RICO SOILS RESIDUAL RISK ANALYSIS

Rico, Colorado

Prepared for Atlantic Richfield Company 317 Anaconda Road Butte, MT 59701

Prepared by integral consulting inc.

411 First Avenue S., Suite 550 Seattle, WA 98104

February 4, 2010

CONTENTS

AC	CRONY	MS AND ABBREVIATIONSi	ii
1	INTRO	ODUCTION	1
2	APPR	OACH OVERVIEW	2
3	HIGH	END EXAMPLES	6
	3.1	Residual Risk for 19 Subject Properties Considering Only Immediately Bordering Off-Property Areas	.6
	3.2	RESIDUAL RISK FOR 1 SUBJECT PROPERTY CONSIDERING INFLUENCE OF NEARBY DOLORES RIVER CORRIDOR OPEN SPACE IN THE OFF-PROPERTY AREA ESTIMATE	.8
4	CONC	CLUSIONS	9
5	REFE	RENCES1	10

Attachment 1.	Rico Soils Residual Risk Analysis - High End Examples
---------------	---

Attachment 2. Rico Soils Residual Risk Analysis - High End Example Locations

ACRONYMS AND ABBREVIATIONS

AR	Atlantic Richfield
CDPHE	Colorado Department of Public Health and Environment
mg/kg	milligrams/kilograms
ppm	parts per million
ROW	right-of-way
US EPA	United States Environmental Protection Agency
VCUP	Voluntary Clean-up Program

1 INTRODUCTION

Lead in soils in the town of Rico have and are being addressed through "risk-based" actions, which rely on scientific approaches to determine what amount of lead is acceptable to protect people in a community. These "risk-based" action levels which have been used in Rico's Soil Voluntary Clean-up Program (VCUP) actions have been developed and approved by the Colorado Department of Public Health and Environment (CDPHE) using methods acceptable to the US EPA. Upon request of the Town of Rico, Atlantic Richfield (AR) previously provided an explanation of risk-based action levels for soils in the Rico community. Based on this explanation, AR concluded that, "With the use of action levels and the Rico blood lead study, AR is confident that the Rico community is not being exposed to unacceptable risk from lead in soil, even where lead in soil in locations around town exceeds the residential or commercial action levels." Although vacant lots with lead above the action levels are encompassed by this conclusion, to ensure potential community concerns are addressed, further quantitative evaluation of potential residual risks posed to Rico residents living in the vicinity of these vacant lots has been conducted.

The intent of the current evaluation is to determine whether the residual risk for residents living next to existing vacant lots is likely to exceed the risk-based residential action level for the site if reclamation decisions for those existing vacant lots are deferred until further development of each lot. Consideration of potential exposures to areas along the Dolores River corridor that are visited for recreational purposes (e.g., walking or fishing) is also presented in this analysis. This analysis was accomplished by selecting a subset of properties judged to have the greatest exposure potential. The influence of surrounding undeveloped property (i.e., Forest Service land) and of unpaved streets and alleys is also considered for occupied residential properties evaluated in this analysis as is the potential impact of a higher street cleanup level and of not remediating vegetative right-of-ways (ROWs), but these areas are not the focus of this evaluation. A summary of the approach used to estimate residual risk concentrations for expected high-end example properties in this evaluation is provided below.

2 APPROACH OVERVIEW

As stated above, the intent of the current evaluation is to determine whether the residual risk for residents living next to existing vacant lots or recreating along the Dolores River corridor is likely to exceed the risk-based residential action level for the site if reclamation decisions for those existing vacant lots/recreational areas are deferred until further development of each lot. The approach developed to support this determination was designed to be conservative and to ensure that residential properties located within the vicinity of vacant lots with the highest lead concentrations are considered. Similarly, for recreational uses, the area of the Dolores River corridor with the highest lead concentrations was considered. By focusing the analysis on these high-end examples for the site, low end examples are also addressed and it is not necessary to evaluate every individual residential property at the site. Throughout the remainder of this summary, the subset of properties representing the high-end examples in this analysis are referred to as "subject properties" and the adjacent areas considered in the analysis are referred to as the "off-property areas."

For this analysis, data for lead in surface soil and mining waste piles from occupied residential lots and immediately surrounding areas including unpaved streets or alleys, vacant lots, and vegetative ROWs were compiled and weighted-average concentrations for each subject property and associated off-property areas were calculated. The sum of these weighted-average concentrations (i.e., the final weighted-average concentration for each subject property) was then compared to the risk-based residential action level for the site, 1,100 mg/kg.

Young children, ages six and under, are the primary population to protect in selecting riskbased action levels for lead because young children are both the most sensitive to the effects of lead and the most likely to have substantial exposure to soil. Therefore, decision rules developed for assessing individual subject properties were developed with consideration of exposure assumptions associated with the young children age group.

Key assumptions and decision rules that underlay the evaluation of each subject property and associated off-property area are detailed below. The data evaluation process used to select the subject properties that were most likely to yield the highest residual risk estimates is described under "High End Examples."

Key Assumptions:

1. Access to vacant lots and other undeveloped land present within residential neighborhoods of Rico and along the Dolores River corridor is not restricted (i.e., Rico residents may visit or trespass on these lots). In the future, should development of vacant lots be proposed, the adoption of a comprehensive institutional controls program ensures that the landowner/developer proposes a cleanup plan tailored to his or her

development that will protect residents and recreational visitors when these areas are used more actively.

2. Very young children will spend the majority of their outdoor time playing in their own residential yards with considerably less time spent contacting soil immediately adjacent to their property boundaries. For the purposes of this evaluation, 80% of a child's exposure is assumed to occur within his or her own residential yard (i.e., the subject property) and 20% will be assumed to occur on bordering or nearby properties, such as unpaved streets, alleys, vacant lots, and vegetative ROWs (i.e., the associated off-property areas). This assumption is based on best professional judgment.¹ For comparative purposes, results are also presented assuming an equal proportion of time (i.e., 50/50) both on the subject property and on associated off-property areas. The 50/50 basis is considered less representative of likely exposures to very young children evaluated in this analysis and should be regarded as highly conservative.

Potential exposures by very young children to areas along the Dolores River corridor that are visited for recreational purposes (e.g., walking or fishing) are expected to occur with less frequency than contact with soils on or near the child's residential property. Further, the nature of soil contacts for a child playing on or near their residence is likely to be more intensive than that represented by intermittent recreational visits to the Dolores River corridor.

Decision Rules for Residential Subject Property Estimates:

1. For exposure to a young child residing at a subject property, all available lead concentration results reported for that property were used to calculate the weighted-average concentration for that property. For residential properties where reclamation has been completed, concentrations of lead in topsoil replacements at the property were used in place of excavated concentrations. This applied to reclaimed subject properties as well as reclaimed lots that were considered as part of the off-property areas for a given subject property. For example, at Lot 133, pre-reclamation composite results were reported as: 408 mg/kg, 3,650 mg/kg, 3,840 mg/kg, 851 mg/kg, and 661 mg/kg. During reclamation, soils associated with the two highest results were replaced with topsoil containing 15 mg/kg lead. Therefore, the weighted-average lead concentration for Lot 133 was calculated as: (408+15+15+851+661) / 5 = 390 mg/kg.

¹ Literature reported values for the percentage of time a young child spends in outdoor play within and outside of the home property were researched, but found to be limited. Values were reported in one study (Ko et al. 2007) that was designed to assess the relationship between video-observed oral behaviors during outdoor play in an urban environment to children's blood lead levels. In that study, investigators reported that approximately 84% of the total play time among all children in the study was spent in their own yards, with 11% spent on the easement, and 6% spent at neighboring properties. The time assumptions incorporated within the Rico residual risk estimates are consistent with these reported values and more conservative.

2. Weighted-average lead concentrations for the young child's subject property were multiplied by 0.8 (and by 0.5 for the 50/50 basis) corresponding to Key Assumption #2 above.

Decision Rules for Associated Off-Property Area Estimates:

- 1. For each subject property evaluated, immediately adjacent residential lots (whether occupied or vacant) were included in the weighted-average soil concentration calculation for the subject property's associated off-property area. For all but one example, only lots immediately adjacent to the subject property (i.e., not separated by streets or alleys), were considered in order to limit subjective decision-making with regard to which nearby, but non-bordering areas to include in the analysis for associated off-property areas. The same topsoil replacement rules described for subject property weighted-average calculations were also applied for lots include as part of the associated off-property area.
 - a. Exception to the Immediately Bordering Off-Property Rule As stated above, in all but one example, only lots immediately adjacent to the subject property were considered in the off-property area estimates. The one exception to this rule was applied for the lot 330 example which is located near to, but not immediately bordering Lot 469. Lot 469 is a large vacant lot that includes a large portion of the Dolores River corridor. Lot 469 was included in the off-property area estimate for Lot 330 to provide a measure of residual risk posed to a very young child whose home range area might expand into the river corridor open space. Lot 469 soil samples were elevated for lead (i.e., greater than 1100 ppm) in 7 of 10 samples collected from this property. The lead concentrations measured at Lot 469 ranged from 356 to 30,100 ppm with an average of 6,357 ppm. Nine of the 10 samples were associated with the portion of the lot representing the Dolores River corridor.
- 2. For streets, alleys, and vegetative right-of-ways immediately adjacent to the child's subject property, lead concentration results available at locations nearest to the perimeter of the subject property boundary were also compiled. Available lead concentrations on unpaved street and in use alley locations may represent soil samples from streets, alleys, or mine waste samples. Consistent with ongoing discussions between AR and the town of Rico regarding Rico's streets, it is assumed that soil caps will be placed on all unpaved streets and in use alleys with lead concentrations greater than 1,700 mg/kg. At these locations, borrow material from off-site will have less than 100 ppm lead, and will be used to cap the streets. Therefore, soil lead concentrations reported for street, alley, or mine waste samples that exceed 1,700 mg/kg were replaced with this value prior to estimating residual risk concentrations.
- 3. Weighted-average concentrations of the associated off-property area inputs were calculated without distinction between the type of result included (i.e., off-property averages may include street, alley, and/or adjacent lot concentrations). Weighting was

based on the total number of off-property inputs associated with the subject property (e.g., a subject property with one street result, one alley result, and two adjacent lots would be weight-averaged based on four inputs for the associated off-property area calculation).

4. Weighted-average lead concentrations for the young child's associated off-property area were multiplied by 0.2 (and by 0.5 for the 50/50 basis) corresponding to Key Assumption #2 above.

The sum of the weighted-average subject property estimate and the weighted-average associated off-property areas estimate represent the final weighted-average concentration for the subject property that was compared to the residential risk-based action level of 1,100 mg/kg.

3 HIGH END EXAMPLES

Residual risk estimates were calculated for 20 subject properties that are expected to be at the upper end of residual risk estimates for the site based on the weighting approach described above. Given that the focus of the evaluation was on vacant lots with lead concentrations above the action level, this analysis targeted occupied residential lots immediately adjacent to vacant lots, or near to an area of the Dolores River corridor, with elevated lead concentrations. Sorting average lead concentration data for vacant lots from highest to lowest, vacant lots were identified on maps to see if candidate subject properties bordered them. In some cases, vacant lots with high lead concentrations were not located immediately adjacent to a candidate subject property and were, therefore, excluded from the high-end examples. If more than one candidate subject property bordered the same vacant property, preference was given to the candidate with the highest average lead concentration. If the candidate subject property owner had previously refused AR's offer for reclamation of soil above the action level, the next available candidate lot was identified. Although lots where reclamation had been refused were rejected from inclusion in the analysis as subject properties, such lots were retained as part of the associated off-property areas when bordering a subject property. Once a subject property was identified, data for adjacent lots, streets, alleys, and vegetative right-of-ways were compiled for estimating the final weighted-average concentrations for that subject property combined with its associated off-property areas.

Final weighted-average concentration estimates for each subject property example are summarized in Attachment 1 and are based on lead concentration data obtained from site figures and data used in the 2006 human health risk assessment as well as updated information corresponding to topsoil concentrations at reclaimed properties. Attachment 2 provides a reference map showing the locations of these example properties. A number of additional properties (not represented in Attachment 1) were also evaluated during selection of these high end examples confirming that the examples are representative of the upper end residual risks for site residential lots encompassed by this evaluation. A discussion of the residual risk analysis results presented in Attachment 1 is provided below for the 19 examples that did not consider the Dolores River corridor and the 1 example that did.

3.1 RESIDUAL RISK FOR 19 SUBJECT PROPERTIES CONSIDERING ONLY IMMEDIATELY BORDERING OFF-PROPERTY AREAS

Based on the residual risk analysis performed for the 19 subject properties presented in Attachment 1 that considered only immediately adjacent off-property areas², the final weighted-

² The impact of including non-adjacent, but nearby properties on residual risk estimates for the subject properties was also considered and did not significantly increase average concentrations.

average lead concentrations for the 50/50 basis were below the residential action level at all but three properties. Details of analyses for these three lots are described below.

Weighted area concentration for Lot 35 for the 50/50 basis exceeds the 1,100 mg/kg action level only when it is assumed that there is open access to adjacent lot 51(see Subject Property Lot ID 35a), which is part of the Van Winkle land consolidation and reclamation. Our understanding is that access from lot 35 to the former Van Winkle lot is limited by a concrete wall and that the ground surface has been re-contoured to prevent runoff from the mine waste areas to the adjacent properties. As shown in Attachment 1 for lot ID 35a, the 80/20 basis estimate is below the 1,100 mg/kg lead residential use action level. In contrast, subject property example 35b estimates, which assume access to the mine waste areas on adjacent lot 51 is prevented, are well below the residential action level for both the 80/20 and 50/50 bases. Due to the barriers in place at this lot, which limit access to the adjacent area of elevated concentrations, reliance upon the 80/20 basis estimate for lot 35 is more appropriate than the 50/50 estimate.

Weighted area concentration for Lot 53 exceeds the action level for the 50/50 basis, but not for the 80/20 basis, which is considered more representative of exposures likely to occur for young children evaluated in this assessment (see Key Assumption #2 above). Contouring and installation of a barrier wall similar to that described for lot 35 is also in place on lot 53. This barrier will not limit access to mine waste located on lot 50, but would limit access and surface runoff from the VanWinkle mine waste areas to the east of lot 53 similar to lot 35, should this be of concern.

The high final weighted-average concentration at lot 45 is primarily due to inclusion of the mine waste sample result on the adjacent Forest Service property which was part of the associated off-property area for lot 45, but is also influenced by the elevated vegetative ROWs in the vicinity of lot 45. For perspective, should reclamation of the higher vegetative ROW sample result (i.e. vegetative ROW input "B" for lot 45, Attachment 1) occur, the 80/20 basis estimate for lot 45 would be below the residential action level. Reclamation of both vegetative ROW areas would further lower the 80/20 basis estimate, but the 50/50 basis estimate would still exceed the residential action level due to inclusion of the mine waste sample result on the adjacent Forest Service property. The intent of the current evaluation was to evaluate whether the residential action levels for the site if reclamation decisions for those existing vacant lots are deferred until further development of each lot. In the context of this evaluation, mine waste on Forest Service property is an issue that the town needs to consider separately from the issue of concentrations at vacant lots in that it is not expected to undergo development for residential use at some point in the future.

3.2 RESIDUAL RISK FOR 1 SUBJECT PROPERTY CONSIDERING INFLUENCE OF NEARBY DOLORES RIVER CORRIDOR OPEN SPACE IN THE OFF-PROPERTY AREA ESTIMATE

The residual risk analysis performed for Lot 330 (Attachment 1) included nearby Lot 469 in the off-property area estimate to evaluate the potential for unacceptable residual risks to Rico residents recreating in areas of the Dolores River corridor where elevated lead concentrations were present. Lot 469 includes a large portion of the river corridor area and was found to have some of the highest lead concentrations reported for any samples at the site. Predicted residual risks for Lot 330 are lower than the residential action level when it was assumed that a child would derive 50% of his or her exposure from off-property areas, including Lot 469. In this example, the weighted-average concentration of the associated off-property area included five different inputs. Each input was factored into the weighted-average equally. Thus, for the residual risk estimate based on 50% off-property exposure, Lot 469 represents about 10% of the assumed exposure by a very young child living at Lot 330. Assuming 10% of exposure is attributable to the river corridor is similar to the assumption in the Rico HHRA which assessed lead exposures to children assuming that children visiting the river corridor during the summer months would receive 1/7 of their total soil and dust exposure from the Dolores River corridor and 6/7 from their residence.

Based on the conservative assumptions inherent in the Lot 330 example, consideration of potential recreational use of the future Dolores River corridor by Rico residents for typical recreational activities is not expected to result in unacceptable residual risks.

4 CONCLUSIONS

In summary, our analysis identified one property, lot 53, for which the final weighted-average concentration exceeded the residential action level due to the influence of uncontrolled vacant lots or roadway concentrations. This exceedance occurred only when assuming a young child would have 50% of his or her exposure from the associated off-property areas. As noted previously (see Key Assumption #2 above), it is more likely that no more than 20% of exposures will be derived from associated off-property areas. Thus, the 80/20 basis estimates are considered more representative of exposures likely to occur for young children evaluated in this assessment.

The final weighted-average concentration for the 50/50 basis at lot 35 also exceeds the residential action level if open access to adjacent vacant lot 51 is assumed. However, as stated above, due to the barriers in place at lot 35, which limit access to the adjacent area of elevated concentrations, reliance upon the 80/20 basis estimate for lot 35 is more appropriate than the 50/50 estimate. The 80/20 basis estimate for lot 35 (Lot ID 35a) is below the residential action level.

In addition, at lot 45, high sample results for nearby vegetative ROWs and the adjacent Forest Service Property contribute to elevated final weighted-average concentrations for both the 50/50 and 80/20 bases. Reclamation of vegetative ROWs would effectively lower the 50/50 basis concentration below the residential action level.

Finally, recreational use of the Dolores River corridor open space areas by Rico residents is not expected to result in unacceptable residual risks.

5 **REFERENCES**

Ko, S., P. D. Schaefer, C. M. Vicario and H. J. Binns. 2007. Relationships of video assessments of touching and mouthing behaviors during outdoor play in urban residential yards to parental perceptions of child behaviors and blood lead levels. *Journal of Exposure Science and Environmental Epidemiology* 17:47–57.

ATTACHMENT 1

RICO SOILS RESIDUAL RISK Analysis – High End Examples

Subject Property		Subject Lot Location Attributes for Weighted Average Estimate			Estimated Weighted Average Concentration for Subject Property (mg/kg)**			Concentration Data Used for Areas Adjacent to Subject Property (mg/kg)							
						Lot Average			Street a	and/or Alley	Vegetative ROW				
Lot ID	Reclaimed?	Average Concentration (mg/kg)	Description of Adjacent Areas	80/20 Basis	50/50 Basis	A	В	С	A	В	С	А	В		
34	Yes	15	Vacant lot 29 to the west. Reclaimed lots 31 and 32 to the east and north, respectively. Portion of Hinkley road to south of lot will be capped. Vegetative ROW sample in vicinity.	150	353	1,590	17	15	100			1,730			
35a	No	329	Reclaimed lot 42 to the north. Vacant lot 51 to the south. Garfield Street to the west. VanWinkle mine waste area to the east. Shaping of mine waste area on southeastern portion of lot 35 and installation of a retaining wall on lot 35 is likely to prevent accessibility of mine waste on lot 51 and in the adjacent VanWinkle area by a young child under age 6 years. This estimate (35a) assumes access to the mine waste areas is not prevented. Two vegetative ROW samples in vicinity. Elevated ROW sample is located to east within VanWinkle area.	971	1,935	15	6,725		881	3,985	788	394	12,000		
35b	No	329	Reclaimed lot 42 to the north. Vacant lot 51 to the south. Garfield Street to the west. VanWinkle mine waste area to the east. Shaping of mine waste area on southeastern portion of lot 35 and installation of a retaining wall on lot 35 is likely to prevent accessibility of mine waste on lot 51 and in the adjacent VanWinkle area by a young child under age 6 years. This estimate (35b) assumes access to the mine waste areas is prevented. Two vegetative ROW samples in vicinity. Elevated ROW sample is located to east within VanWinkle area.	349	380	15			881			394			
40	Yes	15	Vacant lots 39 and 41 to north and east. Mill Road to west will be capped.	335	814	2,796	696		100			2,859			
45	No	561	Reclaimed lot 49 to the southeast. Forest Service property to the north and northeast with an elevated mine waste sample near northeastern corner of lot 45. Mill Road along western length of property will be capped. Vegetative ROW samples in vicinity.	1,170	2,084	113	12,600		100			1,690	3,530		
48	Yes	425	Vacant lot 47 to the south. Mill Road along north/eastern portion of property will be capped.	529	685	1,948			100	788					
53	Yes	15	Vacant lot 50 to north. Portion of Soda Street to southwest and elevated street sample on Garfield Street to west will be capped. Vegetative ROW sample in vicinity.	838	2,072	14,250			100	3,985	788	1,520			
57	No	974	Vacant lot 68 to north. Residential lot 69 to south. Capped and uncapped portions of Silver Street to west. Unpaved alley to east.	969	963	1,138	978		1,240	100	1,300				
69	No	978	Residential lot 57 to north. Reclaimed lot 58 to south. Silver Street to west. Unpaved alley to east.	969	956	974	585		1,240	1,300	576				
70	No	844	Reclaimed lot 54 to the north. Residential lot 62 (owner refused reclamation) to northwest. Residential lot 55 to south (no sample data). Unpaved alley to west. Garfield Street to east.	810	761	64	961		881	805					
80	Yes	15	Reclaimed lots 78 and 79 to the north. Reclaimed lot 84 to the south. Vacant lot 71 to west. Silver Street to east. Vegetative ROW sample in vicinity.	173	409	15	15	15	1,240			2,730			
119	No	311	Vacant lot 123 to southwest. Vacant lot 121 to northeast. Vegetative ROW sample in vicinity.	466	698	959	1,327		1,410	644					
139	No	227	Reclaimed lot 133 to south and 134 to north. Hancock Street to west will be capped. Unpaved alley to east.	303	416	390	354		100	1,580					
152	No	688	Reclaimed lot 153 to north. Vacant lot 143 to south. Garfield Street to east with portion of road along northern half of eastern border to be capped.	734	802	413	2,232		100						

Subject Property		Subject Lot Location Attributes for Weighted Average Estimate		Estimated Weighted Average Concentration for Subject Property (mg/kg)**		Concentration Data Used for Areas Adjacent to Subject Property (mg/kg)							
						Lot Ave	rage		Street a	and/or Alley	/	Vegetati	ve ROW
Lot ID	Reclaimed?	Average Concentration (mg/kg)	Description of Adjacent Areas	80/20 Basis	50/50 Basis	A	В	С	A	В	С	A	В
165	No	894	Residential lot 159 to north. Vacant lot 154 to south. Commercial Street to southwest with wooded area/Silver Creek area directly west of subject lot. Unpaved alley to east.	807	677	392	737		253				
173	No	875	Residential lot 171 to north. Mantz Ave. to south. Commercial street to east. Unpaved alley to west will be capped. Vegetative ROW samples in vicinity.	807	706	337			100	253	411	1,100	1,020
184	Yes	120	Reclaimed lot 183 to the north. Vacant lot 185 to south. River Street to west. Unpaved alley to the east. Vegetative ROW sample in vicinity.	291	546	353	1,882		803	763		1,060	
215	No	684	Vacant lots 214 to the south and 216 (no sample data for lot, but vegetative ROW sample used in analysis is adjacent to lot 216) to the north. Portion of River Street to the east will be capped. Unpaved alley to the west. Vegetative ROW sample in vicinity.	778	920	1,427			100			1,939	
232	No	1,005	Residential lot 231 (no sample data for lot, but vegetative ROW sample used in analysis is adjacent to lot 231) to north and 233 to south. Silver Street to west, a portion of which will be capped. Unpaved alley to east. Vegetative ROW sample in vicinity.	910	768	530			874	100	396	758	
271	No	274	Combined with lot 272 (see below).			See Lot 272							
272	No	462	[Note: Lots 272 and 271 combined for analysis because they appear to be one lot (possibly commercial?) on map. However, only the higher average lead concentration, corresponding to lot 272, was used for the analysis.] Vacant lot 269 to north. Reclaimed residential lot 266 to south. Paved Glasglow Steet to west. Unpaved alley to east.	466	471	331	416		695				
330	Yes	369	Lot 469 near property boundary to the west (includes 1 surface sample and several elevated Dolores River Corridor samples). Vacant lots 521 (no sample data for lot) to south and 331 to north. Streets to east and south. Vegetative ROW sample in vicinity.	656	1,087	6,357	668		732	315		952	

mg/kg = milligrams per kilogram

ROW = Right-of-Way

** Bolded estimates are above the residential risk-based action level of 1,100 mg/kg.

Notes:

1) Please refer to the residual risk evaluation memorandum for background regarding selection of subject lots included in this table. All subject lots are expected to be occupied residential properties where lead concentrations were below the action level and did not require reclamation or at which reclamation was completed. Adjacent lots may be residential or commercial lots, whether vacant or occupied and without regard to reclamation status. 2) 80/20 Basis assumes child under age 6 spends 80% time on subject property and 20% on adjacent areas.

3) 50/50 Basis assumes child under age 6 spends 50% time on subject property and 50% on adjacent areas.

4 While the analysis shows lots 35 and 53 with weighted average concentrations above 1,100 mg/kg, these values were influenced by adjacent lots 51 and 50 respectively, which are part of the Van Winkle land consolidation and reclamation. 5) Elevation of the weighted average concentration at lot 45 is due to the mine waste sample result on the adjacent Forest Service property.

6) Lot 469 average includes the following samples: 4691S1, 0111D1, 0111D2, 0121D1, 0131D1, 0141D1 (+ duplicate), 0151D1, 0161D1, 0171D1, and 0181D1.

ATTACHMENT 2

RICO SOILS RESIDUAL RISK Analysis – High End Example Locations

