X	X	X	X	X	X	X
	3	Initial			X		X	X	X	X		X	X	X
	13	Initial			X		X	X	X	X		X	X	X
UPC1-BB26	0	Initial		X	X	X	X	X	X	X	X	X	X	X
	4	Initial			X		X	X	X	X		X	X	X
	14	Initial			X		X	X	X	X		X	X	X
UPC1-BB27	0	Initial	YES	X	X	X	X	X	X	X	X	X	X	X
	10	Initial			X		X	X	X	X		X	X	X
UPC1-BB27NE	0	Suppl	YES			X								
UPC1-BB27NW	0	Suppl				X								
UPC1-BB27SE	0	Suppl				X								
UPC1-BB27SW	0	Suppl	YES			X								
UPC1-JB15	0	Initial			X	X	X	X	X	X	X	X	X	X
	3	Initial			X		X	X	X	X		X	X	X
	13	Initial			X		X	X	X	X		X	X	X
UPC1-JD21	0	Initial		X	X	X	X	X	X	X	X	X	X	X
	10	Initial			X		X	X	X	X		X	X	X
UPC2-BB27	0	Confirm				X					X			
UPC2-BB27NE	0	Confirm				X					X			
UPC2-BB27SW	0	Confirm				X					X			
UPC2-JE11	0	Suppl				X					X			

= Location removed. As noted in the text, post-scrape analyses associated with follow-up rounds of remediation focused on the analytes triggering that additional remediation, and did not include the full suite analyses of the original analytical program. Therefore, analytical results from the original SAP dataset were retained for all analytes except those that were re-run after additional scraping.

TABLE 3
FINAL SOIL DATASET RESULTS SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Outdoor Worker Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Asbestos[3]	Amphibole	Structures	6	0%	6	--	--	--	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysotile	Structures	6	16.7%	5	--	--	--	--	--	--	1	1	--	--	--	--	1	--	--	--	--	--	--	--	--
Aldehydes	Acetaldehyde	mg/kg	19	10.5%	17	0.297	0.3	0.31	0.31	0.31	0.329	2	0.369	--	0.41	0.41	--	0.452	77.7	0	--	--	--	--	--	--
	Formaldehyde	mg/kg	19	94.7%	1	0.2	--	0.2	0.2	--	0.2	18	0.222	0.26	0.28	0.51	0.37	2.95	41.6	0	--	--	--	--	--	--
Dioxins/Furans	1,2,3,4,6,7,8-Heptachlorodibenzofuran[4]	pg/g	15	46.7%	8	0.1	1.4	5	3.8	5.1	5.1	7	6.1	14	21	50	91	140	--	--	--	--	--	--	--	--
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin[4]	pg/g	15	20.0%	12	0.18	1.7	5.1	3.9	5.1	5.8	3	8	8	8.7	8.9	10	10	--	--	--	--	--	--	--	--
	1,2,3,4,7,8,9-Heptachlorodibenzofuran[4]	pg/g	15	46.7%	8	0.1	1.3	5	3.8	5.1	5.1	7	2.7	4.9	8.2	24	41	76	--	--	--	--	--	--	--	--
	1,2,3,4,7,8-Hexachlorodibenzofuran[4]	pg/g	15	46.7%	8	0.061	1.3	5	3.8	5.1	5.1	7	2.5	4.9	9.9	33	58	99	--	--	--	--	--	--	--	--
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin[4]	pg/g	15	0%	15	0.14	1.1	5	3.9	5.1	5.8	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,3,6,7,8-Hexachlorodibenzofuran[4]	pg/g	15	40.0%	9	0.076	0.96	4.9	3.6	5.1	5.1	6	3.8	5.7	16	22	39	58	--	--	--	--	--	--	--	--
	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin[4]	pg/g	15	6.7%	14	0.13	1.8	5.1	3.9	5.1	5.8	1	4	--	4	4	--	4	--	--	--	--	--	--	--	--
	1,2,3,7,8,9-Hexachlorodibenzofuran[4]	pg/g	15	20.0%	12	0.074	1.5	5.1	3.9	5.1	5.8	3	3.1	3.1	4.1	4.7	7	7	--	--	--	--	--	--	--	--
	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin[4]	pg/g	15	6.7%	14	0.12	1.6	5.1	3.9	5.1	5.8	1	3.1	--	3.1	3.1	--	3.1	--	--	--	--	--	--	--	--
	1,2,3,7,8-Pentachlorodibenzofuran[4]	pg/g	15	40.0%	9	0.071	0.62	4.9	3.5	5.1	5.1	6	2.8	3.1	16	19	33	49	--	--	--	--	--	--	--	--
	1,2,3,7,8-Pentachlorodibenzo-p-dioxin[4]	pg/g	15	6.7%	14	0.11	1.3	5.1	3.8	5.1	5.8	1	3.1	--	3.1	3.1	--	3.1	--	--	--	--	--	--	--	--
	2,3,4,6,7,8-Hexachlorodibenzofuran[4]	pg/g	15	20.0%	12	0.038	1.7	5.1	3.9	5.1	5.8	3	6.3	6.3	8.1	9.8	15	15	--	--	--	--	--	--	--	--
	2,3,4,7,8-Pentachlorodibenzofuran[4]	pg/g	15	20.0%	12	0.073	1.3	5.1	3.9	5.1	5.8	3	13	13	15	18	25	25	--	--	--	--	--	--	--	--
	2,3,7,8-Tetrachlorodibenzofuran[4]	pg/g	15	46.7%	8	0.064	0.3	0.97	0.75	1	1	7	0.54	1.3	3.5	8.4	19	22	--	--	--	--	--	--	--	--
	2,3,7,8-Tetrachlorodibenzo-p-dioxin[4]	pg/g	15	13.3%	13	0.078	0.25	1	0.75	1	1.2	2	0.71	--	0.85	0.85	--	0.99	--	--	--	--	--	--	--	--
	Octachlorodibenzodioxin[4]	pg/g	15	20.0%	12	0.61	3.6	10	7.9	10	12	3	6.8	6.8	11	12	17	17	--	--	--	--	--	--	--	--
	Octachlorodibenzofuran[4]	pg/g	15	46.7%	8	0.22	2.9	9.9	7.5	10	10	7	18	35	50	140	290	380	--	--	--	--	--	--	--	--
	TCDD TEQ	pg/g	15	--[4]	0	--	--	--	--	--	--	15	0.19	5.6	5.9	8.9	8.2	36.5	1000	0	--	--	--	--	--	--
General Chemistry/ Ions	Ammonia (as N)	mg/kg	19	68.4%	6	0.51	0.52	0.52	0.52	0.52	0.53	13	0.14	0.22	0.36	0.7	0.8	3.1	100000	0	--	--	--	--	--	--
	Bromide	mg/kg	19	26.3%	14	0.26	0.27	0.27	0.27	0.27	0.27	5	0.28	0.5	0.89	0.98	1.5	1.6	--	--	--	--	--	--	--	--
	Chlorate	mg/kg	19	21.1%	15	0.48	0.48	0.48	0.49	0.49	0.5	4	0.62	0.82	1.5	1.4	2	2.1	--	--	--	--	--	--	--	--
	Chloride	mg/kg	19	94.7%	1	2	--	2	2	--	2	18	1.3	2.8	40	120	160	788	--	--	--	--	--	--	--	--
	Cyanide, Total	mg/kg	19	10.5%	17	0.11	0.11	0.12	0.12	0.12	0.12	2	0.12	--	0.12	0.12	--	0.12	29.3	0	2	0	40	0	--	--
	Fluoride	mg/kg	19	100%	0	--	--	--	--	--	--	19	0.54	0.88	1	1.3	1.9	2.9	41000	0	--	--	--	--	--	--
	Nitrate	mg/kg	19	100%	0	--	--	--	--	--	--	19	0.54	1.3	1.8	6.3	6.8	25.8	100000	0	7	4	140	0	--	--
	Nitrite	mg/kg	19	5.3%	18	0.033	0.034	0.034	0.034	0.034	0.035	1	0.082	--	0.082	0.082	--	0.082	100000	0	--	--	--	--	--	--
	Orthophosphate as P	mg/kg	19	0%	19	0.51	0.52	5.1	3.2	5.1	5.2	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Perchlorate	mg/kg	19	89.5%	2	0.0101	--	0.01	0.01	--	0.0103	17	0.0286	0.041	0.24	0.77	1.3	4.08	795	0	0.0185	17	0.371	6	--	--
	Sulfate	mg/kg	19	100%	0	--	--	--	--	--	--	19	5	14	31	100	190	432	--	--	--	--	--	--	--	--
	Sulfide	mg/kg	19	15.8%	16	0.84	0.85	0.86	0.86	0.87	0.87	3	16.4	16	17	17	17	16.8	--	--	--	--	--	--	--	--
	Total Kjeldahl Nitrogen (TKN)	mg/kg	19	100%	0	--	--	--	--	--	--	19	30.6	41	57	67	86	158	--	--	--	--	--	--	--	--
Metals	Aluminum	mg/kg	19	100%	0	--	--	--	--	--	--	19	6450	8200	10000	9700	11000	12900	100000	0	75	19	1500	19	15300	0
	Antimony	mg/kg	19	0%	19	0.225	0.23	0.23	0.48	0.23	2.6	0	--	--	--	--	--	--	454	0	0.3	0	6	0	0.5	0
	Arsenic	mg/kg	19	100%	0	--	--	--	--	--	--	19	3.3	5.5	6	7.9	8.2	21.1	1.77	19	1	19	20	1	7.2	7
	Barium	mg/kg	19	100%	0	--	--	--	--	--	--	19	254	380	450	460	540	800	100000	0	82	19	1640	0	445	10
	Beryllium	mg/kg	19	100%	0	--	--	--	--	--	--	19	0.43	0.55	0.66	0.64	0.72	0.8	2230	0	3	0	60	0	0.89	0
	Boron	mg/kg	19	0%	19	2.99	3	51	31	52	52.4	0	--	--	--	--	--	--	100000	0	23.4	0	467	0	11.6	0
	Cadmium	mg/kg	19	26.3%	14	0.25	0.26	0.26	0.26	0.26	0.26	5	0.084	0.097	0.14	0.17	0.25	0.32	1110	0	0.4	0	8	0	0.1291	3
	Calcium	mg/kg	19	100%	0	--	--	--	--	--	--	19	12700	15000	18000	19000	23000	37800	--	--	--	--	--	--	82800	0
	Chromium	mg/kg	19	100%	0	--	--	--	--	--	--	19	7	12	14	16	20	34.4	100000	0	--	--	--	--	16.7	7
	Chromium (VI)	mg/kg	19	47.4%	10	0.1	0.1	0.1	0.16	0.18	0.42	9	0.11	0.11	0.16	0.15	0.17	0.26	1360	0	2	0	40	0	0.32	0
	Cobalt	mg/kg	19	100%	0	--	--	--	--	--	--	19	5.3	7.9	9.1	9	11	11.8	337	0	0.495	19	9.9	8	16.3	0
	Copper	mg/kg	19	100%	0	--	--	--	--	--	--	19	11.6	16	21	20	23	26.9	42200	0	45.8	0	915	0	25.9	1
	Iron	mg/kg	19	100%	0	--	--	--	--	--	--	19	11000	14000	18000	16000	18000	20000	100000	0	7.56	19	151	19	19700	1
	Lead	mg/kg	19	100%	0	--	--	--	--	--	--	19	9.2	13	16	26	26	127	800	0	--	--	--	--	35.1	3
	Lithium	mg/kg	19	100%	0	--	--	--	--	--	--	19	10.7	15	16	17	18	26.1	2270	0	21.9	1	438	0	26.5	0
	Magnesium	mg/kg	19	100%	0	--	--	--	--	--	--	19	6000	7200	9700	9300	10000	13700	100000	0	973	19	19500	0	17500	0
	Manganese	mg/kg	19	100%	0	--	--	--	--	--	--	19	254	400	500	570	710	1000	24900	0	1.3	19	26.1	19	863	2

TABLE 3
FINAL SOIL DATASET RESULTS SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Outdoor Worker Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Metals	Mercury	mg/kg	18	16.7%	15	0.005	0.005	0.034	0.027	0.035	0.035	3	0.0073	0.0073	0.015	0.023	0.047	0.0474	341	0	0.104	0	2.09	0	0.11	0
	Molybdenum	mg/kg	19	0%	19	2.5	2.6	2.6	2.6	2.6	2.6	0	--	--	--	--	--	--	5680	0	3.69	0	73.7	0	2	0
	Nickel	mg/kg	19	100%	0	--	--	--	--	--	--	19	10.7	15	16	16	18	20.1	21800	0	7	19	140	0	30	0
	Potassium	mg/kg	19	100%	0	--	--	--	--	--	--	19	1090	1500	2100	2000	2400	3500	--	--	--	--	--	--	3890	0
	Selenium	mg/kg	19	10.5%	17	0.225	0.23	0.23	0.92	2.6	2.6	2	0.3	--	0.37	0.37	--	0.43	5680	0	0.3	1	6	0	0.6	0
	Silver	mg/kg	19	89.5%	2	0.04	--	0.04	0.04	--	0.04	17	0.043	0.066	0.088	0.097	0.11	0.27	5680	0	0.85	0	17	0	0.2609	1
	Sodium	mg/kg	19	100%	0	--	--	--	--	--	--	19	167	280	540	590	760	1620	--	--	--	--	--	--	1320	1
	Strontium	mg/kg	19	100%	0	--	--	--	--	--	--	19	142	180	210	230	280	383	100000	0	--	--	--	--	808	0
	Thallium	mg/kg	19	5.3%	18	0.105	0.11	0.11	0.41	1	1.1	1	1.1	--	1.1	1.1	--	1.1	74.9	0	0.4	1	8	0	1.8	0
	Tin	mg/kg	19	10.5%	17	0.75	0.75	0.75	0.75	0.75	0.75	2	1.3	--	2.1	2.1	--	2.8	100000	0	--	--	--	--	0.8	2
	Titanium	mg/kg	19	100%	0	--	--	--	--	--	--	19	346	480	620	600	720	862	100000	0	146000	0	2920000	0	1010	0
	Tungsten	mg/kg	19	5.3%	18	0.185	0.19	2.6	1.8	2.6	2.6	1	3.7	--	3.7	3.7	--	3.7	8510	0	41.1	0	822	0	0.0175	1
	Uranium	mg/kg	19	100%	0	--	--	--	--	--	--	19	0.65	0.97	1.1	1.3	1.7	1.9	3400	0	13.5	0	270	0	2.7	0
	Vanadium	mg/kg	19	100%	0	--	--	--	--	--	--	19	36.9	50	57	56	62	79.4	5680	0	300	0	6000	0	59.1	7
	Zinc	mg/kg	19	100%	0	--	--	--	--	--	--	19	26.6	37	50	48	55	71.1	100000	0	620	0	12400	0	121	0
Organochlorine Pesticides	2,4-DDD	mg/kg	19	0%	19	0.00014	0.00014	0.00015	0.00015	0.00015	0.00015	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-DDE	mg/kg	19	15.8%	16	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	3	0.0018	0.0018	0.0062	0.0055	0.0085	0.0085	--	--	--	--	--	--	--	--
	4,4-DDD	mg/kg	19	0%	19	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0	--	--	--	--	--	--	11.1	0	0.8	0	16	0	--	--
	4,4-DDE	mg/kg	19	15.8%	16	0.00043	0.00043	0.00044	0.00044	0.00044	0.00045	3	0.0048	0.0048	0.014	0.013	0.02	0.02	7.81	0	3	0	60	0	--	--
	4,4-DDT	mg/kg	19	10.5%	17	0.00025	0.00025	0.00025	0.00025	0.00026	0.00026	2	0.0063	--	0.0076	0.0076	--	0.0088	7.81	0	2	0	40	0	--	--
	Aldrin	mg/kg	19	0%	19	0.000092	0.000093	0.000094	0.000094	0.000095	0.000096	0	--	--	--	--	--	--	0.113	0	0.02	0	0.4	0	--	--
	alpha-BHC	mg/kg	19	0%	19	0.000095	0.000096	0.000097	0.000097	0.000098	0.000099	0	--	--	--	--	--	--	270	0	0.0291	0	0.583	0	--	--
	alpha-Chlordane	mg/kg	19	0%	19	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	beta-BHC	mg/kg	19	10.5%	17	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	2	0.0022	--	0.005	0.005	--	0.0078	53.9	0	0.00596	1	0.119	0	--	--
	Chlordane	mg/kg	19	0%	19	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0	--	--	--	--	--	--	7.19	0	0.5	0	10	0	--	--
	delta-BHC	mg/kg	19	0%	19	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dieldrin	mg/kg	19	0%	19	0.000097	0.000098	0.000099	0.000099	0.0001	0.0001	0	--	--	--	--	--	--	0.12	0	0.0002	0	0.004	0	--	--
	Endosulfan I	mg/kg	19	0%	19	0.000096	0.000097	0.000098	0.000098	0.000099	0.0001	0	--	--	--	--	--	--	4100	0	0.9	0	18	0	--	--
	Endosulfan II	mg/kg	19	0%	19	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0	--	--	--	--	--	--	4100	0	0.9	0	18	0	--	--
	Endosulfan sulfate	mg/kg	19	0%	19	0.00013	0.00014	0.00014	0.00014	0.00014	0.00014	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin	mg/kg	19	0%	19	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0	--	--	--	--	--	--	205	0	0.05	0	1	0	--	--
	Endrin aldehyde	mg/kg	19	0%	19	0.00015	0.00016	0.00016	0.00016	0.00016	0.00016	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin ketone	mg/kg	19	0%	19	0.00013	0.00013	0.00014	0.00014	0.00014	0.00014	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	gamma-BHC (Lindane)	mg/kg	19	0%	19	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0	--	--	--	--	--	--	8.98	0	0.0005	0	0.01	0	--	--
	gamma-Chlordane	mg/kg	19	0%	19	0.000088	0.000089	0.00009	0.00009	0.000091	0.000091	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Heptachlor	mg/kg	19	0%	19	0.000096	0.000097	0.000098	0.000098	0.000099	0.0001	0	--	--	--	--	--	--	0.426	0	1	0	20	0	--	--
	Heptachlor epoxide	mg/kg	19	0%	19	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0	--	--	--	--	--	--	0.21	0	0.03	0	0.6	0	--	--
	Methoxychlor	mg/kg	19	0%	19	0.00034	0.00034	0.00034	0.00034	0.00035	0.00035	0	--	--	--	--	--	--	3420	0	8	0	160	0	--	--
	Toxaphene	mg/kg	19	0%	19	0.0057	0.0057	0.0058	0.0058	0.0059	0.0059	0	--	--	--	--	--	--	1.74	0	2	0	40	0	--	--
Polynuclear Aromatic Hydrocarbons	Acenaphthene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	2560	0	29	0	580	0	--	--
	Acenaphthylene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	147	0	--	--	--	--	--	--
	Anthracene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	9920	0	590	0	11800	0	--	--
	Benzo(a)anthracene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	2.34	0	0.08	0	1.6	0	--	--
	Benzo(a)pyrene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	0.234	0	0.4	0	8	0	--	--
	Benzo(b)fluoranthene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	2.34	0	0.2	0	4	0	--	--
	Benzo(g,h,i)perylene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	34100	0	--	--	--	--	--	--
	Benzo(k)fluoranthene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	23.4	0	2	0	40	0	--	--
	Chrysene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	234	0	8	0	160	0	--	--
	Dibenzo(a,h)anthracene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	0.234	0	0.08	0	1.6	0	--	--
	Indeno(1,2,3-cd)pyrene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	2.34	0	0.7	0	14	0	--	--
	Phenanthrene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	24.5	0	--	--	--	--	--	--
	Pyrene	mg/kg	19	0%	19	0.00168	0.0017	0.0017	0.0017	0.0017	0.00175	0	--	--	--	--	--	--	19300	0	210	0	4200	0	--	--

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BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Outdoor Worker Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Polychlorinated Biphenyls	PCB 105[4]	pg/g	12	41.7%	7	2	2	2	2	2	2.1	5	2.8	3.6	5.4	22	49	73	--	--	--	--	--	--	--	--
	PCB 114[4]	pg/g	12	8.3%	11	0.2	0.34	2	1.5	2	2.1	1	12	--	12	12	--	12	--	--	--	--	--	--	--	--
	PCB 118[4]	pg/g	12	50.0%	6	1.9	1.9	2	2	2	2.1	6	3.9	5.9	12	54	100	230	--	--	--	--	--	--	--	--
	PCB 123[4]	pg/g	12	0%	12	0.17	2	2	7	2.1	64	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	PCB 126[4]	pg/g	12	8.3%	11	0.19	0.26	2	1.5	2	2.1	1	2.6	--	2.6	2.6	--	2.6	--	--	--	--	--	--	--	--
	PCB 156[4]	pg/g	12	33.3%	8	2	2	2	2	2.1	2.1	4	3.5	4.7	10	58	160	210	--	--	--	--	--	--	--	--
	PCB 157[4]	pg/g	12	16.7%	10	0.15	1.5	2	1.7	2	2.1	2	2	--	7	7	--	12	--	--	--	--	--	--	--	--
	PCB 167[4]	pg/g	12	25.0%	9	0.18	2	2	1.8	2.1	2.1	3	3.2	3.2	3.7	20	53	53	--	--	--	--	--	--	--	--
	PCB 169[4]	pg/g	12	0%	12	0.16	0.26	2	1.4	2	2.1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	PCB 189[4]	pg/g	12	25.0%	9	0.1	2	2	1.8	2.1	2.1	3	3	3	4.3	22	59	59	--	--	--	--	--	--	--	--
	PCB 209[4]	pg/g	12	58.3%	5	0.048	0.052	2	1.2	2.1	2.1	7	23	28	50	270	430	1200	--	--	--	--	--	--	--	--
	PCB 77[4]	pg/g	12	0%	12	0.13	0.73	2	1.9	2.1	5.9	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	PCB 81[4]	pg/g	12	0%	12	0.12	0.28	2	1.4	2	2.1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radionuclides	Radium-226	pCi/g	19	94.7%	1	--	--	--	--	--	--	18	-0.0427	0.49	0.78	0.74	0.98	1.36	0.023	18	0.016	18	0.32	18	2.36	0
	Radium-228	pCi/g	19	89.5%	2	--	--	--	--	--	--	17	0.496	1.5	1.7	1.7	2.1	2.65	0.041	17	0.016	17	0.32	17	2.92	0
	Thorium-228	pCi/g	19	100%	0	--	--	--	--	--	--	19	0.922	1.3	1.6	1.6	1.9	2.87	0.025	19	0.0023	19	0.045	19	2.28	2
	Thorium-230	pCi/g	19	89.5%	2	--	--	--	--	--	--	17	0.568	0.99	1.3	1.4	1.6	3.09	8.3	0	0.00084	17	0.017	17	3.01	1
	Thorium-232	pCi/g	19	100%	0	--	--	--	--	--	--	19	0.767	1.1	1.5	1.4	1.7	1.93	7.4	0	0.0029	19	0.058	19	2.23	0
	Uranium-233/234	pCi/g	19	100%	0	--	--	--	--	--	--	19	0.451	0.76	1.1	1.1	1.3	2.86	11	0	--	--	--	--	2.84	1
	Uranium-235/236	pCi/g	19	0%	19	--	--	--	--	--	--	0	-0.121	-0.021	--	0.043	0.16	0.313	0.35	0	--	--	--	--	0.21	0
	Uranium-238	pCi/g	19	100%	0	--	--	--	--	--	--	19	0.458	0.89	1.0	1.1	1.4	2.48	1.4	5	--	--	--	--	2.37	1
Semivolatile Organic Compounds	1,2,4,5-Tetrachlorobenzene	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	205	0	--	--	--	--	--	--
	1,2-Diphenylhydrazine	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	2.39	0	--	--	--	--	--	--
	1,4-Dioxane	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	19.2	0	--	--	--	--	--	--
	2,2'-Dichlorobenzil	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	341	0	0.0003	0	0.006	0	--	--
	2,4,5-Trichlorophenol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	68400	0	14	0	280	0	--	--
	2,4,6-Trichlorophenol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	174	0	0.008	0	0.16	0	--	--
	2,4-Dichlorophenol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	2050	0	0.05	0	1	0	--	--
	2,4-Dimethylphenol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	13700	0	0.4	0	8	0	--	--
	2,4-Dinitrophenol	mg/kg	19	0%	19	0.128	0.13	0.13	0.13	0.13	0.133	0	--	--	--	--	--	--	1370	0	0.01	0	0.2	0	--	--
	2,4-Dinitrotoluene	mg/kg	19	0%	19	0.0337	0.034	0.034	0.034	0.035	0.0351	0	--	--	--	--	--	--	6.18	0	0.00004	0	0.0008	0	--	--
	2,6-Dinitrotoluene	mg/kg	19	0%	19	0.0337	0.034	0.034	0.034	0.035	0.0351	0	--	--	--	--	--	--	684	0	0.00003	0	0.0006	0	--	--
	2-Chloronaphthalene	mg/kg	19	0%	19	0.0118	0.012	0.012	0.012	0.012	0.0123	0	--	--	--	--	--	--	389	0	--	--	--	--	--	--
	2-Chlorophenol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	1670	0	0.2	0	4	0	--	--
	2-Methylnaphthalene	mg/kg	19	0%	19	0.00674	0.0068	0.0068	0.0068	0.0069	0.00701	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Nitroaniline	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	2050	0	--	--	--	--	--	--
	2-Nitrophenol	mg/kg	19	0%	19	0.0337	0.034	0.034	0.034	0.035	0.0351	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3,3-Dichlorobenzidine	mg/kg	19	0%	19	0.101	0.1	0.1	0.1	0.1	0.105	0	--	--	--	--	--	--	4.26	0	0.0003	0	0.006	0	--	--
	3-Nitroaniline	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Bromophenyl phenyl ether	mg/kg	19	0%	19	0.0337	0.034	0.034	0.034	0.035	0.0351	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chloro-3-methylphenol	mg/kg	19	0%	19	0.0337	0.034	0.034	0.034	0.035	0.0351	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chlorophenyl phenyl ether	mg/kg	19	0%	19	0.0337	0.034	0.034	0.034	0.035	0.0351	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chlorothioanisole	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Nitroaniline	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Nitrophenol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	5470	0	--	--	--	--	--	--
	Acetophenone	mg/kg	19	0%	19	0.0337	0.034	0.034	0.034	0.035	0.0351	0	--	--	--	--	--	--	1740	0	--	--	--	--	--	--
	Aniline	mg/kg	19	0%	19	0.118	0.12	0.12	0.12	0.12	0.123	0	--	--	--	--	--	--	336	0	--	--	--	--	--	--
	Benzenethiol	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzoic acid	mg/kg	19	0%	19	0.168	0.17	0.17	0.17	0.17	0.175	0	--	--	--	--	--	--	100000	0	20	0	400	0	--	--
	Benzyl alcohol	mg/kg	19	0%	19	0.101	0.1	0.1	0.1	0.1	0.105	0	--	--	--	--	--	--	100000	0	--	--	--	--	--	--
	bis(2-Chloroethoxy)methane	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	bis(2-Chloroethyl) ether	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	1.3	0	0.00002	0	0.0004	0	--	--

TABLE 3
FINAL SOIL DATASET RESULTS SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Outdoor Worker Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Semivolatile Organic Compounds	bis(2-Chloroisopropyl) ether	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	18	0	--	--	--	--	--	--
	bis(2-Ethylhexyl) phthalate	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	137	0	180	0	3600	0	--	--
	bis(p-Chlorophenyl) sulfone	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	bis(p-Chlorophenyl)disulfide	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Butylbenzyl phthalate	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	240	0	810	0	16200	0	--	--
	Carbazole	mg/kg	19	0%	19	0.0101	0.01	0.01	0.01	0.01	0.0105	0	--	--	--	--	--	--	95.8	0	0.03	0	0.6	0	--	--
	Dibenzofuran	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	2270	0	--	--	--	--	--	--
	Dichloromethyl ether	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	0.00134	0	--	--	--	--	--	--
	Diethyl phthalate	mg/kg	19	5.3%	18	0.0674	0.068	0.068	0.068	0.069	0.0699	1	0.0828	--	0.083	0.083	--	0.0828	100000	0	--	--	--	--	--	--
	Dimethyl phthalate	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	100000	0	--	--	--	--	--	--
	Di-n-butyl phthalate	mg/kg	19	0%	19	0.0337	0.034	0.034	0.034	0.035	0.0351	0	--	--	--	--	--	--	68400	0	270	0	5400	0	--	--
	Di-n-octyl phthalate	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diphenyl disulfide	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diphenyl sulfide	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diphenyl sulfone	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	2050	0	--	--	--	--	--	--
	Diphenylamine	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	17100	0	--	--	--	--	--	--
	Fluoranthene	mg/kg	19	0%	19	0.0101	0.01	0.01	0.01	0.01	0.0105	0	--	--	--	--	--	--	24400	0	210	0	4200	0	--	--
	Fluorene	mg/kg	19	0%	19	0.0101	0.01	0.01	0.01	0.01	0.0105	0	--	--	--	--	--	--	3670	0	28	0	560	0	--	--
	Hexachlorobenzene	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	1.2	0	0.1	0	2	0	--	--
	Hexachlorobutadiene	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	24.6	0	0.1	0	2	0	--	--
	Hexachlorocyclopentadiene	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	4090	0	20	0	400	0	--	--
	Hexachloroethane	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	137	0	0.02	0	0.4	0	--	--
	Hydroxymethyl phthalimide	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Isophorone	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	2020	0	0.03	0	0.6	0	--	--
	m,p-Cresols	mg/kg	19	0%	19	0.135	0.14	0.14	0.14	0.14	0.14	0	--	--	--	--	--	--	34200	0	0.8	0	16	0	--	--
	Naphthalene	mg/kg	19	0%	19	0.0101	0.01	0.01	0.01	0.01	0.0105	0	--	--	--	--	--	--	17.4	0	4	0	80	0	--	--
	Nitrobenzene	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	15.1	0	0.007	0	0.14	0	--	--
	N-nitrosodi-n-propylamine	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	0.274	0	0.000002	0	0.00004	0	--	--
	o-Cresol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	34200	0	0.8	0	16	0	--	--
	Octachlorostyrene	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	p-Chloroaniline	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	9.58	0	0.03	0	0.6	0	--	--
	p-Chlorobenzenethiol	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pentachlorobenzene	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	547	0	--	--	--	--	--	--
	Pentachlorophenol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	3	0	0.001	0	0.02	0	--	--
	Phenol	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	100000	0	5	0	100	0	--	--
	Phthalic acid	mg/kg	19	0%	19	0.111	0.11	0.11	0.11	0.11	0.116	0	--	--	--	--	--	--	100000	0	--	--	--	--	--	--
	Pyridine	mg/kg	19	0%	19	0.0674	0.068	0.068	0.068	0.069	0.0701	0	--	--	--	--	--	--	667	0	--	--	--	--	--	--
Volatile Organic Compounds	1,1,1,2-Tetrachloroethane	mg/kg	19	0%	19	0.00038	0.00039	0.00039	0.00039	0.00039	0.0004	0	--	--	--	--	--	--	20.3	0	--	--	--	--	--	--
	1,1,1-Trichloroethane	mg/kg	19	0%	19	0.00024	0.00024	0.00024	0.00024	0.00025	0.00025	0	--	--	--	--	--	--	1390	0	0.1	0	2	0	--	--
	1,1,2,2-Tetrachloroethane	mg/kg	19	0%	19	0.00045	0.00045	0.00045	0.00045	0.00046	0.00046	0	--	--	--	--	--	--	2.59	0	0.0002	0	0.004	0	--	--
	1,1,2-Trichloroethane	mg/kg	19	0%	19	0.00036	0.00037	0.00037	0.00037	0.00037	0.00038	0	--	--	--	--	--	--	5.8	0	0.0009	0	0.018	0	--	--
	1,1-Dichloroethane	mg/kg	19	0%	19	0.00037	0.00038	0.00038	0.00038	0.00038	0.00039	0	--	--	--	--	--	--	23.3	0	1	0	20	0	--	--
	1,1-Dichloroethene	mg/kg	19	0%	19	0.00024	0.00024	0.00024	0.00024	0.00025	0.00025	0	--	--	--	--	--	--	1400	0	0.003	0	0.06	0	--	--
	1,1-Dichloropropene	mg/kg	19	0%	19	0.00022	0.00022	0.00023	0.00023	0.00023	0.00023	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichlorobenzene	mg/kg	19	0%	19	0.00046	0.00046	0.00047	0.00047	0.00047	0.00047	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichloropropane	mg/kg	19	0%	19	0.00049	0.00049	0.0005	0.0005	0.0005	0.00051	0	--	--	--	--	--	--	0.106	0	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	mg/kg	19	0%	19	0.00031	0.00031	0.00032	0.00032	0.00032	0.00032	0	--	--	--	--	--	--	110	0	0.3	0	6	0	--	--
	1,2,4-Trimethylbenzene	mg/kg	19	10.5%	17	0.0004	0.0004	0.00041	0.00041	0.00041	0.00042	2	0.00054	--	0.00082	0.00082	--	0.0011	671	0	--	--	--	--	--	--
	1,2-Dichlorobenzene	mg/kg	19	0%	19	0.00036	0.00036	0.00037	0.00037	0.00037	0.00037	0	--	--	--	--	--	--	373	0	0.9	0	18	0	--	--
	1,2-Dichloroethane	mg/kg	19	0%	19	0.00032	0.00033	0.00033	0.00033	0.00034	0.00034	0	--	--	--	--	--	--	2.41	0	0.001	0	0.02	0	--	--
	1,2-Dichloroethene	mg/kg	19	0%	19	0.00063	0.00064	0.00064	0.00064	0.00065	0.00065	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	mg/kg	19	0%	19	0.00037	0.00038	0.00038	0.00038	0.00039	0.00039	0	--	--	--	--	--	--	4.54	0	0.001	0	0.02	0	--	--

TABLE 3
FINAL SOIL DATASET RESULTS SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Outdoor Worker Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Volatile Organic Compounds	1,3,5-Trichlorobenzene	mg/kg	19	0%	19	0.00051	0.00052	0.00052	0.00052	0.00053	0.00053	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,3,5-Trimethylbenzene	mg/kg	19	5.3%	18	0.00025	0.00026	0.00026	0.00026	0.00026	0.00026	1	0.00033	--	0.00033	0.00033	--	0.00033	254	0	--	--	--	--	--	--
	1,3-Dichlorobenzene	mg/kg	19	0%	19	0.00044	0.00045	0.00045	0.00045	0.00046	0.00046	0	--	--	--	--	--	--	373	0	--	--	--	--	--	--
	1,3-Dichloropropane	mg/kg	19	0%	19	0.00042	0.00042	0.00042	0.00042	0.00043	0.00043	0	--	--	--	--	--	--	71.6	0	0.001	0	0.02	0	--	--
	1,4-Dichlorobenzene	mg/kg	19	0%	19	0.00031	0.00031	0.00032	0.00032	0.00032	0.00032	0	--	--	--	--	--	--	14.3	0	0.1	0	2	0	--	--
	2,2,3-Trimethylbutane	mg/kg	19	0%	19	0.00053	0.00054	0.00054	0.00054	0.00055	0.00055	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,2-Dichloropropane	mg/kg	19	0%	19	0.00031	0.00031	0.00032	0.00032	0.00032	0.00032	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,2-Dimethylpentane	mg/kg	19	0%	19	0.00053	0.00054	0.00054	0.00054	0.00055	0.00055	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,3-Dimethylpentane	mg/kg	19	0%	19	0.00044	0.00044	0.00045	0.00045	0.00045	0.00046	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-Dimethylpentane	mg/kg	19	0%	19	0.00049	0.00049	0.0005	0.0005	0.0005	0.00051	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	mg/kg	19	0%	19	0.00034	0.00034	0.00035	0.00035	0.00035	0.00035	0	--	--	--	--	--	--	511	0	--	--	--	--	--	--
	2-Hexanone	mg/kg	19	0%	19	0.00028	0.00029	0.00029	0.00029	0.00029	0.00029	0	--	--	--	--	--	--	2150	0	--	--	--	--	--	--
	2-Methylhexane	mg/kg	19	0%	19	0.00051	0.00051	0.00052	0.00052	0.00052	0.00053	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Nitropropane	mg/kg	19	0%	19	0.00032	0.00033	0.00033	0.00033	0.00033	0.00034	0	--	--	--	--	--	--	0.0598	0	--	--	--	--	--	--
	3,3-Dimethylpentane	mg/kg	19	0%	19	0.00048	0.00049	0.00049	0.00049	0.0005	0.0005	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3-Ethylpentane	mg/kg	19	0%	19	0.00045	0.00045	0.00046	0.00046	0.00046	0.00047	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3-Methylhexane	mg/kg	19	0%	19	0.00047	0.00048	0.00048	0.00048	0.00049	0.00049	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chlorotoluene	mg/kg	19	0%	19	0.00025	0.00025	0.00026	0.00026	0.00026	0.00026	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Methyl-2-pentanone (MIBK)	mg/kg	19	0%	19	0.00031	0.00031	0.00032	0.00032	0.00032	0.00032	0	--	--	--	--	--	--	17200	0	--	--	--	--	--	--
	Acetone	mg/kg	19	10.5%	17	0.0065	0.0066	0.0067	0.0075	0.0068	0.021	2	0.046	--	0.05	0.05	--	0.054	100000	0	0.8	0	16	0	--	--
	Acetonitrile	mg/kg	19	0%	19	0.0035	0.0035	0.0036	0.0036	0.0036	0.0036	0	--	--	--	--	--	--	6840	0	--	--	--	--	--	--
	Benzene	mg/kg	19	0%	19	0.00033	0.00033	0.00034	0.00034	0.00034	0.00034	0	--	--	--	--	--	--	4.5	0	0.002	0	0.04	0	--	--
	Bromobenzene	mg/kg	19	0%	19	0.00038	0.00038	0.00039	0.00039	0.00039	0.00039	0	--	--	--	--	--	--	695	0	--	--	--	--	--	--
	Bromodichloromethane	mg/kg	19	0%	19	0.00032	0.00033	0.00033	0.00033	0.00033	0.00033	0	--	--	--	--	--	--	3.6	0	0.03	0	0.6	0	--	--
	Bromoform	mg/kg	19	0%	19	0.00042	0.00042	0.00042	0.00042	0.00043	0.00043	0	--	--	--	--	--	--	242	0	0.04	0	0.8	0	--	--
	Bromomethane	mg/kg	19	0%	19	0.0004	0.0004	0.00041	0.00041	0.00041	0.00042	0	--	--	--	--	--	--	42.9	0	0.01	0	0.2	0	--	--
	Carbon disulfide	mg/kg	19	0%	19	0.00028	0.00028	0.00028	0.00028	0.00029	0.00029	0	--	--	--	--	--	--	721	0	2	0	40	0	--	--
	Carbon tetrachloride	mg/kg	19	0%	19	0.00031	0.00031	0.00031	0.00031	0.00032	0.00032	0	--	--	--	--	--	--	4.07	0	0.003	0	0.06	0	--	--
	Chlorobenzene	mg/kg	19	0%	19	0.0003	0.00031	0.00031	0.00031	0.00031	0.00032	0	--	--	--	--	--	--	695	0	0.07	0	1.4	0	--	--
	Chlorobromomethane	mg/kg	19	0%	19	0.00044	0.00044	0.00045	0.00045	0.00045	0.00046	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chloroethane	mg/kg	19	0%	19	0.00031	0.00031	0.00032	0.00032	0.00032	0.00032	0	--	--	--	--	--	--	1100	0	--	--	--	--	--	--
	Chloroform	mg/kg	19	10.5%	17	0.00036	0.00036	0.00037	0.00037	0.00037	0.00037	2	0.00047	--	0.0019	0.0019	--	0.0034	1.71	0	0.03	0	0.6	0	--	--
	Chloromethane	mg/kg	19	0%	19	0.00027	0.00028	0.00028	0.00028	0.00028	0.00028	0	--	--	--	--	--	--	8.95	0	--	--	--	--	--	--
	cis-1,2-Dichloroethene	mg/kg	19	0%	19	0.00033	0.00034	0.00034	0.00034	0.00034	0.00035	0	--	--	--	--	--	--	791	0	0.02	0	0.4	0	--	--
	cis-1,3-Dichloropropene	mg/kg	19	0%	19	0.00024	0.00024	0.00024	0.00024	0.00024	0.00024	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cymene (Isopropyltoluene)	mg/kg	19	0%	19	0.00026	0.00026	0.00027	0.00027	0.00027	0.00027	0	--	--	--	--	--	--	647	0	--	--	--	--	--	--
	Dibromochloromethane	mg/kg	19	0%	19	0.00029	0.0003	0.0003	0.0003	0.0003	0.0003	0	--	--	--	--	--	--	6.15	0	0.02	0	0.4	0	--	--
	Dibromochloropropane	mg/kg	19	0%	19	0.0006	0.00061	0.00061	0.00061	0.00062	0.00062	0	--	--	--	--	--	--	0.0583	0	--	--	--	--	--	--
	Dibromomethane	mg/kg	19	0%	19	0.00035	0.00035	0.00035	0.00035	0.00036	0.00036	0	--	--	--	--	--	--	210	0	--	--	--	--	--	--
	Dichloromethane (Methylene chloride)	mg/kg	19	0%	19	0.0023	0.0024	0.0024	0.0025	0.0024	0.0051	0	--	--	--	--	--	--	60.4	0	0.001	0	0.02	0	--	--
	Dimethyldisulfide	mg/kg	19	0%	19	0.00048	0.00049	0.00049	0.00049	0.0005	0.0005	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ethanol	mg/kg	19	0%	19	0.062	0.063	0.063	0.063	0.064	0.065	0	--	--	--	--	--	--	100000	0	--	--	--	--	--	--
	Ethylbenzene	mg/kg	19	5.3%	18	0.00029	0.0003	0.0003	0.0003	0.0003	0.0003	1	0.00048	--	0.00048	0.00048	--	0.00048	21	0	0.7	0	14	0	--	--
	Freon-11 (Trichlorofluoromethane)	mg/kg	19	5.3%	18	0.00031	0.00031	0.00031	0.00031	0.00032	0.00032	1	0.00054	--	0.00054	0.00054	--	0.00054	1980	0	--	--	--	--	--	--
	Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroethan	mg/kg	19	0%	19	0.00025	0.00025	0.00025	0.00025	0.00026	0.00026	0	--	--	--	--	--	--	5550	0	--	--	--	--	--	--
	Freon-12 (Dichlorodifluoromethane)	mg/kg	19	0%	19	0.00025	0.00025	0.00025	0.00025	0.00026	0.00026	0	--	--	--	--	--	--	340	0	--	--	--	--	--	--
	Heptane	mg/kg	19	0%	19	0.00038	0.00038	0.00038	0.00038	0.00039	0.00039	0	--	--	--	--	--	--	220	0	0.03	0	0.6	0	--	--
	Isopropylbenzene	mg/kg	19	0%	19	0.00029	0.00029	0.00029	0.00029	0.00029	0.0003	0	--	--	--	--	--	--	647	0	--	--	--	--	--	--
	m,p-Xylene	mg/kg	19	5.3%	18	0.00046	0.00046	0.00047	0.00047	0.00047	0.00047	1	0.0013	--	0.0013	0.0013	--	0.0013	214	0	10	0	200	0	--	--
	Methyl ethyl ketone (2-Butanone)	mg/kg	19	0%	19	0.00058	0.00058	0.00059	0.00059	0.00059	0.0006	0	--	--	--	--	--	--	34100	0	--	--	--	--	--	--
	Methyl iodide	mg/kg	19	0%	19	0.00039	0.00039	0.0004	0.0004	0.0004	0.0004	0	--	--	--	--	--	--	1680	0	--	--	--	--	--	--
	MTBE (Methyl tert-butyl ether)	mg/kg	19	0%	19	0.00047	0.00047	0.00048	0.00048	0.00048	0.00049	0	--	--	--	--	--	--	216	0	--	--	--	--	--	--

TABLE 3
FINAL SOIL DATASET RESULTS SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Outdoor Worker Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Volatile Organic Compounds	n-Butylbenzene	mg/kg	19	0%	19	0.0003	0.0003	0.0003	0.0003	0.0003	0.00031	0	--	--	--	--	--	--	237	0	--	--	--	--	--	--
	Nonanal	mg/kg	19	0%	19	0.00036	0.00037	0.00037	0.00037	0.00038	0.00038	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	n-Propylbenzene	mg/kg	19	0%	19	0.00027	0.00028	0.00028	0.00028	0.00028	0.00028	0	--	--	--	--	--	--	237	0	--	--	--	--	--	--
	o-Xylene	mg/kg	19	0%	19	0.00024	0.00024	0.00024	0.00024	0.00024	0.00024	0	--	--	--	--	--	--	282	0	9	0	180	0	--	--
	sec-Butylbenzene	mg/kg	19	0%	19	0.00033	0.00033	0.00033	0.00033	0.00034	0.00034	0	--	--	--	--	--	--	223	0	--	--	--	--	--	--
	Styrene	mg/kg	19	0%	19	0.00021	0.00021	0.00021	0.00021	0.00022	0.00022	0	--	--	--	--	--	--	1730	0	0.2	0	4	0	--	--
	tert-Butylbenzene	mg/kg	19	0%	19	0.00023	0.00023	0.00023	0.00023	0.00023	0.00024	0	--	--	--	--	--	--	393	0	--	--	--	--	--	--
	Tetrachloroethene	mg/kg	19	0%	19	0.00047	0.00047	0.00048	0.00048	0.00048	0.00048	0	--	--	--	--	--	--	3.28	0	0.003	0	0.06	0	--	--
	Toluene	mg/kg	19	5.3%	18	0.00024	0.00024	0.00025	0.00025	0.00025	0.00025	1	0.0011	--	0.0011	0.0011	--	0.0011	521	0	0.6	0	12	0	--	--
	trans-1,2-Dichloroethene	mg/kg	19	0%	19	0.00034	0.00034	0.00035	0.00035	0.00035	0.00035	0	--	--	--	--	--	--	600	0	0.03	0	0.6	0	--	--
	trans-1,3-Dichloropropene	mg/kg	19	0%	19	0.00018	0.00018	0.00018	0.00018	0.00018	0.00018	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	mg/kg	19	0%	19	0.00027	0.00027	0.00027	0.00027	0.00027	0.00028	0	--	--	--	--	--	--	5.49	0	0.003	0	0.06	0	--	--
	Vinyl acetate	mg/kg	19	0%	19	0.00038	0.00039	0.00039	0.00039	0.0004	0.0004	0	--	--	--	--	--	--	2710	0	8	0	160	0	--	--
	Vinyl chloride	mg/kg	19	0%	19	0.00032	0.00033	0.00033	0.00033	0.00034	0.00034	0	--	--	--	--	--	--	1.86	0	0.0007	0	0.014	0	--	--
	Xylenes (total)	mg/kg	19	5.3%	18	0.00064	0.00065	0.00066	0.00066	0.00066	0.00067	1	0.0013	--	0.0013	0.0013	--	0.0013	214	0	10	0	200	0	--	--

Notes:
This table includes only data included in the risk assessment. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in the tables in Appendix B, which include all data, regardless of status.
The values used are simply a comparison to NDEP BCL values for information purposes only.
Because both non-detect and detected radionuclides have reported activity levels, calculated summary statistics (and exceedances of comparison levels) are presented as detected regardless of the lab detect flag. Lab detect flags are represented by the censored (non-detect) and detect count fields in the table.
Values for Q1, median, mean, and Q3 are rounded to 2 significant figures. BCLs are rounded to 3 significant figures.
BCL = Basic Comparison Levels (BCLs) from NDEP 2013.
LBCL = Leaching-based BCLs from NDEP 2013.
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
(1) Range of detections include estimated values of detect results between the detection limit and reporting limit. As such some minimum detected concentrations may be below the minimum reporting limit. In these cases the respective sample results are flagged in the dataset.
(2) Comparisons are for information purposes only. See Table 4 for statistical comparison with Galleria ROW dataset.
(3) Asbestos results shown are for long protocol structures (>10um). The minimum and maximum values represent the number of protocol structures in an individual sample. The detect count represents the number of samples with at least one detected protocol structure, not the total number of structures.
(4) TCDD TEQ values are calculated from congener-specific (dioxins, furans, and PCBs) concentrations. An individual TCDD TEQ value may include detect and non-detect congeners. Therefore, the number of detects and non-detects, and a frequency of detection for TCDD TEQ are not presented.
-- = Not applicable or no value has been established.

TABLE 4
SOIL VAPOR FLUX SAMPLE RESULTS SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 2)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]						
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Volatile Organic Compounds (Full Scan)	1,1,1,2-Tetrachloroethane	$\mu g/m^2,min^{-1}$	5	20%	4	0.00963	0.00972	0.0102	0.0102	0.0107	0.0108	1	0.0177	--	0.0177	0.0177	--	0.0177
	1,1,1-Trichloroethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.0208	0.021	0.0219	0.022	0.0231	0.0231	0	--	--	--	--	--	--
	1,1,2-Trichloroethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.0208	0.021	0.0219	0.022	0.0231	0.0231	0	--	--	--	--	--	--
	1,1-Dichloroethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.0154	0.0154	0.0162	0.0162	0.0169	0.0169	0	--	--	--	--	--	--
	1,1-Dichloroethene	$\mu g/m^2,min^{-1}$	5	0%	5	0.015	0.0152	0.0158	0.0159	0.0166	0.0166	0	--	--	--	--	--	--
	1,1-Dichloropropene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0104	0.0104	0.0108	0.0109	0.0114	0.0116	0	--	--	--	--	--	--
	1,2,3-Trichloropropane	$\mu g/m^2,min^{-1}$	5	0%	5	0.0104	0.0104	0.0108	0.0109	0.0114	0.0116	0	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.115	0.116	0.121	0.121	0.127	0.127	0	--	--	--	--	--	--
	1,2,4-Trimethylbenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0751	0.0757	0.0793	0.0793	0.083	0.0835	0	--	--	--	--	--	--
	1,2-Dichlorobenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0901	0.0909	0.0951	0.0951	0.0995	0.1	0	--	--	--	--	--	--
	1,2-Dichloropropane	$\mu g/m^2,min^{-1}$	5	20%	4	0.0177	0.0178	0.0185	0.0187	0.0197	0.02	1	0.0239	--	0.0239	0.0239	--	0.0239
	1,3,5-Trimethylbenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0196	0.0196	0.0824	0.0589	0.0865	0.087	0	--	--	--	--	--	--
	1,3-Dichlorobenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.092	0.0926	0.0966	0.097	0.102	0.102	0	--	--	--	--	--	--
	1,3-Dichloropropane	$\mu g/m^2,min^{-1}$	5	0%	5	0.0104	0.0106	0.0112	0.0111	0.0116	0.0116	0	--	--	--	--	--	--
	1,4-Dioxane	$\mu g/m^2,min^{-1}$	5	0%	5	0.0254	0.0256	0.0266	0.0267	0.0279	0.0281	0	--	--	--	--	--	--
	2,2-Dichloropropane	$\mu g/m^2,min^{-1}$	5	0%	5	0.0142	0.0142	0.015	0.0149	0.0156	0.0158	0	--	--	--	--	--	--
	2-Hexanone	$\mu g/m^2,min^{-1}$	5	60%	2	0.01	--	0.0106	0.0106	--	0.0112	3	0.0142	0.0142	0.0358	0.0321	0.0462	0.0462
	4-Methyl-2-pentanone (MIBK)	$\mu g/m^2,min^{-1}$	5	20%	4	0.0108	0.0109	0.0116	0.0115	0.0119	0.0119	1	0.0119	--	0.0119	0.0119	--	0.0119
	Acetone	$\mu g/m^2,min^{-1}$	5	0%	5	0.194	0.346	0.612	0.54	0.698	0.78	0	--	--	--	--	--	--
	Acetonitrile	$\mu g/m^2,min^{-1}$	5	0%	5	0.0127	0.0129	0.0135	0.0135	0.0142	0.0142	0	--	--	--	--	--	--
	Benzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0131	0.0135	0.0196	0.0197	0.026	0.0323	0	--	--	--	--	--	--
	Bromodichloromethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.00924	0.00924	0.00963	0.00978	0.0104	0.0104	0	--	--	--	--	--	--
	Bromoform	$\mu g/m^2,min^{-1}$	5	0%	5	0.00963	0.00963	0.01	0.0101	0.0106	0.0108	0	--	--	--	--	--	--
	Bromomethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.015	0.0152	0.0158	0.0159	0.0168	0.0169	0	--	--	--	--	--	--
	Carbon disulfide	$\mu g/m^2,min^{-1}$	5	40%	3	0.0219	0.0219	0.0254	0.035	0.0578	0.0578	2	0.0816	--	0.088	0.088	--	0.0943
	Chlorobenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0177	0.0177	0.0185	0.0186	0.0195	0.0196	0	--	--	--	--	--	--
	Chlorobromomethane	$\mu g/m^2,min^{-1}$	5	20%	4	0.00963	0.00972	0.0102	0.0102	0.0107	0.0108	1	0.0135	--	0.0135	0.0135	--	0.0135
	Chloroethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.0104	0.0104	0.0108	0.0109	0.0114	0.0116	0	--	--	--	--	--	--
	Chloromethane	$\mu g/m^2,min^{-1}$	5	20%	4	0.0127	0.0139	0.0177	0.0218	0.0337	0.0389	1	0.0447	--	0.0447	0.0447	--	0.0447
	cis-1,2-Dichloroethene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0154	0.0154	0.0162	0.0162	0.0169	0.0169	0	--	--	--	--	--	--
	cis-1,3-Dichloropropene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0181	0.0183	0.0189	0.019	0.0198	0.02	0	--	--	--	--	--	--
	Cymene (Isopropyltoluene)	$\mu g/m^2,min^{-1}$	5	0%	5	0.0131	0.0133	0.0554	0.0397	0.0582	0.0585	0	--	--	--	--	--	--
	Dibromomethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.00924	0.00924	0.00963	0.0097	0.0102	0.0104	0	--	--	--	--	--	--
	Dichloromethane (Methylene chloride)	$\mu g/m^2,min^{-1}$	5	20%	4	0.0139	0.014	0.0146	0.0145	0.015	0.015	1	0.0135	--	0.0135	0.0135	--	0.0135
	Ethanol	$\mu g/m^2,min^{-1}$	5	20%	4	0.0974	0.0977	0.1	0.102	0.107	0.108	1	0.145	--	0.145	0.145	--	0.145
	Ethylbenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0169	0.0171	0.0177	0.0179	0.0187	0.0189	0	--	--	--	--	--	--
	Freon-11	$\mu g/m^2,min^{-1}$	5	0%	5	0.0219	0.0221	0.0231	0.0236	0.0253	0.0266	0	--	--	--	--	--	--
	Freon-113	$\mu g/m^2,min^{-1}$	5	0%	5	0.0293	0.0295	0.0308	0.0309	0.0325	0.0327	0	--	--	--	--	--	--

TABLE 4
SOIL VAPOR FLUX SAMPLE RESULTS SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 2)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]						
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Volatile Organic Compounds (Full Scan)	Freon-12	$\mu g/m^2,min^{-1}$	5	40%	3	0.0196	0.0196	0.0204	0.0205	0.0216	0.0216	2	0.0235	--	0.0268	0.0268	--	0.03
	Heptane	$\mu g/m^2,min^{-1}$	5	20%	4	0.00886	0.00886	0.00925	0.00981	0.0113	0.0119	1	0.502	--	0.502	0.502	--	0.502
	Isopropylbenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0131	0.0131	0.0543	0.0389	0.057	0.0574	0	--	--	--	--	--	--
	Methyl ethyl ketone (2-Butanone)	$\mu g/m^2,min^{-1}$	5	80%	1	0.0304	--	0.0304	0.0304	--	0.0304	4	0.0847	0.0895	0.142	0.188	0.334	0.386
	Methyl iodide	$\mu g/m^2,min^{-1}$	5	0%	5	0.00655	0.00655	0.00693	0.00693	0.00732	0.00732	0	--	--	--	--	--	--
	MTBE (Methyl tert-butyl ether)	$\mu g/m^2,min^{-1}$	5	0%	5	0.00924	0.00924	0.00963	0.0097	0.0102	0.0104	0	--	--	--	--	--	--
	Naphthalene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0173	0.0175	0.0181	0.0183	0.0191	0.0193	0	--	--	--	--	--	--
	n-Butylbenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0123	0.0125	0.052	0.0373	0.0547	0.0551	0	--	--	--	--	--	--
	n-Propylbenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0127	0.0129	0.0535	0.0383	0.0562	0.0566	0	--	--	--	--	--	--
	o-Xylene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0166	0.0168	0.0173	0.0175	0.0183	0.0185	0	--	--	--	--	--	--
	sec-Butylbenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0135	0.0135	0.0562	0.0404	0.0593	0.0597	0	--	--	--	--	--	--
	Styrene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0166	0.0166	0.0173	0.0174	0.0183	0.0185	0	--	--	--	--	--	--
	tert-Butylbenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0127	0.0127	0.0527	0.0378	0.0555	0.0558	0	--	--	--	--	--	--
	Tetrachloroethene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0258	0.026	0.0273	0.0273	0.0287	0.0289	0	--	--	--	--	--	--
	Toluene	$\mu g/m^2,min^{-1}$	5	60%	2	0.0154	--	0.0158	0.0158	--	0.0162	3	0.0281	0.0281	0.0285	0.166	0.442	0.442
	trans-1,2-Dichloroethene	$\mu g/m^2,min^{-1}$	5	0%	5	0.01	0.01	0.0104	0.0105	0.011	0.0112	0	--	--	--	--	--	--
	trans-1,3-Dichloropropene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0177	0.0179	0.0185	0.0186	0.0195	0.0196	0	--	--	--	--	--	--
	Trichloroethene	$\mu g/m^2,min^{-1}$	5	0%	5	0.0208	0.021	0.0219	0.0219	0.0229	0.0231	0	--	--	--	--	--	--
	Vinyl acetate	$\mu g/m^2,min^{-1}$	5	0%	5	0.0427	0.0431	0.045	0.0452	0.0474	0.0477	0	--	--	--	--	--	--
	Vinyl chloride	$\mu g/m^2,min^{-1}$	5	0%	5	0.01	0.01	0.0104	0.0105	0.011	0.0112	0	--	--	--	--	--	--
	Xylenes (total)	$\mu g/m^2,min^{-1}$	5	20%	4	0.0335	0.0336	0.0347	0.035	0.0368	0.0373	1	0.0424	--	0.0424	0.0424	--	0.0424
Volatile Organic Compounds (SIM)	1,1,2,2-Tetrachloroethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.00262	0.00264	0.00277	0.00277	0.00291	0.00293	0	--	--	--	--	--	--
	1,2-Dichloroethane	$\mu g/m^2,min^{-1}$	5	40%	3	0.00158	0.00158	0.00166	0.00166	0.00173	0.00173	2	0.00173	--	0.00187	0.00187	--	0.002
	1,4-Dichlorobenzene	$\mu g/m^2,min^{-1}$	5	0%	5	0.00231	0.00233	0.00243	0.00243	0.00254	0.00254	0	--	--	--	--	--	--
	Carbon tetrachloride	$\mu g/m^2,min^{-1}$	5	100%	0	--	--	--	--	--	--	5	0.00404	0.00439	0.00801	0.00683	0.00868	0.00916
	Chloroform	$\mu g/m^2,min^{-1}$	5	100%	0	--	--	--	--	--	--	5	0.00932	0.0135	0.0227	0.0397	0.0744	0.0904
	Dibromochloromethane	$\mu g/m^2,min^{-1}$	5	0%	5	0.00119	0.00119	0.00123	0.00125	0.00131	0.00131	0	--	--	--	--	--	--
	Dibromochloropropane	$\mu g/m^2,min^{-1}$	5	20%	4	0.0208	0.0213	0.0241	0.0238	0.0262	0.0264	1	0.0364	--	0.0364	0.0364	--	0.0364
	Hexachlorobutadiene	$\mu g/m^2,min^{-1}$	5	0%	5	0.00412	0.00416	0.00435	0.00435	0.00454	0.00458	0	--	--	--	--	--	--

Notes:

Values for Q1, median, mean, and Q3 are rounded to 3 significant figures.

Max = Maximum

Min = Minimum

Q1 = 1st quartile (25th percentile)

Q3 = 3rd quartile (75th percentile)

(1) Range of detections include estimated values of detect results ("J" flagged values).

-- = Not applicable or no value has been established.

TABLE 5
ASBESTOS RESULTS AND ANALYTICAL SENSITIVITIES
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 1)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Analytical Sensitivity (10^6 s/gPM$_{10}$)	Concentration Protocol Structures[1]		Number of Protocol Structures[2]			
					Chrysotile (10^6 s/gPM$_{10}$)	Amphibole (10^6 s/gPM$_{10}$)	Chrysotile		Amphibole	
							Total	Long	Total	Long
UPC1-BB23	0	NORM	1/12/09	2.979	< 8.908 E+6	< 8.908 E+6	0	0	0	0
UPC1-BB24	0	NORM	1/12/09	2.963	< 8.859 E+6	< 8.859 E+6	0	0	0	0
UPC1-BB25	0	NORM	1/12/09	2.981	< 8.912 E+6	< 8.912 E+6	0	0	0	0
UPC1-BB26	0	NORM	1/12/09	2.979	< 8.908 E+6	< 8.908 E+6	0	0	0	0
UPC1-BB27	0	NORM	1/12/09	2.985	< 8.925 E+6	< 8.925 E+6	0	0	0	0
UPC1-JD21	0	NORM	1/5/09	2.966	1.406 E+7	< 8.869 E+6	2	1	0	0

[1]Fiber dimensions are presented in the respective analytical reports for each sample.

[2]Only long structures (>10µm) present a potential risk and are used for estimating asbestos risks. Total fiber concentrations are presented for informational purposes only. Protocol structures are structures longer than 10 µm and thinner than 0.4 µm.

TABLE 6
COMPARISON OF SUPPLEMENTAL VS. ROW DATA SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 6)

Chemical	Galleria Dr. Right-of-Way Sub-Area															
			Censored (Non-Detect) Data							Detected Data[1]						
	Total Count	Detect Freq.	Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Aluminum	69	100%	0	--	--	--	--	--	--	69	5280	9300	10000	11000	12000	18700
Antimony	69	0%	69	0.225	0.23	0.32	0.67	0.32	2.6	0	--	--	--	--	--	--
Arsenic	69	94%	4	5.2	5.2	5.3	5.3	5.3	5.3	65	3.4	5.2	6.1	6.4	7	14.2
Barium	69	100%	0	--	--	--	--	--	--	69	119	350	450	470	530	1300
Beryllium	69	88%	8	0.51	0.51	0.51	0.51	0.52	0.53	61	0.38	0.55	0.59	0.62	0.67	1.2
Boron	69	0%	69	2.99	17	17	19	17	52	0	--	--	--	--	--	--
Cadmium	69	46%	37	0.04	0.1	0.26	0.21	0.26	0.27	32	0.089	0.11	0.15	0.16	0.2	0.37
Calcium	69	100%	0	--	--	--	--	--	--	69	12700	19000	26000	28000	33000	86700
Chromium	69	100%	0	--	--	--	--	--	--	69	6.5	13	16	16	19	27.9
Chromium (VI)	69	39%	42	0.1	0.1	0.1	0.15	0.11	0.42	27	0.1	0.12	0.2	0.3	0.25	2.1
Cobalt	69	100%	0	--	--	--	--	--	--	69	3.6	7.9	8.8	8.9	9.7	13.2
Copper	69	100%	0	--	--	--	--	--	--	69	12	17	20	20	22	63.7
Iron	69	100%	0	--	--	--	--	--	--	69	6360	15000	17000	17000	19000	24100
Lead	69	100%	0	--	--	--	--	--	--	69	9.2	13	15	22	23	121
Lithium	69	100%	0	--	--	--	--	--	--	69	7.3	15	17	17	19	35.4
Magnesium	69	100%	0	--	--	--	--	--	--	69	4770	9000	10000	10000	11000	19700
Manganese	69	100%	0	--	--	--	--	--	--	69	301	440	510	530	610	867
Mercury	69	14%	59	0.005	0.034	0.034	0.029	0.035	0.0364	10	0.0056	0.0072	0.014	0.021	0.038	0.0529
Molybdenum	69	57%	30	0.47	0.47	2.5	2	2.6	2.6	39	0.52	0.62	0.74	0.88	0.92	2.1
Nickel	69	100%	0	--	--	--	--	--	--	69	6.6	15	17	17	19	28.9
Potassium	69	100%	0	--	--	--	--	--	--	69	1040	1800	2200	2200	2500	3710
Selenium	69	1%	68	0.225	0.4	0.4	0.86	0.4	2.6	1	0.33	--	0.33	0.33	--	0.33
Silver	69	43%	39	0.04	0.11	0.11	0.22	0.11	1	30	0.055	0.07	0.11	0.12	0.15	0.21

TABLE 6
COMPARISON OF SUPPLEMENTAL VS. ROW DATA SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

	Galleria Dr. Right-of-Way Sub-Area															
			Censored (Non-Detect) Data							Detected Data[1]						
Chemical	Total Count	Detect Freq.	Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Sodium	69	100%	0	--	--	--	--	--	--	69	125	220	440	540	760	1660
Strontium	69	100%	0	--	--	--	--	--	--	69	105	190	280	310	370	838
Thallium	69	1%	68	0.105	0.75	0.75	0.62	0.75	1	1	1.1	--	1.1	1.1	--	1.1
Tin	69	19%	56	0.75	0.75	0.75	0.76	0.75	1	13	0.86	0.92	1.1	1.6	1.7	3.9
Titanium	69	100%	0	--	--	--	--	--	--	69	306	520	650	650	770	1030
Tungsten	69	19%	56	0.185	1.3	1.3	1.1	1.3	2.6	13	1.3	1.7	2.1	2.9	3.5	8.5
Uranium	69	100%	0	--	--	--	--	--	--	69	0.64	0.86	0.98	1.1	1.3	3.9
Vanadium	69	100%	0	--	--	--	--	--	--	69	20.7	45	51	52	59	75.3
Zinc	69	100%	0	--	--	--	--	--	--	69	32.6	42	45	49	56	93.1
Radium-226	70	86%	10	--	--	--	--	--	--	60	0.168	0.6	1	1	1.3	2.42
Radium-228	70	93%	5	--	--	--	--	--	--	65	0.525	1.2	1.6	1.6	1.9	3.37
Thorium-228	70	100%	0	--	--	--	--	--	--	70	0.742	1.3	1.5	1.6	1.8	3.15
Thorium-230	70	99%	1	--	--	--	--	--	--	69	0.416	0.9	1.2	1.2	1.4	2.23
Thorium-232	70	100%	0	--	--	--	--	--	--	70	0.657	1.2	1.4	1.4	1.7	2.93
Uranium-233/234	70	96%	3	--	--	--	--	--	--	67	0.312	0.69	0.9	1	1.2	2.34
Uranium-235/236	70	4%	67	--	--	--	--	--	--	3	-0.0434	0.034	0.059	0.075	0.11	0.449
Uranium-238	70	97%	2	--	--	--	--	--	--	68	0.405	0.7	0.9	0.92	1.1	1.58

Note: Background comparison t-tests were performed using one-half the detection limit for metals and using GiSdT® (Neptune and Company 2009). The non-parametric Gehan, quantile and slippage tests make no adjustment for detection limits, since their algorithms account for non-detects through Gehan ranking.
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
(1) Range of detections include estimated values of detect results between the detection limit and reporting limit. As such some minimum detected concentrations may be below the minimum reporting limit. In these cases the respective sample results are flagged in the dataset.
BOLD with Highlight indicates Site concentrations are greater than background.
WRS = Wilcoxon Rank Sum Test with the Gehan Modification
N/A = Not applicable.

TABLE 6
COMPARISON OF SUPPLEMENTAL VS. ROW DATA SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Galleria Dr. Right-of-Way Supplemental															
			Censored (Non-Detect) Data							Detected Data[1]						
	Total Count	Detect Freq.	Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Aluminum	19	100%	0	--	--	--	--	--	--	19	6450	8200	10000	9700	11000	12900
Antimony	19	0%	19	0.225	0.23	0.23	0.48	0.23	2.6	0	--	--	--	--	--	--
Arsenic	19	100%	0	--	--	--	--	--	--	19	3.3	5.5	6	7.9	8.2	21.1
Barium	19	100%	0	--	--	--	--	--	--	19	254	380	450	460	540	800
Beryllium	19	100%	0	--	--	--	--	--	--	19	0.43	0.55	0.66	0.64	0.72	0.8
Boron	19	0%	19	2.99	3	51	31	52	52.4	0	--	--	--	--	--	--
Cadmium	19	26%	14	0.25	0.26	0.26	0.26	0.26	0.26	5	0.084	0.097	0.14	0.17	0.25	0.32
Calcium	19	100%	0	--	--	--	--	--	--	19	12700	15000	18000	19000	23000	37800
Chromium	19	100%	0	--	--	--	--	--	--	19	7	12	14	16	20	34.4
Chromium (VI)	19	47%	10	0.1	0.1	0.1	0.16	0.18	0.42	9	0.11	0.11	0.16	0.15	0.17	0.26
Cobalt	19	100%	0	--	--	--	--	--	--	19	5.3	7.9	9.1	9	11	11.8
Copper	19	100%	0	--	--	--	--	--	--	19	11.6	16	21	20	23	26.9
Iron	19	100%	0	--	--	--	--	--	--	19	11000	14000	18000	16000	18000	20000
Lead	19	100%	0	--	--	--	--	--	--	19	9.2	13	16	26	26	127
Lithium	19	100%	0	--	--	--	--	--	--	19	10.7	15	16	17	18	26.1
Magnesium	19	100%	0	--	--	--	--	--	--	19	6000	7200	9700	9300	10000	13700
Manganese	19	100%	0	--	--	--	--	--	--	19	254	400	500	570	710	1000
Mercury	18	17%	15	0.005	0.005	0.034	0.027	0.035	0.035	3	0.0073	0.0073	0.015	0.023	0.047	0.0474
Molybdenum	19	0%	19	2.5	2.6	2.6	2.6	2.6	2.6	0	--	--	--	--	--	--
Nickel	19	100%	0	--	--	--	--	--	--	19	10.7	15	16	16	18	20.1
Potassium	19	100%	0	--	--	--	--	--	--	19	1090	1500	2100	2000	2400	3500
Selenium	19	11%	17	0.225	0.23	0.23	0.92	2.6	2.6	2	0.3	--	0.37	0.37	--	0.43
Silver	19	89%	2	0.04	--	0.04	0.04	--	0.04	17	0.043	0.066	0.088	0.097	0.11	0.27

TABLE 6
COMPARISON OF SUPPLEMENTAL VS. ROW DATA SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

	Galleria Dr. Right-of-Way Supplemental															
			Censored (Non-Detect) Data							Detected Data[1]						
Chemical	Total Count	Detect Freq.	Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Sodium	19	100%	0	--	--	--	--	--	--	19	167	280	540	590	760	1620
Strontium	19	100%	0	--	--	--	--	--	--	19	142	180	210	230	280	383
Thallium	19	5%	18	0.105	0.11	0.11	0.41	1	1.1	1	1.1	--	1.1	1.1	--	1.1
Tin	19	11%	17	0.75	0.75	0.75	0.75	0.75	0.75	2	1.3	--	2.1	2.1	--	2.8
Titanium	19	100%	0	--	--	--	--	--	--	19	346	480	620	600	720	862
Tungsten	19	5%	18	0.185	0.19	2.6	1.8	2.6	2.6	1	3.7	--	3.7	3.7	--	3.7
Uranium	19	100%	0	--	--	--	--	--	--	19	0.65	0.97	1.1	1.3	1.7	1.9
Vanadium	19	100%	0	--	--	--	--	--	--	19	36.9	50	57	56	62	79.4
Zinc	19	100%	0	--	--	--	--	--	--	19	26.6	37	50	48	55	71.1
Radium-226	19	95%	1	--	--	--	--	--	--	18	-0.0427	0.49	0.78	0.74	0.98	1.36
Radium-228	19	89%	2	--	--	--	--	--	--	17	0.496	1.5	1.7	1.7	2.1	2.65
Thorium-228	19	100%	0	--	--	--	--	--	--	19	0.922	1.3	1.6	1.6	1.9	2.87
Thorium-230	19	89%	2	--	--	--	--	--	--	17	0.568	0.99	1.3	1.4	1.6	3.09
Thorium-232	19	100%	0	--	--	--	--	--	--	19	0.767	1.1	1.5	1.4	1.7	1.93
Uranium-233/234	19	100%	0	--	--	--	--	--	--	19	0.451	0.76	1.1	1.1	1.3	2.86
Uranium-235/236	19	0%	19	--	--	--	--	--	--	0	-0.121	-0.021	--	0.043	0.16	0.313
Uranium-238	19	100%	0	--	--	--	--	--	--	19	0.458	0.89	1	1.1	1.4	2.48

Note: Background comparison t-tests were performed using one-half the detection limit for metals and using GiSdT (Neptune and Company 2009). The non-parametric Gehan, quantile and slippage tests make no adjustment for detection limits, since their algorithms account for non-detects through Gehan ranking.
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
(1) Range of detections include estimated values of detect results between the detection limit and reporting limit. As such some minimum detected concentrations may be below the minimum reporting limit. In these cases the respective sample results are flagged in the dataset.
BOLD with Highlight indicates Site concentrations are greater than background.
WRS = Wilcoxon Rank Sum Test with the Gehan Modification
N/A = Not applicable.

TABLE 6
COMPARISON OF SUPPLEMENTAL VS. ROW DATA SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	T Test *p*	Quantile Test *p*	Slippage Test *p*	WRS Test *p*	Greater than ROW?	Units	Basis
Aluminum	9.5 E-1	9.0 E-1	1.0 E+0	9.1 E-1	NO	mg/kg	Multiple tests
Antimony	8.3 E-1	1.0 E+0	NA	1.0 E+0	NO	mg/kg	Multiple tests
Arsenic	7.5 E-2	1.5 E-1	4.5 E-2	2.1 E-1	NO	mg/kg	Multiple tests
Barium	5.9 E-1	5.5 E-1	1.0 E+0	3.3 E-1	NO	mg/kg	Multiple tests
Beryllium	3.1 E-2	4.0 E-2	1.0 E+0	5.5 E-2	NO	mg/kg	Multiple tests
Boron	2.3 E-2	1.0 E+0	NA	6.9 E-2	NO	mg/kg	ND in ROW and Supplemental
Cadmium	2.6 E-1	8.7 E-1	1.0 E+0	8.9 E-3	NO	mg/kg	Multiple tests; Supplemental max. < ROW max.
Calcium	1.0 E+0	9.8 E-1	1.0 E+0	1.0 E+0	NO	mg/kg	Multiple tests
Chromium	4.8 E-1	3.2 E-1	4.5 E-2	6.1 E-1	NO	mg/kg	Multiple tests
Chromium (VI)	9.0 E-1	5.5 E-1	1.0 E+0	6.7 E-1	NO	mg/kg	Multiple tests
Cobalt	4.4 E-1	1.5 E-1	1.0 E+0	2.6 E-1	NO	mg/kg	Multiple tests
Copper	6.7 E-1	2.7 E-1	1.0 E+0	3.5 E-1	NO	mg/kg	Multiple tests
Iron	7.4 E-1	9.0 E-1	1.0 E+0	4.9 E-1	NO	mg/kg	Multiple tests
Lead	2.7 E-1	5.5 E-1	2.2 E-1	3.7 E-1	NO	mg/kg	Multiple tests
Lithium	7.3 E-1	9.0 E-1	1.0 E+0	5.9 E-1	NO	mg/kg	Multiple tests
Magnesium	9.7 E-1	9.2 E-1	1.0 E+0	9.7 E-1	NO	mg/kg	Multiple tests
Manganese	2.4 E-1	1.5 E-1	4.5 E-2	4.1 E-1	NO	mg/kg	Multiple tests
Mercury	5.5 E-1	5.3 E-1	1.0 E+0	4.4 E-1	NO	mg/kg	Multiple tests
Molybdenum	6.8 E-10	1.0 E+0	1.0 E+0	1.4 E-8	NO	mg/kg	ND in Supplemental
Nickel	8.2 E-1	7.7 E-1	1.0 E+0	6.3 E-1	NO	mg/kg	Multiple tests
Potassium	9.1 E-1	7.3 E-1	1.0 E+0	9.0 E-1	NO	mg/kg	Multiple tests
Selenium	4.3 E-1	1.2 E-1	6.7 E-1	1.0 E+0	NO	mg/kg	Multiple tests
Silver	8.8 E-1	7.7 E-1	2.3 E-1	1.0 E+0	NO	mg/kg	Multiple tests

TABLE 6
COMPARISON OF SUPPLEMENTAL VS. ROW DATA SUMMARY
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	T Test *p*	Quantile Test *p*	Slippage Test *p*	WRS Test *p*	Greater than ROW?	Units	Basis
Sodium	2.8 E-1	5.5 E-1	1.0 E+0	1.6 E-1	NO	mg/kg	Multiple tests
Strontium	1.0 E+0	1.0 E+0	1.0 E+0	9.8 E-1	NO	mg/kg	Multiple tests
Thallium	8.3 E-1	3.9 E-1	1.0 E+0	8.6 E-1	NO	mg/kg	Multiple tests
Tin	6.4 E-1	9.5 E-1	1.0 E+0	8.6 E-1	NO	mg/kg	Multiple tests
Titanium	9.2 E-1	9.2 E-1	1.0 E+0	8.9 E-1	NO	mg/kg	Multiple tests
Tungsten	4.4 E-1	9.8 E-1	1.0 E+0	1.3 E-2	NO	mg/kg	Multiple tests; Supplemental max. < ROW max.
Uranium	1.6 E-1	4.0 E-2	1.0 E+0	5.5 E-2	NO	mg/kg	Multiple tests
Vanadium	8.0 E-2	3.2 E-1	4.5 E-2	6.2 E-2	NO	mg/kg	Multiple tests
Zinc	6.2 E-1	7.7 E-1	1.0 E+0	4.5 E-1	NO	mg/kg	Multiple tests
Radium-226	1.0 E+0	1.0 E+0	1.0 E+0	9.8 E-1	NO	pCi/g	Multiple tests
Radium-228	1.9 E-1	2.6 E-1	1.0 E+0	8.6 E-2	NO	pCi/g	Multiple tests
Thorium-228	3.8 E-1	5.3 E-1	1.0 E+0	3.3 E-1	NO	pCi/g	Multiple tests
Thorium-230	1.0 E-1	3.7 E-2	2.1 E-1	1.2 E-1	NO	pCi/g	Multiple tests
Thorium-232	6.5 E-1	5.3 E-1	1.0 E+0	4.9 E-1	NO	pCi/g	Multiple tests
Uranium-233/234	2.0 E-1	5.3 E-1	2.1 E-1	2.2 E-1	NO	pCi/g	Multiple tests
Uranium-235/236	8.7 E-1	5.3 E-1	1.0 E+0	9.7 E-1	NO	pCi/g	All other radionuclides (and uranium metal) not greater than ROW; ND in Supplemental; all results near noise level of instrument
Uranium-238	3.0 E-2	1.4 E-1	4.4 E-2	2.2 E-2	NO	pCi/g	Multiple tests

Note: Background comparison t-tests were performed using one-half the detection limit for metals and using GiSdT (Neptune and Company 2009). The non-parametric Gehan, quantile and slippage tests make no adjustment for detection limits, since their algorithms account for non-detects through Gehan ranking.
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
(1) Range of detections include estimated values of detect results between the detection limit and reporting limit. As such some minimum detected concentrations may be below the minimum reporting limit. In these cases the respective sample results are flagged in the dataset.
BOLD with Highlight indicates Site concentrations are greater than background.
WRS = Wilcoxon Rank Sum Test with the Gehan Modification
N/A = Not applicable.

TABLE 7
CHEMICAL RISK SUMMARY FOR CONSTRUCTION WORKER RECEPTORS WITH SUPPLEMENTAL DATA
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 1)

	HHRA Results w/Supplemental		**Original ROW HHRA Results**	
Receptor	HI	ILCR	HI	ILCR
Future On-Site Construction Worker				
Soil, Dermal, and Dust	0.52	2 E-7	0.52	2 E-7
Volatile Inhalation (from Flux)(1)	0.008	1 E-7	0.033	2 E-8
Combined	0.53	3 E-7	0.56	2 E-7

Chemical	**Soil Conc. (mg/kg)**	**Oral HQ**	**Dermal HQ**	**Outdoor Inhal HQ**	**Total HI**	**Oral ILCR**	**Dermal ILCR**	**Outdoor Inhal ILCR**	**Total ILCR**
Inorganics									
Perchlorate	2.0	9.1 E-3	NA	NA	9.1 E-3	NA	NA	NA	NA
Metals									
Aluminum	11120	3.6 E-2	NA	4.4 E-2	8.0 E-2	NA	NA	NA	NA
Arsenic	7.2	2.3 E-2	NA	9.6 E-3	3.3 E-2	1 E-7	NA	9 E-9	2 E-7
Lithium	18.1	2.9 E-2	NA	NA	2.9 E-2	NA	NA	NA	NA
Manganese	591.0	8.0 E-2	NA	2.4 E-1	3.2 E-1	NA	NA	NA	NA
Thallium	0	1.8 E-2	NA	NA	1.8 E-2	NA	NA	NA	NA
Vanadium	56.2	3.6 E-2	NA	NA	3.6 E-2	NA	NA	NA	NA
Polynuclear Aromatic Hydrocarbons									
Benzo(a)anthracene	0.001	1.5 E-7	5.8 E-8	NA	2.1 E-7	5 E-11	2 E-11	4 E-14	6 E-11
Benzo(a)pyrene	0.002	2.2 E-7	8.4 E-8	NA	3.0 E-7	7 E-10	3 E-10	6 E-13	9 E-10
Benzo(b)fluoranthene	0.007	7.0 E-7	2.7 E-7	NA	9.8 E-7	2 E-10	9 E-11	2 E-13	3 E-10
Benzo(k)fluoranthene	0.0014	1.5 E-7	5.7 E-8	NA	2.0 E-7	5 E-12	2 E-12	4 E-14	6 E-12
Chrysene	0.002	1.8 E-7	6.9 E-8	NA	2.5 E-7	6 E-13	2 E-13	5 E-15	8 E-13
Dibenzo(a,h)anthracene	0.004	4.3 E-7	1.7 E-7	NA	6.0 E-7	1 E-9	5 E-10	1 E-12	2 E-9
Indeno(1,2,3-cd)pyrene	0.0015	1.6 E-7	6.3 E-8	NA	2.3 E-7	5 E-11	2 E-11	5 E-14	7 E-11
Total		0.23	0.00000078	0.29	**0.52**	2 E-7	9 E-10	9 E-9	**2 E-7**

HQ = hazard quotient
HI - hazard index
ILCR = incremental lifetime cancer risk
(1) Note that risk estimates for surface flux data were done on a sample-by-sample basis, therefore, risks are presented as the maximum individual sample location. See Appendix H for sample-specific risk estimates.

TABLE 8
CHEMICAL RISK SUMMARY FOR MAINTENANCE (OUTDOOR) WORKER RECEPTORS WITH SUPPLEMENTAL DATA
TECHNICAL MEMORANDUM–SUPPLEMENTAL GALLERIA DR. RIGHT-OF-WAY AREAS NFAD REQUEST
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 1)

	HHRA Results w/Supplemental		**Original ROW HHRA Results**	
Receptor	HI	ILCR	HI	ILCR
Future On-Site Maintenance Worker				
Soil, Dermal, and Dust	0.066	1 E-6	0.067	1 E-6
Volatile Inhalation (from Flux)(1)	0.029	3 E-6	0.029	5 E-7
Combined	0.096	4 E-6	0.096	1 E-6

Chemical	**Soil Conc. (mg/kg)**	**Oral HQ**	**Dermal HQ**	**Outdoor Inhal HQ**	**Total HI**	**Oral ILCR**	**Dermal ILCR**	**Outdoor Inhal ILCR**	**Total ILCR**
Inorganics									
Perchlorate	2.0	2.5 E-3	NA	NA	2.5 E-3	NA	NA	NA	NA
Metals									
Aluminum	11120	9.8 E-3	NA	5.2 E-4	1.0 E-2	NA	NA	NA	NA
Arsenic	7.2	6.3 E-3	NA	1.1 E-4	6.5 E-3	1 E-6	NA	3 E-9	1 E-6
Lithium	18.1	8.0 E-3	NA	NA	8.0 E-3	NA	NA	NA	NA
Manganese	591.0	2.2 E-2	NA	2.7 E-3	2.4 E-2	NA	NA	NA	NA
Thallium	0	4.9 E-3	NA	NA	4.9 E-3	NA	NA	NA	NA
Vanadium	56.2	9.9 E-3	NA	NA	9.9 E-3	NA	NA	NA	NA
Polynuclear Aromatic Hydrocarbons									
Benzo(a)anthracene	0.001	4.0 E-8	3.5 E-8	NA	7.5 E-8	3 E-10	3 E-10	1 E-14	6 E-10
Benzo(a)pyrene	0.002	5.9 E-8	5.1 E-8	NA	1.1 E-7	5 E-9	4 E-9	2 E-13	9 E-9
Benzo(b)fluoranthene	0.007	1.9 E-7	1.6 E-7	NA	3.6 E-7	2 E-9	1 E-9	6 E-14	3 E-9
Benzo(k)fluoranthene	0.0014	4.0 E-8	3.4 E-8	NA	7.4 E-8	3 E-11	3 E-11	1 E-14	6 E-11
Chrysene	0.002	4.8 E-8	4.1 E-8	NA	9.0 E-8	4 E-12	3 E-12	2 E-15	7 E-12
Dibenzo(a,h)anthracene	0.004	1.2 E-7	1.0 E-7	NA	2.2 E-7	9 E-9	8 E-9	4 E-13	2 E-8
Indeno(1,2,3-cd)pyrene	0.0015	4.4 E-8	3.8 E-8	NA	8.2 E-8	3 E-10	3 E-10	1 E-14	6 E-10
Total		0.063	0.00000047	0.0034	**0.066**	1 E-6	1 E-8	3 E-9	**1 E-6**

HQ = hazard quotient
HI - hazard index
ILCR = incremental lifetime cancer risk
(1) Note that risk estimates for surface flux data were done on a sample-by-sample basis, therefore, risks are presented as the maximum individual sample location. See Appendix H for sample-specific risk estimates.

ATTACHMENT A

TECHNICAL MEMORANDUM FILES, DATABASE, AND CALCULATION SPREADSHEETS