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3 March 2011

Ms. Lauri Kemper Assistant Executive Officer California Regional Water Quality Control Board - Lahontan Region 2501 South Lake Tahoe Boulevard South Lake Tahoe, California 96150

Subject: Addendum #2 to the Feasibility Study Pacific Gas and Electric Company Compressor Station Hinkley, California

Dear Ms. Kemper:

Pacific Gas and Electric Company (PG&E) has prepared this Addendum #2 to the Feasibility Study (FS) for the PG&E Compressor Station in Hinkley, California (Site). Addendum #1 was submitted on 31 January 2011 and addressed the comments presented by the California Regional Water Quality Control Board – Lahontan Region (Water Board) in their 10 January 2011 letter. In Addendum #1, two new remedial alternatives were presented and evaluated (Combined Alternatives and the preferred alternative, Alternative 4A). As stated in Addendum #1 and as discussed with Water Board staff, PG&E and its consultants have continued efforts to improve this preferred alternative, specifically to incorporate measures to reduce the remediation timeline.

The improved alternative that has been developed is termed Alternative 4B, and is outlined in this Addendum #2. Alternative 4B reduces cleanup time significantly when compared to the previous alternatives. A brief overview of Alternative 4B follows.

DESCRIPTION OF ALTERNATIVES 4A AND 4B

Alternative 4A – Aggressive In-situ Treatment and Beneficial Agricultural Use (Addendum #1)

Alternative 4A is a more aggressive form of Alternative 4 presented in the 30 August 2010 FS (Haley & Aldrich 2010a), expanding the in-situ reactive zone (IRZ) and agricultural unit (AU) remediation components to reduce the Alternative 4 remediation time frame. Table 1 highlights the major differences in Alternatives 4, 4A, and 4B, and summarizes the anticipated time to meet potential remedial milestones. As noted in Table 1, the estimated duration to achieve background concentrations for Alternative 4A decreased significantly (by 50 percent for the 3.1 micrograms per liter [μ g/L] hexavalent chromium [Cr(VI)] background value) compared to Alternative 4. Alternative 4B further reduces the anticipated remedy duration.

Alternative 4B – Aggressive In-situ Treatment and Beneficial Agricultural Use with Targeted Pumping

As discussed in meetings with the Water Board in January and February 2011 regarding Alternatives 4 and 4A, additional adjustments to IRZ and AU treatment approaches were made and modeled to evaluate the potential to further reduce the remedy duration. A new alternative (Alternative 4B), similar to Alternative 4A in overall approach, was developed. Table 1 identifies the major remedy components, and highlights the primary differences among Alternatives 4, 4A, and 4B. Alternative 4B uses much of the same general infrastructure as does Alternative 4A, but relies on a series of step-wise optimizations that refocus the remediation effort on the more "recalcitrant" areas of the chromium plume.

Below is a list of the major components of Alternative 4B, with optimizations over time noted for each remediation component. Refer to Figures 2a and 2b (collectively referred to as "Figure 2", unless otherwise noted) for the conceptual well layout for each optimization period.

- Northwest injection of up to 80 gallons per minute (gpm);
- Extraction of groundwater for application at three existing AUs and three new AUs;
 - Year 10 Optimization: Install 12 new extraction wells and shut down two existing extraction wells
- Far-field carbon-amended injection IRZ utilizing groundwater extracted from the existing South Central Reinjection Area (SCRIA) extraction area, and injecting the dosed water into the SCRIA;
 - Year 5 Optimization: Turn off select SCRIA injection wells; distribute dosed water to SCRIA and Source Area injection wells
 - Year 10 Optimization: Install three new extraction wells and install one new injection well
 - Year 20 Optimization: Turn off select extraction wells (three in total); Modify IRZ application from continuous to intermittent (e.g., 4 months per year) and low concentration carbon-amended water is applied to select SCRIA/Source Area injection wells (39 in total)
- Near-field recirculation IRZ in the Central Area (expanded horizontally and vertically) and Source Area;
 - Year 5 Optimization: Convert select Source Area extraction wells to injection wells (six wells), and apply portion of dosed water from SCRIA Extraction area to Source Area; shut off southern Source Area injection wells
 - Year 10 Optimization: Install two new injection wells in Source Area
 - Year 20 Optimization: Turn off Central Area IRZ; Modify IRZ application from continuous to intermittent (e.g., 4 months per year), application of low concentration carbon-amended water to select SCRIA/Source Area injection wells (39 in total)
- Over time, optimization/modification of the initial (i.e., year 0) system configuration of Alternative 4B would include, for example, shutting down or converting extraction wells to injection points for certain IRZ recirculation zones in the Source Area, Central Area, and/or plume core as the areas respond to treatment as shown on Figure 2.

The initial system configuration of Alternative 4B mimics Alternative 4A as presented in FS Addendum #1 (PG&E, 2011), up through year 10 of operation. After year 10, Alternative 4B includes 12 new focused extraction wells in the vicinity of the plume toe, in addition to the extraction and injection wells installed for Alternative 4A optimizations. These 12 new extraction wells will provide 100 gpm of withdrawal for application on AUs located in the distal portion of the plume; this flow will replace 100 gpm from two existing extraction wells that will be shut down. The 12 new extraction wells, which will be located in areas of the plume toe that are recalcitrant to cleanup (based on modeling of Alternative 4A), will remain operating at 100 gpm until background concentrations have been achieved.

Modeling of Alternative 4B, including 12 new extraction wells targeting groundwater extraction in the plume toe after year 10, indicates a decrease in the estimated remediation duration to background concentrations (3.1 μ g/L) by over 45 percent compared to Alternative 4A, and by over 70 percent compared to Alternative 4.

Duration and Cost

Below is a summary of the anticipated time and cost to meet potential remedial milestones for Alternatives 4A and 4B. Table 2 is a summary of the estimated time and costs to reach chromium remediation goals for all the alternatives evaluated in the FS, Addendum #1, and Addendum #2. Table 3 includes supplemental details for the cost estimates.

		Alternative 4A	Alternative 4B
	Years	6	6
MCL Cr(T) 50 ug/L	Non-Discounted Cost	\$36.1M	\$36.1M
	NPV Cost	\$34.0M	\$34.0M
Maximum	Years	75	40
Background Cr(VI)	Non-Discounted Cost	\$142M	\$109M
3.1 ug/L	NPV Cost	\$78.7M	\$75.9M
Average	Years	130	95
Background Cr(VI)	Non-Discounted Cost	\$203M	\$176M
1.2 ug/L	NPV Cost	\$81.5M	\$84.9M

Figure 1 summarizes the operating periods of the active remediation components (AUs and IRZs) and the estimated timeframes to reach the background remedial goals for the alternatives that were evaluated in the FS, Addendum #1, and Addendum #2. Figure 2 illustrates the well layouts for the various Alternative 4B operational periods. Appendix A includes a detailed evaluation of Alternative 4B relative to the Site-specific remedial objectives outlined in the FS. Appendix B includes the output of the predictive modeling for Alternative 4B.

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SUMMARY

Based on the evaluations included in the FS, Addendum #1, and Addendum #2, and considering the estimated time to achieve chromium remediation goals, comparative ease of implementation, and cost, Alternative 4B is the preferred alternative. This alternative applies effective technologies to areas where they would be the most productive, while generating the least amount of negative impacts.

We appreciate the opportunity to present this additional alternative to the Water Board. PG&E will continue to work on further remedial optimization both prior to and during remedial implementation. However, for the purpose of selecting a final remedy, we propose that the FS is now complete. We look forward to working with the Water Board in the evaluation and selection of a final remedy at Hinkley. If you have any questions, please do not hesitate to contact me.

Sincerely yours,

Cul. Luca Eric Johnson

Principal Remediation Specialist

c: Lisa Dernbach/RWQCB Lahontan Region, South Lake Tahoe Mike Plaziak/RWQCB Lahontan Region, Victorville

Attachments:

Table 1 – Alternatives 4, 4A, and 4B Comparison Table

Table 2 – Estimated Time and Costs to Reach Chromium Remediation Goals

Table 3 – Supplemental Details for Cost Estimate

Figure 1 - Remedial Alternative Summary – Active Remediation Components and Durations

Figure 2a – Alternative 4B Aggressive In-Situ Treatment and Beneficial Agricultural Use with Targeted Pumping Conceptual Well Layout

Figure 2b – Alternative 4B Aggressive In-Situ Treatment and Beneficial Agricultural Use with Targeted Pumping Conceptual Well Layout

Appendix A – Detailed Evaluation of Alternative 4B

Appendix B - Groundwater Modeling Output for Alternative 4B

REFERENCES

- 1. Haley & Aldrich, Inc. 2010a. Feasibility Study, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. 30 August.
- 2. Haley & Aldrich, Inc. 2010b. Hinkley Feasibility Study Supplemental Data Submittal. 14 October.
- 3. Pacific Gas and Electric Company (PG&E). 2010. Addendum #1 to the Feasibility Study, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. 31 January.

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TABLE 1

ALTERNATIVES 4, 4A, AND 4B COMPARISON TABLE PACIFIC GAS AND ELECTRIC COMPANY HINKLEY, CALIFORNIA

Major Item	Alternative 4 (per FS)	Alternative 4A (Addendum #1)	Alternative 4B (Addendum #2)
Agricultural Units	840/950 gpm ^{Note 1,2}	1270 gpm	1270 gpm
Northwest Freshwater Injection	40 gpm	80 gpm	80 gpm
Far-field Carbon Amended Injection IRZ	195/0 gpm ^{Note 1,2}	195/195/255/170 gpm ^{Note 1}	195/195/255/170 gpm ^{Note 1}
Near-field Recirculation IRZ Central Area Source Area	275/0 gpm ^{Note 1.3} 150/0 gpm ^{Note 1.3} 125/0 gpm ^{Note 1.3}	290/140/140/0 gpm ^{Note 1,3} 140/140/140/0 gpm ^{Note 1,3} 150/0/0/0 gpm ^{Note 1,3}	290/140/140/0 gpm ^{Note 1,3} 140/140/140/0 gpm ^{Note 1,3} 150/0/0/0 gpm ^{Note 1,3}
Primary Differences Between Alterna	atives		
1. Central Area IRZ	Current horizontal length for the recirculation IRZ, with supplemental SCRIA injection points to the east	Increase the width by 100 percent over the current length, expanding to the east and west to intercept a greater portion of the plume	Increase the width by 100 percent over the current length, expanding to the east and west to intercept a greater portion of the plume <i>No change compared to Alternative 4A</i>
2. Operation of IRZ Components (SCRIA, Source Area, and Central Area)	5 years	20 years (intermittent, low concentration carbon amendment continues beyond 20 years - see text for description)	20 years (intermittent, low concentration carbon amendment continues beyond 20 years in SCRIA Injection Area & Source Area) <i>No change compared to Alternative 4A</i>
3. Plume Containment and Treatment via GW Extraction	950 gallons per minute (gpm) average annual withdrawal, 840 gpm of which is sent to AUs, and 110 gpm is sent to the SCRIA (while IRZ is in operation)	Increase the amount of withdrawal above Alternative 4 by 430 gpm (to a total of 1,380 gpm total). The increased withdrawal all goes to support AU expansion. After year 10, an additional 60 gpm is pumped and sent to the SCRIA.	Increase the amount of withdrawal above Alternative 4 by 430 gpm (to a total of 1,380 gpm total). The increased withdrawal all goes to support AU expansion. After year 10, an additional 60 gpm is pumped and sent to the SCRIA. After year 10, 2 of the original extraction wells to support the new AUs are shut down, and the same flow (total of 100 gpm) is extracted from 12 new extraction wells located in the plume toe (10 in the vicinity of the existing SCRIA and DVD AU extraction wells, and 2 in the vicinity of the Gorman AU extraction wells), and redirects this flow to the new AUs.
4. Duration of GW Extraction	Until background concentrations are achieved	Until background concentrations are achieved	Until background concentrations are achieved No change compared to Alternative 4A
Estimated Timeframe of Alternative	to Reach: ^{Note 4}		
50 µg/L	6 years	6 years	6 years
80% mass removal	13 years	10 years	10 years
3.1 μg/L	150 years	75 years	40 years
1.2 μg/L	220 years	130 years	95 years

Notes:

1. Flows by each major item are separated by optimization using "/"; Alternative 4 has one optimization at 5 years; Alternative 4A and Alternative 4B have optimizations at 5, 10, and 20 years.

2. Under Alternative 4, 840 gpm is applied to Agricultural Units in initial buildout, then once IRZs are shut down at year 5, the flow from the SCRIA IRZ extraction is sent to the Agricultural Units for a total of 950 gpm applied to AUs.

3. Estimated IRZ recirculation flows (i.e., the water is both extracted and injected) are shown.

4. Except for 80% mass reduction timeframe, durations based on fate & transport model performed by ARCADIS and represent time when the starting plume area has been reduced by 99 percent in the Remedial Area. The values in these tables represent the longer of Layers 1 and 3. Durations are capped at 1000 years for purposes of this costing and feasibility evaluation.

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		MCL Cr(T) 50 ug/L		Estimated Time to 80% Chromium Mass Removal	Ma	ximum Background 3.1 ug/L	l Cr(VI)	А	verage Background 1.2 ug/L	Cr(VI)
Alternative	Years*	Non-Discounted Cost*	NPV Cost*	Years*	Years*	Non-Discounted Cost*	NPV Cost*	Years**	Non-Discounted Cost*	NPV Cost*
1: No Further Action	750-1000	\$0M	\$0M	>780	>1000	\$0M	\$0M	>1000	\$0M	\$0M
2: Containment	120	\$123M	\$35.3M	95	260	\$258M	\$36.0M	320	\$316M	\$36.0M
3: Plume-Wide In-Situ Treatment	8	\$58.1M	\$50.7M	10	110	\$399M	\$130M	180	\$634M	\$133M
4: Core In-Situ Treatment and Beneficial Agricultural Use	6	\$28.9M	\$27.2M	13	150	\$154M	\$50.2M	220	\$215M	\$50.4M
5: Plume-Wide Pump and Treat	50	\$334M	\$180M	37	140	\$882M	\$218M	210	\$1.31B	\$221M
4A: Aggressive In- Situ Treatment and Beneficial Agricultural Use	6	\$36.1M	\$34.0M	10	75	\$142M	\$78.7M	130	\$203M	\$81.5M
Combined Alternative	28	\$173M	\$121M	18	90	\$295M	\$151M	130	\$340M	\$153M
4B: Aggressive In- Situ Treatment and Beneficial Agricultural Use with Targeted Pumping	6	\$36.1M	\$34.0M	10	40	\$109M	\$75.9M	95	\$176M	\$84.9M

*Except for 80% mass reduction timeframe, durations based on fate & transport model performed by ARCADIS and represent time when the starting plume area has been reduced by 99 percent in the Remedial Area. The values in these tables represent the longer of Layers 1 and 3. Durations are capped at 1000 years for purposes of this costing and feasibility evaluation.

**Timeframe to reach 1.2 ug/L shown above, to the extent achieving this criteria is feasible, is based on modeling.

Unless otherwise noted, Non-Discounted and NPV costs in millions and refer to the capital and O&M cost for the duration to reach the criteria.

ug/L - micrograms per liter chromium NPV = Net present value \$M = Millions of dollars \$B = Billions of dollars

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OPINION OF PROBABLE COST	Hinkl	ley Feasi	ibility Study Including Adde	endum #	‡ 2									Pro	ject Number:	36385
Cost Breakdown Detail by Component	7														Date:	22-Feb-11
B												_				
							NPV to r	each 50 i	ug/L Hexavalen	Chromium*		Non-discounte	d Cash Flow to	o reach 5	50 ug/L Hexavalen	t Chromium*
							Optim	ization				Optin	nization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital	O&M x No of years	. Total Capital & O&M	Begin	End	0&	M x No. of To years	tal Capital & O&M
Alternative 2 - Containment																
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	-	\$ 157,524	0	120	\$-	\$ 4,851,7	70 \$ 4,851,770	0	120	\$	18,902,938 \$	18,902,938
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	25	\$-	\$ 7,180,3	L4 \$ 7,180,314	0	25	\$	10,505,000 \$	10,505,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150	25	120	\$-	\$ 4,321,4	L6 \$ 4,321,416	25	120	\$	29,939,250 \$	29,939,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100	0	0	\$-	\$-	\$-	0	0	\$	- \$	-
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (2)	\$	900,600	\$ 84,747	0	120	\$ 900,600	\$ 2,610,2	17 \$ 3,510,817	0	120	\$	10,169,642 \$	11,070,242
Extraction for AU Application	SCRIA Extraction	Initial	SCRIA Extraction	\$	-	\$ 72,722	0	120	\$-	\$ 2,239,8	55 \$ 2,239,855	0	120	\$	8,726,680 \$	8,726,680
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$-	0	120	\$ 240,000	\$-	\$ 240,000	0	120	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU	\$	2,213,475	\$-	0	120	\$ 2,213,475	\$-	\$ 2,213,475	0	120	\$	- \$	2,213,475
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	-	\$ 339,181	0	120	\$-	\$ 10,446,8	10,446,815	0	120	\$	40,701,742 \$	40,701,742
Land Acquisition	Land Acquisition or Other	Initial	Alt 2 Land Acq	\$	320,000	\$-	0	120	\$ 320,000	\$-	\$ 320,000	0	120	\$	- \$	320,000
TOTAL				\$	3,674,075				\$ 3,674,075	\$ 31,650,3	37 \$ 35,324,462			\$	118,945,252 \$	122,619,327

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Add	lendum #2										Project Number:	36385
Cost Breakdown Detail by Component														Date:	22-Feb-11
							NEX		-/1 11	Ch.u.a.u.a.*		New -P-			
							Optim		g/L Hexavalent	Chromium*			ed Cash Flow to mization	reach 50 ug/L Hexavale	nt Chromium*
		0t				A	Optim			00.04	Tatal Cardital	Optil	mzation		
ALT	Area	Opt	Sheet Name	Capit	al	Annual	Begin	End	Capital	O&M x No.	Total Capital	Begin	End	O&M x No. of T	-
		No.				O&M	U			of years	& O&M			years	O&M
Alternative 3 - Plume-Wide In-Situ Trea	tment														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	Ś	-	\$ 157,524	0	8	\$ -	\$ 1,097,886	\$ 1,097,886	0	8	\$ 1,260,196 \$	1,260,196
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	Ś	_	\$ 420,200	0	8	<u>\$</u> -	\$ 2,928,635	\$ 2,928,635	0	8	\$ 3,361,600 \$	3,361,600
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ś	-	\$ 315,150	0	0	\$ -	\$ -	\$ -	0	0	\$ - \$	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś	_	\$ 210,100	0	0	\$	\$	\$	0	0	ې خ خ	_
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (3)	<u>ې</u> خ 1 <i>۴</i>	75,800	\$ 86,455	0	8	\$ 1,675,800	\$ 602,557	\$ 2,278,357	0	8	\$ 691,639 \$	2,367,439
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	<u> </u>	-	\$ 72,722	0	8	<u> </u>	\$ 506,847	\$ 506,847	0	8	\$ 581,779 \$	581,779
Groundwater Extraction	DVD Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	<u> </u>	-	\$ 76,992	0	-	<u> </u>	\$ 350,895	\$ 350,895	0	5	\$ 384,959 \$	384,959
Groundwater Extraction	DVD Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	ې خ	-	\$ 76,992 \$ 76,992	5	8	÷ -	\$ 185,709	\$ 185,709	5	2	\$ 230,976 \$	230,976
Groundwater Extraction	DVD Extraction	Opt 1 Opt 2	Alt 3_PIPE-WELL (10+)	¢	_	\$ 76,992 \$ 76,992	0	0	\$	\$ 105,705	\$ 105,705	0	0	\$ 230,370 \$	230,570
Groundwater Extraction	DVD Extraction	Opt 2 Opt 3	Alt 3 PIPE-WELL (10+)	¢	_	\$ 76,992	0	0	¢ _	\$ \$	\$	0	0	\$ _ \$	_
Groundwater Extraction	Gorman Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	<u> </u>	_	\$ 60,024	0		\$ -	\$ 273,564	\$ 273,564	0	5	\$ 300,121 \$	300,121
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	¢ ¢	_	\$ 60,024	5	8	\$	\$	\$ 144,782	5	8	\$ 180,073 \$	180,073
Groundwater Extraction	Gorman Extraction	Opt 1 Opt 2	Alt 3_PIPE-WELL (10+)	¢	_	\$ 60,024	0	0	\$	\$ 144,702 \$ -	\$ <u>144,702</u> \$ _	0	0	\$ 100,073 \$ \$ _ \$	-
Groundwater Extraction	Gorman Extraction	Opt 2 Opt 3	Alt 3 PIPE-WELL (10+)	¢	_	\$ 60,024	0	0	¢	\$	¢ _	0	0	¢ _ ¢	_
Dosed Injection	Northern Injection	Initial	Alt #3_0 to 5 yrs	<u>ې</u> د		<u>\$ 00,024</u> \$ -	0	5	<u>-</u> < -	<u>,</u> ,	<u>, -</u> ¢ _	0	5	<u>, , ,</u>	
Dosed Injection	Northern Injection	Opt 1	Alt #3_5 to 10 yrs	, \$Л(42,022	\$ 666,354	5	8	\$ 3,971,367	\$ 1,607,287	\$ 5,578,654	5	8	\$	6,641,084
Dosed Injection	Northern Injection	Opt 1 Opt 2	Alt #3_10 to 15 yrs		24,500	\$ 742,545	0	0	\$ 5,571,507	\$ 1,007,207 \$ -	\$ 5,576,054 \$ -	0	0	\$ 1,555,002 \$ \$ _ \$	2,024,500
Dosed Injection	Northern Injection	Opt 2 Opt 3	Alt #3 15+ yrs	ې <u>ک</u> ر د	-	\$ 495,898	0	0	¢ _	\$ \$	\$ \$	0	0	\$ _ \$	2,024,500
Dosed Injection	Central Area IRZ / Injection	Initial	Alt #3 0 to 5 yrs	ې د 13	53,685	\$ 918,288	0	5	\$ 1,353,685	\$ 4,185,153	\$ 5,538,838	0	5	\$ 4,591,438 \$	5,945,123
Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	ې <u>۲</u> ٫۰ د		\$ 918,288 \$ 918,288	5	2	\$ 1,333,085 \$	\$ 2,214,965	\$ 2,214,965	5	2	\$ 2,754,863 \$	2,754,863
Dosed Injection	Central Area IRZ / Injection	Opt 1 Opt 2	Alt #3_10 to 15 yrs	с С	_	\$ 910,200	0	0		\$ 2,214,905 \$	\$ 2,214,905 ¢	0	0	\$ 2,754,805 \$ \$ _ \$	2,754,805
Dosed Injection	Central Area IRZ / Injection	Opt 2 Opt 3	Alt #3 15+ yrs	с С	_	ς - ¢ -	0	0		ς - ¢ -	ې - د -	0	0		_
Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #3_0 to 5 yrs	ې د ۲	.15,069	\$ 643,490	0	5	\$ 2,115,069	\$ 2,932,746	\$ 5,047,815	0	5	\$ 3,217,450 \$	5,332,519
Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #3_5 to 10 yrs	ې _{کر}	15,005	\$ 357,888	5	8	\$ 2,113,009 ¢	\$ 863,247	\$ 3,047,813 \$ 863,247	5	0	\$ 1,073,664 \$	1,073,664
Dosed Injection	SCRIA / Dosed Injection	Opt 1 Opt 2	Alt #3_10 to 15 yrs	ې د	-	\$ 337,000 ¢	0	8 0	, - ¢	\$ 603,247 ¢	\$ 605,247 ¢	0	0	ς 1,075,004 ς ς ς	1,075,004
Dosed Injection	SCRIA / Dosed Injection	Opt 2 Opt 3	Alt #3 15+ yrs	ې د	-	\$ 358,973	0	0	, - ¢	γ - ¢	γ - ¢	0	0		-
Dosed Injection	Source Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	<u>ې</u> خ ي:	95,618	\$ 946,596	0	_	\$ 3,595,618	\$ 4,314,169	\$ 7,909,787	0	5	\$ 4,732,978 \$	8,328,596
Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	ې د,۔ خ		\$ 940,390 \$ _	5	8	\$ 3,333,018	\$ 4,314,103 \$	\$ 7,909,787 \$	5	2	\$ 4,732,978 \$ \$ _ \$	6,528,590
Dosed Injection	Source Area IRZ / Injection	Opt 1 Opt 2	Alt #3_10 to 15 yrs	ې د	-	ې - د	0	8 0	ې - د	ې - د	ې - د	0	0		-
Dosed Injection	Source Area IRZ / Injection	Opt 2 Opt 3	Alt #3_15+ yrs	ې د	-	\$ - \$ 669,535	0	0	, - ¢	γ - ¢	γ - ¢	0	0		-
Dosed Injection	Northern Plume Fringe	Initial	Alt #3_0 to 5 yrs	ې د	-	\$ 112,201	0	-	<u> </u>	<u> </u>	\$	0	<u>_</u>	<u> </u>	561,004
Dosed Injection	Northern Plume Fringe		Alt #3_5 to 10 yrs	ې د	-	\$ 112,201 \$ 112,201	U F	8	ې - د			0	5 0	\$ 336,603 \$	336,603
Dosed Injection	Northern Plume Fringe	Opt 1 Opt 2	Alt #3_10 to 15 yrs	ې د	-	\$ 112,201 \$ 112,201	0	0	, - ¢	\$ 270,635	\$ 270,033 ¢	0	0	\$ 550,005 \$ ¢ ¢	550,005
	Northern Plume Fringe	-		ې د	-	\$ 112,201 \$ 112,201	0	0	ې - د	ې - د	ې - د	0	0		-
Dosed Injection		Opt 3	Alt #3_15+ yrs	ې د	-			ů.	<u>-</u>	ې - د ۲۶۶ م	<u>-</u>	0	<u>_</u>		9/1 EOG
Dosed Injection Dosed Injection	Southeast and East Plume Fringe Southeast and East Plume Fringe	Initial Opt 1	Alt #3_0 to 5 yrs	ې د	-	\$ 168,301 \$ 209,102	0	5	\$ - ¢	\$ 767,043 \$ 504,366		U	С 0	\$ 841,506 \$	841,506 627,305
Dosed Injection	Southeast and East Plume Fringe	Opt 1 Opt 2	Alt #3_5 to 10 yrs	ې د	-		с 0	8 0	γ - ¢	ခ္ ၁04,300 ငံ	\$ 504,366	5	٥ 0	\$ 627,305 \$	027,305
-	Southeast and East Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	ې د	-	\$ 173,401 \$ 172,401	0		γ - ¢	ှ - င်	ှ - ငံ	0	0	ې - ې د د	-
Dosed Injection		Opt 3	Alt #3_15+ yrs	ې د	-	\$ 173,401 \$ 158,101	0	0	 -			0		<u>-</u>	-
Dosed Injection	Southern Plume Fringe	Initial	Alt #3_0 to 5 yrs	\$ ¢	-	\$ 158,101	0		\$ -	\$ 720,556	\$ 720,556	0	5	\$ 790,506 \$	790,506
Dosed Injection	Southern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$ ¢	-	\$ 249,902	5	8	ې - د	\$ 602,778	\$ 602,778	5	ð	\$ 749,706 \$	749,706
Dosed Injection	Southern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	Ş	-	\$ 249,902	U	0	ې - د	Ş -	> -	U	U	Ş - Ş	-
Dosed Injection	Southern Plume Fringe	Opt 3	Alt #3_15+ yrs	\$	-	\$ 249,902	0	0	Ş -	Ş -	Ş -	U	0	Ş - Ş	-

OPINION OF PROBABLE COST	Hink	ley Feas	ibility Study Including Adde	endum #2									Project Number:	36385
Cost Breakdown Detail by Component													Date:	22-Feb-11
						NPV to r	each 50 u	g/L Hexavalent (Chromium*		Non-discounte	d Cash Flow to	reach 50 ug/L Hexavale	nt Chromium*
						Optim	nization				Optin	nization		
ALT	Area	Opt	Sheet Name	Capital	Annual	Begin	End	Capital	O&M x No.	Total Capital	Begin	End	O&M x No. of T	otal Capital &
	Aica	No.	Sheet Rume	Capital	0&M	Degin		Cupital	of years	& 0&M	208	2110	years	O&M
Alternative 3 - Plume-Wide In-Situ Treat	tment													
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$-	\$ 157,524		8	\$-	\$ 1,097,886	\$ 1,097,886	0	8	\$ 1,260,196 \$	1,260,196
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$ -	\$ 420,200		8	\$-	\$ 2,928,635	\$ 2,928,635	0	8	\$ 3,361,600 \$	3,361,600
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$ -	\$ 315,150		0	\$ -	\$ -	\$ -	0	0	\$-\$	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$-	\$ 210,100		0	\$-	\$-	\$ -	0	0	\$-\$	-
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (3)	\$ 1,675,800			8	\$ 1,675,800	\$ 602,557	\$ 2,278,357	0	8	\$ 691,639 \$	2,367,439
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	\$-	\$ 72,722	0	8	\$-	\$ 506,847	\$ 506,847	0	8	\$ 581,779 \$	581,779
Groundwater Extraction	DVD Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	\$ -	\$ 76,992	0	5	\$ -	\$ 350,895	\$ 350,895	0	5	\$ 384,959 \$	384,959
Groundwater Extraction	DVD Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$-	\$ 76,992	5	8	\$-	\$ 185,709	\$ 185,709	5	8	\$ 230,976 \$	230,976
Groundwater Extraction	DVD Extraction	Opt 2	Alt 3_PIPE-WELL (10+)	\$-	\$ 76,992	0	0	\$-	\$-	\$-	0	0	\$-\$	-
Groundwater Extraction	DVD Extraction	Opt 3	Alt 3_PIPE-WELL (10+)	\$-	\$ 76,992	0	0	\$-	\$-	\$-	0	0	\$-\$	-
Groundwater Extraction	Gorman Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	\$-	\$ 60,024	0	5	\$-	\$ 273,564	\$ 273,564	0	5	\$ 300,121 \$	300,121
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$-	\$ 60,024	5	8	\$-	\$ 144,782	\$ 144,782	5	8	\$ 180,073 \$	180,073
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 3_PIPE-WELL (10+)	\$-	\$ 60,024	0	0	\$-	\$-	\$-	0	0	\$-\$	-
Groundwater Extraction	Gorman Extraction	Opt 3	Alt 3 PIPE-WELL (10+)	\$-	\$ 60,024	0	0	\$-	\$-	\$-	0	0	\$-\$	-
Dosed Injection	Northern Injection	Initial	Alt #3_0 to 5 yrs	\$ -	\$ -	0	5	\$ -	\$ -	\$ -	0	5	\$ - \$	-
Dosed Injection	Northern Injection	Opt 1	Alt #3_5 to 10 yrs	\$ 4,642,022	2 \$ 666,354	5	8	\$ 3,971,367	\$ 1,607,287	\$ 5,578,654	5	8	\$ 1,999,062 \$	6,641,084
Dosed Injection	Northern Injection	Opt 2	Alt #3_10 to 15 yrs	\$ 2,024,500) \$ 742,545	0	0	\$ -	\$ -	\$ -	0	0	\$ - \$	2,024,500
Dosed Injection	Northern Injection	Opt 3		\$ -	\$ 495,898		0	\$ -	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	Central Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	\$ 1,353,68			5	\$ 1,353,685	\$ 4,185,153	\$ 5,538,838	0	5	\$ 4,591,438 \$	5,945,123
Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	Ś -	\$ 918,288		8	\$ -	\$ 2,214,965	\$ 2,214,965	5	8	\$ 2,754,863 \$	2,754,863
Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #3_10 to 15 yrs	\$ -	\$ -	0	0	\$-	\$ -	\$ -	0	0	\$ - \$	
Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #3 15+ yrs	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #3 0 to 5 yrs	\$ 2,115,069	9 \$ 643,490	0	5	\$ 2,115,069	\$ 2,932,746	\$ 5,047,815	0	5	\$ 3,217,450 \$	5,332,519
Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #3_5 to 10 yrs	\$	\$ 357,888		8	\$ _		\$ 863,247	5	8	\$ 1,073,664 \$	1,073,664
Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #3_10 to 15 yrs	ې د _	\$ 337,888 \$ -	0	0	\$	\$ 000,247 \$ -	\$ 000,247	0	0	\$ <u>1,073,004</u> \$ \$ _ \$	-
Dosed Injection	SCRIA / Dosed Injection	Opt 2 Opt 3	Alt #3_15+ yrs	ې د _	\$ 358,973	0	0	ې د _	ې د _	\$	0	0	ې خ خ	-
Dosed Injection	Source Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	\$ 3,595,618			<u> </u>	\$ 3,595,618	\$	\$	0	5	\$ 4,732,978 \$	8,328,596
Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	ς - ζ	\$ 5 5 540,350 \$ -	, U 5	2	ς	ς -,51+,105 ς -	ς <i>ι,503,101</i> ς -	5	2 Q	ې ۲,۱۵۷,۶۱۵ ې خ _ خ	0,520,550
Dosed Injection	Source Area IRZ / Injection	Opt 1 Opt 2	Alt #3_10 to 15 yrs	ب - ذ	\$ - \$ -	0	0	 ¢		- ¢	0	0		-
Dosed Injection	Source Area IRZ / Injection	Opt 2 Opt 3	Alt #3_10 to 15 yrs Alt #3_15+ yrs	ې - د	ې - \$ 669,535		0	γ - ¢	י - ל	י - ל	0	0	γ - γ ¢ ć	-
	Northern Plume Fringe	Initial	Alt #3_15+ yrs Alt #3_0 to 5 yrs	ې - د	\$ 112,201			ب - د	<u>\$</u> - \$511,362	<u> </u>		U E	<u> </u>	- 561,004
Dosed Injection	•			ခု - ငံ			5 0	မှ - င်			U	С 0		
Dosed Injection	Northern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	ခု - ၄	\$ 112,201 \$ 112,201		ð	မှ - ၄	\$ 270,635	\$ 270,635	5	ō	\$ 336,603 \$	336,603
Dosed Injection	Northern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	ې - د	\$ 112,201		U	ን - ድ	ç - ≿	ን - ረ	U	U	> - > c	-
Dosed Injection	Northern Plume Fringe	Opt 3	Alt #3_15+ yrs	<u> </u>	\$ 112,201		0	<u> </u>	> -	> -	0	<u> </u>	<u> </u>	-
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt #3_0 to 5 yrs	ې - د	\$ 168,301		5	ې - د	\$ 767,043	\$ 767,043	0	5	\$ 841,506 \$	841,506
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$- ¢	\$ 209,102		8	ې - د	\$ 504,366	\$ 504,366	5	8	\$ 627,305 \$	627,305
Dosed Injection	Southeast and East Plume Fringe	Opt 2	= ;	ې -	\$ 173,401		U	۶ -	ې -	ې -	U	U	\$ - \$	-
Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3_15+ yrs	<u>Ş</u> -	\$ 173,401		0	<u>> -</u>	<u>></u> -	> -	0	0	<u>Ş</u> - Ş	-
Dosed Injection	Southern Plume Fringe	Initial	Alt #3_0 to 5 yrs	Ş -	\$ 158,101		-	\$ -	\$ 720,556	\$ 720,556	0	5	\$ 790,506 \$	790,506
Dosed Injection	Southern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	Ş -	\$ 249,902		8	Ş -	\$ 602,778	\$ 602,778	5	8	\$ 749,706 \$	749,706
Dosed Injection	Southern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	Ş -	\$ 249,902		0	Ş -	Ş -	Ş -	0	0	\$ - \$	-
Dosed Injection	Southern Plume Fringe	Opt 3	Alt #3_15+ yrs	\$-	\$ 249,902	0	0	\$-	\$-	\$ -	0	0	\$-\$	-

OPINION OF PROBABLE COST	Hinkl	ey Feasi	ibility Study Including Adde	ndum #2									Project Number:	36385
Cost Breakdown Detail by Component													Date:	22-Feb-11
								ug/L Hexavaler	t Chromium*				reach 50 ug/L Hexavale	nt Chromium*
						Optin	nization	_			Optim	nization	_	
ALT	Area	Opt	Sheet Name	Capital	Annual	Begin	End	Capital	O&M x No.	Total Capital	Begin	End	O&M x No. of T	otal Capital &
	Alca	No.	Sheet Name	Capital	0&M	Degin	End	Capital	of years	& O&M	Degin	Lind	years	O&M
Alternative 3 - Plume-Wide In-Situ Treat	ment													
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$ -	\$ 157,524	0	8	\$ -	\$ 1,097,886	\$ 1,097,886	0	8	\$ 1,260,196 \$	1,260,196
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$-	\$ 420,200	0	8	\$-	\$ 2,928,635	\$ 2,928,635	0	8	\$ 3,361,600 \$	3,361,600
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$-	\$ 315,150	0	0	\$-	\$-	\$-	0	0	\$-\$	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$-	\$ 210,100	0	0	\$-	\$-	\$-	0	0	\$-\$	-
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (3)	\$ 1,675,80	0 \$ 86,455	0	8	\$ 1,675,80	\$ 602,557	\$ 2,278,357	0	8	\$ 691,639 \$	2,367,439
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	\$-	\$ 72,722	0	8	\$-	\$ 506,847	\$ 506,847	0	8	\$ 581,779 \$	581,779
Groundwater Extraction	DVD Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	\$-	\$ 76,992	0	5	\$-	\$ 350,895	\$ 350,895	0	5	\$ 384,959 \$	384,959
Groundwater Extraction	DVD Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$-	\$ 76,992	5	8	\$-	\$ 185,709	\$ 185,709	5	8	\$ 230,976 \$	230,976
Groundwater Extraction	DVD Extraction	Opt 2	Alt 3_PIPE-WELL (10+)	\$-	\$ 76,992	0	0	\$-	\$-	\$ -	0	0	\$-\$	-
Groundwater Extraction	DVD Extraction	Opt 3	Alt 3_PIPE-WELL (10+)	\$-	\$ 76,992	0	0	\$-	\$-	\$ -	0	0	\$-\$	-
Groundwater Extraction	Gorman Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	\$-	\$ 60,024	0	5	\$-	\$ 273,564	\$ 273,564	0	5	\$ 300,121 \$	300,121
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$-	\$ 60,024	5	8	\$-	\$ 144,782	\$ 144,782	5	8	\$ 180,073 \$	180,073
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 3_PIPE-WELL (10+)	\$-	\$ 60,024	0	0	\$-	\$-	\$ -	0	0	\$-\$	-
Groundwater Extraction	Gorman Extraction	Opt 3	Alt 3_PIPE-WELL (10+)	\$-	\$ 60,024	0	0	\$-	\$-	\$-	0	0	\$-\$	-
Dosed Injection	Northern Injection	Initial	Alt #3_0 to 5 yrs	\$-	\$-	0	5	\$-	\$-	\$-	0	5	\$-\$	-
Dosed Injection	Northern Injection	Opt 1	Alt #3_5 to 10 yrs	\$ 4,642,02	2 \$ 666,354	5	8	\$ 3,971,36	\$ 1,607,287	\$ 5,578,654	5	8	\$ 1,999,062 \$	6,641,084
Dosed Injection	Northern Injection	Opt 2	Alt #3_10 to 15 yrs	\$ 2,024,50	0 \$ 742,545	0	0	\$-	\$-	\$-	0	0	\$-\$	2,024,500
Dosed Injection	Northern Injection	Opt 3	Alt #3_15+ yrs	\$-	\$ 495,898	0	0	\$-	\$-	\$-	0	0	\$-\$	-
Dosed Injection	Central Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	\$ 1,353,68	5 \$ 918,288	0	5	\$ 1,353,68	\$ 4,185,153	\$ 5,538,838	0	5	\$ 4,591,438 \$	5,945,123
Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	\$-	\$ 918,288	5	8	\$-	\$ 2,214,965	\$ 2,214,965	5	8	\$ 2,754,863 \$	2,754,863
Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #3_10 to 15 yrs	\$ -	\$ -	0	0	\$ -	\$-	\$ -	0	0	\$ - \$	-
Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #3 15+ yrs	\$ -	\$ -	0	0	\$ -	\$-	\$ -	0	0	\$ - \$	-
Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #3 0 to 5 yrs	\$ 2,115,06	9 \$ 643,490	0	5	\$ 2,115,06	\$ 2,932,746	\$ 5,047,815	0	5	\$ 3,217,450 \$	5,332,519
Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #3_5 to 10 yrs	\$ -	\$ 357,888	5	8	\$ -	\$ 863,247	\$ 863,247	5	8	\$ 1,073,664 \$	1,073,664
Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #3_10 to 15 yrs	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #3 15+ yrs	\$ -	\$ 358,973	0	0	\$ -	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	Source Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	\$ 3,595,62			5	\$ 3,595,61	\$ \$ 4,314,169	\$ 7,909,787	0	5	\$ 4,732,978 \$	8,328,596
Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	\$ -	\$ -	5	8	\$ -	\$-	\$ -	5	8	\$ - \$	-
Dosed Injection	Source Area IRZ / Injection	Opt 2	 Alt #3_10 to 15 yrs	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	Source Area IRZ / Injection	Opt 3	, Alt #3_15+ yrs	\$ -	\$ 669,535	0	0	\$ -	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	Northern Plume Fringe	Initial	Alt #3_0 to 5 yrs	\$ -	\$ 112,201	0	5	\$ -	\$ 511,362	\$ 511,362	0	5	\$ 561,004 \$	561,004
Dosed Injection	Northern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$ -	\$ 112,201	5	8	\$ -	\$ 270,635		5	8	\$ 336,603 \$	336,603
Dosed Injection	Northern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	\$ -	\$ 112,201	0	0	\$ -	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	Northern Plume Fringe	Opt 3	, Alt #3_15+ yrs	\$ -	\$ 112,201	0	0	, \$-	\$ -	\$-	0	0	\$ - \$	-
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt #3_0 to 5 yrs	\$ -	\$ 168,301	0	5	\$ -	\$ 767,043	\$ 767,043	0	5	\$ 841,506 \$	841,506
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$ -	\$ 209,102	5	8	, \$-	\$ 504,366		5	8	\$ 627,305 \$	627,305
Dosed Injection	Southeast and East Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	\$ -	\$ 173,401		0	\$-	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3_15+ yrs	\$ -	\$ 173,401	0	0	\$-	\$ -	\$ -	0	0	\$ - \$	-
Dosed Injection	Southern Plume Fringe	Initial	Alt #3_0 to 5 yrs	\$ -	\$ 158,101	0	5	<u></u> \$ -	\$ 720,556	\$ 720,556	0	5	\$ 790,506 \$	790,506
Dosed Injection	Southern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$ -	\$ 249,902	5	8	, \$-	\$ 602,778	\$ 602,778	5	8	\$ 749,706 \$	749,706
Dosed Injection	Southern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	\$-	\$ 249,902		0	\$-	\$ -	\$ -	0	0	\$ - \$	
Dosed Injection	Southern Plume Fringe	Opt 3	Alt #3_15+ yrs	, \$-	\$ 249,902		0	, Ś -	, Ś -	\$-	0	0	\$ - \$	-
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ALT Area Opt Sheet Name Capital Annual Development <	OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Addend	dum i	#2									Projec	ct Number:	36385
AtT Area Opt Sheet Name Capital Annual Testin Testin Testin Capital Opt Sheet Name Testin Capital Opt Annual Testin Capital Opt Annual Testin Capital Opt Annual Testin Annual Testin Annual	Cost Breakdown Detail by Component															Date:	22-Feb-11
ALT Area Opt Sheet Name Capital Annual Explicit Testin Annual Explicit								NPV to re	ach 50 u	g/l Hevavalent	Chromium*		Non-discour	ted Cash Flow to	reach 50	ug/L Hevavale	nt Chromium*
Att Area No. Opt No. Sheet Name (page) Capital (page) Obset (page) Copital (page) <thcopital (page)<="" th=""> <thcopital (page)<="" th=""> <thc< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>g/L Hexavalent</th><th>Chronnan</th><th></th><th></th><th></th><th></th><th>ug/Literavale</th><th></th></thc<></thcopital></thcopital>										g/L Hexavalent	Chronnan					ug/Literavale	
No. No. Other No. Other No. Variation Augests Description Northern Plane Fringe Cart A1.2975-W1L (0-51) 5 1.7456-07 86.75 5 2.7452-07 5 2.7472-07 5 5 1.7572-07 <t< th=""><th></th><th>A</th><th>Opt</th><th></th><th></th><th>Consisted</th><th>Annual</th><th></th><th></th><th>Cowital</th><th>O&M x No.</th><th>Total Capital</th><th></th><th></th><th>0&M</th><th>x No. of T</th><th>otal Capital &</th></t<>		A	Opt			Consisted	Annual			Cowital	O&M x No.	Total Capital			0&M	x No. of T	otal Capital &
Doad Injection Number's Hume Finge Opt All 3_PPE-WILL (1-0) S - S 146,000 0 S - S 322,884 S 322,884 S S 8 S 443,000 S Doad Injection Number's Hume Finge Opt All 3_PPE-WILL (1-0) S - S 146,000 0 S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S	ALI	Area	No.	Sneet Name		Capital	0&M	ведіп	Ena	Capital	of years	& O&M	ведіп	End	У	ears	O&M
Description Number Prime Primge Opt 2 All 3 PPE VTL (10x) S · S 1.46,300 0 0 S · S · S · S · S · S · S · S · S · S · S · S · S · S · S · S · S · S	Dosed Injection	Northern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	1,745,667 \$	5 146,300	0	5	\$ 1,745,667			0	5	\$		2,477,167
Doade flightion Northern Plume Fringe Op/I All "per-VEILION" S - S	Dosed Injection	Northern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	- \$	5 146,300	5	8	\$-	\$ 352,884	\$ 352,884	5	8	\$	438,900 \$	438,900
Dosed hjection Southest and sat Plume fringe Dosed hjection Intal Southest and sat Plume fringe posed hjection Nat 2, PIP-VMIL [5 - 10] Supposed hjection Supposed hjection <th< td=""><td>Dosed Injection</td><td>•</td><td>Opt 2</td><td>Alt 3_PIPE-WELL (10+)</td><td>\$</td><td>- \$</td><td>5 146,300</td><td>0</td><td>0</td><td>\$-</td><td>\$-</td><td>\$-</td><td>0</td><td>0</td><td>\$</td><td>- \$</td><td>-</td></th<>	Dosed Injection	•	Opt 2	Alt 3_PIPE-WELL (10+)	\$	- \$	5 146,300	0	0	\$-	\$-	\$-	0	0	\$	- \$	-
Dosed hjericin Southeat and sar Plume Fringe Dosed hjericin Opt I Southeat and Sar Plume Fringe Dosed hjericin Southeat and Sar Plume Fringe Dosed hjericin<	Dosed Injection	Northern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	- \$	5 146,300	0	0	\$-	\$-	\$-	0	0	\$	Ý	-
Doed rejection Southeast and fast Plume Fringe Opt 2 Att 3, PIP - Well (10-) S	Dosed Injection	Southeast and East Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,094,800 \$	5 184,360	0	5	\$ 2,094,800	\$ 840,232	\$ 2,935,032	0	5	\$	921,800 \$	3,016,600
Dissed injection Southeast and stat Plume Fringe Opt 1 Aft # 13 PJP - WFL (0 > 1) S - S	Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	1,401,273 \$	265,540	5	8	\$ 1,198,824	\$ 640,499	\$ 1,839,323	5	8	\$	796,620 \$	2,197,893
Dosed hjection Southern Plume Fringe Initial Alt 3, PIPE-WELL (0 - 5) S 2,443,333 S 963,560 S 447,693 S 1,007,100 S 1,007,100 S 1,007,100 S 2,443,933 S 963,560 S 3,407,693 S S 1,007,100 S 1,000,00 S<	Dosed Injection	Southeast and East Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	- \$	5 184,360	0	0	\$-	\$-	\$-	0	0	\$	- \$	-
Dosed injection Southern Plume Fringe Opt 1 Alt 3 PIPE-WEL (10+) S B0727 S 313,660 S S S 6,602 S 7,203 S 1,456,022 S 3 S B05,012 S 7,103 S 1,456,022 S - S 2,0,003 S 1,001 S 3,0,040 S 5,0,013 S 1,001 S S 2,000<	Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3_15+ yrs	\$	- \$	5 173,401	0	0	\$-	\$-	\$-	0	0	\$	- \$	-
Dosed injection Southern Plume Fringe Opt 3 At 32 PIPE-WELL (104) \$. \$ 313,660 0	Dosed Injection	Southern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,443,933 \$	5 211,420	0	5	\$ 2,443,933	\$ 963,560	\$ 3,407,493	0	5	\$	1,057,100 \$	3,501,033
Description Southern Plume Fringe Opt a AR3_PIPE-WELL(10+) \$ - \$ 319.660 0 0 \$ - \$ > \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$ - \$ 20,000 \$	Dosed Injection	Southern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	800,727 \$	319,660	5	8	\$ 685,042	\$ 771,039	\$ 1,456,082	5	8	\$	958,980 \$	1,759,707
Land Acquisition Land Acquisition of Other Initial Att 3 Land Acq \$ 20,000 \$ \$ 20,000 <td>Dosed Injection</td> <td>Southern Plume Fringe</td> <td>Opt 2</td> <td>Alt 3_PIPE-WELL (10+)</td> <td>\$</td> <td>- \$</td> <td>319,660</td> <td>0</td> <td>0</td> <td>\$-</td> <td>\$-</td> <td>\$-</td> <td>0</td> <td>0</td> <td>\$</td> <td>- \$</td> <td>-</td>	Dosed Injection	Southern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	- \$	319,660	0	0	\$-	\$-	\$-	0	0	\$	- \$	-
TOTAL \$ 23,913,094 \$ 20,899,805 \$ 29,820,170 \$ \$ 50,719,975 \$ 34,172,326 \$ Alternative 4 - Core In-Site Treatment and Beneficial Agricultural Use Freshwater Injection Initial GMP&RCMP (current) \$ - \$ 157,524 0 6 \$ - \$ 848,553 \$ 848,553 0 6 \$ 9 45,147 \$ Groundwater Monitoring Program GMP Including BCMP Initial GMP&RCMP (Current) \$ - \$ \$ 420,200 0 6 \$ - \$ \$ 2,263,534 \$ 2,265,534 0 6 \$ \$ - \$ \$ 945,147 \$ Groundwater Monitoring Program GMP Including BCMP Initial GMP&RCMP (CSW) \$ - \$ \$ 420,200 0 6 \$ \$ - \$ \$ 2,263,534 \$ 2,265,534 0 6 \$ \$ 2,521,200 \$ Groundwater Monitoring Program GMP Including BCMP Initial GMP&RCMP (CSW) \$ - \$ \$ 15,150 0 0 0 \$ \$ - \$ \$. \$ \$. 0 0 \$ \$ - \$ \$ 0 6 \$ \$ 2,251,200 \$ Groundwater Monitoring Program GMP Including BCMP Initial SCRIA Extraction (A LAPBICATION (SW) \$ \$. \$ \$ 1,103,400 \$ \$. \$ \$. \$ \$. \$. \$. 0 0 \$ \$. \$ \$. \$ 0 \$ \$. \$ \$. \$ \$. \$. 0 0 \$ \$. \$ \$. \$ \$. \$ \$. \$ \$. \$.	Dosed Injection	Southern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	- \$	319,660	0	0	\$-	\$-	\$-	0	0	\$	- \$	-
Alternative 4 - Core In-Site Treatment and Beneficial Agricultural Use Freshwater Injection Northwest Freshwater Injection Initial NW Injection 40 gpm 5 - \$ 157,524 0 6 \$ - \$ 848,553 \$ 848,553 0 6 \$ - \$ 420,200 0 6 \$ - \$ 2,263,534 \$ 2,263,534 0 6 \$ 2,263,534 0 6 \$ 2,263,534 0 6 \$ 2,263,534 0 6 \$ 2,263,534 0 0 \$ \$ \$ \$ \$ \$ \$ \$ 0 0 \$ <td>Land Acquisition</td> <td>Land Acquisition or Other</td> <td>Initial</td> <td>Alt 3 Land Acq</td> <td>\$</td> <td>20,000 \$</td> <td>5 -</td> <td>0</td> <td>8</td> <td>\$ 20,000</td> <td>\$-</td> <td>\$ 20,000</td> <td>0</td> <td>8</td> <td>\$</td> <td>- \$</td> <td>20,000</td>	Land Acquisition	Land Acquisition or Other	Initial	Alt 3 Land Acq	\$	20,000 \$	5 -	0	8	\$ 20,000	\$-	\$ 20,000	0	8	\$	- \$	20,000
Alternative 4 - Core In-Site Treatment and Beneficial Agricultural Use Freshwater Injection Northwest Freshwater Injection Initial NW Injection 40 gpm 5 - \$ 157,524 0 6 \$ - \$ 848,553 \$ 848,553 0 6 \$ - \$ 420,200 0 6 \$ - \$ 2,263,534 \$ 2,263,534 0 6 \$ 2,263,534 0 6 \$ 2,263,534 0 6 \$ 2,263,534 0 6 \$ 2,263,534 0 0 \$ \$ \$ \$ \$ \$ \$ \$ 0 0 \$ <td></td>																	
Alternative 4 - Core In-Site Treatment and Beneficial Agricultural Use Freshwater Injection Initial Nurlivest Freshwater Injection Initial Owner Streshwater Injection Streshwater Injecti	τοται				ć	23 913 094			-	\$ 20 899 805	\$ 29 820 170	\$ 50 719 975			\$ 3	A 172 326 \$	58,085,420
Freshwater Injection Northwest Freshwater Injection Initial NW Injection 40 gpm \$< \$< \$ \$ \$ \$ \$< \$< \$< \$<					•	_0,5 _0,00 !				÷ =0,000,000	÷ _0,0_0,1,0	÷ •••,: 20,010			, ,	,,_, _ ,	00,000,120
Freshwater Injection Northwest Freshwater Injection Initial NW Injection 40 gpm \$< \$ \$ \$ \$ \$ \$ \$ \$ \$																	
Freshwater Injection Northwest Freshwater Injection Initial NW Injection 40 gpm \$ - \$ 157,524 0 6 \$ 948,553 \$ 848,553 \$ 848,553 \$ 848,553 \$ 848,553 \$ 848,553 \$ 848,553 \$ 848,553 \$ 848,553 \$ 848,553 \$ 848,553 \$ \$ 2,263,534 \$	Alternative 4. Care In Site Treatment	hand Danaficial Agricultural															
Groundwater Monitoring Program GMP Including BCMP Initial GMP&BCMP (Current) \$ - \$ 420,200 0 6 \$ - \$ 2,263,534 \$ 2,261,200 \$ \$ 2,261,203 \$ 3					-	A				*	4 0.10 550	<u> </u>			-		
Groundwater Monitoring Program GMP Including BCMP Initial GMPR & BCMP (75%) \$ - \$ 315,150 0 0 \$ - \$ \$ - \$ \$. . \$. . \$. . \$. \$. \$. \$. </td <td></td> <td></td> <td></td> <td>· · · · ·</td> <td>T</td> <td>+</td> <td></td> <td></td> <td>0</td> <td>Ş</td> <td>· · ·</td> <td></td> <td></td> <td>6</td> <td>Ş</td> <td></td> <td>945,147</td>				· · · · ·	T	+			0	Ş	· · ·			6	Ş		945,147
Groundwater Monitoring Program GMP Including BCMP Initial GMP&BBCMP (50%) \$		0		. ,	Ş	- Ş	-	0	6	Ş -	\$ 2,263,534	\$ 2,263,534	0	6	Ş	2,521,200 \$	2,521,200
Extraction for AU Application Northern Extraction Initial Northern Extraction (4) \$ 1,103,400 \$ 456,515 \$ 1,559,915 0 6 \$ 508,482 \$ Groundwater Extraction SCRIA Extraction Initial SCRIA Extraction \$ - \$ 72,722 0 6 \$ - \$ 391,741 \$ 391,741 0 6 \$ 436,334 \$ Groundwater Extraction SCRIA Extraction Initial Alt #4_0 to 5 yrs \$ 1,337,296 \$ 1,337,296 \$ 4,185,153 \$ 5,522,449 0 5 \$ 4,591,438 \$ 1,828 0 5 \$ 1,337,296 \$ 4,185,153 \$ 5,522,449 0 5 \$ 4,591,438 \$ 1,828 0 5 \$ 4,698,720 \$ 4,189,906 \$ 4,189,906 \$ 4,189,906 \$ 8,1241 0 5 \$ 2,173,086 6,871,806 <		-			\$	- \$	-	0	0	\$ -	\$ -	\$ -	0	0	\$	- \$	-
Groundwater Extraction SCRIA Extraction Initial SCRIA Extraction Initial SCRIA Extraction \$ - \$ 72,722 0 6 \$ - \$ 391,741 \$ <				· · · · ·	\$	- \$		0	0	\$ -	\$-	\$ -	0	0	\$	- \$	-
Groundwater Extraction SCRIA Extraction Initial Supplemental SCRIA Extraction \$ - \$ 54,559 0 6 \$ - \$ 293,900 \$ 4,591,438 \$ IRZ/Dosed Injection Initial Alt #4_0 to 5 yrs \$ 1,249,906 \$ 8,42,241 0 5 \$ 2,49,60,858 0 5 4,960,858 0 5 \$ 4,071,203 \$ 40 <td>Extraction for AU Application</td> <td></td> <td>Initial</td> <td></td> <td>\$</td> <td>1,103,400 \$</td> <td></td> <td>0</td> <td>6</td> <td>\$ 1,103,400</td> <td>· · ·</td> <td></td> <td>0</td> <td>6</td> <td>\$</td> <td></td> <td>1,611,882</td>	Extraction for AU Application		Initial		\$	1,103,400 \$		0	6	\$ 1,103,400	· · ·		0	6	\$		1,611,882
IRZ/Dosed Injection Initial Alt #4_0 to 5 yrs \$ 1,337,296 \$ 1,337,296 \$ 4,185,153 \$ 5,522,449 0 5 \$ 4,591,438 \$ IRZ/Dosed Injection SCRIA / Dosed Injection Initial Alt #4_0 to 5 yrs \$ 4,698,720 \$ 4,698,720 \$ 4,698,720 \$ 2,173,086 \$ 6,871,806 0 5 \$ 2,384,044 \$ IRZ/Dosed Injection Source Area IRZ / Injection Initial Alt #4_0 to 5 yrs \$ 1,249,906 \$ 3,710,952 \$ 4,960,858 0 5 \$ 4,071,203 \$ AU Application Agricultural Units Initial AU Mods \$ 2,213,475 \$ - \$ \$ 2,40,000 \$ - \$ \$ 4,960,858 0 5 \$ 4,071,203 \$ \$ 4,071,203 \$ \$ 4,071,203 \$ \$ 4,071,203 \$ \$ 4,071,203 \$ \$ 4,071,203 \$ \$ \$ 2,213,475 \$ \$ \$<			Initial		\$	- \$		0	6	\$ -			0	6	\$		
IRZ/Dosed Injection Initial Alt #4_0 to 5 yrs \$ 4,698,720 \$ 476,809 0 5 \$ 4,698,720 \$ 4,698,720 \$ 2,173,086 \$ 6,871,806 0 5 \$ 2,384,044 \$ IRZ/Dosed Injection Initial Alt #4_0 to 5 yrs \$ 1,249,906 \$ 814,241 0 5 \$ 4,698,720 \$ 1,249,906 \$ 3,710,952 \$ 4,960,858 0 5 \$ 4,071,203 \$ AU Application Agricultural Units Initial AU Mods \$ 2,213,475 \$ - 0 5 \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 5 \$ 2,213,475 \$ - \$ 5 \$ 2,213,475 \$ - \$ 5 \$ 2,213,475 \$ - \$ 5 \$ 2,213,475 \$ 0 5 \$ 5 \$ 2,213,475 \$ 0 5 \$ 5 \$ 2,213,475 \$ 0 5 \$ 5 \$ 2,213,475 \$ 0 5 </td <td></td> <td></td> <td>Initial</td> <td>• •</td> <td>\$</td> <td>- \$</td> <td></td> <td>0</td> <td>6</td> <td>\$ -</td> <td>· · ·</td> <td></td> <td>0</td> <td>6</td> <td>\$</td> <td></td> <td>327,356</td>			Initial	• •	\$	- \$		0	6	\$ -	· · ·		0	6	\$		327,356
IRZ/Dosed Injection Initial Alt #4_0 to 5 yrs \$ 1,249,906 \$ 1,249,906 \$ 3,710,952 \$ 4,960,858 0 5 \$ 4,071,203 \$ AU Application Agricultural Units Initial AU Mods \$ 240,000 \$ - 0 5 \$ 240,000 \$ -		Central Area IRZ / Injection	Initial	Alt #4_0 to 5 yrs	\$			0	5	\$ 1,337,296	\$ 4,185,153	\$ 5,522,449	0	5	\$	4,591,438 \$	5,928,734
AU Application Agricultural Units Initial AU Mods \$ 240,000 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 319,636 \$ 0 5 - \$ 31,456,759 \$ 1,456,759 \$ 0 5 - \$ 1,598,178 \$ 34,159,178 \$ 34,159,178 \$ 339,181 \$ 339,181 \$ - \$ 337,600 \$ - \$ 281,262 \$ 281,262 \$ 5 - 6 - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337	IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4_0 to 5 yrs	\$	4,698,720 \$	476,809	0	5	\$ 4,698,720	\$ 2,173,086	\$ 6,871,806	0	5	\$	2,384,044 \$	7,082,764
AU Application Agricultural Units Initial New AU \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759 \$ 1,456,759	IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4_0 to 5 yrs	\$	1,249,906 \$	814,241	0	5	\$ 1,249,906	\$ 3,710,952	\$ 4,960,858	0	5	\$	4,071,203 \$	5,321,109
AU Application Agricultural Units Initial AU O&M Summary \$ - \$ 319,636 0 5 \$ - \$ 1,456,759 \$ 1,456,759 0 5 \$ \$ \$ \$ \$ - \$ 319,636 0 5 \$ - \$ 1,456,759 \$ 1,456,759 0 5 \$ \$ \$ \$ \$ \$ > \$	AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$		0	5	\$ 240,000	\$ -	\$ 240,000	0	5	\$	- \$	240,000
AU Application Agricultural Units Opt 1 AU O&M Summary \$ - \$ 339,181 5 6 \$ - \$ 281,262 5 6 \$ 339,181 \$ Land Acquisition Land Acquisition or Other Initial Alt 4 Land Acq \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ \$ 337,600 \$ - \$ \$ 337,600 \$ - \$ \$ 337,600 \$ - \$ \$ 337,600 \$ - \$ \$ 337,600 \$ - \$ \$ 337,600 \$ - \$ \$ 337,600 \$ - \$ \$ 337,600 \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ >	AU Application	Agricultural Units	Initial	New AU	\$	2,213,475 \$	-	0	5	\$ 2,213,475	\$-	\$ 2,213,475	0	5	\$	- \$	2,213,475
Land Acquisition or Other Initial Alt 4 Land Acq \$ 337,600 \$ - 0 6 \$ 337,600 \$ - \$ 337,600 \$ - <td>AU Application</td> <td>Agricultural Units</td> <td>Initial</td> <td>AU O&M Summary</td> <td>\$</td> <td>- \$</td> <td>319,636</td> <td>0</td> <td>5</td> <td>\$-</td> <td>\$ 1,456,759</td> <td>\$ 1,456,759</td> <td>0</td> <td>5</td> <td>\$</td> <td>1,598,178 \$</td> <td>1,598,178</td>	AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	319,636	0	5	\$-	\$ 1,456,759	\$ 1,456,759	0	5	\$	1,598,178 \$	1,598,178
Land Acquisition or Other Initial Alt 4 Land Acq \$ 337,600 \$ - 0 6 \$ 337,600 \$ - \$ 337,600 \$ - <td>AU Application</td> <td>Agricultural Units</td> <td>Opt 1</td> <td>AU O&M Summary</td> <td>\$</td> <td> \$</td> <td><u>33</u>9,181</td> <td>5</td> <td>6</td> <td>\$-</td> <td>\$ 281,262</td> <td>\$ 281,262</td> <td>5</td> <td>6</td> <td>\$</td> <td><u>339,</u>181 \$</td> <td>339,181</td>	AU Application	Agricultural Units	Opt 1	AU O&M Summary	\$	\$	<u>33</u> 9,181	5	6	\$-	\$ 281,262	\$ 281,262	5	6	\$	<u>339,</u> 181 \$	339,181
	Land Acquisition	Land Acquisition or Other	Initial	Alt 4 Land Acq	\$	337,600 \$		0	6	\$ 337,600	\$ -	\$ 337,600	0	6	\$	- \$	
TOTAL \$ 11,180,397 \$ 16,061,455 \$ 27,241,852 \$ 17,722,563 \$	TOTAL				\$	11,180,397					\$ 16,061,455	\$ 27,241,852			\$ 1	7,722,563 \$	28,902,960

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Addend	dum #	<i>¥2</i>									Project Numb	er:	36385
Cost Breakdown Detail by Component														Dat	te:	22-Feb-11
							NPV to rea	ach 50 uu	g/L Hexavalent	Chromium*		Non-discount	ed Cash Flow to	reach 50 ug/L Hex	avalent	Chromium*
							Optimiz		g/ L Hexavalent	emoninam			mization		avaient	
ALT	Area	Opt	Sheet Name		Canital	Innual	Begin	End	Capital		Total Capital	Begin	End	O&M x No. c	of Tot	-
Decedurization	Northous Division Friday	No.		<u> </u>		0&M			¢ 1745.007	of years	& O&M		F	years	00 ć	0&M
Dosed Injection	Northern Plume Fringe Northern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	Ş	1,745,667 \$	146,300 146,300	0	5	\$ 1,745,667	\$	\$ 2,412,438 \$ 352,884	0	5	\$ 731,50 \$ 438,90		2,477,167 438,900
Dosed Injection	5	Opt 1	Alt 3_PIPE-WELL (5 - 10)	ې د	- > ¢	-	5	0	ې - د	ې 352,884 د	२ ३ २, ७७४ ८	5	8	Ċ.	~	438,900
Dosed Injection	Northern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	ې د	- \$	146,300	0	0	ې - د	Ş -	ን - ሩ	0	0	Ş -	ې د	-
Dosed Injection	Northern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	<u> </u>	- Ş	146,300	0	0	<u> </u>	<u>></u> -	<u>> -</u>	0	<u>0</u>	<u> </u>	Ŷ	-
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	Ş		184,360	0	5	\$ 2,094,800	. ,	\$ 2,935,032	0	5	\$ 921,80		3,016,600
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	Ş		265,540	5	8	\$ 1,198,824	\$ 640,499	\$ 1,839,323	5	8	\$ 796,62	~	2,197,893
Dosed Injection	Southeast and East Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	Ş		184,360	0	0	Ş -	Ş -	\$ -	0	0	Ş -	Ş	-
Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3_15+ yrs	<u></u>		173,401	0	0	<u> </u>	<u> </u>	<u>> -</u>	0	0	<u> </u>	<u> </u>	-
Dosed Injection	Southern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	Ş		211,420	0	5	\$ 2,443,933	. ,	\$ 3,407,493	0	5	\$ 1,057,10		3,501,033
Dosed Injection	Southern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	Ş		319,660	5	8	\$ 685,042	\$ 771,039	\$ 1,456,082	5	8	\$ 958,98	su Ş	1,759,707
Dosed Injection	Southern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	Ş		319,660	0	0	Ş -	Ş -	\$ -	0	0	Ş -	Ş	-
Dosed Injection	Southern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	<u>Ş</u>		319,660	0	0	<u>\$</u> -	<u>Ş</u> -	<u> -</u>	0	0	<u>Ş</u> -	<u>Ş</u>	-
Land Acquisition	Land Acquisition or Other	Initial	Alt 3 Land Acq	\$	20,000 \$	-	0	8	\$ 20,000	Ş -	\$ 20,000	0	8	Ş -	Ş	20,000
TOTAL				\$	23,913,094			-	\$ 20,899,805	\$ 29,820,170	\$ 50,719,975			\$ 34,172,32	26 \$	58,085,420
Alternative 4 - Core In-Site Treatmer	nt and Beneficial Agricultural	Use														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	- \$	157,524	0	6	\$-	\$ 848,553	\$ 848,553	0	6	\$ 945,14	17 \$	945,147
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	6	\$ -	\$ 2,263,534	\$ 2,263,534	0	6	\$ 2,521,20	00 \$	2,521,200
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$		315,150	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$		210,100	0	0	\$ -	\$ -	\$-	0	0	\$ -	\$	-
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4)	Ś	1,103,400 \$	84,747	0	6	\$ 1,103,400	\$ 456,515	\$ 1,559,915	0	6	\$ 508,48	32 Ś	1,611,882
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	Ś	- \$	72,722	0	6	\$ -	\$ 391,741		0	6	\$ 436,33		436,334
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	Ś	- Ś	54,559	0	6	\$ -	\$ 293,900	\$ 293,900	0	6	\$ 327,35		327,356
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4_0 to 5 yrs	Ś	1,337,296 \$	918,288	0	5	\$ 1,337,296		\$ 5,522,449	0	5	\$ 4,591,43		5,928,734
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4_0 to 5 yrs	Ś	4,698,720 \$		0	5	\$ 4,698,720		\$ 6,871,806	0	5	\$ 2,384,04		7,082,764
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4_0 to 5 yrs	Ś	1,249,906 \$		0	5	\$ 1,249,906		\$ 4,960,858	0	5	\$ 4,071,20		5,321,109
AU Application	Agricultural Units	Initial	AU Mods	Ś	240,000 \$	-	0	5	\$ 240,000		\$ 240,000	0	5	<u>\$</u>	\$	240,000
	Agricultural Units	Initial	New AU	Ś	2,213,475 \$	-	0	5	\$ 2,213,475		\$ 2,213,475	0 0	5	\$ -	Ś	2,213,475
		minum		Υ 		319,636	n	5	\$ 2,213,473 \$ -	\$ 1,456,759		0	5	Ŧ	Ŧ	1,598,178
AU Application	•	Initial	ALL O&M Summary	C C			0							ζ 1 ζων 1 /		
AU Application AU Application	Agricultural Units	Initial Opt 1	AU O&M Summary	Ş ¢			5	6	¢			5	5	\$ 1,598,17 \$ 339.19		
AU Application AU Application AU Application	Agricultural Units Agricultural Units	Opt 1	AU O&M Summary	\$ \$ ¢	- \$	339,181	5	6	÷ \$-	\$ 281,262	\$ 281,262	5	6 6	\$ 339,18	31 \$	339,181
AU Application AU Application	Agricultural Units		-	\$ \$ \$			5 0	6 6	\$ - \$ 337,600	\$ 281,262		0 5 0	6 6	\$ 339,18		

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adden	dum i	#2										Pro	ject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to re	each 50	ug/l He	exavalent C	hromium*		Non-discount	ed Cash Flow to	reach ^I	50 ug/L Hexavalen	nt Chromium*
							Optimi		<u>, , , , , , , , , , , , , , , , , , , </u>					mization			
		Opt				Annual			-		O&M x No.	Total Capital			1 08	M x No. of To	ntal Canital &
ALT	Area	No.	Sheet Name		Capital	O&M	Begin	End	Ca	apital	of years	& O&M	Begin	End		vears	O&M
		110.									UI years	a Uaivi				years	UQIVI
Alternative 4A - Aggressive Core In-Site		<u> </u>															
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	- \$	=,=	0	6	\$	-	\$ 804,018	\$ 804,018	0	6	\$	895,542 \$	895,542
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	6	\$	-	\$ 2,263,534	\$ 2,263,534	0	6	\$	2,521,200 \$	2,521,200
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	315,150	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	210,100	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560 \$	-	0	6	\$ 2	2,623,560	\$-	\$ 2,623,560	0	6	\$	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- \$	86,274	0	6	\$	-	\$ 464,743	\$ 464,743	0	6	\$	517,646 \$	517,646
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- \$	54,559	0	6	\$	-	\$ 293,900	\$ 293,900	0	6	\$	327,356 \$	327,356
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200 \$	55,755	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	- \$	142,029	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,077,153 \$	904,760	0	5	\$ 2	2,077,153	\$ 4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,951
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,927,479 \$	478,213	0	5	\$ 2	2,927,479	\$ 2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	3,083,759 \$	821,971	0	5	\$ 3	3,083,759	\$ 3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	- \$	904,760	5	6	\$	-	\$ 750,261		5	6	\$	904,760 \$	904,760
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	356,104 \$	-	5	6	Ś	304,656	\$ 315,631		5	6	Ś	380,628 \$	736,732
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	69,296 \$,	5	6	Ś	59,284	\$	\$ 653,493	5	6	Ś	716,571 \$	785,867
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	Ś	- Ś	904,760	0	0	Ś	-	<u>, </u>	<u> </u>	0	0	Ś	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś	848,241 \$		0	0	Ś	-	, Ś -	\$-	0	0	Ś	- Ś	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś	327,581 \$		0	0	Ś	-	, Ś -	\$-	0	0	Ś	- Ś	-
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	Ś	- \$	-	0	0	Ś	-	<u>,</u> \$-	<u>\$</u> -	0	0	Ś	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	Ś	- \$	88,342	0	0	Ś	-	, Ś -	\$-	0	0	Ś	- \$	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	Ś	- \$	38,842	0	0	Ś	-	- -	\$ -	0	0	Ś	- \$	-
AU Application	Agricultural Units	Initial	AU Mods	Ś	240,000 \$	-	0	6	Ś	240,000	<u>,</u> \$-	\$ 240,000	0	6	Ś	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	Ś	3,469,796 \$	-	0	6		3,469,796	\$-	\$ 3,469,796	0	6	Ś	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	Ś	- \$	491,904	0	6	Ś		\$ 2,649,789	\$ 2,649,789	0	6	ې د	2,951,425 \$	2,951,425
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600 \$		0	6	<u>ې</u> خ 1	1,012,600	<u>, 2,043,703</u> \$	\$ 1,012,600	0	6	ې د		1,012,600
		milial		Ļ	1,012,000 9	_	0	0	γı	1,012,000	∀ –	γ <u>1,012,000</u>	0	0	ب	ب –	1,012,000
				_					A						-		
TOTAL				Ş	17,777,770				Ş 15	5,798,289	\$ 18,185,251	\$ 33,983,539			Ş	20,239,844 \$	36,099,592

Groundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueExtraction for AU ApplicationNorthern EGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	Area N and Beneficial Agr Freshwater Injection Init ding BCMP Init		Canital	Annual O&M	NPV to rea Optimiz Begin		<mark>;/L Hexavalent (</mark> Capital		Total Capital & O&M		ed Cash Flow to nization End		Date: 50 ug/L Hexavalen M x No. of To	
Alternative 4A - Aggressive Core In-Site Treatmentreshwater InjectionNorthwestGMP InclueGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueStroundwater Monitoring ProgramGMP InclueStroundwater Monitoring ProgramSCRIA ExtraStroundwater ExtractionSCRIA ExtraStroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraStroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	Area N and Beneficial Agr Freshwater Injection Init ding BCMP Init	icultural Use	Canital		Optimiz	ation		O&M x No.	•	Optin	nization			
Alternative 4A - Aggressive Core In-Site Treatmentreshwater InjectionNorthwestGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueStroundwater Monitoring ProgramGMP InclueStroundwater Monitoring ProgramSCRIA ExtraStroundwater ExtractionSCRIA Extra	Area N and Beneficial Agr Freshwater Injection Init ding BCMP Init	icultural Use	Canital				Capital		•	Optin	nization			
Alternative 4A - Aggressive Core In-Site TreatmentFreshwater InjectionNorthwestGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueStraction for AU ApplicationNorthern EGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	Area N and Beneficial Agr Freshwater Injection Init ding BCMP Init	icultural Use	Canital		Begin	End	Capital		•	Begin	End	0&	M x No. of To	tal Capital &
Freshwater InjectionNorthwestGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueExtraction for AU ApplicationNorthern EGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	Freshwater Injection Init ding BCMP Init												years	0&M
reshwater InjectionNorthwestGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramSCRIA ExtractionGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	Freshwater Injection Init ding BCMP Init													
Groundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueExtraction for AU ApplicationNorthern EGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	0		\$ - \$	149,257	0	6	\$-	\$ 804,018	\$ 804,018	0	6	\$	895,542 \$	895,54
Groundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueGroundwater Monitoring ProgramGMP InclueExtraction for AU ApplicationNorthern EGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	0	al GMP&BCMP (Current)	\$ - \$	420,200	0	6	\$ -	\$ 2,263,534		0	6	\$	2,521,200 \$	2,521,20
Extraction for AU ApplicationNorthern EGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	ding BCMP Init		\$ - \$	315,150	0	0	\$ -	\$ -	\$ -	0	0	\$	- \$	-
Extraction for AU ApplicationNorthern EGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	ding BCMP Init	al GMP&BCMP (50%)	\$ - \$	210,100	0	0	\$ -	\$ -	\$ -	0	0	\$	- \$	-
Groundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA ExtraGroundwater ExtractionSCRIA Extra	xtraction Init	al Northern Extraction (4A)	\$ 2,623,560 \$	-	0	6	\$ 2,623,560	\$ -	\$ 2,623,560	0	6	\$	- \$	2,623,50
Groundwater Extraction SCRIA Extra Groundwater Extraction SCRIA Extra	action Init	al SCRIA Extraction (5 wells)	\$ - \$	86,274	0	6	\$ -	\$ 464,743	\$ 464,743	0	6	\$	517,646 \$	517,6
Groundwater Extraction SCRIA Extra	action Init	al Supplemental SCRIA Extraction	\$ - \$	54,559	0	6	\$ -	\$ 293,900	\$ 293,900	0	6	\$	327,356 \$	327,3
	action Opt	2 DVD_SCRIA Extr (60 gpm)	\$ 742,200 \$	55,755	0	0	\$-	\$ -	\$-	0	0	\$	- \$	-
	action Opt	3 SCRIA Extraction for low dose	\$ - \$	142,029	0	0	\$-	\$ - :	\$-	0	0	\$	- \$	-
RZ/Dosed Injection Central Are	ea IRZ / Injection Init	al Alt #4A_0 to 5 yrs	\$ 2,077,153 \$	904,760	0	5	\$ 2,077,153	\$ 4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,9
RZ/Dosed Injection SCRIA / Do	sed Injection Init	al Alt #4A_0 to 5 yrs	\$ 2,927,479 \$	478,213	0	5	\$ 2,927,479	\$ 2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,54
IRZ/Dosed Injection Source Are	a IRZ / Injection Init	al Alt #4A_0 to 5 yrs	\$ 3,083,759 \$	821,971	0	5	\$ 3,083,759	\$ 3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,6
RZ/Dosed Injection Central Are	ea IRZ / Injection Opt	1 Alt #4A_5 to 10 yrs	\$ - \$	904,760	5	6	\$-	\$ 750,261	\$ 750,261	5	6	\$	904,760 \$	904,70
IRZ/Dosed Injection SCRIA / Do	sed Injection Opt	1 Alt #4A_5 to 10 yrs	\$ 356,104 \$	380,628	5	6	\$ 304,656	\$ 315,631	\$ 620,287	5	6	\$	380,628 \$	736,73
IRZ/Dosed Injection Source Are	a IRZ / Injection Opt	1 Alt #4A_5 to 10 yrs	\$ 69,296 \$	716,571	5	6	\$ 59,284	\$ 594,208	\$ 653,493	5	6	\$	716,571 \$	785,86
IRZ/Dosed Injection Central Are	ea IRZ / Injection Opt	2 Alt #4A_10 to 20 yrs	\$ - \$	904,760	0	0	\$-	\$ -	\$-	0	0	\$	- \$	-
IRZ/Dosed Injection SCRIA / Do	sed Injection Opt	2 Alt #4A_10 to 20 yrs	\$ 848,241 \$	416,508	0	0	\$-	\$ -	\$-	0	0	\$	- \$	-
RZ/Dosed Injection Source Are	a IRZ / Injection Opt	2 Alt #4A_10 to 20 yrs	\$ 327,581 \$	294,136	0	0	\$-	\$ -	\$-	0	0	\$	- \$	-
RZ/Dosed Injection Central Are	ea IRZ / Injection Opt	3 Alt #4A_20+ yrs	\$ - \$	-	0	0	\$-	\$ -	\$-	0	0	\$	- \$	-
RZ/Dosed Injection SCRIA / Do	sed Injection Opt	3 Alt #4A 20+ yrs	\$ - \$	88,342	0	0	\$ -	\$ -	\$ -	0	0	\$	- \$	-
RZ/Dosed Injection Source Are	a IRZ / Injection Opt	3 Alt #4A_20+ yrs	\$ - \$	38,842	0	0	\$-	\$ -	\$-	0	0	\$	- \$	-
AU Application Agricultura	l Units Init	al AU Mods	\$ 240,000 \$	-	0	6	\$ 240,000	\$ -	\$ 240,000	0	6	\$	- \$	240,00
AU Application Agricultura	l Units Init	al New AU (Rev)	\$ 3,469,796 \$	-	0	6	\$ 3,469,796	\$ -	\$ 3,469,796	0	6	\$	- \$	3,469,79
AU Application Agricultura	l Units Init	al AU O&M Summary	\$ - \$	491,904	0	6	\$ -	\$ 2,649,789	\$ 2,649,789	0	6	\$	2,951,425 \$	2,951,42
	sition or Other Init		\$ 1,012,600 \$	-	0	6	\$ 1,012,600		\$ 1,012,600	0	6	\$	- \$	1,012,60

OPINION OF PROBABLE COST	Hink	ley Feasi	ibility Study Including Adden	dum	#2										Pro	oject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to	reach 5	0 ug/l	L Hexavalent C	hromium*		Non-discounte	ed Cash Flow to	reach !	50 ug/L Hexavaleı	nt Chromium*
							Opti	mizatior	ו I				Optin	nization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begir	n En	d	Capital	O&M x No. of years	Total Capital & O&M	Begin	End	08	M x No. of To years	otal Capital O&M
Alternative 4A - Aggressive Core In-Site	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	ć		\$ 149,257	0	6	Ś	<u> </u>	\$ 804,018	\$ 804,018	0	6	¢	895,542 \$	895,5
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	ر د		\$ 420,200	0	6	Ŧ	-		\$ 2,263,534	0	6	<u>ر</u> خ	2,521,200 \$	2,521,2
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	ې د	-	\$ 315,150	0	0	т	_	\$ 2,203,334	\$ 2,203,334 \$ _	0	0	ç ¢	2,321,200 Ş	2,321,2
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	¢ ¢	-	\$ 210,100	0	0	Ŧ	_	ې خ _	ې د _	0	0	¢ ¢	ې خ	
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	<u>\$ 210,100</u> \$ -	0	6	Ŷ	2,623,560	<u>,</u> \$	\$ 2,623,560	0	6	<u>ې</u> د	\$	2,623,5
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	-	\$ 86,274	0	6	T	-	\$ 464,743	, , ,	0	6	\$	517,646 \$	517,6
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	Ś	-	\$ 54,559	0	6	Ś	-	\$ 293,900		0	6	Ś	327,356 \$	327,3
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD SCRIA Extr (60 gpm)	Ś	742,200	\$ 55,755	0	0	Ś	_		<u>\$</u> -	0	0	Ś	- \$	-
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	-	\$ 142,029	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,077,153	\$ 904,760	0	5	\$	2,077,153	\$ 4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,95
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,927,479	\$ 478,213	0	5	\$	2,927,479	\$ 2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,54
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	3,083,759	\$ 821,971	0	5	\$	3,083,759	\$ 3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,6
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	-	\$ 904,760	5	6	\$	-	\$ 750,261	\$ 750,261	5	6	\$	904,760 \$	904,76
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	356,104	\$ 380,628	5	6	\$	304,656	\$ 315,631	\$ 620,287	5	6	\$	380,628 \$	736,73
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	69,296	\$ 716,571	5	6	\$	59,284	\$ 594,208	\$ 653,493	5	6	\$	716,571 \$	785,86
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	-	\$ 904,760	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	848,241	\$ 416,508	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	327,581	\$ 294,136	0	0	\$	-	\$-	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ -	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ 88,342	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ 38,842	0	0	\$	-	\$-	\$ -	0	0	\$	- \$	-
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$ -	0	6	\$	240,000	\$ -	\$ 240,000	0	6	\$	- \$	240,0
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796	\$-	0	6	\$	3,469,796	\$ -	\$ 3,469,796	0	6	\$	- \$	3,469,7
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	-	\$ 491,904	0	6	\$	-	\$ 2,649,789	\$ 2,649,789	0	6	\$	2,951,425 \$	2,951,42
and Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600	\$ -	0	6	\$	1,012,600	\$ -	\$ 1,012,600	0	6	\$	- \$	1,012,6
				_					_								
TOTAL				\$	17,777,770				\$	15,798,289	\$ 18,185,251	\$ 33,983,539			\$	20,239,844 \$	36,099,5

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adden	dum	#2										Pro	ject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV t	o reach 5	<u>Ο μσ/Ι</u>	. Hexavalent C	`hromium*		Non-discount	ed Cash Flow to	reach	50 ug/L Hexavaler	at Chromium*
								imization						mization			
		Opt				Annual					O&M x No.	Total Capital			1 08	M x No. of To	otal Canital &
ALT	Area	No.	Sheet Name		Capital	O&M	Beg	in End	b	Capital	of years	& O&M	Begin	End		years	O&M
		NO.				UQIVI					UI years	a Calvi				years	UQIVI
Alternative 4B - Aggressive Core In-Site	Freatment and Beneficial	Agricu	Itural Use with Targe	tod	Dumning												
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	ادع د		\$ 149,257	0	6	\$		\$ 804,018	\$ 804,018	0	6	Ś	895,542 \$	895,542
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	Ś		\$ 420,200	0		\$		\$ 2,263,534	· · · ·	0	6	<u>ې</u> د	2,521,200 \$	2,521,200
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	ب خ	-	\$ 420,200 \$ 315,150	0	0	s S	_	\$ <u>-</u>	\$ <u>2,203,334</u> \$ -	0	0	ې خ	- \$	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	¢ ¢	_	\$ 210,100	0	0	ې خ	_	\$	\$ \$	0	0	¢	ې - خ	_
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	Ś	2,623,560	<u>\$ 210,100</u> \$ -	0	6	\$	2,623,560	<u> </u>	\$ 2,623,560	0	6	<u>ې</u> د		2,623,560
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4B at 10)	¢ ¢	3,390,900	\$ 100,562	0	0	ς ζ	-	\$	\$ 2,023,500 \$ -	0	0	¢ ¢	ې - خ	2,023,300
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	<u>ې</u> د	-	\$ 86,274	0	, v	Ś	_	\$ 464,743	\$ 464,743	0	6	\$	517,646 \$	517,646
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	Ś	-	\$ 54,559	0	6	Ś	_	\$ 293,900		0	6	¢ ¢	327,356 \$	327,356
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD SCRIA Extr (60 gpm)	Ś	742,200	\$ 55,755	0	•	Ś	_	<u>\$ -</u>	<u>\$</u>	0	0	\$	- \$	-
Groundwater Extraction	SCRIA Extraction	Opt 2 Opt 3	SCRIA Extraction for low dose	Ś	-	\$ 142,029	0	0		_	<u>\$</u> -	\$ -	0	0	\$	- \$	_
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	Ś	2,077,153	. ,	0	5	Ś	2,077,153	\$ 4,123,498	\$ 6,200,651	0	5	Ś	4,523,798 \$	6,600,951
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	Ś	2,927,479		0	5	Ś		\$ 2,179,485		0	5	Ś	2,391,064 \$	5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	Ś		\$ 821,971	0	5	Ś	3,083,759	\$ 3,746,184		0	5	Ś	4,109,855 \$	7,193,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	-	\$ 904,760	5	6	Ś	-	\$ 750,261		5	6	Ś	904,760 \$	904,760
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	356,104	\$ 380,628	5	6	Ś	304,656	\$ 315,631	. ,	5	6	Ś	380,628 \$	736,732
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	,	\$ 716,571	5	6	Ś	59,284	\$ 594,208		5	6	Ś	716,571 \$	785,867
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś		\$ 904,760	0	0	Ś	-	\$ -	\$ -	0	0	Ś	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	848,241	\$ 416,508	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	327,581	\$ 294,136	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ -	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ 88,342	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ 38,842	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$-	0	6	\$	240,000	\$-	\$ 240,000	0	6	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796	\$-	0	6	\$	3,469,796	\$-	\$ 3,469,796	0	6	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	-	\$ 491,904	0	6	\$	-	\$ 2,649,789	\$ 2,649,789	0	6	\$	2,951,425 \$	2,951,425
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600	\$-	0	6	\$	1,012,600	\$-	\$ 1,012,600	0	6	\$	- \$	1,012,600
TOTAL				\$	21,168,670				\$	15,798,289	\$ 18,185,251	\$ 33,983,539			\$	20,239,844 \$	36,099,592

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adden	dum #	2										Project Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
							NPV to r	each 50	ug/L Hexavale	nt Chromium*			Non-discounte	ed Cash Flow to	reach 50 ug/L Hexavale	ent Chromium*
								ization						nization		
		Opt				Annual	optim		-	0&M x N	No. To	otal Capital	optil		O&M x No. of 1	Total Capital
ALT	Area	No.	Sheet Name		Capital	O&M	Begin	End	Capital	of year		& O&M	Begin	End	years	O&M
Alternative 4B - Aggressive Core In-Site	Treatment and Reneficial	Δστίςι	Iltural Use with Targe	ted	Pumning											
reshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	Ś		\$ 149,257	0	6	Ś -	\$ 804	,018 \$	804,018	0	6	\$ 895,542 \$	\$ 895,5
roundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	Ś	_	\$ 420,200	0	6	\$ -	\$ 2,263		2,263,534	0	6	\$ 2,521,200 \$	\$
Froundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ś	_	\$ 315,150	0	0	\$ -	\$	- \$		0	0	\$ <u>_</u> \$	5 -,5,-
roundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś	_	\$ 210,100	0	0	\$ -	Ś	- \$	_	0	0	¢ _ ¢	
xtraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	Ś	2,623,560	<u>\$ -</u>	0	6	\$ 2,623,5	50 Ś	- \$	2,623,560	0	6	<u> </u>	, 2,623,5
straction for AU Application	Northern Extraction	Initial	Northern Extraction (4B at 10)	Ś	3,390,900	\$ 100,562	0	0	\$ _,023,3	Ś	- \$	-	0	0	\$ \$	5
roundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	Ś	-	\$ 86,274	0	6	<u> </u>	\$ 464	,743 \$	464,743	0	6	\$	5 5 517,6
roundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	Ś	-	\$ 54,559	0	6	÷ -		,900 \$	293,900	0	6	\$ 327,356 \$,
roundwater Extraction	SCRIA Extraction	Opt 2	DVD SCRIA Extr (60 gpm)	Ś	742,200	\$ 55,755	0	0	<u> </u>	4	- \$	-	0	0	<u> </u>	
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$		\$ 142,029	0	0	<u> </u>	\$	- \$	_	0	0	<u> </u>	
RZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	Ś	2,077,153		0	5	\$ 2,077,1	53 \$ 4,123	.498 \$	6,200,651	0	5	\$ 4,523,798 \$, 5 6,600,9
RZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A 0 to 5 yrs	Ś		\$ 478,213	0	5	\$ 2,927,4			5,106,964	0	5	\$ 2,391,064 \$	
RZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$		\$ 821,971	0	5	\$ 3,083,7			6,829,944	0	5	\$ 4,109,855 \$	
RZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	Ś		\$ 904,760	5	6	\$ -		,261 \$	750,261	5	6	\$ 904,760 \$	
RZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	356,104	\$ 380,628	5	6	\$ 304,6		,631 \$	620,287	5	6	\$ 380,628 \$	
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$		\$716,571	5	6	\$ 59,2		,208 \$	653,493	5	6	\$ 716,571 \$	
RZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	· · · · · · · · · · · · · · · · · · ·	\$ 904,760	0	0	\$ -	\$	- \$	-	0	0	\$ - \$	- -
RZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	848,241	\$ 416,508	0	0	\$ -	\$	- \$	-	0	0	\$ - \$	-
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	327,581	\$ 294,136	0	0	\$ -	\$	- \$	-	0	0	\$ - \$	- -
RZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$-	0	0	\$ -	\$	- \$	-	0	0	\$ - \$	
RZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$88,342	0	0	\$ -	\$	- \$	-	0	0	\$ - \$	- -
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ 38,842	0	0	\$ -	\$	- \$	-	0	0	\$ - \$	-
U Application	Agricultural Units	Initial	AU Mods	\$	240,000		0	6	\$ 240,0	00 \$	- \$	240,000	0	6	\$ - \$	\$ 240,0
NU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796	\$-	0	6	\$ 3,469,7	•	- \$	3,469,796	0	6	\$ - \$	3,469,7
	•	Initial	AU O&M Summary	ć		, \$ 491,904	0	6	ć , ,	\$ 2,649	789 \$	2,649,789	0	6	\$ 2,951,425 \$	
U Application	Agricultural Units	Initidi	AU UQIVI Summary	ر ب		\$ 491,904	0	0	- ب	J 2,04J	, OJ J	L ,013,703	0	0		

		ey reusik	bility Study Including Adde	гпаит я	F2									Project Number:	36385
Cost Breakdown Detail by Component														Date:	22-Feb-11
							NPV to re	each 50 u	ıg/L Hexavalen	t Chromium*		Non-discounte	od Cash Flow to	reach 50 ug/L Hexaval	ent Chromium*
							Optimi						nization		
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital	O&M x No. of years	Total Capital & O&M	Begin	End	O&M x No. of years	Total Capital & O&M
Alternative F. Durne Wide Durne and T.															
Alternative 5 - Plume-Wide Pump and Tr		Initial	NW Injection 40 gpm	Ś	ć	157,524	0	50	ć	\$ 3,925,427	\$ 3,925,427	0	50	\$ 7,876,224	5 7,876,224
Freshwater Injection	Northwest Freshwater Injection		· · · · · · · · · · · · · · · · · · ·	<u>ې</u>	- Ş		0					0			
Groundwater Monitoring Program Groundwater Monitoring Program	GMP Including BCMP GMP Including BCMP	Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%)	ې د	- > ~	420,200 315,150	0	10 0	Ş - ¢	\$ 3,553,493	\$ 3,553,493	0	10	\$ 4,202,000 S	4,202,000
	GMP Including BCMP		GMP&BCMP (50%)	ې د	- > ¢		-	50	ې - د	ې - \$ 3,458,834	\$ - \$ 3,458,834	0	50	\$ 8,404,000	
Groundwater Monitoring Program Groundwater Extraction	Northern Extraction	Initial Initial	Northern Extraction (5)	<u>ې</u> \$	 1,675,800 \$	210,100 84,747	<u>10</u>	50	<u> </u>			0	50	\$ 4,237,351	5 8,404,000 5 5,913,151
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	<u> </u>	- \$	72,722	0	50	\$ 1,075,800 ¢	\$ 1,812,202		0	50	\$ 3,636,117	
Groundwater Extraction	DVD Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$	73,576	0		<u> </u>	\$ 622,210		0	10	\$ 735,762	
Groundwater Extraction	DVD Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	ې خ	- , . ć	73,576	10	15	γ - ¢ -	\$ 245,435		10	10	\$ 367,881	
Groundwater Extraction	DVD Extraction	Opt 1 Opt 2	Alt 5 PIPE-WELL (15+)	ې خ		73,576	15	50	¢ _	\$ 965,836		15	50	\$ 2,575,168	
Groundwater Extraction	Gorman Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	ې د	- , _	58,316	0		<u> </u>	\$ 493,163		0	10	\$ 583,164	
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	ې خ	- , . ć	58,310 58,316	10	15	γ - ¢ -	\$ 194,531		10	10	\$ 291,582	
Groundwater Extraction	Gorman Extraction	Opt 1 Opt 2	Alt 5 PIPE-WELL (15+)	ې خ	- , . ć	58,310 58,316	10	50	γ - ¢ -	\$ 765,520		15	15 50	\$ 2,041,075	
Groundwater Extraction	Ranch or Other Extraction	Initial	Alt 5 PIPE-WELL (0 - 10)	\$	3,202,844 \$	126,247	0	10	\$ 3,202,844			0	10	\$ 1,262,472	
Groundwater Extraction	Ranch or Other Extraction	Opt 1	Alt 5 PIPE-WELL (10 - 15)	ې خ	677,400 \$	126,247	10	15	\$ 3,202,844			10	10	\$ 631,236	
Groundwater Extraction	Ranch or Other Extraction	Opt 1 Opt 2	Alt 5 PIPE-WELL (15+)	ې خ	885,600 \$	126,247	10	50	\$ 554,544	. ,		15	50	\$ 4,418,652	5,304,252
Treated Injection	Northern Plume Fringe	Initial	Alt 5 PIPE-WELL (0 - 10)	ې خ	1,526,995 \$	146,300	0	10	\$ 1,526,995			0	10	\$ 1,463,000	2,989,995
Treated Injection	Northern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	ې خ	- \$	146,300	10	15	\$ 1,520,995	\$ 488,026		10	10	\$ 731,500	
Treated Injection	Northern Plume Fringe	Opt 1 Opt 2	Alt 5_PIPE-WELL (15+)	ې خ	- , . ć	146,300	10	50	γ - ¢ -	\$ 1,920,482		15	50	\$ 5,120,500	5,120,500
Treated Injection	Southeast and East Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	ې د	6,718,776 \$	617,320	0	10	\$ 6,718,776			0	10	\$ 6,173,200	
Treated Injection	Southeast and East Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	ې خ	0,710,770 \$	617,320	10	15	\$ 0,710,770	\$ 2,059,248		10	10	\$ 3,086,600	
Treated Injection	Southeast and East Plume Fringe	Opt 1 Opt 2	Alt 5 PIPE-WELL (15+)	ې خ	- , - ,	617,320	10	50	ς - ς -	\$ 8,103,567		15	50	\$ 21,606,200	21,606,200
Treated Injection	Southern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	ر د	3,359,388 \$	319,660	0	10	\$ 3,359,388			0	10	\$ 3,196,600	6,555,988
Treated Injection	Southern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	¢ ¢	- ¢	319,660	10	15	\$ 3,333,300	\$ 1,066,318		10	15	\$ 1,598,300	1,598,300
Treated Injection	Southern Plume Fringe	Opt 1 Opt 2	Alt 5 PIPE-WELL (15+)	¢ ¢	ې - خ	319,660	15	50	\$ \$	\$ 4,196,180		10	50	\$ 11,188,100	5 11,188,100
Treated Injection	Southwest Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	<u>ې</u> خ	916,197 \$	92,180	0	10	\$ 916,197			0	10	\$ 921,800	
Treated Injection	Southwest Plume Fringe		Alt 5_PIPE-WELL (10 - 15)	ې خ	- ¢	92,180	10	15	\$ 510,157 \$ -	\$ 307,493		10	15	\$ 460,900	
Treated Injection	Southwest Plume Fringe	-	Alt 5 PIPE-WELL (15+)	Ś	ې - <	92,180	15	50	\$ -	\$ 1,210,048		15	50	\$ 3,226,300	
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	•	EX-A	Ś	8,012,515 \$		0		\$ 8,012,515			0	50	\$ 206,536,624	
Land Acquisition	Land Acquisition or Other	Initial	Alt 5 Land Acq	\$	454,000 \$	-	0	50	\$ 454,000		\$ 454,000	0	50	<u>\$ 200,000,02</u> + 5 \$ - 5	5 454,000
			· ··· > ===··· • · · • •	Ŷ				20	- 10 1 <u>7</u> 000	Ť	- 10 1,000			Ŧ	10 1,000
TOTAL				\$	27,429,515				\$ 26,916,864	\$ 153,522,020	\$ 180,438,885			\$ 306,572,310	334,001,825

OPINION OF PROBABLE COST	Hink	ley Feasil	bility Study Including Adde	endum #	ŧ2								Project Numb	er:	36385
Cost Breakdown Detail by Component													Da	nte: 2	22-Feb-11
								g/L Hexavalent	Chromium*				reach 50 ug/L He	avalent (Chromium*
		Orat			Areneval	Optim	ization			Total Conital	Optin	nization		-6 7-1	al Canital Q
ALT	Area	Opt No.	Sheet Name		Capital Annual O&M	Begin	End	Capital	O&M x No. of years	Total Capital & O&M	Begin	End	O&M x No. years	of lota	O&M
Alternative 5 - Plume-Wide Pump and T				<u> </u>				1							
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	Ş	- \$ 157,524	0	50	<u>Ş</u> -	\$ 3,925,427	\$ 3,925,427	0	50	\$ 7,876,2		7,876,22
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	Ş	- \$ 420,200	0	10	Ş -	\$ 3,553,493	\$ 3,553,493	0	10	\$ 4,202,0	JU Ş	4,202,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ş	- \$ 315,150	0	0	Ş -	Ş -	Ş -	0	0	Ş -	Ş	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ş	- \$ 210,100	10	50	<u>Ş</u> -	\$ 3,458,834	\$ 3,458,834	10	50	\$ 8,404,0	-	8,404,00
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (5)	Ş	1,675,800 \$ 84,747	0		\$ 1,675,800	\$ 2,111,851	\$ 3,787,651	0	50	\$ 4,237,3	-	5,913,15
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	Ş	- \$ 72,722	0	50	<u>Ş</u> -	\$ 1,812,202	\$ 1,812,202	0	50	\$ 3,636,1	-	3,636,11
Groundwater Extraction	DVD Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	Ş	- \$ 73,576	0		Ş -	\$ 622,210		0	10	\$ 735,7		735,76
Groundwater Extraction	DVD Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	Ş	- \$ 73,576	10	15	Ş -	\$ 245,435		10	15	\$ 367,8		367,88
Groundwater Extraction	DVD Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 73,576	15		<u>\$</u> -	\$ 965,836		15	50	\$ 2,575,1		2,575,16
Groundwater Extraction	Gorman Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$ 58,316	0	10	\$ -	\$ 493,163		0	10	\$ 583,1		583,164
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 58,316	10	15	\$ -	\$ 194,531		10	15	\$ 291,5		291,58
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 58,316	15	50	\$ -	\$ 765,520		15	50	\$ 2,041,0	-	2,041,07
Groundwater Extraction	Ranch or Other Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,202,844 \$ 126,247	0	10	\$ 3,202,844	\$ 1,067,631	\$ 4,270,475	0	10	\$ 1,262,4		4,465,31
Groundwater Extraction	Ranch or Other Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	677,400 \$ 126,247	10	15	\$ 495,805	\$ 421,134	\$ 916,939	10	15	\$ 631,2	36 \$	1,308,636
Groundwater Extraction	Ranch or Other Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	885,600 \$ 126,247	15	50	\$ 554,544	\$ 1,657,249	\$ 2,211,793	15	50	\$ 4,418,6	52 \$	5,304,25
Treated Injection	Northern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	1,526,995 \$ 146,300	0	10	\$ 1,526,995	\$ 1,237,211	\$ 2,764,206	0	10	\$ 1,463,0	JO \$	2,989,995
Treated Injection	Northern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 146,300	10	15	\$-	\$ 488,026	\$ 488,026	10	15	\$ 731,5	JO \$	731,500
Treated Injection	Northern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 146,300	15	50	\$-	\$ 1,920,482	\$ 1,920,482	15	50	\$ 5,120,5	JO \$	5,120,50
Treated Injection	Southeast and East Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	6,718,776 \$ 617,320	0	10	\$ 6,718,776	\$ 5,220,473	\$ 11,939,249	0	10	\$ 6,173,2	JO \$	12,891,97
Treated Injection	Southeast and East Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 617,320	10	15	\$-	\$ 2,059,248	\$ 2,059,248	10	15	\$ 3,086,6	JO \$	3,086,60
Treated Injection	Southeast and East Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 617,320	15	50	\$-	\$ 8,103,567	\$ 8,103,567	15	50	\$ 21,606,2	JO \$	21,606,20
Freated Injection	Southern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,359,388 \$ 319,660	0	10	\$ 3,359,388	\$ 2,703,260	\$ 6,062,648	0	10	\$ 3,196,6	JO \$	6,555,98
Treated Injection	Southern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 319,660	10	15	\$-	\$ 1,066,318	\$ 1,066,318	10	15	\$ 1,598,3	JO \$	1,598,30
reated Injection	Southern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 319,660	15	50	\$-	\$ 4,196,180	\$ 4,196,180	15	50	\$ 11,188,1	JO \$	11,188,10
Freated Injection	Southwest Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	916,197 \$ 92,180	0	10	\$ 916,197			0	10	\$ 921,8		1,837,99
Treated Injection	Southwest Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 92,180	10		\$ -	\$ 307,493		10	15	\$ 460,9		460,90
Treated Injection	Southwest Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 92,180	15	50	\$-	\$ 1,210,048		15	50	\$ 3,226,3		3,226,300
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A	\$	8,012,515 \$ 4,130,732	0		\$ 8,012,515	\$ 102,935,665		0	50	\$ 206,536,6		214,549,13
Land Acquisition	Land Acquisition or Other	Initial	Alt 5 Land Acq	\$	454,000 \$ -	0	50	\$ 454,000		\$ 454,000	0	50	\$ -	\$	454,000
ΤΟΤΔΙ				Ś	27 429 515			\$ 26 916 864	\$ 153 522 020	\$ 180 438 885			\$ 306 572 3	10 \$	334 001 825

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adde	endum #	#2								Project Number:	36385
Cost Breakdown Detail by Component													Date:	22-Feb-11
								<mark>ıg/L Hexavalen</mark>	t Chromium*				reach 50 ug/L Hexav	alent Chromium*
		•				Optir	nization	-			Optin	nization		
ALT	Area	Opt No.	Sheet Name		Capital Annual O&M	Begin	End	Capital	O&M x No. of years	Total Capital & O&M	Begin	End	V&IM x No. of years	Total Capital & O&M
Alternative C. Diverse Mide Diverse and T														
Alternative 5 - Plume-Wide Pump and T		luciti e l		ć	<u> </u>	0	50	ć	<u> </u>	¢ 2,025,427		50	¢ 7.076.224	<u> </u>
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	<u>ې</u>	- \$ 157,524	0	50	<u> </u>	\$ 3,925,427	, , ,	0	50	\$ 7,876,224	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	ې د	- \$ 420,200	0	10	Ş -	\$ 3,553,493	\$ 3,553,493	U	10	\$ 4,202,000	\$ 4,202,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ş	- \$ 315,150		0	Ş -	> -	> -	0	0	> -	γ -
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	<u>ې</u>	- \$ 210,100	<u>10</u> 0	50 50	<u>></u> -	\$ 3,458,834	\$ 3,458,834		50	\$ 8,404,000	· · · ·
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (5)	<u> </u>	<u>1,675,800 \$ 84,747</u> - \$ 72 722			\$ 1,675,800		\$ 3,787,651	0	50	\$ 4,237,351	· · · ·
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	Ť	Ş 12,122	0	50	<u> </u>	\$ 1)012)202		0	50	\$ 3,636,117	
Groundwater Extraction Groundwater Extraction	DVD Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$ 73,576			ې - د	\$ 622,210		0	10	\$ 735,762	
	DVD Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	ې د	- \$ 73,576	10	15	ς - έ	\$ 245,435		10	15	\$ 367,881	
Groundwater Extraction	DVD Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	<u>ې</u>	- \$ 73,576			<u> </u>	\$ 965,836	· · · ·	<u>15</u> 0	50	\$ 2,575,168	
Groundwater Extraction	Gorman Extraction Gorman Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	Ş	- \$ 58,316	0	10	Ş -	\$ 493,163		e e	10	\$ 583,164	
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	Ş	- \$ 58,316	10 15	15 50	ې - د	\$ 194,531 \$ 765,520		10	15 50	\$ 291,582	
Groundwater Extraction Groundwater Extraction	Ranch or Other Extraction	Opt 2 Initial	Alt 5_PIPE-WELL (15+)	<u>ې</u>	- \$ 58,316 3,202,844 \$ 126,247			<u> </u>		· · · ·	_ <u>15</u> 0		\$ 2,041,075	
			Alt 5_PIPE-WELL (0 - 10)	\$		0	10	. , ,			-	10	\$ 1,262,472	
Groundwater Extraction	Ranch or Other Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	Ş	677,400 \$ 126,247	10 15	15 50	\$ 495,805 \$ 554,544			10 15	15 50	\$ 631,236	
Groundwater Extraction	Ranch or Other Extraction Northern Plume Fringe	Opt 2 Initial	Alt 5_PIPE-WELL (15+) Alt 5 PIPE-WELL (0 - 10)	ې د	885,600 \$ 126,247 1,526,995 \$ 146,300	0	10	\$ 1,526,995			0	10	\$ 4,418,652 \$ 1,463,000	
Treated Injection Treated Injection	Northern Plume Fringe		Alt 5_PIPE-WELL (10 - 10)	ې د	- \$ 146,300	10	10 15	\$ 1,520,995 ¢	\$ 488,026		10		\$ 1,403,000 \$ 731,500	
Treated Injection	Northern Plume Fringe	Opt 1 Opt 2	Alt 5_PIPE-WELL (10 - 15)	ې د	- \$ 146,300	10	13 50	ა - ხ	\$ 1,920,482		10	15 50	\$	
Treated Injection	Southeast and East Plume Fringe	Initial	Alt 5 PIPE-WELL (0 - 10)	ې د	6,718,776 \$ 617,320	0	10	\$ 6,718,776			0	10	\$ 6,173,200	
Treated Injection	Southeast and East Plume Fringe		Alt 5_PIPE-WELL (10 - 10)	ې د	- \$ 617,320	10	10 15	\$ 0,/10,//(\$ 2,059,248		10		\$ 3,086,600	
Treated Injection	Southeast and East Plume Fringe	Opt 1 Opt 2	Alt 5_PIPE-WELL (10 - 15)	ې د	- \$ 617,320	10	13 50	ა - ხ	\$ 2,039,248	\$ 2,059,248 \$ 8,103,567	10	15 50	\$ 21,606,200	
Treated Injection	Southern Plume Fringe	Initial	Alt 5 PIPE-WELL (0 - 10)	ې د	3,359,388 \$ 319,660	0	10	<u> </u>				10	\$ 3,196,600	
Treated Injection	Southern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	ې د	- \$ 319,660	10	10	\$ 3,339,360 ¢ _	\$ 1,066,318		10	10	\$ 1,598,300	
Treated Injection	Southern Plume Fringe	Opt 1 Opt 2	Alt 5 PIPE-WELL (15+)	ې خ	- \$ 319,660		50	, - с	\$ 4,196,180		15	50	\$ 11,188,100	
Treated Injection	Southwest Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	ر خ	916,197 \$ 92,180		10	\$ 916,197				10	\$ 921,800	
Treated Injection	Southwest Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	ې خ	- \$ 92,180			\$ 910,197 \$ -	\$ 307,493		10	10	\$ 460,900	
Treated Injection	Southwest Plume Fringe	Opt 1 Opt 2	Alt 5_PIPE-WELL (15+)	ې خ	- \$ 92,180		50	γ - ¢ -	\$ 1,210,048		15	50	\$ 3,226,300	
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A	<u>ې</u> \$	8,012,515 \$ 4,130,732	0		\$ 8,012,515	5 \$ 102,935,665		0	50	\$ 206,536,624	
Land Acquisition	Land Acquisition or Other	Initial	Alt 5 Land Acq	ر د	454,000 \$ -	0		\$ 454,000		\$ 454,000	0	50	<u>\$ 200,530,024</u> \$ -	\$ 454,000
	Land Acquisition of Other			~ 	φ σσυμετ			÷ +5+,000	У Y	÷ +5+,000		50	¥	÷ +3+,000
τοται				¢	27 429 515			\$ 26 916 864	1 \$ 153 522 020	\$ 180 438 885			\$ 306 572 310	\$ 334 001 825

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Addend	lum #	¢2										Pro	oject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to r	each 50) 11g/l	Hexavalent C	hromium*		Non-discounte	d Cash Flow to	reach	50 ug/L Hexavaler	at Chromium*
							Optim							nization			
		Opt				Annual	opum	2411011			O&M x No.	Total Capital			08	kM x No. of To	otal Canital &
ALT	Area	No.	Sheet Name		Capital	O&M	Begin	End	1 (Capital	of years	& O&M	Begin	End		years	O&M
Combined Alternative																	
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	- \$	149,257	0	28	\$	-	\$ 2,743,346	\$ 2,743,346	0	28	\$	4,179,195 \$	4,179,195
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	15	\$	-	\$ 4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	315,150	15	28	\$	-	\$ 2,076,070	\$ 2,076,070	15	28	\$	4,096,950 \$	4,096,950
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	210,100	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (Combined)	\$	2,623,560 \$	-	0	28	\$	2,623,560	\$ -	\$ 2,623,560	0	28	\$	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- \$	86,274	0	28	\$	-	\$ 1,585,724	\$ 1,585,724	0	28	\$	2,415,681 \$	2,415,681
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- \$	54,559	0	28	\$	-	\$ 1,002,800	\$ 1,002,800	0	28	\$	1,527,659 \$	1,527,659
Groundwater Extraction	SCRIA Extraction	Initial	DVD_SCRIA Extr (60 gpm)	\$	742,200 \$	55,755	10	28	\$	543,234	\$ 553,274	\$ 1,096,507	10	28	\$	1,003,585 \$	1,745,785
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction for low dose	\$	- \$	142,029	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #6_0 to 10 yrs	\$	2,394,426 \$	904,760	0	10	\$	2,394,426	\$ 7,651,254	\$ 10,045,681	0	10	\$	9,047,595 \$	11,442,022
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #6_0 to 10 yrs	\$	3,374,635 \$	478,213	0	10	\$	3,374,635	\$ 4,044,089	\$ 7,418,724	0	10	\$	4,782,128 \$	8,156,763
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #6_10 to 40 yrs	\$	- \$	904,760	10	28	\$	-	\$ 8,978,243	\$ 8,978,243	10	28	\$	16,285,671 \$	16,285,671
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #6_10 to 40 yrs	\$	937,022 \$	539,845	10	28	\$	685,828	\$ 5,357,072	\$ 6,042,900	10	28	\$	9,717,215 \$	10,654,236
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #6_40 to 42 yrs	\$	- \$	-	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #6 40 to 42 yrs	\$	377,067 \$	365,220	0	0	\$	-	\$-	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #6 40 to 42 yrs	\$	107,733 \$	652,153	0	0	\$	-	\$-	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #6 42+ yrs	\$	- \$	88,342	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #6_42+ yrs	\$	- \$	38,842	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$	-	0	28	\$	240,000	\$-	\$ 240,000	0	28	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$	-	0	28	\$	3,469,796	\$-	\$ 3,469,796	0	28	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	491,904	0	28	\$	-	\$ 9,041,207	\$ 9,041,207	0	28	\$	13,773,315 \$	13,773,315
Land Acquisition	Land Acquisition or Other	Initial	Alt 6 Land Acq	\$	1,130,400 \$	-	0	28	\$	1,130,400	\$-	\$ 1,130,400	0	28	\$	- \$	1,130,400
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A (200 gpm)	\$	3,494,573 \$	2,123,267	0	28	\$	3,494,573	\$ 39,025,693	\$ 42,520,266	0	28	\$	59,451,483 \$	62,946,056
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Initial	Alt 6_PIPE-WELL (0-10)	\$	4,221,720 \$	624,855	0	10	\$	4,221,720	\$ 5,284,195	\$ 9,505,915	0	10	\$	6,248,552 \$	10,470,272
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Opt 1	Alt 6_PIPE-WELL (10-40)	\$	598,500 \$	624,811	10	28	\$	438,056	\$ 6,200,219		10	28	\$	11,246,602 \$	11,845,102
TOTAL				\$	23,711,633				\$ 2	22,616,229	\$ 98,498,377	\$ 121,114,606			\$	150,078,632 \$	173,305,465

OPINION OF PROBABLE COST	Hinkl	ley Feasi	bility Study Including Addend	lum #	#2										Pro	ject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to	reach 5	50 ug/	L Hexavalent C	Chromium*		Non-discounte	ed Cash Flow to	reach 5	0 ug/L Hexavalen	it Chromium*
								nizatio						nization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	n En	d	Capital	O&M x No. of years	Total Capital & O&M	Begin	End	0&	M x No. of To years	otal Capital & O&M
Combined Alternative																	
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	- \$	149,257	0	28		-	\$ 2,743,346	\$ 2,743,346	0	28	\$	4,179,195 \$	4,179,195
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	15		-	\$ 4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	315,150	15	28	3\$	-	\$ 2,076,070	\$ 2,076,070	15	28	\$	4,096,950 \$	4,096,950
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	210,100	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (Combined)	\$	2,623,560 \$	-	0	28	3\$	2,623,560	\$-	\$ 2,623,560	0	28	\$	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- \$	86,274	0	28	3\$	-	\$ 1,585,724	\$ 1,585,724	0	28	\$	2,415,681 \$	2,415,681
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- \$	54,559	0	28	3\$	-	\$ 1,002,800	\$ 1,002,800	0	28	\$	1,527,659 \$	1,527,659
Groundwater Extraction	SCRIA Extraction	Initial	DVD_SCRIA Extr (60 gpm)	\$	742,200 \$	55,755	10	28	3\$	543,234	\$ 553,274	\$ 1,096,507	10	28	\$	1,003,585 \$	1,745,785
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction for low dose	\$	- \$	142,029	0	0	\$	-	\$-	\$-	0	0	\$	- \$	-
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #6_0 to 10 yrs	\$	2,394,426 \$	904,760	0	10) \$	2,394,426	\$ 7,651,254	\$ 10,045,681	0	10	\$	9,047,595 \$	11,442,022
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #6 0 to 10 yrs	\$	3,374,635 \$	478,213	0	10) \$	3,374,635	\$ 4,044,089	\$ 7,418,724	0	10	\$	4,782,128 \$	8,156,763
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #6 10 to 40 yrs	\$	- \$	904,760	10	28	3 \$	-	\$ 8,978,243	\$ 8,978,243	10	28	\$	16,285,671 \$	16,285,671
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #6 10 to 40 yrs	\$	937,022 \$	539,845	10	28	3 \$	685,828	\$ 5,357,072	\$ 6,042,900	10	28	\$	9,717,215 \$	10,654,236
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #6 40 to 42 yrs	\$	- \$	-	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #6 40 to 42 yrs	\$	377,067 \$	365,220	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #6 40 to 42 yrs	\$	107,733 \$	652,153	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #6 42+ yrs	\$	- \$	88,342	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #6 42+ yrs	\$	- \$	38,842	0	0	\$	-	\$ -	\$ -	0	0	\$	- \$	-
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$	-	0	28	3 \$	240,000	\$ -	\$ 240,000	0	28	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$	-	0	28	3 \$	3,469,796	\$ -	\$ 3,469,796	0	28	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	491,904	0	28		;	\$ 9,041,207	\$ 9,041,207	0	28	\$	13,773,315 \$	13,773,315
Land Acquisition	Land Acquisition or Other	Initial	Alt 6 Land Acq	\$	1,130,400 \$	-	0	28		1,130,400	\$ -	\$ 1,130,400	0	28	\$	- \$	1,130,400
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A (200 gpm)	\$	3,494,573 \$	2,123,267	0	28			\$ 39,025,693	\$ 42,520,266	0	28	\$	59,451,483 \$	62,946,056
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Initial	Alt 6 PIPE-WELL (0-10)	\$	4,221,720 \$	624,855	0	10				\$ 9,505,915	0	10	\$	6,248,552 \$	10,470,272
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Opt 1	Alt 6_PIPE-WELL (10-40)	\$	598,500 \$	624,811	10	28	•			\$ 6,638,275	10	28	\$	11,246,602 \$	11,845,102
TOTAL				Ś	23.711.633					22.616.229	\$ 98.498.377	\$ 121.114.606			ć	150.078.632 Ś	173.305.465

TOTAL

*Except for 80% mass reduction timeframe, durations based on fate & transport model performed by ARCADIS and represent time when the starting plume area has been reduced by 99 percent in the Remedial Area. The values in these tables represent the longer of Layers 1 and 3. Durations are capped at 1000 years for purposes of this costing and feasibility evaluation.

** Timeframe to reach 1.2 ug/L shown above, to the extent achieving this criteria is feasible, is based on modeling.

піпкіе	y reasibility	Sluuy	including	Auuenuum

OPINION OF PROBABLE COST	Hink	ley Feas	ibility Study Including Adde	endum #	#2										I	Project Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							1014		/		ىك •		a. 11 .		_		
								reach 3.1 nization	ug/L Hexava	lent Ch	iromium*			ization	v to rea	ach 3.1 ug/L Hexav	valent Chromium*
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin		Capital	(O&M x No. of years	Total Capital & O&M	Begin	End	0	&M x No. of years	Total Capital & O&M
Alternative 2 - Containment																	
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	-	\$ 157,524	0	260	\$	· \$	4,967,739	\$ 4,967,739	0	260	\$	40,956,366	\$ 40,956,366
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	25	\$	· \$	7,180,314	\$ 7,180,314	0	25	\$	10,505,000	\$ 10,505,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150	25	260	\$	· \$	4,553,429	\$ 4,553,429	25	260	\$	74,060,250	\$ 74,060,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100	0	0	\$. \$	-	\$-	0	0	\$	-	\$-
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (2)	\$	900,600	\$ 84,747	0	260	\$ 900,6	i00 \$	2,672,607	\$ 3,573,207	0	260	\$	22,034,224	\$ 22,934,824
Extraction for AU Application	SCRIA Extraction	Initial	SCRIA Extraction	\$	_	\$ 72,722	0	260	\$. \$	2,293,393	\$ 2,293,393	0	260	\$	18,907,806	\$ 18,907,806
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$-	0	260	\$ 240,0	00 \$	-	\$ 240,000	0	260	\$	-	\$ 240,000
AU Application	Agricultural Units	Initial	New AU	\$	2,213,475	\$-	0	260	\$ 2,213,4	75 \$	-	\$ 2,213,475	0	260	\$	-	\$ 2,213,475
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	-	\$ 339,181	0	260	\$. \$	10,696,519	\$ 10,696,519	0	260	\$	88,187,108	\$ 88,187,108
Land Acquisition	Land Acquisition or Other	Initial	Alt 2 Land Acq	\$	320,000	\$-	0	260	\$ 320,0	00 \$	-	\$ 320,000	0	260	\$	-	\$ 320,000
TOTAL				\$	3,674,075				\$ 3,674,0	75 \$	32,364,003	\$ 36,038,078			\$	254,650,754	\$ 258,324,829

OPINION OF PROBABLE COST	Hinkley Feasibility Study Including Addendum #2
Cost Breakdown Detail by Component	

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Adde	endum #	#2									Project Number:	36385
Cost Breakdown Detail by Component														Date:	22-Feb-11
									ug/L Hexaval	ent Chromium*				o reach 3.1 ug/L Hexav	alent Chromium*
							Opti	mization	_			Optin	nization		
ALT	Area	Opt	Sheet Name		Capital	Annual	Begi	n End	Capital	O&M x No.	Total Capital	Begin	End	O&M x No. of	Total Capital &
	Alea	No.	Sheet Name		Capital	O&M	Degi		Capitai	of years	& O&M	Degin	End	years	O&M
Alternative 3 - Plume-Wide In-Situ Treat	ment														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	Ś		\$ 157,524	0	110	Ś -	\$ 4,808,750) \$ 4,808,750	0	110	\$ 17,327,693	17,327,693
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	110	<u> </u>	\$ 3,553,493		0	110	\$ 4,202,000	4,202,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$ \$	_	\$ 315,150	0	0	\$ -	\$ 5,555,455	\$ <u>-</u>	0	0	\$ - (-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś	_	\$ 210,100	10	110	\$	\$ 4,636,976	5 \$ 4,636,976	10	110	\$ 21,010,000	21,010,000
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (3)	\$	1,675,800	\$ 86,455	0	110	\$ 1,675,8			0	110	\$ 9,510,030 \$	
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	<u> </u>	-	\$ 72,722	0	110	<u> </u>	\$ 2,219,995		0	110	\$ 7,999,457 \$	
Groundwater Extraction	DVD Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	<u>ې</u> خ	-	\$ 76,992	0	5	<u>\$</u> -	\$ 350,895		0	5	\$ 384,959	
Groundwater Extraction	DVD Extraction	Opt 1	Alt 3 PIPE-WELL (5 - 10)	¢ ¢	_	\$ 76,992	5	10	ې د -	\$ 300,200		5	10	\$ 384,959	
Groundwater Extraction	DVD Extraction	Opt 1 Opt 2	Alt 3 PIPE-WELL (10+)	¢ ¢	_	\$ 76,992	10	15	ې د _	\$ 256,828		10	15	\$ 384,959	-
Groundwater Extraction	DVD Extraction	Opt 2 Opt 3	Alt 3 PIPE-WELL (10+)	с С	-	\$ 76,992 \$ 76,992	15	110	\$ -	÷		15	110	\$ 7,314,225	
Groundwater Extraction	Gorman Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	<u> </u>		\$ 60,024	0	5	\$ -	\$ 273,564		0	5	\$ 300,121	
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	ې خ	_	\$ 60,024 \$ 60,024	5	10	¢	\$ 234,041		5	10	\$ 300,121 \$	
Groundwater Extraction	Gorman Extraction	Opt 1 Opt 2	Alt 3_PIPE-WELL (10+)	с С	_	\$ 60,024 \$ 60,024	10	15	ې د .	\$ 200,228		10	15	\$ 300,121 \$	
Groundwater Extraction	Gorman Extraction	Opt 2 Opt 3	Alt 3 PIPE-WELL (10+)	ې د	_	\$ 60,024 \$ 60,024	15	110	ς ς -			15	110	\$ 5,702,302	-
Dosed Injection	Northern Injection	Initial	Alt #3_0 to 5 yrs	ر خ		<u>\$ 00,024</u> \$ -	0	5	<u>ې</u> د -	<u> </u>	\$ 1,124,327 \$ -	0	5	<u> </u>	5,702,502
Dosed Injection	Northern Injection	Opt 1	Alt #3_0 to 3 yrs	ې د	4,642,022	\$ 666,354	5	10	\$ 3,971,3	Ŧ	\$ 6,569,555	5	10	\$ 3,331,771	7,973,792
Dosed Injection	Northern Injection	Opt 1 Opt 2	Alt #3_10 to 15 yrs	ې د	2,024,500	\$ 000,334 \$ 742,545	10	10	\$ 3,971,3 \$ 1,481,7			10	10	\$ 3,712,725	
Dosed Injection	Northern Injection	Opt 2 Opt 3	Alt #3_10 to 15 yrs Alt #3_15+ yrs	ې د	2,024,300	\$ 495,898	10	110	\$ 1,401,7 ¢	\$ 9,290,426		10	110	\$ 47,110,327	
Dosed Injection	Central Area IRZ / Injection	Initial	Alt #3_15+ yrs	ې د	1,353,685	\$ 918,288	0		<u> </u>			0	5	\$ 4,591,438	
Dosed Injection	Central Area IRZ / Injection		Alt #3_5 to 10 yrs	ې د	1,555,065	\$ 918,288 \$ 918,288	U E	5 10	\$ 1,555,0 ¢	\$ 3,580,504		0	-	\$ 4,591,438 \$ \$ 4,591,438 \$	
-	-	Opt 1		ې د	-	\$ 910,200 ¢	5 10	10	ې - د	ې 5,560,504 د	+ ۲۵ کې ۶,۵۵۵,۵۵4 د	10	10 15	ې 4,591,450 د	4,591,450
Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #3_10 to 15 yrs	ې د	-	ሩ - ሩ			ې - د		ې - د		15 110	- ; c	, –
Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #3_15+ yrs	<u>ې</u>	-	<u>\$</u> \$ 643,490	<u>15</u> 0	110	- - -	<u> </u>	<u> </u>	<u>15</u> 0		<u> </u>	-
Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #3_0 to 5 yrs	ې د	2,115,069		0	5 10	\$ 2,115,0			0	5	\$ 3,217,450 \$	
Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #3_5 to 10 yrs	ې د	-	\$ 357,888	5	10	ې - د	\$ 1,395,444	\$ 1,395,444	5	10	\$ 1,789,439	1,789,439
Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #3_10 to 15 yrs	Ş	-	\$- 6 250 072	10	15	ې - د	> -	> -	10	15	> - ;	-
Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #3_15+ yrs	<u>ې</u>		\$ 358,973	15	110	<u> </u>	+ -):==)===			110	\$ 34,102,463	
Dosed Injection	Source Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	Ş	3,595,618	\$ 946,596	0	5	\$ 3,595,6		9 \$ 7,909,787	0	5	\$ 4,732,978	8,328,596
Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	Ş	-	Ş -	5	10	Ş -	Ş -	Ş -	5	10	Ş - ;	-
Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$ -	10	15	Ş -	\$ -	\$ -	10	15	\$ - \$	
Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #3_15+ yrs	<u>Ş</u>	-	\$ 669,535	15	110	<u> </u>	\$ 12,543,428			110	\$ 63,605,803	63,605,803
Dosed Injection	Northern Plume Fringe	Initial	Alt #3_0 to 5 yrs	Ş	-	\$ 112,201	0	-	Ş -	\$ 511,362		0	5	\$ 561,004 \$	
Dosed Injection	Northern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	Ş	-	\$ 112,201	5	10	Ş -	\$ 437,483		5	10	\$ 561,004 \$	
Dosed Injection	Northern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	Ş	-	\$ 112,201	10	15	Ş -	\$ 374,278		10	15	\$ 561,004 \$	
Dosed Injection	Northern Plume Fringe	Opt 3	Alt #3_15+ yrs	<u>Ş</u>	-	\$ 112,201	15	110	<u>Ş</u> -	+ _)		15	110	\$ 10,659,080 \$	10,659,080
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt #3_0 to 5 yrs	Ş	-	\$ 168,301	0	5	Ş -	\$ 767,043		0	5	\$ 841,506 \$	
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	Ş	-	\$ 209,102	5	10	Ş -	\$ 815,310		5	10	\$ 1,045,508 \$	
Dosed Injection	Southeast and East Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	Ş	-	\$ 173,401	10	15	ş -	\$ 578,430		10	15	\$ 867,007 \$	
Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3_15+ yrs	Ş	-	\$ 173,401	15		<u>Ş</u> -	\$ 3,248,594		15	110	\$ 16,473,124	
Dosed Injection	Southern Plume Fringe	Initial	Alt #3_0 to 5 yrs	\$	-	\$ 158,101	0	5	\$ -	φ , 2 0)000		0	5	\$ 790,506 \$	
Dosed Injection	Southern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$ 249,902	5	10	ş -	\$ 974,395		5	10	\$ 1,249,509	
Dosed Injection	Southern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$ 249,902	10	15	\$-	\$ 833,619		10	15	\$ 1,249,509	
Dosed Injection	Southern Plume Fringe	Opt 3	Alt #3_15+ yrs	\$	-	\$ 249,902	15	110	\$ -	\$ 4,681,797	'\$ 4,681,797	15	110	\$ 23,740,678	23,740,678

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Addena	dum #2	?										Project Nu	umber:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to re	each 3.1 u	g/L Hexavale	nt Chron	nium*		Non-discount	ted Cash Flow	to reach 3.1 ug	z/L Hexaval	ent Chromium
							Optimi							nization		<u> </u>	
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital		M x No. f years	Total Capital & O&M	Begin	End	O&M x No years		otal Capital 8 O&M
Dosed Injection	Northern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	1,745,667 \$	5 146,300	0	5	\$ 1,745,66	7\$	666,771	5 2,412,438	0	5	\$ 73	31,500 \$	2,477,1
Dosed Injection	Northern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	- \$	5 146,300	5	10	\$-	\$	570,440	570,440	5	10	\$ 73	31,500 \$	731,50
Dosed Injection	Northern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	- \$	5 146,300	10	15	\$-	\$	488,026	488,026	10	15	\$ 73	31,500 \$	731,5
Dosed Injection	Northern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	- \$	5 146,300	15	110	\$-	\$	2,740,864	2,740,864	15	110	\$ 13,89	98,500 \$	13,898,5
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,094,800 \$	5 184,360	0	5	\$ 2,094,80	0\$	840,232	2,935,032	0	5	\$ 92	21,800 \$	3,016,6
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	1,401,273 \$	\$ 265,540	5	10	\$ 1,198,82	4\$	1,035,370	2,234,194	5	10	\$ 1,32	27,700 \$	2,728,97
Dosed Injection	Southeast and East Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	- \$	5 184,360	10	15	\$-	\$	614,986	614,986	10	15	\$ 92	21,800 \$	921,80
Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3_15+ yrs	\$	- \$	5 173,401	15	110	\$-	\$	3,248,594	3,248,594	15	110	\$ 16,47	73,124 \$	16,473,1
Dosed Injection	Southern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,443,933 \$	5 211,420	0	5	\$ 2,443,93	3\$	963,560	3,407,493	0	5	\$ 1,05	57,100 \$	3,501,03
Dosed Injection	Southern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	800,727 \$	5 319,660	5	10	\$ 685,042	2\$	1,246,389	5 1,931,432	5	10	\$ 1,59	98,300 \$	2,399,02
Dosed Injection	Southern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	- \$	319,660	10	15	\$-	\$	1,066,318	5 1,066,318	10	15	\$ 1,59	98,300 \$	1,598,30
Dosed Injection	Southern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	- \$	319,660	15	110	\$-	\$	5,988,684	5,988,684	15	110	\$ 30,36	57,700 \$	30,367,7
Land Acquisition	Land Acquisition or Other	Initial	Alt 3 Land Acg	Ś	20,000 \$	5 -	0	110	\$ 20,00	0\$	-	5 20,000	0	110	\$	- \$	20,0
· · · ·			Art 5 Land Acq	ć					\$ 22 381 58	· · ·	17 598 472	129 980 057			\$ 374.86	55 044 Ś	398 778 1
TOTAL			Art 5 Luna Aeq	\$	23,913,094				\$ 22,381,58	· · ·)7,598,472	5 129,980,057			\$ 374,86	55,044 \$	398,778,1
TOTAL Alternative 4 - Core In-Site Treatment				\$					\$ 22,381,58	5 \$ 10							
TOTAL Alternative 4 - Core In-Site Treatment Freshwater Injection	and Beneficial Agricultural Northwest Freshwater Injection	Use Initial	NW Injection 40 gpm	\$ \$		5 157,524	0	150	\$ 22,381,58	5 \$ 10 \$	4,923,172	5 4,923,172	0	150	\$ 23,62	28,673 \$	398,778,1 3 23,628,67
TOTAL Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP	Use	NW Injection 40 gpm GMP&BCMP (Current)	\$ \$ \$		\$ 420,200	0 0		\$ 22,381,58 \$ - \$ -	5 \$ 10 \$			0 0	150 10	\$ 23,62		23,628,61
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP	Use Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%)	\$ \$ \$ \$		5 420,200 5 315,150		150 10 0	\$ 22,381,58 \$ - \$ - \$ - \$ -	5 \$ 10 \$ \$ \$	4,923,172 3,553,493 -	5 4,923,172 5 3,553,493 5 -	0	10 0	\$ 23,62 \$ 4,20 \$	28,673 \$ 02,000 \$ - \$	23,628,6 4,202,00
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP	Use Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%)	\$ \$ \$ \$	23,913,094 - \$ - \$ - \$ - \$ - \$	420,200315,150210,100		150 10 0 150	\$ - \$ - \$ - \$ -	5 \$ 10 \$ \$ \$ \$ \$	4,923,172 3,553,493 - 4,789,588	5 4,923,172 5 3,553,493 5 - 5 4,789,588		10 0 150	\$ 23,62 \$ 4,20 \$ \$ 29,41	28,673 \$ 02,000 \$ - \$ 14,000 \$	23,628,6 4,202,00 - 29,414,00
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction	Use Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4)	\$ \$ \$ \$ \$ \$		5 420,200 5 315,150 5 210,100 5 84,747	0	150 10 0 150 150	\$ 22,381,58 \$	5 \$ 10 \$ \$ \$ \$ 0 \$	4,923,172 3,553,493 - 4,789,588 2,648,630	4,923,172 3,553,493 - 4,789,588 3,752,030	0	10 0 150 150	\$ 23,62 \$ 4,20 \$ \$ 29,41 \$ 12,71	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$	23,628,6 4,202,0 - 29,414,0 13,815,4
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction	Use Initial Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction	\$ \$	23,913,094 - \$ - \$ - \$ - \$ - \$	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722	0 0 10	150 10 0 150	\$ - \$ - \$ - \$ -	5 \$ 10 \$ \$ \$ \$ 0 \$	4,923,172 3 3,553,493 3 - 2 4,789,588 3 2,648,630 3 2,272,818 3	4,923,172 3,553,493 4,789,588 3,752,030 2,272,818	0 0 10	10 0 150	\$ 23,62 \$ 4,20 \$ \$ 29,41 \$ 12,71 \$ 10,90	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$	23,628,6 4,202,00 - 29,414,00 13,815,4 10,908,3
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction	Use Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4)	\$ \$	23,913,094 - \$ - \$ - \$ 1,103,400 \$ - \$ 1,103,400 \$	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559	0 0 10 0	150 10 0 150 150	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	5 \$ 10 \$ \$ \$ \$ \$ \$ 0 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,923,172 9 3,553,493 9 - 9 4,789,588 9 2,648,630 9 2,272,818 9 248,657 9	5 4,923,172 3,553,493 5 - 4,789,588 5 3,752,030 5 2,272,818 5 248,657	0 0 10 0	10 0 150 150	\$ 23,62 \$ 4,20 \$ \$ 29,41 \$ 12,71 \$ 10,90 \$ 27	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$ 72,796 \$	23,628,6 4,202,00 - 29,414,00 13,815,4 10,908,3 272,7
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Extraction for AU Application Groundwater Extraction Groundwater Extraction RZ/Dosed Injection	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection	Use Initial Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs	\$ \$	23,913,094 - \$ - \$ - \$ 1,103,400 \$ 1,337,296 \$	420,200 315,150 210,100 84,747 72,722 54,559 918,288	0 0 10 0	150 10 0 150 150 5	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	5 \$ 10 \$ \$ \$ \$ 0 \$ \$ \$ 6 \$	4,923,172 9 3,553,493 9 - 9 4,789,588 9 2,648,630 9 2,272,818 9 248,657 9 4,185,153 9	5 4,923,172 5 3,553,493 5 - 5 4,789,588 5 3,752,030 5 2,272,818 5 248,657 5 5,522,449	0 0 10 0 0	10 0 150 150	\$ 23,62 \$ 4,20 \$ \$ 29,41 \$ 12,71 \$ 10,90 \$ 27 \$ 4,59	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$ 72,796 \$ 01,438 \$	23,628,6 4,202,0 - 29,414,0 13,815,4 10,908,3 272,7 5,928,7
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Condwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction RZ/Dosed Injection RZ/Dosed Injection	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection	Use Initial Initial Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs	\$ \$	23,913,094 23,913,094 - \$ - \$ - \$ 1,103,400 - \$ 1,337,296 \$ 4,698,720 \$	420,200 315,150 210,100 84,747 72,722 54,559 918,288 476,809	0 0 10 0 0 0	150 10 0 150 150 150 5 5	\$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ 1,337,290 \$ 1,337,290 \$ 4,698,720	5 \$ 10 \$ \$ \$ \$ 0 \$ \$ 6 \$ 0 \$	4,923,172 3 3,553,493 3 - 3 4,789,588 3 2,648,630 3 2,272,818 3 248,657 3 4,185,153 3 2,173,086 3	5 4,923,172 5 3,553,493 5 - 5 4,789,588 5 3,752,030 5 2,272,818 5 248,657 5 5,522,449 6 ,871,806	0 0 10 0 0 0	10 0 150 150 150 5	\$ 23,62 \$ 4,20 \$ \$ 29,41 \$ 12,71 \$ 10,90 \$ 27 \$ 4,59 \$ 2,38	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$ 72,796 \$ 91,438 \$ 34,044 \$	23,628,6 4,202,0 - 29,414,0 13,815,4 10,908,3 272,7 5,928,7 7,082,7
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction Groundwater Extraction RZ/Dosed Injection RZ/Dosed Injection RZ/Dosed Injection	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection Source Area IRZ / Injection	Use Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	NW Injection 40 gpmGMP&BCMP (Current)GMP&BCMP (75%)GMP&BCMP (50%)Northern Extraction (4)SCRIA ExtractionSupplemental SCRIA ExtractionAlt #4_0 to 5 yrsAlt #4_0 to 5 yrsAlt #4_0 to 5 yrsAlt #4_0 to 5 yrs	\$ \$	23,913,094 23,913,094 - \$ - \$ 1,103,400 \$ 1,103,400 \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$	420,200 315,150 210,100 84,747 72,722 54,559 918,288 476,809 814,241	0 0 10 0 0 0	150 10 0 150 150 150 5 5	\$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ 1,337,290 \$ 4,698,720 \$ 4,698,720 \$ 1,249,900	5 \$ 10 5 \$ 10 5 5 5 5 5 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	4,923,172 9 3,553,493 9 - 9 4,789,588 9 2,648,630 9 2,272,818 9 248,657 9 4,185,153 9	4,923,172 3,553,493 - 4,789,588 3,752,030 2,272,818 248,657 5,522,449 6,871,806 4,960,858	0 0 10 0 0 0	10 0 150 150 150 5	\$ 23,62 \$ 4,20 \$ \$ 29,41 \$ 12,71 \$ 10,90 \$ 27 \$ 4,59 \$ 2,38	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$ 72,796 \$ 01,438 \$	23,628,6 4,202,0 - 29,414,0 13,815,4 10,908,3 272,7 5,928,7 7,082,7 5,321,1
OTAL Alternative 4 - Core In-Site Treatment reshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction RZ/Dosed Injection R	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection Source Area IRZ / Injection Agricultural Units	Use Initial Initial Initial Initial Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs AU Mods	\$ \$	23,913,094 23,913,094 	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241	0 0 10 0 0 0	150 10 0 150 150 150 5 5	\$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ 1,103,400 \$ - \$ 1,337,290 \$ 4,698,720 \$ 1,249,900 \$ 240,000	5 \$ 10 5 \$ 10 5 5 5 5 5 6 5 6 5 6 5 6 5 0 5 6 5 0 5 6 5 0 5 0 5 6 5 0 5 5 0 5 5 0 5 5 0 5 5 5 0 5 5 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5	4,923,172 3 3,553,493 3 - 3 4,789,588 3 2,648,630 3 2,272,818 3 248,657 3 4,185,153 3 2,173,086 3	4,923,172 3,553,493 - 4,789,588 3,752,030 2,272,818 248,657 5,522,449 6,871,806 4,960,858 240,000	0 0 10 0 0 0	10 0 150 150 150 5	\$ 23,62 \$ 4,20 \$ \$ 29,41 \$ 12,71 \$ 10,90 \$ 27 \$ 4,59 \$ 2,38	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$ 72,796 \$ 91,438 \$ 34,044 \$	23,628,6 4,202,0 - 29,414,0 13,815,4 10,908,3 272,7 5,928,7 7,082,7 5,321,1 240,0
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction Groundwater Extraction RZ/Dosed Injection RZ/Dosed Injection AU Application AU Application	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection SCRIA / Dosed Injection Agricultural Units Agricultural Units	Use Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU	\$ \$	23,913,094 23,913,094 - \$ - \$ 1,103,400 \$ 1,103,400 \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$	420,200 315,150 210,100 84,747 72,722 54,559 918,288 476,809 814,241	0 0 10 0 0 0	150 10 0 150 150 150 5 5	\$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ 1,337,290 \$ 4,698,720 \$ 4,698,720 \$ 1,249,900	5 \$ 10 \$ \$ \$ \$ 0 \$ \$ 0 \$ 6 \$ 0 \$ 6 \$ 0 \$ 5 \$	4,923,172 3,553,493 - 4,789,588 2,648,630 2,272,818 248,657 4,185,153 2,173,086 3,710,952 - -	5 4,923,172 3,553,493 4,789,588 3,752,030 5 2,272,818 248,657 5 5,522,449 6,871,806 4,960,858 5 240,000 5 2,213,475	0 0 10 0 0 0 0 0 0 0 0	10 0 150 150 150 5	\$ 23,62 \$ 4,20 \$ \$ 29,41 \$ 12,71 \$ 10,90 \$ 27 \$ 4,59 \$ 2,38 \$ 4,07 \$ \$ \$	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$ 72,796 \$ 91,438 \$ 34,044 \$ 71,203 \$ - \$ - \$ - \$	23,628,6 4,202,0 - - 29,414,0 13,815,4 10,908,3 272,7 5,928,7 7,082,7 5,321,1 240,0 2,213,4
Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction RZ/Dosed Injection RZ/Dosed Injection AU Application AU Application AU Application	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection SCRIA / Dosed Injection Agricultural Units Agricultural Units Agricultural Units	Use Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary	\$ \$	23,913,094 23,913,094 	420,200 315,150 210,100 84,747 72,722 54,559 918,288 476,809 814,241 5 5 319,636	0 0 10 0 0 0	150 10 0 150 150 150 5 5 5 5 5 5 5 5 5 5	\$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ 1,103,400 \$ - \$ 1,337,290 \$ 4,698,720 \$ 1,249,900 \$ 240,000	5 \$ 10 \$ \$ \$ \$ 0 \$ 6 \$ 0 \$ 6 \$ 0 \$ 6 \$ 0 \$ 5 \$ \$	4,923,172 9 3,553,493 9 - 9 4,789,588 9 2,648,630 9 2,272,818 9 248,657 9 4,185,153 9 2,173,086 9 3,710,952 9 - 9 1,456,759 9	5 4,923,172 5 3,553,493 5 - 4,789,588 5 3,752,030 5 2,272,818 5 248,657 5 5,522,449 6 ,871,806 5 4,960,858 5 240,000 5 2,213,475 1,456,759	0 0 10 0 0 0 0 0 0 0 0	10 0 150 150 150 5	\$ 23,62 \$ 4,20 \$ 29,41 \$ 12,71 \$ 10,90 \$ 27 \$ 4,59 \$ 2,38 \$ 4,07 \$ \$ 5 \$ 1,59	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$ 72,796 \$ 01,438 \$ 34,044 \$ 71,203 \$ - \$ - \$ - \$ 08,178 \$	23,628,6 4,202,0 - 29,414,0 13,815,4 10,908,3 272,7 5,928,7 7,082,7 5,321,1 240,0 2,213,4
TOTAL Alternative 4 - Core In-Site Treatment Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Scoundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction RZ/Dosed Injection RZ/Dosed Injection AU Application AU Application	and Beneficial Agricultural Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection SCRIA / Dosed Injection Agricultural Units Agricultural Units	Use Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	NW Injection 40 gpm GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU	\$ \$	23,913,094 - \$ - \$ - \$ 1,103,400 \$ 1,103,400 \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475 \$	420,200 315,150 210,100 84,747 72,722 54,559 918,288 476,809 814,241 5 5 319,636 339,181	0 0 10 0 0 0	150 10 0 150 150 150 5 5	\$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ 1,103,400 \$ - \$ 1,337,290 \$ 4,698,720 \$ 1,249,900 \$ 240,000	5 \$ 10 5 \$ 10 5 5 5 5 6 5 5 5 5 5 5 5 5 5 5 5 5 5	4,923,172 3,553,493 - 4,789,588 2,648,630 2,272,818 248,657 4,185,153 2,173,086 3,710,952 - -	5 4,923,172 5 3,553,493 5 - 4,789,588 5 3,752,030 5 2,272,818 5 248,657 5 5,522,449 6 ,871,806 5 4,960,858 5 240,000 5 2,213,475 1,456,759	0 0 10 0 0 0 0 0 0 0 0	10 0 150 150 150 5	\$ 23,62 \$ 4,20 \$ 29,41 \$ 12,71 \$ 10,90 \$ 27 \$ 4,59 \$ 2,38 \$ 4,07 \$ \$ 5 \$ 1,59	28,673 \$ 02,000 \$ - \$ 14,000 \$ 12,052 \$ 08,350 \$ 72,796 \$ 91,438 \$ 34,044 \$ 71,203 \$ - \$ - \$ - \$	

Att Area Opt No. Sheet Name Capital Annual Optimization Description Description <thdescriptio< th=""><th>ALT Area Opt No. Sheet Name Capital Annual Annual No. Capital Opt No. Sheet Name Capital Annual Optimation vot in printe Nothern Prime Pringe No. No. 1/25,67 <td< th=""><th>OPINION OF PROBABLE COST</th><th>Hink</th><th>ley Feasi</th><th>bility Study Including Addena</th><th>dum ‡</th><th>#2</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Project Number:</th><th>36385</th></td<></th></thdescriptio<>	ALT Area Opt No. Sheet Name Capital Annual Annual No. Capital Opt No. Sheet Name Capital Annual Optimation vot in printe Nothern Prime Pringe No. No. 1/25,67 <td< th=""><th>OPINION OF PROBABLE COST</th><th>Hink</th><th>ley Feasi</th><th>bility Study Including Addena</th><th>dum ‡</th><th>#2</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Project Number:</th><th>36385</th></td<>	OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Addena	dum ‡	#2										Project Number:	36385							
ALT Area Opt Sheet Name Capital Annual Function South No. Total Capital Capital </th <th>ALT Area Opt No. Sheet Name Capital Annual (2000) Optimization (1900) Opticopticopticopticopticopticopticoptico</th> <th>Cost Breakdown Detail by Component</th> <th></th> <th>Date:</th> <th>22-Feb-11</th>	ALT Area Opt No. Sheet Name Capital Annual (2000) Optimization (1900) Opticopticopticopticopticopticopticoptico	Cost Breakdown Detail by Component															Date:	22-Feb-11							
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ALT Area Sheet Name Capital ORA Pages Pages Col Perform Beelin Distance Perform Beelin Distance Perform Beelin Distance Perform Beelin Distance Col State Perform Beelin Distance State Perform Beelin Distance State	ALT Area No. Sheet Name CapItal Option or years 0.0 km Perior End years 0.0 km set legiction Northern Planne Fringe Option Northern Planne Fringe Option 1.755.97 1.63.00 5 5 5.73.440 5 5 773.440 5 5 773.440 5 5 773.440 5 5 773.440 5 5 773.440 773.440 773.440 773.440 773.440 773.440										.8/														
Nordient Plume Fringe Opt 1 An 3_PIPE-WELL (10-) S - S 10 S 712.00 S 10 S 712.00 S 100 S 712.00 S 100 S 100 S 712.00 S 100 S <th>seed injection Northern Plume Primes Opti 1 A12_PIP-VALL (>) S - S 10 S - S 746,300 <th< th=""><th>ALT</th><th>Area</th><th></th><th>Sheet Name</th><th></th><th>Capital</th><th></th><th>Begin</th><th>End</th><th>Capital</th><th>_</th><th></th><th>-</th><th>Begin</th><th>End</th><th></th><th>Total Capital O&M</th></th<></th>	seed injection Northern Plume Primes Opti 1 A12_PIP-VALL (>) S - S 10 S - S 746,300 S 746,300 <th< th=""><th>ALT</th><th>Area</th><th></th><th>Sheet Name</th><th></th><th>Capital</th><th></th><th>Begin</th><th>End</th><th>Capital</th><th>_</th><th></th><th>-</th><th>Begin</th><th>End</th><th></th><th>Total Capital O&M</th></th<>	ALT	Area		Sheet Name		Capital		Begin	End	Capital	_		-	Begin	End		Total Capital O&M							
Northern Funder Fringe Opt A A 3 pPF-VVLL (10-) S - S 48,020 S 48,020 S 48,020 S 48,020 S 48,020 S 5 2,74,080 S 2,74,080	Seed lightedin Northern Phume Fringe Opt 2 At 3_PIPE-WELL [0-1) S S J 46,300 10 15 S 7.35,000	losed Injection	Northern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	1,745,667 \$	146,300	0	5	\$ 1,745,667	,		2,412,438	0	5	\$ 731,500	\$ 2,477,1							
Instrume Prime Prime Prime Opid Att Per-WELL (10) S - S 16 10 S 1.5 1.0 S 2.740,864 S 1.05 S 2.740,864 S 1.05 S 2.740,874 S 1.05 S 2.740,874 S 1.05 1.05 S 2.740,784 S 2.740,874 S 2.740,784 S 2.740,784 S 2.740,784 <	Instruction Northeer Tringe Opt 3 At 3 PPE VettL [10] S · S 110 S 2,740,846 S 1,101 S 1,288,820 S 1,015,87 S 1,010 S S 2,740,846 S 2,740,846 S 1,010 S S 2,740,846 S 1,010 S 5 2,740,846 S 1,010 S 5 2,740,846 S 1,010 S 2,720,846 S 1,010,83 S 1,010 S 2,720,846 S 1,010,83 S 1,010 S 2,720,846 S 1,010,83 S 1,010,83 S 1,010,83 S 1,010,83 S 1,010,83 S 1,010,83 S 1,01	osed Injection	Northern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	- \$	146,300	5	10	\$-	\$ 570,4	440 \$	570,440	5	10	\$ 731,500	\$ 731,5							
osciel injection Southeast and East Pliner Finge Initial A12, Pliner Kills (0 - 5) \$2, 204,800 \$ 540,223 \$ 2, 255,020 \$ 0 5 \$2, 204,400 \$ 540,233 \$ 52,345,446 \$ 10 1, 5 \$1,00,237,05 \$ 2, 224,149 \$ 10 1, 5 \$1,00,237,05 \$ 2, 224,149 \$ 10 1,5 \$1,00,237,05 \$ 2, 244,596 \$ 10 1,5 \$1,00,237,05 \$ 2, 244,596 \$ 10 1,5 \$1,02,737,05 \$ 2, 244,596 \$ 10 1,5 \$1,02,737,05 \$ 2, 244,593 \$ 10 1,5 \$1,227,200 \$ \$1,527,312 \$ 1 10 1,5 \$1,247,300 \$ \$1,527,312 \$ 10 1,5 \$2,443,333 \$ \$2,454,035 \$ 10,31,422 \$ 10 1,5 \$1,248,804 \$ \$1,206,204 \$ \$1,214,200 \$ \$1,248,406 \$ \$1,248,406 \$ \$1,248,406 \$ \$1,248,406 \$ \$1,248,406 \$ </td <td>sectimetricion Southeast and East Plume Fringe Initial At 3 (PPE VELL (0 5) \$2.0044300 \$1.042,732 \$2.004,200 \$0.402,22 \$2.05,502 0 5 \$2.016,833 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$2.23,81,805 \$1.02,77,00 \$2.22 \$1.022,77,00 \$2.22 \$2.23,81,805 \$1.02,81,815 \$1.02,81,824 \$1.03,87,95 \$2.23,81,805 \$1.02,81,824 \$1.02,81,824 \$1.03,87,95 \$2.23,81,805 \$1.02,81,815 \$1.02,81,815 \$1.02,81,914 \$1.01,87,7100 \$2.23 \$1.02,81,815 \$1.01,87,7100 \$2.23 \$1.02,81,815 \$1.01,87,7100 \$2.23 \$1.02,81,815 \$1.01,81,814,814 \$1.01,81,814 \$1.01,81,814<!--</td--><td>osed Injection</td><td>Northern Plume Fringe</td><td>Opt 2</td><td>Alt 3_PIPE-WELL (10+)</td><td>\$</td><td>- \$</td><td>146,300</td><td>10</td><td>15</td><td>\$-</td><td>\$ 488,0</td><td>)26 \$</td><td>488,026</td><td>10</td><td>15</td><td>\$ 731,500</td><td>\$ 731,5</td></td>	sectimetricion Southeast and East Plume Fringe Initial At 3 (PPE VELL (0 5) \$2.0044300 \$1.042,732 \$2.004,200 \$0.402,22 \$2.05,502 0 5 \$2.016,833 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$1.022,77,00 \$2.22 \$2.23,81,805 \$1.02,77,00 \$2.22 \$1.022,77,00 \$2.22 \$2.23,81,805 \$1.02,81,815 \$1.02,81,824 \$1.03,87,95 \$2.23,81,805 \$1.02,81,824 \$1.02,81,824 \$1.03,87,95 \$2.23,81,805 \$1.02,81,815 \$1.02,81,815 \$1.02,81,914 \$1.01,87,7100 \$2.23 \$1.02,81,815 \$1.01,87,7100 \$2.23 \$1.02,81,815 \$1.01,87,7100 \$2.23 \$1.02,81,815 \$1.01,81,814,814 \$1.01,81,814 \$1.01,81,814 </td <td>osed Injection</td> <td>Northern Plume Fringe</td> <td>Opt 2</td> <td>Alt 3_PIPE-WELL (10+)</td> <td>\$</td> <td>- \$</td> <td>146,300</td> <td>10</td> <td>15</td> <td>\$-</td> <td>\$ 488,0</td> <td>)26 \$</td> <td>488,026</td> <td>10</td> <td>15</td> <td>\$ 731,500</td> <td>\$ 731,5</td>	osed Injection	Northern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	- \$	146,300	10	15	\$-	\$ 488,0)26 \$	488,026	10	15	\$ 731,500	\$ 731,5							
based hysicition Southeast and sar plume fringe Opt A43_PIPE VFL(16)-10 S 1.06_1273 2 265.40 5 10 5 1.05 5 1.05 5 1.05 5 1.05 5 1.05 5 1.05 5 1.05 5 5 1.05 5 5 1.05 5 5 1.05 5 5 1.05 5 5 1.05 5 5 1.05 5 5 1.05 5 1.05 5 1.05 1.05 5 5 1.05 1.05 5 1.05 1.05 5 1.05 1.05 5 1.05 1.05 5 1.05 1.05 5 1.05 1.05 5 1.05 1.05 5 1.05 <t< td=""><td>sed injection Southeast and East Pume Fringe Op1 Att 2_PIP-WTL1 [10-1] S 1,401.273 S 2,054,003 S 2,234,249 S 10 S <t< td=""><td>osed Injection</td><td>Northern Plume Fringe</td><td>Opt 3</td><td>Alt 3_PIPE-WELL (10+)</td><td>\$</td><td>- \$</td><td>146,300</td><td>15</td><td>110</td><td>\$-</td><td>\$ 2,740,8</td><td>364 \$</td><td>2,740,864</td><td>15</td><td>110</td><td>\$ 13,898,500</td><td>\$ 13,898,5</td></t<></td></t<>	sed injection Southeast and East Pume Fringe Op1 Att 2_PIP-WTL1 [10-1] S 1,401.273 S 2,054,003 S 2,234,249 S 10 S <t< td=""><td>osed Injection</td><td>Northern Plume Fringe</td><td>Opt 3</td><td>Alt 3_PIPE-WELL (10+)</td><td>\$</td><td>- \$</td><td>146,300</td><td>15</td><td>110</td><td>\$-</td><td>\$ 2,740,8</td><td>364 \$</td><td>2,740,864</td><td>15</td><td>110</td><td>\$ 13,898,500</td><td>\$ 13,898,5</td></t<>	osed Injection	Northern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	- \$	146,300	15	110	\$-	\$ 2,740,8	364 \$	2,740,864	15	110	\$ 13,898,500	\$ 13,898,5							
osed lepiction Southeast and fast plume fringe Opt All 3, PIP-WL (10-r) S - S 16,4586 S 15,4586 10 15 S 921,800 S osed lepiction Southeast and fast plume fringe Opt All 3, PIP-WL (1, 10-r) S 2,443,933 S 95,4581 S 3,445,943 0 S 1,577,100 S 16,473,127 S 1,667,127,127 S 1,667,127,127 S 1,667,127,127 S 1,668,128 S 3,445,943 0 S 8,445,943 S 1,668,128 1,08 1,598,300 S 1,598,300 S 1,668,128 1,066,128 10 S 1,58 1,598,300 S 1,668,128 1,068,128 1,068,128 1,08 1,15 S 1,658,128 1,068,128 1,08 1,15 S 1,598,300 S 1,068,128 1,068,128 1,01 S 1,598,300 S 1,058,318 1,068,128 1,01 S 1,598,300 S 1,01 S 1,02 S 2,02,00 S 1,01 S 1,01 S	sectingection Southeast and fast plume finge Opt Att 3, PPF-VecL (0 - 5) S 184,360 10 15 5 - S 81,4986 5 11,4986 10 15 5 2,724,5934 15 110 5 15 10 5 15,724 5 16,73,100 5 3,508 5 3,224,5933 5 3,224,5933 5 3,224,5933 5 3,224,5933 5 3,244,5933 5 3,244,5933 5 3,244,5933 5 3,244,5933 5 3,244,5933 5 3,244,5933 5 1,057,100 5 3,508 3 3,935,60 5 3,244,5933 5 1,057,310 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5 1,057,300 5	osed Injection	Southeast and East Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,094,800 \$	184,360	0	5	\$ 2,094,800	\$ 840,2	232 \$	2,935,032	0	5	\$ 921,800	\$ 3,016,6							
osed migration Southest and cast Plume Fringe Opt 3 Alt #3 19F VPLL (0 - 1) 5 - 5 17.401 15 100 5 - 5 2.448,394 5 1.248,394 5 1.20 5 2.448,394 5 1.20 5 2.448,394 5 1.20 5 2.448,394 5 1.20 5 2.448,394 5 1.20 5 2.448,394 5 1.206,313 5 1.206,313 100 5 5 2.448,394 5 1.206,313 100 5 5 2.448,394 5 1.206,313 100 15 5 5 1.206,313 100 15 5 1.206,313 100 15 5 2.448,394 5 1.206,313 100 15 5 5 1.206,313 100 15 5 1.206,313 100 100 5 5 1.206,313 100 15 100 5 2.20,000 100 5 2.20,000 100 5 5 2.20,000 100 5 1.206,313 100 100 5 2.20,000	sed injection Southeast and rask Plume Fringe OR 13 Alt # 3 PH* VPL (5 - 10) S	osed Injection	Southeast and East Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	1,401,273 \$	265,540	5	10	\$ 1,198,824	\$ 1,035,3	370 \$	2,234,194	5	10	\$ 1,327,700	\$ 2,728,9							
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XZ/Dosed Injection Initial Alt #4_0 to 5 yrs \$ 4,698,720 \$ 4,698,720 \$ 2,173,086 \$ 6,871,806 0 5 \$ 2,384,044 \$ XZ/Dosed Injection Initial Alt #4_0 to 5 yrs \$ 1,249,906 \$ 814,241 0 5 \$ 4,698,720 \$ 1,249,906 \$ 3,710,952 \$ 4,960,858 0 5 \$ 4,071,203 \$ U Application Agricultural Units Initial AU Mods \$ 2,213,475 \$ - 0 5 \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ 0 \$ 5 \$ 1,456,759 \$ 1,456,759 \$ 0 \$ 5 \$ 1,598,178 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 </td <td>SCRIA / Dosed Injection Initial Alt #4_0 to 5 yrs \$ 4,698,720 \$ 476,809 0 5 \$ 4,698,720 \$ 2,173,086 \$ 6,871,806 0 5 \$ 2,384,044 \$ 7,08 // Dosed Injection Initial Alt #4_0 to 5 yrs \$ 1,249,906 \$ 814,241 0 5 \$ 1,249,906 \$ 3,710,952 \$ 4,960,858 0 5 \$ 4,071,203 \$ 5,32 Application Agricultural Units Initial Alt #4_0 to 5 yrs \$ 240,000 \$ - 0 5 \$ 2,40,000 \$ - \$ 2,213,475 \$ 4,960,858 0 5 \$ 4,071,203 \$ 5,32 Application Agricultural Units Initial AU Mods \$ 240,000 \$ - 0 5 \$ 2,40,000 \$ - \$ 2,213,475 0 5 \$ 4,960,858 0 5 \$ 4,071,203 \$ 5,32 Application Agricultural Units Initial AU Mods \$ 2,213,475 - 0 5 \$ 2,213,475 0 5 \$ 3,221 Application Agricultural Units Initial AU O&M Summary \$ - \$ 319,636 0 5</td> <td></td> <td></td> <td></td> <td></td> <td>ېې</td> <td></td> <td></td> <td>0</td> <td></td> <td><u>-</u></td> <td></td> <td></td> <td></td> <td></td> <td>5 </td> <td></td> <td></td>	SCRIA / Dosed Injection Initial Alt #4_0 to 5 yrs \$ 4,698,720 \$ 476,809 0 5 \$ 4,698,720 \$ 2,173,086 \$ 6,871,806 0 5 \$ 2,384,044 \$ 7,08 // Dosed Injection Initial Alt #4_0 to 5 yrs \$ 1,249,906 \$ 814,241 0 5 \$ 1,249,906 \$ 3,710,952 \$ 4,960,858 0 5 \$ 4,071,203 \$ 5,32 Application Agricultural Units Initial Alt #4_0 to 5 yrs \$ 240,000 \$ - 0 5 \$ 2,40,000 \$ - \$ 2,213,475 \$ 4,960,858 0 5 \$ 4,071,203 \$ 5,32 Application Agricultural Units Initial AU Mods \$ 240,000 \$ - 0 5 \$ 2,40,000 \$ - \$ 2,213,475 0 5 \$ 4,960,858 0 5 \$ 4,071,203 \$ 5,32 Application Agricultural Units Initial AU Mods \$ 2,213,475 - 0 5 \$ 2,213,475 0 5 \$ 3,221 Application Agricultural Units Initial AU O&M Summary \$ - \$ 319,636 0 5					ېې			0		<u>-</u>					5 									
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U Application Agricultural Units Initial AU Mods \$ 240,000 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ 0 \$ 5 \$ 2,213,475 \$ 0 \$ 5 \$ 2,213,475 \$ 0 \$ 5 \$ 2,213,475 \$ 0 \$ 5 \$ 2,213,475 \$ 0 \$ 5 \$ 1,598,178 \$ 1,598,178 \$ 0 \$ 1,598,178 \$ 0 \$ 1,598,178 \$ 0 \$ 1,456,759 \$ 0 \$ 1,50 \$ 337,600 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$	Application Agricultural Units Initial AU Mods \$ 240,000 \$ - \$ 2,213,475 \$ 0 \$ 5 \$ - \$ 2,213,475 \$ 0 \$ 5 \$ 1,456,759 \$ 1,456,759 \$ 0 \$ 5 \$ 1,598,178 \$ 1,598,178 \$ 1,598,178 \$ 1,598,178 \$ 0 \$ 1,598,178 \$ 0 \$ 1,598,178 \$ 0 \$ 1,598,178 \$ 0	-				Ş			0	5					0	5									
Agricultural Units Initial New AU \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 0 5 \$ - \$ J Application Agricultural Units Initial AU O&M Summary \$ - \$ 319,636 0 5 \$ - \$ 1,456,759 0 5 \$ 1,598,178 \$ J Application Agricultural Units Opt 1 AU O&M Summary \$ - \$ 339,181 5 150 \$ - \$ 9,054,718 \$ 9,054,718 5 150 \$ 49,181,272	Application Agricultural Units Initial New AU \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 0 5 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 0 5 \$ \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ 0 5 \$ \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ 0 5 \$ \$ - \$ 2,213,475 \$ - \$ 2,213,475 \$ 0 5 \$ 2,213,475 \$ 0 5 \$ 2,213,475 \$ 0 5 \$ 2,213,475 \$ 0 5 \$ 2,213,475 0 5 \$ 2,213,475 0 5 \$ 2,213,475 0 5 \$ 1,598,178 \$ 1,598,17	•				<u>ې</u>			0	5			<u>152 Ş</u>		0	5									
Application Agricultural Units Initial AU O&M Summary \$ - \$ 319,636 0 5 - \$ 1,456,759 \$ 1,456,759 0 5 \$ 1,598,178 \$ J Application Agricultural Units Opt 1 AU O&M Summary \$ - \$ 339,181 5 150 \$ - \$ 9,054,718 \$ 9,054,718 5 150 \$ 49,181,272 \$ 4 nd Acquisition or Other Initial Alt 4 Land Acq \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ > - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ </td <td>Application Agricultural Units Initial AU O&M Summary \$ - \$ 319,636 0 5 \$ - \$ 1,456,759 \$ 1,456,759 0 5 \$ 1,598,178 \$<!--</td--><td></td><td>•</td><td></td><td></td><td>Ş</td><td></td><td></td><td>0</td><td>5</td><td></td><td></td><td>- ></td><td></td><td>0</td><td>5</td><td>- -</td><td></td></td>	Application Agricultural Units Initial AU O&M Summary \$ - \$ 319,636 0 5 \$ - \$ 1,456,759 \$ 1,456,759 0 5 \$ 1,598,178 \$ </td <td></td> <td>•</td> <td></td> <td></td> <td>Ş</td> <td></td> <td></td> <td>0</td> <td>5</td> <td></td> <td></td> <td>- ></td> <td></td> <td>0</td> <td>5</td> <td>- -</td> <td></td>		•			Ş			0	5			- >		0	5	- -								
J Application Agricultural Units Opt 1 AU O&M Summary \$ - \$ 339,181 5 150 \$ 9,054,718 \$ 9,054,718 5 150 \$ 49,181,272 \$ 4 nd Acquisition Copy 1 All 4 Land Acq \$ 337,600 \$ - \$ 9,054,718 \$ 9,054,718 5 150 \$ 49,181,272 \$ 4 nd Acquisition Copy 1 Alt 4 Land Acq \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ 337,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - - - - - - - - -<	Application Agricultural Units Opt 1 AU O&M Summary \$ - \$ 339,181 5 150 \$ 9,054,718 \$ 9,054,718 5 150 \$ 49,181,272 \$ 49,181 and Acquisition or Other Initial Alt 4 Land Acq \$ 337,600 \$ - <td< td=""><td></td><td>-</td><td></td><td></td><td>Ş</td><td></td><td></td><td>0</td><td>5</td><td>\$ 2,213,475</td><td></td><td>- \$</td><td></td><td>U</td><td>5</td><td>Ŷ</td><td>\$ 2,213,4</td></td<>		-			Ş			0	5	\$ 2,213,475		- \$		U	5	Ŷ	\$ 2,213,4							
and Acquisition or Other Initial Alt 4 Land Acq \$ 337,600 \$ - 0 150 \$ 337,600 \$ - \$ 337,600 0 150 \$ - \$	nd Acquisition or Other Initial Alt 4 Land Acq \$ 337,600 \$ - 0 150 \$ 337,600 \$ - \$ 337,600 0 150 \$ - \$ - \$ 337,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$		•		•	Ş	- \$		0	5	Ş -				0	5									
					•	Ş	- \$	339,181			<u>Ş</u> -	\$ 9,054,7	/18 Ş		5										
	\$ 11,180,397 \$ 39,017,027 \$ 50,197,424 \$ 142,964,006 \$ 154,14	and Acquisition	Land Acquisition or Other	Initial	Alt 4 Land Acq	\$	337,600 \$	-	0	150	\$ 337,600	\$	- \$	337,600	0	150	Ş -	\$ 337,6							
	TAL \$ 11,180,397 \$ 39,017,027 \$ 50,197,424 \$ 142,964,006 \$ 154,14					_																			

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adden	dum #	<i>‡</i> 2										Р	roject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to	reach 3.:	1 ug/L	Hexavalent	Chromium*		Non-discount	ed Cash Flow	to rea	ch 3.1 ug/L Hexaval	ent Chromium*
							Optin	nization					Optim	nization			
		Opt				Annual					O&M x No.	Total Capital			0	kM x No. of T	otal Capital &
ALT	Area	No.	Sheet Name		Capital	O&M	Begin	End		Capital	of years	& O&M	Begin	End		vears	O&M
																•	
Alternative 4A - Aggressive Core In-Site	Treatment and Beneficial	Agricu	Itural Use														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	- (5 149,257	0	75	\$	-	\$ 4,255,140	\$ 4,255,140	0	75	\$	11,194,273 \$	11,194,273
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	15	-	-	\$ 4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	315,150	15	30	\$	-	\$ 2,327,128	\$ 2,327,128	15	30	\$	4,727,250 \$	4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	5 210,100	30	75	\$	-	\$ 1,960,689	\$ 1,960,689	30	75	\$	9,454,500 \$	9,454,500
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	; -	0	75	\$	2,623,560	\$ -	\$ 2,623,560	0	75	\$	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- ;	86,274	0	20		-	\$ 1,263,600	\$ 1,263,600	0	20	\$	1,725,487 \$	1,725,487
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- \$	54,559	0	20	\$	-	\$ 799,092		0	20	\$	1,091,185 \$	1,091,185
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD SCRIA Extr (60 gpm)	\$	742,200	55,755	10	20	\$	543,234	\$ 345,102		10	20	\$	557,547 \$	1,299,747
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	- \$	5 142,029	20	75	\$	-	\$ 1,968,880	\$ 1,968,880	20	75	\$	7,811,598 \$	7,811,598
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,077,153		0	5	\$	2,077,153	\$ 4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,951
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,927,479	478,213	0	5	\$	2,927,479	\$ 2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	3,083,759	821,971	0	5	\$	3,083,759	\$ 3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	- ;	904,760	5	10	\$	-	\$ 3,527,757	\$ 3,527,757	5	10	\$	4,523,798 \$	4,523,798
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	356,104	380,628	5	10	\$	304,656	\$ 1,484,111	\$ 1,788,767	5	10	\$	1,903,140 \$	2,259,244
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	69,296	5 716,571	5	10	\$	59,284	\$ 2,793,990	\$ 2,853,274	5	10	\$	3,582,856 \$	3,652,152
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	- \$	904,760	10	20	\$	-	\$ 5,600,133	\$ 5,600,133	10	20	\$	9,047,595 \$	9,047,595
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	848,241 \$	416,508	10	20	\$	620,848	\$ 2,578,035	\$ 3,198,883	10	20	\$	4,165,083 \$	5,013,325
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	327,581	294,136	10	20	\$	239,764	\$ 1,820,593	\$ 2,060,357	10	20	\$	2,941,356 \$	3,268,937
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$; -	20	75	\$	-	\$-	\$-	20	75	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	88,342	20	75	\$	-	\$ 1,224,643	\$ 1,224,643	20	75	\$	4,858,812 \$	4,858,812
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	38,842	20	75	\$	-	\$ 538,448	\$ 538,448	20	75	\$	2,136,312 \$	2,136,312
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$	<u> </u>	0	75	\$	240,000	\$ -	\$ 240,000	0	75	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796	; -	0	75	\$	3,469,796	\$-	\$ 3,469,796	0	75	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	491,904	0	75	\$	-	\$ 14,023,606	\$ 14,023,606	0	75	\$	36,892,807 \$	36,892,807
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600 \$. -	0	75	\$	1,012,600	\$-	\$ 1,012,600	0	75	\$	- \$	1,012,600
TOTAL				Ś	17,777,770				\$ 1	17.202.134	\$ 61,515,303	\$ 78,717,436			Ś	123,941,318 \$	141,719,088

OPINION OF PROBABLE COST	Hink	ley Feasi	ibility Study Including Adden	dum #	#2											Project Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to	reach 3.1	ug/L Hexavaler	t Chrom	ium*		Non-discount	ed Cash Flov	v to re	ach 3.1 ug/L Hexava	lent Chromium*
								nization					Optim				
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital		VI x No. years	Total Capital & O&M	Begin	End	0	&M x No. of T years	otal Capital & O&M
Alternative 4A - Aggressive Core In-Site	Treatment and Beneficial	Agricu	ultural Use														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	-	\$ 149,257	0	75	\$-	\$4	4,255,140	\$ 4,255,140	0	75	\$	11,194,273 \$	11,194,273
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	15	\$ -	\$ 4	4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150	15	30	\$-		2,327,128	5 2,327,128	15	30	\$	4,727,250 \$	4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100	30	75	\$ -	\$ 1	1,960,689	5 1,960,689	30	75	\$	9,454,500 \$	9,454,500
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	\$ -	0	75	\$ 2,623,560) \$		\$ 2,623,560	0	75	\$	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	-	\$ 86,274	0	20	\$ -	\$ 1	1,263,600	5 1,263,600	0	20	\$	1,725,487 \$	1,725,487
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	-	\$ 54,559	0	20	\$-	\$	799,092	5 799,092	0	20	\$	1,091,185 \$	1,091,185
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200	\$ 55,755	10	20	\$ 543,234	\$	345,102	\$ 888,335	10	20	\$	557,547 \$	1,299,747
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	-	\$ 142,029	20	75	\$-	\$ 1	1,968,880	5 1,968,880	20	75	\$	7,811,598 \$	7,811,598
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,077,153	\$ 904,760	0	5	\$ 2,077,153	\$\$4	4,123,498	6,200,651	0	5	\$	4,523,798 \$	6,600,951
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,927,479	\$ 478,213	0	5	\$ 2,927,479	\$ 2	2,179,485	5,106,964	0	5	\$	2,391,064 \$	5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	3,083,759	\$ 821,971	0	5	\$ 3,083,759	\$ 3	3,746,184	6,829,944	0	5	\$	4,109,855 \$	7,193,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	-	\$ 904,760	5	10	\$-	\$ 3	3,527,757	3,527,757	5	10	\$	4,523,798 \$	4,523,798
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	356,104	\$ 380,628	5	10	\$ 304,656	5 \$ 1	1,484,111	5 1,788,767	5	10	\$	1,903,140 \$	2,259,244
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	69,296	\$ 716,571	5	10	\$ 59,284	\$ 2	2,793,990	\$ 2,853,274	5	10	\$	3,582,856 \$	3,652,152
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	-	\$ 904,760	10	20	\$-	\$ 5	5,600,133	5,600,133	10	20	\$	9,047,595 \$	9,047,595
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	848,241	\$ 416,508	10	20	\$ 620,848	\$\$2	2,578,035	5 3,198,883	10	20	\$	4,165,083 \$	5,013,325
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	327,581	\$ 294,136	10	20	\$ 239,764	\$ 1	1,820,593	\$ 2,060,357	10	20	\$	2,941,356 \$	3,268,937
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$-	20	75	\$-	\$	- 9	-	20	75	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ 88,342	20	75	\$ -	\$1	1,224,643	5 1,224,643	20	75	\$	4,858,812 \$	4,858,812
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ 38,842	20	75	\$-	\$	538,448	538,448	20	75	\$	2,136,312 \$	2,136,312
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$ -	0	75	\$ 240,000) \$		\$ 240,000	0	75	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796	\$-	0	75	\$ 3,469,796	; \$		3,469,796	0	75	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	-	\$ 491,904	0	75	\$-	\$ 14	4,023,606	5 14,023,606	0	75	\$	36,892,807 \$	36,892,807
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600	\$ -	0	75	\$ 1,012,600) \$		\$ 1,012,600	0	75	\$	- \$	1,012,600
TOTAL				\$	17,777,770	•			\$ 17,202,134	\$ 61	L,515,303	\$ 78,717,436			\$	123,941,318 \$	141,719,088

OPINION OF PROBABLE COST	Hink	ley Feasi	ibility Study Including Adden	dum #	<i>‡</i> 2										I	Project Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to r	each 3.1	ug/L Hexa	valent Ch	nromium*		Non-discount	ed Cash Flo	w to re	ach 3.1 ug/L Hexaval	lent Chromium*
								ization					Optim				
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capi	tal	O&M x No. of years	Total Capital & O&M	Begin	End	0	&M x No. of T years	otal Capital 8 O&M
Alternative 4A - Aggressive Core In-Site	Treatment and Beneficial	Agricu	ultural Use														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	- \$	149,257	0	75	\$	- \$	4,255,140	\$ 4,255,140	0	75	\$	11,194,273 \$	11,194,27
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	15	\$	- \$	4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,00
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	315,150	15	30	\$	- \$	2,327,128		15	30	\$	4,727,250 \$	4,727,25
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	210,100	30	75	\$	- \$	1,960,689	\$ 1,960,689	30	75	\$	9,454,500 \$	9,454,5
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560 \$	-	0	75	\$ 2,62	3,560 \$	-	\$ 2,623,560	0	75	\$	- \$	2,623,5
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- \$	86,274	0	20	\$	- \$	1,263,600	\$ 1,263,600	0	20	\$	1,725,487 \$	1,725,4
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- \$	54,559	0	20	\$	- \$	799,092	\$ 799,092	0	20	\$	1,091,185 \$	1,091,18
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200 \$	55,755	10	20	\$ 54	3,234 \$	345,102	\$ 888,335	10	20	\$	557,547 \$	1,299,74
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	- \$	142,029	20	75	\$	- \$	1,968,880	\$ 1,968,880	20	75	\$	7,811,598 \$	7,811,59
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,077,153 \$	904,760	0	5	\$ 2,07	7,153 \$	4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,95
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,927,479 \$	478,213	0	5	\$ 2,92	7,479 \$	2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,54
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	3,083,759 \$	821,971	0	5	\$ 3,08	3,759 \$	3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,6
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	- \$	904,760	5	10	\$	- \$	3,527,757	\$ 3,527,757	5	10	\$	4,523,798 \$	4,523,7
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	356,104 \$	380,628	5	10	\$ 30	4,656 \$	1,484,111	\$ 1,788,767	5	10	\$	1,903,140 \$	2,259,24
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	69,296 \$	716,571	5	10	\$5	9,284 \$	2,793,990	\$ 2,853,274	5	10	\$	3,582,856 \$	3,652,1
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	- \$	904,760	10	20	\$	- \$	5,600,133	\$ 5,600,133	10	20	\$	9,047,595 \$	9,047,59
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	848,241 \$	416,508	10	20	\$ 62	0,848 \$	2,578,035	\$ 3,198,883	10	20	\$	4,165,083 \$	5,013,32
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	327,581 \$	294,136	10	20	\$ 23	9,764 \$	1,820,593	\$ 2,060,357	10	20	\$	2,941,356 \$	3,268,93
RZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	-	20	75	\$	- \$	-	\$-	20	75	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	88,342	20	75	\$	- \$	1,224,643	\$ 1,224,643	20	75	\$	4,858,812 \$	4,858,83
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	38,842	20	75	\$	- \$	538,448	\$ 538,448	20	75	\$	2,136,312 \$	2,136,3
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$	-	0	75	\$ 24	0,000 \$	-	\$ 240,000	0	75	\$	- \$	240,00
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$	-	0	75	\$ 3,46	9,796 \$		\$ 3,469,796	0	75	\$	- \$	3,469,79
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	491,904	0	75	\$	- \$	14,023,606	\$ 14,023,606	0	75	\$	36,892,807 \$	36,892,80
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acg	Ś	1,012,600 \$		0	75	\$ 1,01	2 600 6		\$ 1,012,600	0	75	ć	- \$	1,012,60

OPINION OF PROBABLE COST	Hink	ley Feasi	ibility Study Including Adden	dum	#2										Project Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
							NPV to r	each 3.1	ug/L Hexavaler	t Chromium*	:		Non-discount	ted Cash Flow	to reach 3.1 ug/L Hexav	alent Chromium*
								ization		c chi officiali				nization		
		Opt				Annual				O&M x	NO. T	otal Capital			O&M x No. of	Total Capital &
ALT	Area	No.	Sheet Name		Capital	O&M	Begin	End	Capital	of yea		& 0&M	Begin	End	vears	O&M
											-				, care	
				_												
Alternative 4B - Aggressive Core In-Site	Freatment and Beneficial	Agricu	ultural Use with Targe	eted	Pumping											
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	-	\$ 149,257	0	40	\$-	\$ 3,357	, .	3,357,164	0	40	\$ 5,970,279	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	15	\$-		,191 \$	4,955,191	0	15	\$ 6,303,000	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150	15	30	\$-	\$ 2,327	,128 \$	2,327,128	15	30	\$ 4,727,250	\$ 4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100	30	40	\$-	\$ 696	,663 \$	696,663	30	40	\$ 2,101,000	\$ 2,101,000
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	\$-	0	40	\$ 2,623,560	\$	- \$	2,623,560	0	40	\$-\$	\$ 2,623,560
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4B at 10)	\$	3,390,900	\$ 100,562	10	40	\$ 2,481,879	\$ 1,411	,472 \$	3,893,352	10	40	\$ 3,016,860	\$ 6,407,760
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	-	\$ 86,274	0	20	\$-	\$ 1,263	,600 \$	1,263,600	0	20	\$ 1,725,487	\$ 1,725,487
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	-	\$ 54,559	0	20	\$-	\$ 799	,092 \$	799,092	0	20	\$ 1,091,185	\$ 1,091,185
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200	\$ 55,755	10	20	\$ 543,234	\$ 345	,102 \$	888,335	10	20	\$ 557,547 \$	\$ 1,299,747
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	-	\$ 142,029	20	40	\$-	\$ 1,114	,389 \$	1,114,389	20	40	\$ 2,840,581	\$ 2,840,581
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,077,153	\$ 904,760	0	5	\$ 2,077,153	\$ 4,123	,498 \$	6,200,651	0	5	\$ 4,523,798	\$ 6,600,951
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,927,479	\$ 478,213	0	5	\$ 2,927,479	\$ 2,179	,485 \$	5,106,964	0	5	\$ 2,391,064	\$ 5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	3,083,759	\$ 821,971	0	5	\$ 3,083,759	\$ 3,746	,184 \$	6,829,944	0	5	\$ 4,109,855	\$ 7,193,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	-	\$ 904,760	5	10	\$ -	\$ 3,527	,757 \$	3,527,757	5	10	\$ 4,523,798	
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	356,104	\$ 380,628	5	10	\$ 304,656	\$ 1,484	,111 \$	1,788,767	5	10	\$ 1,903,140	
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	69,296		5	10	\$ 59,284	\$ 2,793	,990 \$	2,853,274	5	10	\$ 3,582,856	
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	-	\$ 904,760	10	20	\$ -	\$ 5,600	,133 \$	5,600,133	10	20	\$ 9,047,595	
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	848,241	\$ 416,508	10	20	\$ 620,848			3,198,883	10	20	\$ 4,165,083	
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2		\$	327,581		10	20	\$ 239,764			2,060,357	10	20	\$ 2,941,356	
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$-	20	40	\$ -	\$	- \$	-	20	40	\$ - 5	
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ 88,342	20	40	\$-	\$ 693	,150 \$	693,150	20	40	\$ 1,766,841	\$ 1,766,841
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ 38,842	20	40	\$ -		,763 \$	304,763	20	40	\$ 776,841 \$	
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000		0	40	\$ 240,000		- \$	240,000	0	40	\$ - 9	\$ 240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	Ś	3,469,796		0	40	\$ 3,469,796		- Ś	3,469,796	0	40	\$ - 9	\$ 3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	-		0	40	\$ -	\$ 11,064	,159 Ś	11,064,159	0	40	\$ 19,676,164	\$ 19,676,164
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600	\$ -	0	40	\$ 1,012,600		- \$	1,012,600	0	40	\$ - \$	\$ 1,012,600
				_						4						
TOTAL				\$	21,168,670				\$ 19,684,013	\$ 56,185	,656 Ş	75,869,669			\$ 87,741,581	\$ 108,910,251

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adden	dum #	#2										Р	roject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							ND\/ +	o reach 3	21 ug/IL	lexavalent (°hromium*		Non-discount	ed Cash Elow	to rea	ch 3.1 ug/L Hexava	lent Chromium
								imizatio						ization		CIT 3.1 ug/ L HEXava	
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begi			apital	O&M x No. of years	Total Capital & O&M	Begin	End	08	&M x No. of years	Fotal Capital & O&M
											•					•	
Iternative 4B - Aggressive Core In-Site	Treatment and Beneficial	Agricu	ultural Use with Targe	eted	Pumping												
eshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	-	\$ 149,257	0	4(0\$	-	\$ 3,357,164	\$ 3,357,164	0	40	\$	5,970,279 \$	5,970,2
oundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	1	5\$	-	\$ 4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,0
oundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150	15	30	0\$	-	\$ 2,327,128	\$ 2,327,128	15	30	\$	4,727,250 \$	4,727,2
oundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100	30	40	0\$	-	\$ 696,663	\$ 696,663	30	40	\$	2,101,000 \$	2,101,0
traction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	\$-	0	4(0 \$ 2	2,623,560	\$-	\$ 2,623,560	0	40	\$	- \$	2,623,5
traction for AU Application	Northern Extraction	Initial	Northern Extraction (4B at 10)	\$	3,390,900	\$ 100,562	10	4(0 \$ 2	2,481,879	\$ 1,411,472	\$ 3,893,352	10	40	\$	3,016,860 \$	6,407,7
oundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	-	\$ 86,274	0	20	0\$	-	\$ 1,263,600	\$ 1,263,600	0	20	\$	1,725,487 \$	1,725,4
oundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	-	\$ 54,559	0	20	0\$	-	\$ 799,092	\$ 799,092	0	20	\$	1,091,185 \$	1,091,1
oundwater Extraction	SCRIA Extraction	Opt 2	DVD SCRIA Extr (60 gpm)	\$	742,200	\$ 55,755	10	20	0\$	543,234	\$ 345,102	\$ 888,335	10	20	\$	557,547 \$	1,299,7
oundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	-	\$ 142,029	20			-	\$ 1,114,389	\$ 1,114,389	20	40	\$	2,840,581 \$	2,840,5
Z/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	Ś	2,077,153	\$ 904,760	0	5		2,077,153	\$ 4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,9
Z/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A 0 to 5 yrs	Ś	2,927,479	\$ 478,213	0	5			\$ 2,179,485	\$ 5,106,964	0	5	Ś	2,391,064 \$	5,318,5
Z/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	Ś	3,083,759	\$ 821,971	0	5	•		\$ 3,746,184	\$ 6,829,944	0	5	Ś	4,109,855 \$	7,193,6
Z/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	-	\$ 904,760	5	1(0 \$	_	\$ 3,527,757	\$ 3,527,757	5	10	Ś	4,523,798 \$	4,523,7
Z/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	356,104	\$ 380,628	5		0\$	304,656	. , ,	\$ 1,788,767	5	10	Ś	1,903,140 \$	2,259,2
Z/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	69,296	\$ 716,571	5		0\$	-	\$ 2,793,990	\$ 2,853,274	5	10	Ś	3,582,856 \$	3,652,1
Z/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś	-	\$ 904,760	10		<u> </u>	-	\$ 5,600,133	\$ 5,600,133	10	20	Ś	9,047,595 \$	9,047,5
Z/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś	848,241	\$ 416,508	10		•	620,848	\$ 2,578,035	\$ 3,198,883	10	20	Ś	4,165,083 \$	5,013,3
Z/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś	327,581	\$ 294,136	10				\$ 1,820,593	\$ 2,060,357	10	20	Ś	2,941,356 \$	3,268,9
Z/Dosed Injection	Central Area IRZ / Injection	Opt 2 Opt 3	Alt #4A 20+ yrs	<u>ې</u> د	-	\$ <u>-</u>	20			-	<u>\$ 1,020,000</u> \$ -	<u>\$ 2,000,007</u>	20	40	\$	- \$	
Z/Dosed Injection	SCRIA / Dosed Injection	Opt 3 Opt 3	Alt #4A_20+ yrs	ب خ	_	\$ 88,342	20			_	\$ 693,150	\$ 693,150	20	40	ب خ	1,766,841 \$	1,766,8
Z/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	¢ ¢	_	\$ 38,842	20			_	\$ 304,763	\$ 304,763	20	40	¢ ¢	776,841 \$	776,8
Application	Agricultural Units	Initial	AU Mods	ب خ	240,000	· · ·	0	40		240,000		\$ 240,000	0	40	ب خ	- \$	240,0
Application	Agricultural Units	Initial	New AU (Rev)	ې خ	3,469,796	ς _	0	40	•	240,000 3,469,796		\$ 3,469,796	0	40	ہ خ	_ ¢	3,469,7
J Application	Agricultural Units	Initial	AU O&M Summary	ې خ	5,405,790	\$ - \$ 491,904	0	40		,+09,790	\$ - \$ 11,064,159	\$ 3,469,796 \$ 11,064,159	0	40 40	ې خ	- ې 19,676,164 \$	5,409,7 19,676,1
nd Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acg	ې د	1,012,600		0	40		- L,012,600	¢ 11,004,139	\$ 1,012,600	0	40	ې خ	- \$	1,012,6
		millai	Ait 4a Latiu Acy	Ş	1,012,000	- ږ	0	40	υςι	1,012,000	- ر <u>ب</u>	<u>ب 1,012,000 </u>	0	40	Ş	- >	1,012,0
DTAL				Ś	21,168,670				\$ 19	9,684,013	\$ 56,185,656	\$ 75,869,669			Ś	87.741.581 Ś	108,910,25

OPINION OF PROBABLE COST	Hink	ley Feasi	ibility Study Including Adden	dum #	2										P	roject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to r	each 3.1	ug/L He	exavalent C	hromium*		Non-discount	ed Cash Flow	/ to rea	ch 3.1 ug/L Hexava	alent Chromiu
								ization						ization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Ca	pital	O&M x No. of years	Total Capital & O&M	Begin	End	0	M x No. of 7 years	Fotal Capita O&M
Iternative 4B - Aggressive Core In-Site	Freatment and Beneficial	Agricu	ultural Use with Targe	eted	Pumping								_				
eshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	-	\$ 149,257	0	40	\$		\$ 3,357,164	\$ 3,357,164	0	40	\$	5,970,279 \$	5,970
oundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	15	\$	- !	\$ 4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,30
oundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150	15	30	\$	- 9	\$ 2,327,128		15	30	\$	4,727,250 \$	4,72
oundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100	30	40	\$	- :	\$ 696,663	\$ 696,663	30	40	\$	2,101,000 \$	2,10
traction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	\$-	0	40	\$2,	,623,560	\$-	\$ 2,623,560	0	40	\$	- \$	2,62
traction for AU Application	Northern Extraction	Initial	Northern Extraction (4B at 10)	\$	3,390,900	\$ 100,562	10	40	\$2,4	,481,879	\$ 1,411,472	\$ 3,893,352	10	40	\$	3,016,860 \$	6,40
oundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	-	\$ 86,274	0	20	\$	- !	\$ 1,263,600	\$ 1,263,600	0	20	\$	1,725,487 \$	1,72
oundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	-	\$ 54,559	0	20	\$	- !	\$ 799,092	\$ 799,092	0	20	\$	1,091,185 \$	1,09
oundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200	\$ 55,755	10	20	\$	543,234	\$ 345,102	\$ 888,335	10	20	\$	557,547 \$	1,29
oundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	-	\$ 142,029	20	40	\$	-	\$ 1,114,389	\$ 1,114,389	20	40	\$	2,840,581 \$	2,840
Z/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,077,153	\$ 904,760	0	5	\$2,	,077,153	\$ 4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,60
Z/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,927,479	\$ 478,213	0	5	\$ 2,	,927,479	\$ 2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318
Z/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	3,083,759	\$ 821,971	0	5	\$3,	,083,759	\$ 3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193
/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	-	\$ 904,760	5	10	\$	- 9	\$ 3,527,757	\$ 3,527,757	5	10	\$	4,523,798 \$	4,523
/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	356,104	\$ 380,628	5	10	\$	304,656	\$ 1,484,111	\$ 1,788,767	5	10	\$	1,903,140 \$	2,259
/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	-	\$ 716,571	5	10	\$	59,284		\$ 2,853,274	5	10	\$	3,582,856 \$	3,652
/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	· · · · · · · · · · · · · · · · · · ·	\$ 904,760	10	20	\$	- !	\$ 5,600,133	\$ 5,600,133	10	20	\$	9,047,595 \$	9,047
/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	848,241	\$ 416,508	10	20	\$	620,848	\$ 2,578,035	\$ 3,198,883	10	20	\$	4,165,083 \$	5,013
Z/Dosed Injection	Source Area IRZ / Injection	Opt 2		\$	327,581		10	20	\$	239,764		\$ 2,060,357	10	20	\$	2,941,356 \$	3,268
Z/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ -	20	40	\$		\$-	\$ -	20	40	\$	- \$	
Z/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ 88,342	20	40	\$	-	, \$	\$ 693,150	20	40	\$	1,766,841 \$	1,760
Z/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ 38,842	20	40	\$	-	\$ 304,763	\$ 304,763	20	40	\$	776,841 \$	77(
Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$ -	0	40	\$	240,000	· · ·	\$ 240,000	0	40	\$	- \$	240
	Agricultural Units	Initial	New AU (Rev)	Ś	3,469,796	\$ -	0	40	•	,469,796	\$-	\$ 3,469,796	0	40	Ś	- Ś	3,469
Application	0			ć	-,,0	\$ 491,904	0	40	ć ,		\$ 11,064,159	\$ 11,064,159	0	40	ć	19,676,164 \$	19,67
Application	Agricultural Units	Initial	AU O&M Summary	3	-	3 471.704			5				0	40	2	19.0/0.104 3	

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Adde	endum #	ŧ2										Project Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
							NPV to r	each 3.1 u	ıg/L Hexavale	nt Chromium'	k		Non-discount	ted Cash Flow	to reach 3.1 ug/L Hexav	alent Chromium*
							Optim	-	- <u>6/ - 110/01/010</u>					nization		
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital	O&M x of yea		otal Capital & O&M	Begin	End	O&M x No. of years	Total Capital & O&M
Alternative 5 - Plume-Wide Pump and Tr	eat															
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	- \$	157,524	0	140	\$-	\$ 4,906	5,304 \$	4,906,304	0	140	\$ 22,053,428	\$ 22,053,428
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	10	\$-	\$ 3,553	8,493 \$	3,553,493	0	10	\$ 4,202,000	\$ 4,202,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	315,150	0	0	\$-	\$	- \$	-	0	0	\$ - 9	- ڏ
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	210,100	10	140	\$-	\$ 4,767	7,089 \$	4,767,089	10	140	\$ 27,313,000	\$ 27,313,000
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (5)	\$	1,675,800 \$	84,747	0	140	\$ 1,675,80	0 \$ 2,639	9,555 \$	4,315,355	0	140	\$ 11,864,582	
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	\$	- \$	72,722	0	140	\$-	\$ 2,265	5,031 \$	2,265,031	0	140	\$ 10,181,126	\$ 10,181,126
Groundwater Extraction	DVD Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$	73,576	0	10	\$-	\$ 622	2,210 \$	622,210	0	10	\$ 735,762	\$ 735,762
Groundwater Extraction	DVD Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	73,576	10	15	\$-	\$ 245	5,435 \$	245,435	10	15	\$ 367,881	\$ 367,881
Groundwater Extraction	DVD Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$	73,576	15	140	\$-	\$ 1,423	8,982 \$	1,423,982	15	140	\$ 9,197,029	\$ 9,197,029
Groundwater Extraction	Gorman Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$	58,316	0	10	\$-	\$ 493	8,163 \$	493,163	0	10	\$ 583,164	\$ 583,164
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	58,316	10	15	\$-	\$ 194	l,531 \$	194,531	10	15	\$ 291,582	\$ 291,582
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$	58,316	15	140	\$-	\$ 1,128	8,647 \$	1,128,647	15	140	\$ 7,289,554	\$ 7,289,554
Groundwater Extraction	Ranch or Other Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,202,844 \$	126,247	0	10	\$ 3,202,84	4 \$ 1,067	',631 \$	4,270,475	0	10	\$ 1,262,472	\$ 4,465,316
Groundwater Extraction	Ranch or Other Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	677,400 \$	126,247	10	15	\$ 495,80	5 \$ 421	,134 \$	916,939	10	15	\$ 631,236	\$ 1,308,636
Groundwater Extraction	Ranch or Other Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	885,600 \$	126,247	15	140	\$ 554,54	4 \$ 2,443	8,368 \$	2,997,912	15	140	\$ 15,780,901	\$ 16,666,501
Treated Injection	Northern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	1,526,995 \$	146,300	0	10	\$ 1,526,99	5 \$ 1,237	<i>',</i> 211 \$	2,764,206	0	10	\$ 1,463,000	\$ 2,989,995
Treated Injection	Northern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	146,300	10	15	\$-	\$ 488	3,026 \$	488,026	10	15	\$ 731,500	\$ 731,500
Treated Injection	Northern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$	146,300	15	140	\$-	\$ 2,831	,466 \$	2,831,466	15	140	\$ 18,287,500	\$ 18,287,500
Treated Injection	Southeast and East Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	6,718,776 \$	617,320	0	10	\$ 6,718,77	6 \$ 5,220),473 \$	11,939,249	0	10	\$ 6,173,200	\$ 12,891,976
Treated Injection	Southeast and East Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	617,320	10	15	\$-	\$ 2,059	9,248 \$	2,059,248	10	15	\$ 3,086,600	\$ 3,086,600
Treated Injection	Southeast and East Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$	617,320	15	140	\$-	\$ 11,947	<i>,</i> 509 \$	11,947,509	15	140	\$ 77,165,000	\$ 77,165,000
Treated Injection	Southern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,359,388 \$	319,660	0	10	\$ 3,359,38	8 \$ 2,703	8,260 \$	6,062,648	0	10	\$ 3,196,600	\$ 6,555,988
Treated Injection	Southern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	319,660	10	15	\$-	\$ 1,066	5,318 \$	1,066,318	10	15	\$ 1,598,300	\$ 1,598,300
Treated Injection	Southern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$	319,660	15	140	\$-	\$ 6,186	5,647 \$	6,186,647	15	140	\$ 39,957,500	\$ 39,957,500
Treated Injection	Southwest Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	916,197 \$	92,180	0	10	\$ 916,19	7 \$ 779	9,536 \$	1,695,733	0	10	\$ 921,800	\$ 1,837,997
Treated Injection	Southwest Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	92,180	10	15	\$-	\$ 307	7,493 \$	307,493	10	15	\$ 460,900	\$ 460,900
Treated Injection	Southwest Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$	92,180	15	140	\$-	\$ 1,784	1,036 \$	1,784,036	15	140	\$ 11,522,500	
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A	\$	8,012,515 \$	4,130,732	0	140	\$ 8,012,51	5 \$ 128,657	7,005 \$	136,669,520	0	140	\$ 578,302,548	\$ 586,315,063
Land Acquisition	Land Acquisition or Other	Initial	Alt 5 Land Acq	\$	454,000 \$	-	0	140	\$ 454,00	0\$	- \$	454,000	0	140	\$ - \$	\$ 454,000
TOTAL				\$	27,429,515			<u>-</u>	\$ 26,916,86	4 \$ 191,439) <i>,</i> 800 \$	218,356,664			\$ 854,620,667	\$ 882,050,182

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Adde	endum #	#2								Project Number:	36385
Cost Breakdown Detail by Component													Date:	22-Feb-11
									+ Chuanium *		New	ted Cech Flow		
							reach 3.1 u mization	g/L Hexavaler				nization	to reach 3.1 ug/L Hexa	alent Chromium*
ALT	Area	Opt	Sheet Name		Capital Annual	Begir		Capital	O&M x No	•	Begin	End	O&M x No. of	Total Capital &
		No.			O&M				of years	& O&M			years	O&M
Alternative 5 - Plume-Wide Pump and Tr	eat													
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	- \$ 157,524	0	140	\$-	\$ 4,906,30	4 \$ 4,906,304	0	140	\$ 22,053,428	\$ 22,053,42
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$ 420,200	0	10	\$-	\$ 3,553,49	3 \$ 3,553,493	0	10	\$ 4,202,000	\$ 4,202,00
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$ 315,150	0	0	\$-	\$-	\$-	0	0	\$-	\$-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$ 210,100	10	140	\$-	\$ 4,767,08	. , ,	10	140	\$ 27,313,000	\$ 27,313,00
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (5)	\$	1,675,800 \$ 84,747	0	1.0	\$ 1,675,800	\$ 2,639,55	5 \$ 4,315,355	0	140	\$ 11,864,582	\$ 13,540,38
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	\$	- \$ 72,722	0	140	\$-	\$ 2,265,03	1 \$ 2,265,031	0	140	\$ 10,181,126	\$ 10,181,12
Groundwater Extraction	DVD Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$ 73,576	0	10	\$-	\$ 622,21	0 \$ 622,210	0	10	\$ 735,762	\$ 735,76
Groundwater Extraction	DVD Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 73,576	10	15	\$-	\$ 245,43	5 \$ 245,435	10	15	\$ 367,881	\$ 367,88
Groundwater Extraction	DVD Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 73,576	15	140	\$-	\$ 1,423,98	2 \$ 1,423,982	15	140	\$ 9,197,029	\$ 9,197,02
Groundwater Extraction	Gorman Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$ 58,316	0	10	\$-	\$ 493,16	3 \$ 493,163	0	10	\$ 583,164	\$ 583,16
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 58,316	10	15	\$-	\$ 194,53	1 \$ 194,531	10	15	\$ 291,582	\$ 291,58
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 58,316	15	140	\$-	\$ 1,128,64	7 \$ 1,128,647	15	140	\$ 7,289,554	\$ 7,289,55
Groundwater Extraction	Ranch or Other Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,202,844 \$ 126,247	0	10	\$ 3,202,844	\$ 1,067,63	1 \$ 4,270,475	0	10	\$ 1,262,472	\$ 4,465,31
Groundwater Extraction	Ranch or Other Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	677,400 \$ 126,247	10	15	\$ 495,805	\$ 421,13	4 \$ 916,939	10	15	\$ 631,236	\$ 1,308,63
Groundwater Extraction	Ranch or Other Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	885,600 \$ 126,247	15	140	\$ 554,544	\$ 2,443,36	8 \$ 2,997,912	15	140	\$ 15,780,901	\$ 16,666,50
Treated Injection	Northern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	1,526,995 \$ 146,300	0	10	\$ 1,526,995	\$ 1,237,21	1 \$ 2,764,206	0	10	\$ 1,463,000	\$ 2,989,99
Treated Injection	Northern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 146,300	10	15	\$-	\$ 488,02	6 \$ 488,026	10	15	\$ 731,500	\$ 731,50
Treated Injection	Northern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 146,300	15	140	\$-	\$ 2,831,46	6 \$ 2,831,466	15	140	\$ 18,287,500	\$ 18,287,50
Treated Injection	Southeast and East Plume Fringe	Initial	Alt 5 PIPE-WELL (0 - 10)	\$	6,718,776 \$ 617,320	0	10	\$ 6,718,776	\$ 5,220,47	3 \$ 11,939,249	0	10	\$ 6,173,200	\$ 12,891,97
Treated Injection	Southeast and East Plume Fringe	Opt 1	Alt 5 PIPE-WELL (10 - 15)	\$	- \$ 617,320	10	15	\$ -	\$ 2,059,24	8 \$ 2,059,248	10	15	\$ 3,086,600	
Treated Injection	Southeast and East Plume Fringe	Opt 2	Alt 5 PIPE-WELL (15+)	\$	- \$ 617,320	15	140	\$ -	\$ 11,947,50	9 \$ 11,947,509	15	140	\$ 77,165,000	\$ 77,165,00
Treated Injection	Southern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,359,388 \$ 319,660	0	10	\$ 3,359,388	\$ 2,703,26	0 \$ 6,062,648	0	10	\$ 3,196,600	\$ 6,555,98
Treated Injection	Southern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 319,660	10	15	\$ -	\$ 1,066,31		10	15	\$ 1,598,300	\$ 1,598,30
Treated Injection	Southern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 319,660	15	140	\$-	\$ 6,186,64		15	140	\$ 39,957,500	\$ 39,957,50
Treated Injection	Southwest Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	916,197 \$ 92,180	0	10	\$ 916,197	\$ 779,53	6 \$ 1,695,733	0	10	\$ 921,800	\$ 1,837,99
Treated Injection	Southwest Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 92,180	10		\$ -	\$ 307,49		10	15	\$ 460,900	
Treated Injection	Southwest Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 92,180	15		\$ -	\$ 1,784,03		15	140	\$ 11,522,500	
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A	\$	8,012,515 \$ 4,130,732	0		\$ 8,012,515	\$ 128,657,00		0	140	\$ 578,302,548	
Land Acquisition	Land Acquisition or Other	Initial	Alt 5 Land Acq	\$	454,000 \$ -	0		\$ 454,000		\$ 454,000	0	140	\$ -	\$ 454,00
TOTAL					27.429.515		-	<u> </u>	A 404 400 00	0 \$ 218.356.664			\$ 854.620.667	\$ 882.050.182

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adde	ndum i	#2										Project Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
-								ach 2 1			*		Non discount	ad Cash Flow	to reach 3.1 ug/L Hexa	valant Chromium*
						ſ	Optimi		g/L Hexavaler	it Chromium	<u> </u>			ization	lo reach 3.1 ug/L Hexa	alent Chromium.
ALT	Area	Opt No.	Sheet Name		Capital Annu O&N		Begin	End	Capital	O&M x of yea		Total Capital & O&M	Begin	End	O&M x No. of years	Total Capital & O&M
Alternative 5 - Plume-Wide Pump and T	reat															
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	Ś	- \$ 157	.524	0	140	Ś -	\$ 4.90	6,304	\$ 4,906,304	0	140	\$ 22,053,428	\$ 22,053,428
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$ 420		0	10	<u>+</u> \$-		3,493	\$ 3,553,493	0	10	\$ 4,202,000	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ś	- \$ 315		0	0	\$-	\$ 0,00	_ (0	0	\$ -	\$
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś	- \$ 210		10	140	÷ \$-	\$ 476	7,089 \$, \$ 4,767,089	10	140	\$	\$
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (5)	Ś		, <u>100 </u>	0		<u> </u>		9,555	\$ 4,315,355	0	140	\$ 11,864,582	
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	Ś		,722	0	140	<u>\$ </u>		5,031	\$ 2,265,031	0	140	\$ 10,181,126	
Groundwater Extraction	DVD Extraction	Initial	Alt 5 PIPE-WELL (0 - 10)	Ś		,576	0	10	<u>,</u> \$-		2,210	\$ 622,210	0	10	\$ 735,762	
Groundwater Extraction	DVD Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	Ś		,576	10	15	, Ś -		5,435		10	15	\$ 367,881	
Groundwater Extraction	DVD Extraction	Opt 2	Alt 5 PIPE-WELL (15+)	Ś		,576	15	140	, Ś-		3,982	\$ 1,423,982	15	140	\$ 9,197,029	\$ 9,197,029
Groundwater Extraction	Gorman Extraction	Initial	Alt 5 PIPE-WELL (0 - 10)	Ś		,316	0	10	<u>,</u> \$-		3,163	\$ 493,163	0	10	\$ 583,164	
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	Ś		,316	10	15	, Ś -		4,531		10	15	\$ 291,582	
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 5 PIPE-WELL (15+)	Ś		,316	15	140	, Ś -		8,647	\$ 1,128,647	15	140	\$ 7,289,554	\$ 7,289,554
Groundwater Extraction	Ranch or Other Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,202,844 \$ 126		0	10	; \$ 3,202,844		7,631	\$ 4,270,475	0	10	\$ 1,262,472	
Groundwater Extraction	Ranch or Other Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	Ś	677,400 \$ 126	,	10	15	\$, 1,134 §	\$	10	15	\$ 631,236	
Groundwater Extraction	Ranch or Other Extraction	Opt 2	Alt 5 PIPE-WELL (15+)	\$	885,600 \$ 126		15	140	, \$, 3,368 \$, \$	15	140	\$ 15,780,901	\$ 16,666,501
Treated Injection	Northern Plume Fringe	Initial	Alt 5 PIPE-WELL (0 - 10)	\$	1,526,995 \$ 146		0	10	\$ 1,526,995		7,211	\$ 2,764,206	0	10	\$ 1,463,000	
Treated Injection	Northern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 146	,300	10	15	\$ -		8,026	\$ 488,026	10	15	\$ 731,500	
Treated Injection	Northern Plume Fringe	Opt 2	Alt 5 PIPE-WELL (15+)	\$	- \$ 146		15	140	\$-		1,466 \$	\$ 2,831,466	15	140	\$ 18,287,500	
Treated Injection	Southeast and East Plume Fringe	Initial	Alt 5 PIPE-WELL (0 - 10)	\$	6,718,776 \$ 617	,320	0	10	\$ 6,718,776		0,473	\$ 11,939,249	0	10	\$ 6,173,200	
Treated Injection	Southeast and East Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 617	,320	10	15	\$ -		9,248	\$ 2,059,248	10	15	\$ 3,086,600	
Treated Injection	Southeast and East Plume Fringe	Opt 2	Alt 5 PIPE-WELL (15+)	\$	- \$ 617	,320	15	140	\$ -	\$ 11,94	7,509	\$ 11,947,509	15	140	\$ 77,165,000	\$ 77,165,000
Treated Injection	Southern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,359,388 \$ 319	,660	0	10	\$ 3,359,388	\$ \$ 2,70	3,260	\$ 6,062,648	0	10	\$ 3,196,600	\$ 6,555,988
Treated Injection	Southern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 319	,660	10	15	\$ -		6,318	\$ 1,066,318	10	15	\$ 1,598,300	\$ 1,598,300
Treated Injection	Southern Plume Fringe	Opt 2	Alt 5 PIPE-WELL (15+)	\$	- \$ 319	,660	15	140	\$ -	\$ 6,18	6,647	\$ 6,186,647	15	140	\$ 39,957,500	\$ 39,957,500
Treated Injection	Southwest Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	916,197 \$ 92	,180	0	10	\$	'\$77	9,536	\$ 1,695,733	0	10	\$ 921,800	\$ 1,837,997
Treated Injection	Southwest Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$,180	10	15	\$ -		7,493		10	15	\$ 460,900	
Treated Injection	Southwest Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$,180	15	140	\$-		4,036		15	140	\$ 11,522,500	
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A	\$	8,012,515 \$ 4,130		0	140	\$ 8,012,515	\$ 128,65			0	140	\$ 578,302,548	
Land Acquisition	Land Acquisition or Other	Initial	Alt 5 Land Acq	\$	454,000 \$		0	140	\$ 454,000		- 9	\$ 454,000	0	140	\$ -	\$ 454,000
TOTAL				<u> </u>	27.429.515			-	¢ 26.016.064	¢ 101.43	0 000 -	\$ 218.356.664			\$ 854.620.667	\$ 882.050.182

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Addend	dum #	#2										I	Project Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to r	each 3	1 μσ/Ι H	levavalent	Chromium*		Non-discount	ed Cash Flow	to re	ach 3.1 ug/L Hexaval	ent Chromium*
							Optim			iexavalent	chronnun			ization			
		Opt				Annual	optim				O&M x No.	Total Capital	optill			&M x No. of T	otal Capital &
ALT	Area	No.	Sheet Name		Capital	O&M	Begin	End	l Ca	apital	of years	& O&M	Begin	End	Ŭ	years	O&M
Combined Alternative																	
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	- \$	149,257	0	90	\$	-	\$ 4,424,586	\$ 4,424,586	0	90	\$	13,433,127 \$	13,433,127
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	15	\$	-	\$ 4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	315,150	15	30	\$	-	\$ 2,327,128	\$ 2,327,128	15	30	\$	4,727,250 \$	4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	210,100	30	90	\$	-	\$ 2,199,208	\$ 2,199,208	30	90	\$	12,606,000 \$	12,606,000
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (Combined)	\$	2,623,560 \$	-	0	90	\$2	2,623,560	\$ -	\$ 2,623,560	0	90	\$	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- \$	86,274	0	40	\$	-	\$ 1,940,526	\$ 1,940,526	0	40	\$	3,450,973 \$	3,450,973
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- \$	54,559	0	40	\$	-	\$ 1,227,175	\$ 1,227,175	0	40	\$	2,182,371 \$	2,182,371
Groundwater Extraction	SCRIA Extraction	Initial	DVD_SCRIA Extr (60 gpm)	\$	742,200 \$	55,755	10	40	\$	543,234	\$ 782,564	\$ 1,325,798	10	40	\$	1,672,642 \$	2,414,842
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction for low dose	\$	- \$	142,029	40	90	\$	-	\$ 1,015,731	\$ 1,015,731	40	90	\$	7,101,453 \$	7,101,453
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #6_0 to 10 yrs	\$	2,394,426 \$	904,760	0	10	\$2	2,394,426	\$ 7,651,254	\$ 10,045,681	0	10	\$	9,047,595 \$	11,442,022
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #6_0 to 10 yrs	\$	3,374,635 \$	478,213	0	10	\$ 3	3,374,635	\$ 4,044,089	\$ 7,418,724	0	10	\$	4,782,128 \$	8,156,763
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #6_10 to 40 yrs	\$	- \$	904,760	10	40	\$	-	\$ 12,699,060	\$ 12,699,060	10	40	\$	27,142,786 \$	27,142,786
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #6_10 to 40 yrs	\$	937,022 \$	539,845	10	40	\$	685,828	\$ 7,577,182	\$ 8,263,010	10	40	\$	16,195,358 \$	17,132,379
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #6_40 to 42 yrs	\$	- \$	-	40	42	\$	-	\$ -	\$-	40	42	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #6_40 to 42 yrs	\$	377,067 \$	365,220	40	42	\$	108,213	\$ 200,064	\$ 308,278	40	42	\$	730,440 \$	1,107,507
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #6_40 to 42 yrs	\$	107,733 \$	652,153	40	42	\$	30,918	\$ 357,244	\$ 388,162	40	42	\$	1,304,306 \$	1,412,039
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #6_42+ yrs	\$	- \$	88,342	42	90	\$	-	\$ 583,392	\$ 583,392	42	90	\$	4,240,418 \$	4,240,418
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #6_42+ yrs	\$	- \$	38,842	42	90	\$	-	\$ 256,504	\$ 256,504	42	90	\$	1,864,418 \$	1,864,418
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$	-	0	90	\$	240,000	\$ -	\$ 240,000	0	90	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$	-	0	90	\$ 3	3,469,796	\$ -	\$ 3,469,796	0	90	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	491,904	0	90	\$	-	\$ 14,582,047	\$ 14,582,047	0	90	\$	44,271,369 \$	44,271,369
Land Acquisition	Land Acquisition or Other	Initial	Alt 6 Land Acq	\$	1,130,400 \$	-	0	90	\$1	L,130,400	\$ -	\$ 1,130,400	0	90	\$	- \$	1,130,400
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A (200 gpm)	\$	3,494,573 \$	2,123,267	0	40	\$ 3	3,494,573	\$ 47,757,614	\$ 51,252,188	0	40	\$	84,930,690 \$	88,425,263
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Initial	Alt 6_PIPE-WELL (0-10)	\$	4,221,720 \$	624,855	0	10	\$ 4	1,221,720	\$ 5,284,195	\$ 9,505,915	0	10	\$	6,248,552 \$	10,470,272
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Opt 1	Alt 6_PIPE-WELL (10-40)	\$	598,500 \$		10	40		438,056	\$ 8,769,750	\$ 9,207,807	10	40	\$	18,744,336 \$	19,342,836
TOTAL				\$	23,711,633				\$ 22	2,755,361	\$ 128,634,507	\$ 151,389,868			\$	270,979,211 \$	294,690,844

OPINION OF PROBABLE COST	Hinkl	ley Feasi	bility Study Including Addendu	m #2	2									F	roject Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
						NPV to r	reach 3.:	1 ug/L Hexava	alent C	Chromium*		Non-discount	ed Cash Flow	to rea	ch 3.1 ug/L Hexav	alent Chromium*
						Optim	nization					Optim	ization			
ALT	Area	Opt No.	Sheet Name		Capital Annual O&M	Begin	End	Capita	I	O&M x No. of years	Total Capital & O&M	Begin	End	0	&M x No. of years	Total Capital & O&M
								•		-					-	
Combined Alternative																
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	- \$ 149,257	0	90	\$	-	\$ 4,424,586	\$ 4,424,586	0	90	\$	13,433,127 \$	13,433,127
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$ 420,200	0	15	\$	-	\$ 4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$ 315,150	15	30	\$	-	\$ 2,327,128	\$ 2,327,128	15	30	\$	4,727,250 \$	4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$ 210,100	30	90	\$	-	\$ 2,199,208	\$ 2,199,208	30	90	\$	12,606,000 \$	12,606,000
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (Combined)	\$	2,623,560 \$ -	0	90	\$ 2,623,	560	\$ -	\$ 2,623,560	0	90	\$	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- \$ 86,274	0	40	\$	-	\$ 1,940,526	\$ 1,940,526	0	40	\$	3,450,973 \$	
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- \$ 54,559	0	40	\$	-	\$ 1,227,175	\$ 1,227,175	0	40	\$	2,182,371 \$	2,182,371
Groundwater Extraction	SCRIA Extraction	Initial	DVD_SCRIA Extr (60 gpm)	\$	742,200 \$ 55,755	10	40	\$ 543,	234	\$ 782,564	\$ 1,325,798	10	40	\$	1,672,642 \$	2,414,842
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction for low dose	\$	- \$ 142,029	40	90	\$	-	\$ 1,015,731	\$ 1,015,731	40	90	\$	7,101,453 \$	7,101,453
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #6 0 to 10 yrs	\$	2,394,426 \$ 904,760	0	10	\$ 2,394,	426	\$ 7,651,254	\$ 10,045,681	0	10	\$	9,047,595 \$	11,442,022
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #6 0 to 10 yrs	\$	3,374,635 \$ 478,213	0	10	\$ 3,374,	635	\$ 4,044,089	\$ 7,418,724	0	10	\$	4,782,128 \$	8,156,763
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #6_10 to 40 yrs	\$	- \$ 904,760	10	40	\$	-	\$ 12,699,060	\$ 12,699,060	10	40	\$	27,142,786 \$	27,142,786
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #6_10 to 40 yrs	\$	937,022 \$ 539,845	10	40	\$ 685,	828	\$ 7,577,182	\$ 8,263,010	10	40	\$	16,195,358 \$	17,132,379
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #6_40 to 42 yrs	\$	- \$ -	40	42	\$	-	\$-	\$-	40	42	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #6_40 to 42 yrs	\$	377,067 \$ 365,220	40	42	\$ 108,	213	\$ 200,064	\$ 308,278	40	42	\$	730,440 \$	1,107,507
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #6_40 to 42 yrs	\$	107,733 \$ 652,153	40	42	\$ 30,	918	\$ 357,244	\$ 388,162	40	42	\$	1,304,306 \$	1,412,039
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #6_42+ yrs	\$	- \$ 88,342	42	90	\$	-	\$ 583,392	\$ 583,392	42	90	\$	4,240,418 \$	4,240,418
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #6_42+ yrs	\$	- \$ 38,842	42	90	\$	-	\$ 256,504	\$ 256,504	42	90	\$	1,864,418 \$	1,864,418
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$ -	0	90	\$ 240,	000	\$-	\$ 240,000	0	90	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$ -	0	90	\$ 3,469,	796	\$ -	\$ 3,469,796	0	90	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$ 491,904	0	90	\$	-	\$ 14,582,047	\$ 14,582,047	0	90	\$	44,271,369 \$	44,271,369
Land Acquisition	Land Acquisition or Other	Initial	Alt 6 Land Acq	\$	1,130,400 \$ -	0	90	\$ 1,130,	400	\$-	\$ 1,130,400	0	90	\$	- \$	1,130,400
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A (200 gpm)	\$	3,494,573 \$ 2,123,267	0	40	\$ 3,494,	573	\$ 47,757,614	\$ 51,252,188	0	40	\$	84,930,690 \$	88,425,263
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Initial	Alt 6_PIPE-WELL (0-10)	\$	4,221,720 \$ 624,855	0	10	\$ 4,221,	720	\$ 5,284,195	\$ 9,505,915	0	10	\$	6,248,552 \$	10,470,272
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Opt 1	Alt 6_PIPE-WELL (10-40)	\$	598,500 \$ 624,811	10	40				\$ 9,207,807	10	40	\$	18,744,336 \$	
								4		4						
TOTAL				Ş	23,711,633			Ş 22,755,	361	\$ 128,634,507	\$ 151,389,868			Ş	270,979,211 \$	294,690,844

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*Except for 80% mass reduction timeframe, durations based on fate & transport model performed by ARCADIS and represent time when the starting plume area has been reduced by 99 percent in the Remedial Area. The values in these tables represent the longer of Layers 1 and 3. Durations are capped at 1000 years for purposes of this costing and feasibility evaluation.

** Timeframe to reach 1.2 ug/L shown above, to the extent achieving this criteria is feasible, is based on modeling.

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OPINION OF PROBABLE COST	Hink	ley Feas	ibility Study Including Adde	endum #	2									Proj	ect Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
									g/L Hexavaler	t Chromium**				reach 1.2	2 ug/L Hexava	lent Chromium**
							Optim	zation				Optir	mization	_		
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital	O&M x No of years	•	Begin	End		l x No. of rears	Total Capital & O&M
Alternative 2 - Containment										•						
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$		\$ 157,524	0	320	\$-	\$ 4,968,99	98 \$ 4,968,998	0	320	\$	50,407,835	\$ 50,407,835
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$		\$ 420,200	0	25	\$-	\$ 7,180,33	4 \$ 7,180,314	0	25	\$	10,505,000	\$ 10,505,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	\$ 315,150	25	320	\$-	\$ 4,555,94	4,555,947	25	320	\$	92,969,250	\$ 92,969,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	\$ 210,100	0	0	\$-	\$-	\$-	0	0	\$	-	\$ -
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (2)	\$	900,600 \$	\$ 84,747	0	320	\$ 900,600	\$ 2,673,28	34 \$ 3,573,884	0	320	\$	27,119,044	\$ 28,019,644
Extraction for AU Application	SCRIA Extraction	Initial	SCRIA Extraction	\$	- 4	\$ 72,722	0	320	\$-	\$ 2,293,9	74 \$ 2,293,974	0	320	\$	23,271,146	\$ 23,271,146
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$	\$-	0	320	\$ 240,000	\$-	\$ 240,000	0	320	\$	-	\$ 240,000
AU Application	Agricultural Units	Initial	New AU	\$	2,213,475	\$-	0	320	\$ 2,213,475	\$-	\$ 2,213,475	0	320	\$	-	\$ 2,213,475
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	-	\$ 339,181	0	320	\$-	\$ 10,699,23	80 \$ 10,699,230	0	320	\$1	.08,537,979	\$ 108,537,979
Land Acquisition	Land Acquisition or Other	Initial	Alt 2 Land Acq	\$	320,000 \$	\$-	0	320	\$ 320,000	\$-	\$ 320,000	0	320	\$	-	\$ 320,000
TOTAL				\$	3,674,075				\$ 3,674,075	\$ 32,371,74	8 \$ 36,045,823			\$ 3	312,810,255	\$ 316,484,330

OPINION OF PROBABLE COST	Hinkl	ey Feas	ibility Study Including Adde	endum	#2									Project Number:	36385
Cost Breakdown Detail by Component		-												Date:	22-Feb-11
									ıg/L Hexavalent	t Chromium**				reach 1.2 ug/L Hexaval	ent Chromium**
		-					Optim	ization				Optim	nization		
ALT	Area	Opt	Sheet Name		Capital	Annual	Begin	End	Capital	O&M x No.	Total Capital	Begin	End	O&M x No. of	Total Capital &
		No.				O&M				of years	& 0&M			years	O&M
Alternative 3 - Plume-Wide In-Situ Treat	ment														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	Ś	_	\$ 157,524	0	180	Ś -	\$ 4,951,169	\$ 4,951,169	0	180	\$ 28,354,407 \$	28,354,407
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	<u> </u>	-	\$ 420,200	0		<u> </u>	\$ 3,553,493	\$ 3,553,493	0	100	\$ 4,202,000 \$	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ś	-	\$ 315,150	0	0	\$ -	\$ -	\$ -	0	0	\$ - <u>\$</u>	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś	-	\$ 210,100	10	180	\$ -	\$ 4,826,928	\$ 4,826,928	10	180	\$ 35,717,000 \$	35,717,000
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (3)	Ś	1,675,800	\$ 86,455	0		\$ 1,675,800		\$ 4,393,170	0	180	\$ 15,561,867 \$	
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	Ś		\$ 72,722	0	180	<u>\$</u>	\$ 2,285,743		0	180	\$ 13,090,020 \$	
Groundwater Extraction	DVD Extraction	Initial	Alt 3 PIPE-WELL (0 - 5)	Ś	-	\$ 76,992	0	5	\$ -	\$ 350,895	\$ 350,895	0	5	\$ 384,959 \$	
Groundwater Extraction	DVD Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	-	\$ 76,992	5	10	\$ -	\$ 300,200	\$ 300,200	5	10	\$ 384,959 \$	
Groundwater Extraction	DVD Extraction	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 76,992	10	15	\$ -	\$ 256,828	\$ 256,828	10	15	\$ 384,959 \$	
Groundwater Extraction	DVD Extraction	Opt 3	Alt 3 PIPE-WELL (10+)	\$	-	\$ 76,992	15	180	\$ -	\$ 1,512,015	\$ 1,512,015	15	180	\$ 12,703,653 \$	
Groundwater Extraction	Gorman Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	-	\$ 60,024	0	5	\$ -	\$ 273,564	\$ 273,564	0	5	\$ 300,121 \$	
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	-	\$ 60,024	5	10	\$ -	\$ 234,041	\$ 234,041	5	10	\$ 300,121 \$	
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 60,024	10	15	\$ -	\$ 200,228	\$ 200,228	10	15	\$ 300,121 \$	
Groundwater Extraction	Gorman Extraction	Opt 3	Alt 3 PIPE-WELL (10+)	\$	-	\$ 60,024	15	180	\$ -	\$ 1,178,795	\$ 1,178,795	15	180	\$ 9,903,999 \$	
Dosed Injection	Northern Injection	Initial	Alt #3 0 to 5 yrs	\$	-	\$ -	0	5	\$ -	\$ -	\$ -	0	5	\$ - \$	
Dosed Injection	Northern Injection	Opt 1	Alt #3_5 to 10 yrs	\$	4,642,022	\$ 666,354	5	10	\$ 3,971,367	\$ 2,598,188	\$ 6,569,555	5	10	\$ 3,331,771 \$	5 7,973,792
Dosed Injection	Northern Injection	Opt 2	Alt #3_10 to 15 yrs	\$	2,024,500	\$ 742,545	10	15	\$ 1,481,779	\$ 2,476,972	\$ 3,958,751	10	15	\$ 3,712,725 \$	
Dosed Injection	Northern Injection	Opt 3	Alt #3_15+ yrs	\$	-	\$ 495,898	15	180	\$-	\$ 9,738,769	\$ 9,738,769	15	180	\$ 81,823,199 \$	81,823,199
Dosed Injection	Central Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	\$	1,353,685	\$ 918,288	0	5	\$ 1,353,685	\$ 4,185,153	\$ 5,538,838	0	5	\$ 4,591,438 \$	5,945,123
Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$ 918,288	5	10	\$-	\$ 3,580,504	\$ 3,580,504	5	10	\$ 4,591,438 \$	4,591,438
Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$-	10	15	\$-	\$-	\$ -	10	15	\$-\$, –
Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #3_15+ yrs	\$	-	\$-	15	180	\$-	\$-	\$ -	15	180	\$-\$, –
Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #3_0 to 5 yrs	\$	2,115,069	\$ 643,490	0	5	\$ 2,115,069	\$ 2,932,746	\$ 5,047,815	0	5	\$ 3,217,450 \$	5,332,519
Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$ 357,888	5	10	\$-	\$ 1,395,444	\$ 1,395,444	5	10	\$ 1,789,439 \$	5 1,789,439
Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$-	10	15	\$-	\$-	\$-	10	15	\$ - \$, –
Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #3_15+ yrs	\$	-	\$ 358,973	15	180	\$-	\$ 7,049,750	\$ 7,049,750	15	180	\$ 59,230,594 \$	59,230,594
Dosed Injection	Source Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	\$	3,595,618	\$ 946,596	0	5	\$ 3,595,618	\$ 4,314,169	\$ 7,909,787	0	5	\$ 4,732,978 \$	8,328,596
Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$-	5	10	\$-	\$-	\$-	5	10	\$-\$	
Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$-	10	15	\$-	\$-	\$-	10	15	\$-\$, –
Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #3_15+ yrs	\$	-	\$ 669,535	15	180	\$-	\$ 13,148,756	\$ 13,148,756	15	180	\$ 110,473,236 \$	5 110,473,236
Dosed Injection	Northern Plume Fringe	Initial	Alt #3_0 to 5 yrs	\$	-	\$ 112,201	0	5	\$-	\$ 511,362	\$ 511,362	0	5	\$ 561,004 \$	5 561,004
Dosed Injection	Northern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$ 112,201	5	10	\$-	\$ 437,483	\$ 437,483	5	10	\$ 561,004 \$	5 561,004
Dosed Injection	Northern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$ 112,201	10	15	\$-	\$ 374,278	\$ 374,278	10	15	\$ 561,004 \$	5 561,004
Dosed Injection	Northern Plume Fringe	Opt 3	Alt #3_15+ yrs	\$	-	\$ 112,201	15	180	\$-	\$ 2,203,473	\$ 2,203,473	15	180	\$ 18,513,139 \$	18,513,139
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt #3_0 to 5 yrs	\$	-	\$ 168,301	0	5	\$-	\$ 767,043	\$ 767,043	0	5	\$ 841,506 \$	841,506
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$ 209,102	5	10	\$-	\$ 815,310	\$ 815,310	5	10	\$ 1,045,508 \$	5 1,045,508
Dosed Injection	Southeast and East Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$ 173,401	10	15	\$-	\$ 578,430	\$ 578,430	10	15	\$ 867,007 \$	867,007
Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3_15+ yrs	\$	-	\$ 173,401	15	180	\$-	\$ 3,405,367	\$ 3,405,367	15	180	\$ 28,611,215 \$	28,611,215
Dosed Injection	Southern Plume Fringe	Initial	Alt #3_0 to 5 yrs	\$	-	\$ 158,101	0	5	\$-	\$ 720,556		0	5	\$ 790,506 \$	5 790,506
Dosed Injection	Southern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$ 249,902	5	10	\$-	\$ 974,395		5	10	\$ 1,249,509 \$	
Dosed Injection	Southern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$ 249,902	10	15	\$-	\$ 833,619		10	15	\$ 1,249,509 \$	
Dosed Injection	Southern Plume Fringe	Opt 3	Alt #3_15+ yrs	\$	-	\$ 249,902	15	180	\$-	\$ 4,907,735	\$ 4,907,735	15	180	\$ 41,233,810 \$	6 41,233,810

OPINION OF PROBABLE COST	Hinkl	ley Feasi	bility Study Including Adder	ndum	#2									Рі	roject Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
-										Ch					4.2	
								ization	ug/L Hexavalent	Chromium**			nization	reach	1.2 ug/L Hexavale	
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin		Capital	O&M x No. of years	Total Capital & O&M	Begin	End	08	M x No. of T years	Total Capital & O&M
															,	
Alternative 3 - Plume-Wide In-Situ Trea	tment															
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	-	\$ 157,524	0	180	\$-	\$ 4,951,169		0	180	\$	28,354,407 \$	28,354,407
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	10	\$ -	\$ 3,553,493	\$ 3,553,493	0	10	\$	4,202,000 \$	4,202,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150	0	0	\$-	\$ -	\$-	0	0	\$	- \$	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100	10	180	\$-	\$ 4,826,928	. , ,	10	180	\$	35,717,000 \$	35,717,000
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (3)	\$	1,675,800	\$ 86,455	0	180	\$ 1,675,800	\$ 2,717,370	. , ,	0	180	\$	15,561,867 \$	17,237,667
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	\$	-	\$ 72,722	0	180	\$-	\$ 2,285,743		0	180	\$	13,090,020 \$	13,090,020
Groundwater Extraction	DVD Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	-	\$ 76,992	0	5	\$-	\$ 350,895	. ,	0	5	\$	384,959 \$	384,959
Groundwater Extraction	DVD Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	-	\$ 76,992	5	10	\$-	\$ 300,200		5	10	\$	384,959 \$	384,959
Groundwater Extraction	DVD Extraction	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 76,992	10	15	\$-	\$ 256,828	\$ 256,828	10	15	\$	384,959 \$	384,959
Groundwater Extraction	DVD Extraction	Opt 3	Alt 3_PIPE-WELL (10+)	\$	-	\$ 76,992	15	180	\$-	\$ 1,512,015		15	180	\$	12,703,653 \$	12,703,653
Groundwater Extraction	Gorman Extraction	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	-	\$ 60,024	0	5	\$-	\$ 273,564	\$ 273,564	0	5	\$	300,121 \$	300,121
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	-	\$ 60,024	5	10	\$-	\$ 234,041	\$ 234,041	5	10	\$	300,121 \$	300,121
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 60,024	10	15	\$-	\$ 200,228	\$ 200,228	10	15	\$	300,121 \$	300,121
Groundwater Extraction	Gorman Extraction	Opt 3	Alt 3_PIPE-WELL (10+)	\$	-	\$ 60,024	15	180	\$-	\$ 1,178,795	\$ 1,178,795	15	180	\$	9,903,999 \$	9,903,999
Dosed Injection	Northern Injection	Initial	Alt #3_0 to 5 yrs	\$	-	\$-	0	5	\$-	\$-	\$-	0	5	\$	- \$	-
Dosed Injection	Northern Injection	Opt 1	Alt #3_5 to 10 yrs	\$	4,642,022	\$ 666,354	5	10	\$ 3,971,367	\$ 2,598,188	\$ 6,569,555	5	10	\$	3,331,771 \$	7,973,792
Dosed Injection	Northern Injection	Opt 2	Alt #3_10 to 15 yrs	\$	2,024,500	\$ 742,545	10	15	\$ 1,481,779	\$ 2,476,972	\$ 3,958,751	10	15	\$	3,712,725 \$	5,737,225
Dosed Injection	Northern Injection	Opt 3	Alt #3_15+ yrs	\$	-	\$ 495,898	15	180	\$-	\$ 9,738,769	\$ 9,738,769	15	180	\$	81,823,199 \$	81,823,199
Dosed Injection	Central Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	\$	1,353,685	\$ 918,288	0	5	\$ 1,353,685	\$ 4,185,153	\$ 5,538,838	0	5	\$	4,591,438 \$	5,945,123
Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$ 918,288	5	10	\$-	\$ 3,580,504	\$ 3,580,504	5	10	\$	4,591,438 \$	4,591,438
Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #3_10 to 15 yrs	\$	-	\$-	10	15	\$-	\$-	\$-	10	15	\$	- \$	-
Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #3_15+ yrs	\$	-	\$-	15	180	\$-	\$-	\$-	15	180	\$	- \$	-
Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #3 0 to 5 yrs	\$	2,115,069	\$ 643,490	0	5	\$ 2,115,069	\$ 2,932,746	\$ 5,047,815	0	5	\$	3,217,450 \$	5,332,519
Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #3 5 to 10 yrs	\$	-	\$ 357,888	5	10	\$ -	\$ 1,395,444	\$ 1,395,444	5	10	\$	1,789,439 \$	1,789,439
Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #3 10 to 15 yrs	\$	-	\$-	10	15	\$ -	\$ -	\$ -	10	15	\$	- \$	-
Dosed Injection	SCRIA / Dosed Injection	Opt 3		\$	-	\$ 358,973	15	180	\$ -	\$ 7,049,750	\$ 7,049,750	15	180	\$	59,230,594 \$	59,230,594
Dosed Injection	Source Area IRZ / Injection	Initial	Alt #3_0 to 5 yrs	\$	3,595,618		0	5	\$ 3,595,618			0	5	\$	4,732,978 \$	8,328,596
Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #3_5 to 10 yrs	\$	-	\$	5	10	\$ -	\$ -	\$ -	5	10	\$	- \$	-
Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #3 10 to 15 yrs	Ś	-	, Ś-	10	15	, \$-	, \$-	, Ś -	10	15	Ś	- \$	-
Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #3_15+ yrs	Ś	-	\$ 669,535	15	180	\$ -	\$ 13,148,756	\$ 13,148,756	15	180	Ś	110,473,236 \$	110,473,236
Dosed Injection	Northern Plume Fringe	Initial	Alt #3_0 to 5 yrs	Ś	-	\$ 112,201	0		\$ -	\$ 511,362		0	5	Ś	561,004 \$	561,004
Dosed Injection	Northern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	Ś	-	\$ 112,201	5	10	\$-	\$ 437,483		5	10	Ś	561,004 \$	561,004
Dosed Injection	Northern Plume Fringe	Opt 2	Alt #3_10 to 15 yrs	Ś	-	\$ 112,201	10	15	\$ -	\$ 374,278		10	15	Ś	561,004 \$	561,004
Dosed Injection	Northern Plume Fringe	Opt 3	Alt #3_15+ yrs	Ś	_	\$ 112,201	15	180	\$-	\$ 2,203,473		15	180	Ś	18,513,139 \$	18,513,139
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt #3_0 to 5 yrs	÷ Ś	_	\$ 168,301	0	5	<u> </u>	\$ 767,043		0	5	Ś	841,506 \$	841,506
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	Ś	-	\$ 209,102	5	10	\$-	\$ 815,310		5	10	Ś	1,045,508 \$	1,045,508
Dosed Injection	Southeast and East Plume Fringe	Opt 1 Opt 2	Alt #3_10 to 15 yrs	Ś	-	\$	10	15	\$-	\$ 578,430		10	15	Ś	867,007 \$	867,007
Dosed Injection	Southeast and East Plume Fringe	Opt 2 Opt 3	Alt #3_15+ yrs	ې خ	-	\$	15		\$-	\$ 3,405,367		15	180	Ś	28,611,215 \$	28,611,215
Dosed Injection	Southern Plume Fringe	Initial	Alt #3_0 to 5 yrs	<u>ب</u> خ	-	\$ 158,101	<u> </u>		<u> </u>	\$ 720,556		0	5	<u>ې</u> ۲	790,506 \$	790,506
Dosed Injection	Southern Plume Fringe	Opt 1	Alt #3_5 to 10 yrs	ب خ	_	\$ 138,101 \$ 249,902	5	10	\$ -	\$ 974,395		5	10	¢ ¢	1,249,509 \$	1,249,509
Dosed Injection	Southern Plume Fringe	Opt 1 Opt 2	Alt #3_10 to 15 yrs	ب خ	-	\$ 249,902 \$ 249,902	10	10	\$- \$-	\$ 833,619		10	10	ې خ	1,249,509 \$	1,249,509
Dosed Injection	Southern Plume Fringe	Opt 2 Opt 3		ڊ خ	-	\$ 249,902 \$ 249,902	10		ş - \$ -	\$ 4,907,735		15	180	ې خ	41,233,810 \$	41,233,810
Dosed injection	Southern Fiullie Fillige	Optis	AIL #3_13+ YIS	Ş	-	× ۲۹۵٬۵۵۲	12	100	- ب	ې 4,307,735	ې 4,301,135		100	ډ	41,200,010 \$	41,200,010

	Hinkl	ey Feas	ibility Study Including Addena	dum #2	2									Р	Project Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
							NPV to re	ach 1.2 u	ıg/L Hexavalent (`hromium**		Non-discounte	ed Cash Flow to	o reach	n 1.2 ug/L Hexavale	nt Chromium**
							Optimi						nization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital	O&M x No. of years	Total Capital & O&M	Begin	End	08	&M x No. of years	Total Capital & O&M
Dosed Injection	Northern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	1,745,667	\$ 146,300	0	5	\$ 1,745,667	\$ 666,771	\$ 2,412,438	0	5	\$	731,500 \$	2,477,16
Dosed Injection	Northern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	-	\$ 146,300	5	10	\$-	\$ 570,440	\$ 570,440	5	10	\$	731,500 \$	731,50
Dosed Injection	Northern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 146,300	10	15	\$-	\$ 488,026	\$ 488,026	10	15	\$	731,500 \$	731,50
Dosed Injection	Northern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	-	\$ 146,300	15	180	\$ -	\$ 2,873,134	\$ 2,873,134	15	180	\$	24,139,500 \$	24,139,50
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,094,800	\$ 184,360	0	5	\$ 2,094,800	\$ 840,232	\$ 2,935,032	0	5	\$	921,800 \$	3,016,60
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	1,401,273	\$ 265,540	5	10	\$ 1,198,824	\$ 1,035,370	\$ 2,234,194	5	10	\$	1,327,700 \$	2,728,97
Dosed Injection	Southeast and East Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 184,360	10	15	\$-	\$ 614,986	\$ 614,986	10	15	\$	921,800 \$	921,80
Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3 15+ yrs	\$	-	\$ 173,401	15	180	\$-	\$ 3,405,367	\$ 3,405,367	15	180	\$	28,611,215 \$	28,611,21
Dosed Injection	Southern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,443,933	\$ 211,420	0	5	\$ 2,443,933	\$ 963,560	\$ 3,407,493	0	5	\$	1,057,100 \$	3,501,03
Dosed Injection	Southern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	800,727	\$ 319,660	5	10	\$ 685,042	\$ 1,246,389	\$ 1,931,432	5	10	\$	1,598,300 \$	2,399,02
Dosed Injection	Southern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 319,660	10	15	\$-	\$ 1,066,318	\$ 1,066,318	10	15	\$	1,598,300 \$	1,598,30
Dosed Injection	Southern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	-	\$ 319,660	15	180	\$-	\$ 6,277,690	\$ 6,277,690	15	180	\$	52,743,900 \$	52,743,90
Land Acquisition	Land Acquisition or Other	Initial	Alt 3 Land Acq	\$	20,000	\$-	0	180	\$ 20,000	\$-	\$ 20,000	0	180	\$	- \$	20,00
TOTAL				\$	23,913,094				\$ 22,381,585	\$ 110,639,053	\$ 133,020,637			\$	610,281,292 \$	634,194,38
Alternative 4 - Core In-Site Treatment a																
	and Beneficial Agricultural															
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	-	\$ 157,524	0		Ş	\$ 4,964,044	\$ 4,964,044	0	220	\$	34,655,387 \$	34,655,38
Freshwater Injection Groundwater Monitoring Program	Northwest Freshwater Injection GMP Including BCMP	Initial Initial	GMP&BCMP (Current)	\$ \$		\$ 420,200	0	10	<u>\$ -</u> \$ -	\$ 4,964,044 \$ 3,553,493	\$ 4,964,044 \$ 3,553,493	0	10	\$	34,655,387 \$ 4,202,000 \$	34,655,38 4,202,00
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP	Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%)	\$ \$ \$	- - -	\$ 420,200 \$ 315,150	0	10 0	T	\$ 3,553,493 \$ -	\$ 3,553,493 \$ -	0 0	10 0	\$ \$ \$	4,202,000 \$ - \$	4,202,00
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP	Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%)	\$ \$ \$	- - -	\$ 420,200 \$ 315,150 \$ 210,100	0 0 10	10 0 220	\$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101	\$ 3,553,493 \$ - \$ 4,844,101	0 0 10	10 0 220	\$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$	4,202,00 - 44,121,00
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction	Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4)	\$ \$ \$ \$	- - - - 1,103,400	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747	0 0 10 0	10 0 220 220	T	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019	0 0 10 0	10 0 220 220	\$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$	4,202,00 - 44,121,00 19,747,74
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction	Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction	\$ \$ \$ \$ \$	- - -	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722	0 0 10	10 0 220	\$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687	0 0 10	10 0 220	\$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$	4,202,00 - 44,121,00 19,747,74 15,998,91
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction	Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction	\$ \$ \$ \$ \$ \$	- - - 1,103,400 - -	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657	0 0 10 0 0 0	10 0 220 220 220 5	\$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$	4,202,00 - - 44,121,00 19,747,74 15,998,91 272,79
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection	Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs	\$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288	0 0 10 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ - \$ - \$ 1,337,296	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 4,185,153	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449	0 0 10 0 0 0 0	10 0 220 220	\$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection	Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 4,185,153 \$ 2,173,086	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806	0 0 10 0 0 0	10 0 220 220 220 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction RZ/Dosed Injection RZ/Dosed Injection RZ/Dosed Injection	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SOURCE Area IRZ / Injection	Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - - 1,337,296 4,698,720 1,249,906	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 2,291,687 \$ 248,657 \$ 4,185,153 \$ 2,173,086 \$ 3,710,952	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858	0 0 10 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Morthern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection Source Area IRZ / Injection Agricultural Units	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ -	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 4,185,153 \$ 2,173,086 \$ 3,710,952 \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000	0 0 10 0 0 0 0	10 0 220 220 220 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Morthern Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor Central Area IRZ / Injection SOURCE Area IRZ / Injection Agricultural Units Agricultural Units	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - - 1,337,296 4,698,720 1,249,906	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ -	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 4,185,153 \$ 2,173,086 \$ 3,710,952 \$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475	0 0 10 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor SCRIA Factor SCRIA Factor SCRIA Provide Injection SCRIA / Dosed Injection Source Area IRZ / Injection Agricultural Units Agricultural Units Agricultural Units	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000 2,213,475	\$ 420,200 \$ 315,150 \$ 210,100 \$ 210,100 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ - \$ 319,636	0 0 10 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 248,657 \$ 2,173,086 \$ 3,710,952 \$ - \$ - \$ 1,456,759	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475 \$ 1,456,759	0 0 10 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$ 1,598,178 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47 1,598,17
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor Sourc	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Opt 1	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary AU O&M Summary	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000 2,213,475 - -	\$ 420,200 \$ 315,150 \$ 210,100 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ - \$ 319,636 \$ 339,181	0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 5	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 220	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475 \$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 2,48,657 \$ 2,173,086 \$ 3,710,952 \$ - \$ 1,456,759 \$ 9,142,724	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 2,291,687 \$ 2,291,687 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475 \$ 1,456,759 \$ 9,142,724	0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 220	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47 1,598,17 72,923,95
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor SCRIA Factor SCRIA Factor SCRIA Provide Injection SCRIA / Dosed Injection Source Area IRZ / Injection Agricultural Units Agricultural Units Agricultural Units	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary AU O&M Summary	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000 2,213,475	\$ 420,200 \$ 315,150 \$ 210,100 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ - \$ 319,636 \$ 339,181	0 0 10 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475 \$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 2,48,657 \$ 2,173,086 \$ 3,710,952 \$ - \$ 1,456,759 \$ 9,142,724	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475 \$ 1,456,759 \$ 9,142,724	0 0 10 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$ 1,598,178 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47 1,598,17 72,923,95
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor Sourc	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Opt 1	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary AU O&M Summary	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000 2,213,475 - -	\$ 420,200 \$ 315,150 \$ 210,100 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ - \$ 319,636 \$ 339,181	0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 5	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 220	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475 \$ - \$ - \$ 337,600	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 2,48,657 \$ 2,173,086 \$ 3,710,952 \$ - \$ 1,456,759 \$ 9,142,724	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475 \$ 1,456,759 \$ 9,142,724 \$ 337,600	$ \begin{array}{c} 0 \\ 0 \\ 10 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 220	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$ 1,598,178 \$ 72,923,955 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47 1,598,17 72,923,95

	Hinkl	ey Feas	ibility Study Including Addena	dum #2	2									Р	Project Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
							NPV to re	ach 1.2 u	ıg/L Hexavalent (`hromium**		Non-discounte	ed Cash Flow to	o reach	n 1.2 ug/L Hexavale	nt Chromium**
							Optimi						nization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital	O&M x No. of years	Total Capital & O&M	Begin	End	08	&M x No. of years	Total Capital & O&M
Dosed Injection	Northern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	1,745,667	\$ 146,300	0	5	\$ 1,745,667	\$ 666,771	\$ 2,412,438	0	5	\$	731,500 \$	2,477,16
Dosed Injection	Northern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	-	\$ 146,300	5	10	\$-	\$ 570,440	\$ 570,440	5	10	\$	731,500 \$	731,50
Dosed Injection	Northern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 146,300	10	15	\$-	\$ 488,026	\$ 488,026	10	15	\$	731,500 \$	731,50
Dosed Injection	Northern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	-	\$ 146,300	15	180	\$ -	\$ 2,873,134	\$ 2,873,134	15	180	\$	24,139,500 \$	24,139,50
Dosed Injection	Southeast and East Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,094,800	\$ 184,360	0	5	\$ 2,094,800	\$ 840,232	\$ 2,935,032	0	5	\$	921,800 \$	3,016,60
Dosed Injection	Southeast and East Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	1,401,273	\$ 265,540	5	10	\$ 1,198,824	\$ 1,035,370	\$ 2,234,194	5	10	\$	1,327,700 \$	2,728,97
Dosed Injection	Southeast and East Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 184,360	10	15	\$-	\$ 614,986	\$ 614,986	10	15	\$	921,800 \$	921,80
Dosed Injection	Southeast and East Plume Fringe	Opt 3	Alt #3 15+ yrs	\$	-	\$ 173,401	15	180	\$-	\$ 3,405,367	\$ 3,405,367	15	180	\$	28,611,215 \$	28,611,21
Dosed Injection	Southern Plume Fringe	Initial	Alt 3_PIPE-WELL (0 - 5)	\$	2,443,933	\$ 211,420	0	5	\$ 2,443,933	\$ 963,560	\$ 3,407,493	0	5	\$	1,057,100 \$	3,501,03
Dosed Injection	Southern Plume Fringe	Opt 1	Alt 3_PIPE-WELL (5 - 10)	\$	800,727	\$ 319,660	5	10	\$ 685,042	\$ 1,246,389	\$ 1,931,432	5	10	\$	1,598,300 \$	2,399,02
Dosed Injection	Southern Plume Fringe	Opt 2	Alt 3_PIPE-WELL (10+)	\$	-	\$ 319,660	10	15	\$-	\$ 1,066,318	\$ 1,066,318	10	15	\$	1,598,300 \$	1,598,30
Dosed Injection	Southern Plume Fringe	Opt 3	Alt 3_PIPE-WELL (10+)	\$	-	\$ 319,660	15	180	\$-	\$ 6,277,690	\$ 6,277,690	15	180	\$	52,743,900 \$	52,743,90
Land Acquisition	Land Acquisition or Other	Initial	Alt 3 Land Acq	\$	20,000	\$-	0	180	\$ 20,000	\$-	\$ 20,000	0	180	\$	- \$	20,00
TOTAL				\$	23,913,094				\$ 22,381,585	\$ 110,639,053	\$ 133,020,637			\$	610,281,292 \$	634,194,38
Alternative 4 - Core In-Site Treatment a																
	and Beneficial Agricultural															
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	-	\$ 157,524	0		Ş	\$ 4,964,044	\$ 4,964,044	0	220	\$	34,655,387 \$	34,655,38
Freshwater Injection Groundwater Monitoring Program	Northwest Freshwater Injection GMP Including BCMP	Initial Initial	GMP&BCMP (Current)	\$ \$		\$ 420,200	0	10	<u>\$ -</u> \$ -	\$ 4,964,044 \$ 3,553,493	\$ 4,964,044 \$ 3,553,493	0	10	\$	34,655,387 \$ 4,202,000 \$	34,655,38 4,202,00
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP	Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%)	\$ \$ \$	- - -	\$ 420,200 \$ 315,150	0	10 0	T	\$ 3,553,493 \$ -	\$ 3,553,493 \$ -	0 0	10 0	\$ \$ \$	4,202,000 \$ - \$	4,202,00
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP	Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%)	\$ \$ \$	- - -	\$ 420,200 \$ 315,150 \$ 210,100	0 0 10	10 0 220	\$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101	\$ 3,553,493 \$ - \$ 4,844,101	0 0 10	10 0 220	\$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$	4,202,00 - 44,121,00
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction	Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4)	\$ \$ \$ \$	- - - - 1,103,400	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747	0 0 10 0	10 0 220 220	T	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019	0 0 10 0	10 0 220 220	\$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$	4,202,00 - 44,121,00 19,747,74
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction	Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction	\$ \$ \$ \$ \$	- - -	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722	0 0 10	10 0 220	\$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687	0 0 10	10 0 220	\$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$	4,202,00 - 44,121,00 19,747,74 15,998,91
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction	Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction	\$ \$ \$ \$ \$ \$	- - - 1,103,400 - -	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657	0 0 10 0 0 0	10 0 220 220 220 5	\$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$	4,202,00 - - 44,121,00 19,747,74 15,998,91 272,79
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection	Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs	\$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288	0 0 10 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ - \$ - \$ 1,337,296	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 4,185,153	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449	0 0 10 0 0 0 0	10 0 220 220	\$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection	Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 4,185,153 \$ 2,173,086	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806	0 0 10 0 0 0	10 0 220 220 220 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction RZ/Dosed Injection RZ/Dosed Injection RZ/Dosed Injection	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Northern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SOURCE Area IRZ / Injection	Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - - 1,337,296 4,698,720 1,249,906	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 2,291,687 \$ 248,657 \$ 4,185,153 \$ 2,173,086 \$ 3,710,952	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858	0 0 10 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Morthern Extraction SCRIA Extraction SCRIA Extraction Central Area IRZ / Injection SCRIA / Dosed Injection Source Area IRZ / Injection Agricultural Units	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 4,185,153 \$ 2,173,086 \$ 3,710,952 \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000	0 0 10 0 0 0 0	10 0 220 220 220 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP Morthern Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor Central Area IRZ / Injection SOURCE Area IRZ / Injection Agricultural Units Agricultural Units	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - - 1,337,296 4,698,720 1,249,906	\$ 420,200 \$ 315,150 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ -	0 0 10 0 0 0	10 0 220 220 220 5	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 4,185,153 \$ 2,173,086 \$ 3,710,952 \$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475	0 0 10 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor SCRIA Factor SCRIA Factor SCRIA Provide Injection SCRIA / Dosed Injection Source Area IRZ / Injection Agricultural Units Agricultural Units Agricultural Units	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000 2,213,475	\$ 420,200 \$ 315,150 \$ 210,100 \$ 210,100 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ - \$ 319,636	0 0 10 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 248,657 \$ 248,657 \$ 2,173,086 \$ 3,710,952 \$ - \$ - \$ 1,456,759	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475 \$ 1,456,759	0 0 10 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$ 1,598,178 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47 1,598,17
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor Sourc	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Opt 1	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary AU O&M Summary	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000 2,213,475 - -	\$ 420,200 \$ 315,150 \$ 210,100 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ - \$ 319,636 \$ 339,181	0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 5	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 220	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475 \$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 2,48,657 \$ 2,173,086 \$ 3,710,952 \$ - \$ 1,456,759 \$ 9,142,724	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 2,291,687 \$ 2,291,687 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475 \$ 1,456,759 \$ 9,142,724	0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 220	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47 1,598,17 72,923,95
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor SCRIA Factor SCRIA Factor SCRIA Provide Injection SCRIA / Dosed Injection Source Area IRZ / Injection Agricultural Units Agricultural Units Agricultural Units	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary AU O&M Summary	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000 2,213,475	\$ 420,200 \$ 315,150 \$ 210,100 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ - \$ 319,636 \$ 339,181	0 0 10 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475 \$ - \$ - \$ -	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 2,48,657 \$ 2,173,086 \$ 3,710,952 \$ - \$ 1,456,759 \$ 9,142,724	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475 \$ 1,456,759 \$ 9,142,724	0 0 10 0 0 0 0 0 0 0 0	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$ 1,598,178 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47 1,598,17 72,923,95
Freshwater Injection Groundwater Monitoring Program Groundwater Monitoring Program Extraction for AU Application Groundwater Extraction Groundwater Extraction Groundwater Extraction IRZ/Dosed Injection IRZ/Dosed Injection AU Application AU Application	Northwest Freshwater Injection GMP Including BCMP GMP Including BCMP GMP Including BCMP GMP Including BCMP SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Extraction SCRIA Factor Sourc	Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Initial Opt 1	GMP&BCMP (Current) GMP&BCMP (75%) GMP&BCMP (50%) Northern Extraction (4) SCRIA Extraction Supplemental SCRIA Extraction Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs Alt #4_0 to 5 yrs AU Mods New AU AU O&M Summary AU O&M Summary	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 1,103,400 - - 1,337,296 4,698,720 1,249,906 240,000 2,213,475 - -	\$ 420,200 \$ 315,150 \$ 210,100 \$ 210,100 \$ 84,747 \$ 72,722 \$ 54,559 \$ 918,288 \$ 476,809 \$ 814,241 \$ - \$ - \$ 319,636 \$ 339,181	0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 5	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 220	\$ - \$ - \$ - \$ 1,103,400 \$ - \$ 1,337,296 \$ 4,698,720 \$ 1,249,906 \$ 240,000 \$ 2,213,475 \$ - \$ - \$ 337,600	\$ 3,553,493 \$ - \$ 4,844,101 \$ 2,670,619 \$ 2,291,687 \$ 2,48,657 \$ 2,173,086 \$ 3,710,952 \$ - \$ 1,456,759 \$ 9,142,724	\$ 3,553,493 \$ - \$ 4,844,101 \$ 3,774,019 \$ 2,291,687 \$ 248,657 \$ 5,522,449 \$ 6,871,806 \$ 4,960,858 \$ 240,000 \$ 2,213,475 \$ 1,456,759 \$ 9,142,724 \$ 337,600	$ \begin{array}{c} 0 \\ 0 \\ 10 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $	10 0 220 220 5 5 5 5 5 5 5 5 5 5 5 5 220	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	4,202,000 \$ - \$ 44,121,000 \$ 18,644,343 \$ 15,998,913 \$ 272,796 \$ 4,591,438 \$ 2,384,044 \$ 4,071,203 \$ - \$ 1,598,178 \$ 72,923,955 \$	4,202,00 - 44,121,00 19,747,74 15,998,91 272,79 5,928,73 7,082,76 5,321,10 240,00 2,213,47 1,598,17 72,923,95

OPINION OF PROBABLE COST	Hinkl	ey Feas	ibility Study Including Addena	lum #	2										F	roject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to re	each 1.2	ug/L Hexavaler	nt Chro	mium**		Non-discounte	d Cash Flow t	o reach	1.2 ug/L Hexavalent	t Chromium**
							Optimi							ization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital		&M x No. of years	Total Capital & O&M	Begin	End	0	M x No. of To years	otal Capital & O&M
Alternative 4A - Aggressive Core In-Site Tre	atment and Beneficial	Agric.	ultural Use														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	- \$	149,257	0	130	\$-	\$	4,626,965	\$ 4,626,965	0	130	\$	19,403,406 \$	19,403,406
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$	420,200	0	15	\$-	\$	4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$	315,150	15	30	\$-	\$	2,327,128	\$ 2,327,128	15	30	\$	4,727,250 \$	4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$	210,100	30	130	\$-	\$	2,484,084	\$ 2,484,084	30	130	\$	21,010,000 \$	21,010,000
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560 \$	-	0	130	\$ 2,623,560) \$	-	\$ 2,623,560	0	130	\$	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- \$	86,274	0	20	\$-	\$	1,263,600	\$ 1,263,600	0	20	\$	1,725,487 \$	1,725,487
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- \$	54,559	0	20	\$-	\$	799,092	\$ 799,092	0	20	\$	1,091,185 \$	1,091,185
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200 \$	55,755	10	20	\$ 543,234	\$	345,102	\$ 888,335	10	20	\$	557,547 \$	1,299,747
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	- \$	142,029	20	130	\$-	\$	2,322,698	\$ 2,322,698	20	130	\$	15,623,196 \$	15,623,196
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,077,153 \$	904,760	0	5	\$ 2,077,153	\$	4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,951
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,927,479 \$	478,213	0	5	\$ 2,927,479) \$	2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	3,083,759 \$	821,971	0	5	\$ 3,083,759) \$	3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	- \$	904,760	5	10	\$-	\$	3,527,757	\$ 3,527,757	5	10	\$	4,523,798 \$	4,523,798
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	356,104 \$	380,628	5	10	\$ 304,656	5\$	1,484,111	\$ 1,788,767	5	10	\$	1,903,140 \$	2,259,244
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	69,296 \$	716,571	5	10	\$ 59,284	\$	2,793,990	\$ 2,853,274	5	10	\$	3,582,856 \$	3,652,152
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	- \$	904,760	10	20	\$-	\$	5,600,133	\$ 5,600,133	10	20	\$	9,047,595 \$	9,047,595
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	848,241 \$	416,508	10	20	\$ 620,848	\$	2,578,035	\$ 3,198,883	10	20	\$	4,165,083 \$	5,013,325
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	327,581 \$	294,136	10	20	\$ 239,764	\$	1,820,593	\$ 2,060,357	10	20	\$	2,941,356 \$	3,268,937
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	-	20	130	\$-	\$	-	\$-	20	130	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	88,342	20	130	\$-	\$	1,444,718	\$ 1,444,718	20	130	\$	9,717,625 \$	9,717,625
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	38,842	20	130	\$-	\$	635,210	\$ 635,210	20	130	\$	4,272,625 \$	4,272,625
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$	-	0	130	\$ 240,000) \$	-	\$ 240,000	0	130	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$	-	0	130	\$ 3,469,796	5\$	-	\$ 3,469,796	0	130	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	491,904	0	130	\$-		15,249,022		0	130	\$	63,947,533 \$	63,947,533
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600 \$	-	0	130	\$ 1,012,600	-	-	\$ 1,012,600	0	130	\$	- \$	1,012,600
TOTAL				\$	17,777,770				\$ 17,202,134	\$	64,306,594	\$ 81,508,727			\$	185,567,400 \$	203,345,170

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Addena	dum	#2										I	Project Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to	reach 1.2	ug/L Hexavale	nt Chr	omium**		Non-discounte	ed Cash Flow to	o reacl	h 1.2 ug/L Hexavalen	it Chromium**
							Optin	nization					Optim	ization			
ALT	Area	Opt No.	Sheet Name		Canital	Annual O&M	Begin	End	Capital		&M x No. of years	Total Capital & O&M	Begin	End	0	&M x No. of T years	otal Capital & O&M
Alternative 4A - Aggressive Core In-Site	Treatment and Beneficial	Δστίοι	ultural Lise														
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	Ś	- \$	149,257	0	130	<u>\$</u> -	Ś	4,626,965	\$ 4,626,965	0	130	Ś	19,403,406 \$	19,403,406
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	Ś	- \$	420,200	0	15	<u> </u>	Ś	4,955,191	\$ 4,955,191	0	15	Ś	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ś	- \$	315,150	15	30	\$ -	Ś		\$ 2,327,128	15	30	Ś	4,727,250 \$	4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś	- \$	210,100	30	130	Ŧ	Ś	2,484,084	\$ 2,484,084	30	130	Ś	21,010,000 \$	21,010,000
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	Ś	2,623,560 \$	-	0	130) <u>\$</u>		\$ 2,623,560	0	130	Ś	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	Ś	<u>- \$</u>	86,274	0	20	<u>\$ -</u>	Ś	1,263,600	\$ 1,263,600	0	20	Ś	1,725,487 \$	1,725,487
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	Ś	- \$	54,559	0	20	\$ -	Ś	799,092	\$ 799,092	0	20	Ś	1,091,185 \$	1,091,185
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD SCRIA Extr (60 gpm)	\$	742,200 \$	55,755	10	20	\$ 543,23	4 \$	345,102	\$ 888,335	10	20	\$	557,547 \$	1,299,747
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	- \$	142,029	20	130	\$ -	\$	2,322,698	\$ 2,322,698	20	130	\$	15,623,196 \$	15,623,196
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,077,153 \$	904,760	0	5	\$ 2,077,15	3 \$	4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,951
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,927,479 \$	478,213	0	5	\$ 2,927,47	9 \$	2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	3,083,759 \$	821,971	0	5	\$ 3,083,75	9\$	3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	- \$	904,760	5	10	\$-	\$	3,527,757	\$ 3,527,757	5	10	\$	4,523,798 \$	4,523,798
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	356,104 \$	380,628	5	10	\$ 304,65	5\$	1,484,111	\$ 1,788,767	5	10	\$	1,903,140 \$	2,259,244
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	69,296 \$	716,571	5	10	\$ 59,28	4 \$	2,793,990	\$ 2,853,274	5	10	\$	3,582,856 \$	3,652,152
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	- \$	904,760	10	20	\$-	\$	5,600,133	\$ 5,600,133	10	20	\$	9,047,595 \$	9,047,595
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	848,241 \$	416,508	10	20	\$ 620,84	8\$	2,578,035	\$ 3,198,883	10	20	\$	4,165,083 \$	5,013,325
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	327,581 \$	294,136	10	20	\$ 239,76	4\$	1,820,593	\$ 2,060,357	10	20	\$	2,941,356 \$	3,268,937
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	-	20	130	\$-	\$	-	\$-	20	130	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	88,342	20	130	\$ -	\$	1,444,718	\$ 1,444,718	20	130	\$	9,717,625 \$	9,717,625
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$	38,842	20	130	\$-	\$	635,210	\$ 635,210	20	130	\$	4,272,625 \$	4,272,625
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$	-	0	130	\$ 240,00) \$	-	\$ 240,000	0	130	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$	-	0	130	\$ 3,469,79	5\$	-	\$ 3,469,796	0	130	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	491,904	0	130			15,249,022		0	130	\$	63,947,533 \$	63,947,533
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600 \$	-	0		\$ 1,012,60		-	\$ 1,012,600	0	130	\$	- \$	1,012,600
TOTAL				\$	17,777,770				\$ 17,202,13	4 \$	64,306,594	\$ 81,508,727			\$	185,567,400 \$	203,345,170

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adden	dum i	#2									F	roject Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
						NPV to	reach 1	.2 ug/L Hexava	ent Ch	iromium**		Non-discounte	ed Cash Flow to	o reach	n 1.2 ug/L Hexavalen	t Chromium**
						Optir	nization	1				Optim	ization			
ALT	Area	Opt No.	Sheet Name		Capital Annual O&M	Begin	n End	d Capital	C	O&M x No. of years	Total Capital & O&M	Begin	End	0	&M x No. of To years	otal Capital & O&M
Alternative 4A - Aggressive Core In-Site	Treatment and Peneficial	Agricu	utural Lico													
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	Ś	- \$ 149,257	0	130	ıć.	<u> </u>	4,626,965	\$ 4,626,965	0	130	¢	19,403,406 \$	19,403,406
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$ 420,200		15	•	ب خ	, ,	\$ 4,955,191	0	150	\$	6,303,000 \$	6,303,00
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$ \$	- \$ 315,150		30	•	, ş		\$ 2,327,128	15	30	ς ς	4,727,250 \$	4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś	- \$ 210,100		130		ς Υ	2,484,084	\$ 2,484,084	30	130	Ś	21,010,000 \$	21,010,00
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560 \$ -	0	130		ې 60 \$	-	\$ 2,623,560	0	130	<u>ې</u> خ	- \$	2,623,56
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- \$ 86,274		20	. , ,	<u> </u>	1,263,600		0	20	Ś	1,725,487 \$	1,725,48
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	Ś	- \$ 54,559		20		Ś	799,092	\$ 799,092	0	20	Ś	1,091,185 \$	1,091,18
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD SCRIA Extr (60 gpm)	Ś	742,200 \$ 55,755	10	20	· ·	34 \$	345,102		10	20	Ś	557,547 \$	1,299,747
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	Ś	- \$ 142,029	20	130	. ,	\$	2,322,698	\$ 2,322,698	20	130	Ś	15,623,196 \$	15,623,196
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	Ś	2,077,153 \$ 904,760		5	\$ 2,077,1	53 Ś	4,123,498	\$ 6,200,651	0	5	Ś	4,523,798 \$	6,600,951
RZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A 0 to 5 yrs	\$	2,927,479 \$ 478,213	0	5	\$ 2,927,4		2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	3,083,759 \$ 821,971		5	\$ 3,083,7	59 \$	3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,61
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	- \$ 904,760		10	. , ,	\$	3,527,757	\$ 3,527,757	5	10	\$	4,523,798 \$	4,523,798
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	356,104 \$ 380,628	5	10	\$ 304,6	56 \$	1,484,111		5	10	\$	1,903,140 \$	2,259,244
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	69,296 \$ 716,571	5	10	. ,	•	2,793,990	\$ 2,853,274	5	10	\$	3,582,856 \$	3,652,152
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	- \$ 904,760	10	20	\$.	\$	5,600,133	\$ 5,600,133	10	20	\$	9,047,595 \$	9,047,595
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	848,241 \$ 416,508		20	\$ 620,8	48 \$	2,578,035	\$ 3,198,883	10	20	\$	4,165,083 \$	5,013,325
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	327,581 \$ 294,136		20			1,820,593	\$ 2,060,357	10	20	\$	2,941,356 \$	3,268,937
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	\$	- \$ -	20	130) \$.	\$	-	\$ -	20	130	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A 20+ yrs	\$	- \$ 88,342		130) \$.	\$	1,444,718	\$ 1,444,718	20	130	\$	9,717,625 \$	9,717,625
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	- \$ 38,842		130	•	\$	635,210	\$ 635,210	20	130	\$	4,272,625 \$	4,272,625
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$ -	0	130) \$ 240,0	00 \$	-	\$ 240,000	0	130	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$ -	0	130) \$ 3,469,7	96 \$	-	\$ 3,469,796	0	130	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$ 491,904	0	130		\$	15,249,022		0	130	\$	63,947,533 \$	63,947,533
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600 \$ -	0) \$ 1,012,6	00 \$	-	\$ 1,012,600	0	130	\$	- \$	1,012,600
	·										· ·				·	· _ /
TOTAL				\$	17,777,770			\$ 17,202,1	34 \$	64,306,594	\$ 81,508,727			\$	185,567,400 \$	203,345,170

OPINION OF PROBABLE COST	Hink	ey Feas	ibility Study Including Addend	lum #	#2									P	oject Number:	36385
Cost Breakdown Detail by Component															Date:	22-Feb-11
							NPV to re	ach 1 2 i	ug/L Hexavalent	Chromium**		Non-discounte	d Cash Flow to	reach	1 2 ug/l Heyaval	ent Chromium**
							Optimi			cinomun			ization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital	O&M x No. of years	Total Capital & O&M	Begin	End	08	M x No. of years	Total Capital & O&M
Alternative 4B - Aggressive Core In-Site Tre		Agricu	ultural Use with Targe	ted	Pumping											
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$		5 149,257	0	95	\$ -	\$ 4,465,593	. , ,	0	95	\$	14,179,412	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- 9	\$ 420,200	0	15	\$ -	\$ 4,955,191		0	15	\$	6,303,000	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$		\$ 315,150	15	30	\$ -	\$ 2,327,128		15	30	\$	4,727,250	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- 9	\$ 210,100	30	95	\$-	\$ 2,256,931	, , ,	30	95	\$	13,656,500	
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	5 -	0	95	\$ 2,623,560	\$-	\$ 2,623,560	0	95	\$	- 9	-//
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (4B at 10)	\$	3,390,900	9 100,502	10	95	\$ 2,481,879	\$ 2,158,277	\$ 4,640,157	10	95	\$	8,547,770	\$ 11,938,670
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	- 9	\$ 86,274	0	20	\$-	\$ 1,263,600	\$ 1,263,600	0	20	\$	1,725,487	
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	- 9	54,559	0	20	\$-	\$ 799,092	\$ 799,092	0	20	\$	1,091,185	\$ 1,091,185
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200	55,755	10	20	\$ 543,234	\$ 345,102	\$ 888,335	10	20	\$	557,547	\$ 1,299,747
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	- 9	5 142,029	20	95	\$-	\$ 2,169,141	\$ 2,169,141	20	95	\$	10,652,179	\$ 10,652,179
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,077,153	\$ 904,760	0	5	\$ 2,077,153	\$ 4,123,498	\$ 6,200,651	0	5	\$	4,523,798	\$ 6,600,951
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,927,479	478,213	0	5	\$ 2,927,479	\$ 2,179,485	\$ 5,106,964	0	5	\$	2,391,064	5,318,543
IRZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A 0 to 5 yrs	\$	3,083,759		0	5	\$ 3,083,759	\$ 3,746,184		0	5	\$	4,109,855	
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	\$	- 9	\$ 904,760	5	10	\$ -	\$ 3,527,757	\$ 3,527,757	5	10	\$	4,523,798	
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	356,104	380,628	5	10	\$ 304,656	\$ 1,484,111		5	10	Ś	1,903,140	
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A 5 to 10 yrs	Ś	69.296		5	10	\$ 59,284	\$ 2,793,990		5	10	Ś	3,582,856	
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś	- (,	10	20	\$ -	\$ 5,600,133		10	20	Ś	9,047,595	
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś	848,241	· ·	10	20	\$ 620,848			10	20	Ś	4,165,083	
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	Ś	327,581		10	20	\$ 239,764	\$ 1,820,593		10	20	Ś	2,941,356	
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	Ś	- 9	<u></u>	20	95	\$ -	<u>\$</u> -	<u>\$</u> -	20	95	Ś		
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A 20+ yrs	Ś	-	88,342	20	95	\$ -	\$ 1,349,205	\$	20	95	Ś	6,625,653	
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	Ś	-	38,842	20	95	\$ -	\$ 593,216		20	95	Ś	2,913,153	
AU Application	Agricultural Units	Initial	AU Mods	Ś	240,000	5 -	0	95	\$ 240,000	, ,	\$ 240,000	0	95	Ś		\$ 240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	Ś	3,469,796	- -	0	95	\$ 3,469,796	•	\$ 3,469,796	0	95	Ś	_ (\$ 3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	ې د	_ (5 491,904	0	95	\$ -	\$ 14,717,193		0 0	95	Ś	46,730,889	\$ 46,730,889
Land Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600		0	95	\$ 1,012,600	\$ -	\$ 1,012,600	0	95	\$		
TOTAL				\$	21,168,670				\$ 19,684,013	\$ 65,253,455	\$ 84,937,468			\$	154,898,573	\$ 176,067,242

OPINION OF PROBABLE COST	Hink	ley Feas	ibility Study Including Addend	dum #	¢2										F	Project Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to r	each 1.2	ug/L Hexavale	nt Chr	omium**		Non-discount	ed Cash Flow to	o reac	h 1.2 ug/L Hexavale	nt Chromium*
							Optim	ization					Optin	nization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capital	-	&M x No. of years	Total Capital & O&M	Begin	End	0	&M x No. of 7 vears	Total Capital O&M
											or years	a oam				Years	
ternative 4B - Aggressive Core In-Site	Treatment and Beneficial	Agric	ultural Use with Targe	ted	Pumping												
shwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	-	\$ 149,257	0	95	\$-	\$	4,465,593	\$ 4,465,593	0	95	\$	14,179,412 \$	14,179
undwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200	0	15	\$-	\$	4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303
oundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150	15	30	\$-	\$	2,327,128	\$ 2,327,128	15	30	\$	4,727,250 \$	4,727
oundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100	30	95	\$-	\$	2,256,931	\$ 2,256,931	30	95	\$	13,656,500 \$	13,656
raction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	\$-	0	95	\$ 2,623,56	0\$	-	\$ 2,623,560	0	95	\$	- \$	2,623
action for AU Application	Northern Extraction	Initial	Northern Extraction (4B at 10)	\$	3,390,900	\$ 100,562	10	95	\$ 2,481,87	9\$	2,158,277	\$ 4,640,157	10	95	\$	8,547,770 \$	11,938
oundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	-	\$ 86,274	0	20	\$-	\$	1,263,600	\$ 1,263,600	0	20	\$	1,725,487 \$	1,725
oundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	-	\$ 54,559	0	20	\$-	\$	799,092	\$ 799,092	0	20	\$	1,091,185 \$	1,091
bundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200	\$ 55,755	10	20	\$ 543,23	4\$	345,102	\$ 888,335	10	20	\$	557,547 \$	1,299
oundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	-	\$ 142,029	20	95	\$-	\$	2,169,141	\$ 2,169,141	20	95	\$	10,652,179 \$	10,652
/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,077,153	\$ 904,760	0	5	\$ 2,077,15	3\$	4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600
/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,927,479	\$ 478,213	0	5	\$ 2,927,47	9\$	2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318
/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	3,083,759	\$ 821,971	0	5	\$ 3,083,75	9\$	3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193
Z/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	-	\$ 904,760	5	10	\$-	\$	3,527,757	\$ 3,527,757	5	10	\$	4,523,798 \$	4,523,
Z/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	356,104	\$ 380,628	5	10	\$ 304,65	6\$	1,484,111	\$ 1,788,767	5	10	\$	1,903,140 \$	2,259,
Z/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	69,296	\$ 716,571	5	10	\$ 59,28	4 \$	2,793,990	\$ 2,853,274	5	10	\$	3,582,856 \$	3,652,
Z/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	-	\$ 904,760	10	20	\$-	\$	5,600,133	\$ 5,600,133	10	20	\$	9,047,595 \$	9,047,
Z/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	848,241	\$ 416,508	10	20	\$ 620,84	8\$	2,578,035	\$ 3,198,883	10	20	\$	4,165,083 \$	5,013,
/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	327,581	\$ 294,136	10	20	\$ 239,76	4 \$	1,820,593	\$ 2,060,357	10	20	\$	2,941,356 \$	3,268
/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$-	20	95	\$-	\$	-	\$-	20	95	\$	- \$	-
/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A_20+ yrs	\$	- :	\$ 88,342	20	95	\$-	\$	1,349,205	\$ 1,349,205	20	95	\$	6,625,653 \$	6,625
/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ 38,842	20	95	\$-	\$	593,216	\$ 593,216	20	95	\$	2,913,153 \$	2,913
Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$ -	0	95	\$ 240,00	0\$	-	\$ 240,000	0	95	\$	- \$	240
Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796	\$-	0	95	\$ 3,469,79	6\$	-	\$ 3,469,796	0	95	\$	- \$	3,469
J Application	Agricultural Units	Initial	AU O&M Summary	\$	- :	\$ 491,904	0	95	\$ -	\$	14,717,193	\$ 14,717,193	0	95	\$	46,730,889 \$	46,730,
nd Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600	\$ -	0	95	\$ 1,012,60		-	\$ 1,012,600	0	95	\$	- \$	1,012,
				ć	21 169 670						65 252 455	¢ 91 027 169				164 909 572 \$	176 067 3

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adden	dum #	#2											Proj	ect Number:	36385
Cost Breakdown Detail by Component																	Date:	22-Feb-11
							NPV t	to reach	1.2 u	g/L Hexavalent	: Chrom	nium**		Non-discounte	d Cash Flow to	reach 1.	2 ug/L Hexavale	nt Chromium**
							Op	otimizati	on					Optimi	ization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Beg	gin E	nd	Capital		M x No. years	Total Capital & O&M	Begin	End		I x No. of 7 vears	otal Capital & O&M
Alternative 4B - Aggressive Core In-Site				ted	Pumping													
reshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	\$	-	\$ 149,257			95	\$ -		4,465,593	\$ 4,465,593	0	95	\$	14,179,412 \$	14,179,43
Froundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	-	\$ 420,200			15	\$-	•	4,955,191	\$ 4,955,191	0	15	\$	6,303,000 \$	6,303,00
roundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	-	\$ 315,150			30	\$ -	\$	2,327,128		15	30	\$	4,727,250 \$	4,727,2
roundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	-	\$ 210,100) 30	0	95	\$-		2,256,931	\$ 2,256,931	30	95	\$	13,656,500 \$	13,656,5
xtraction for AU Application	Northern Extraction	Initial	Northern Extraction (4A)	\$	2,623,560	\$-	0	0 9	95	\$ 2,623,560		-	\$ 2,623,560	0	95	\$	- \$	2,623,5
xtraction for AU Application	Northern Extraction	Initial	Northern Extraction (4B at 10)	\$	3,390,900	\$ 100,562		.0	95	\$ 2,481,879		2,158,277	\$ 4,640,157	10	95	\$	8,547,770 \$	11,938,6
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$	-	\$ 86,274	1 0	0 2	20	\$-	\$	1,263,600	\$ 1,263,600	0	20	\$	1,725,487 \$	1,725,48
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$	-	\$ 54,559) 0	0 2	20	\$-	\$	799,092	\$ 799,092	0	20	\$	1,091,185 \$	1,091,18
Groundwater Extraction	SCRIA Extraction	Opt 2	DVD_SCRIA Extr (60 gpm)	\$	742,200	\$ 55,755	5 10	.0	20	\$ 543,234	\$	345,102	\$ 888,335	10	20	\$	557,547 \$	1,299,74
Groundwater Extraction	SCRIA Extraction	Opt 3	SCRIA Extraction for low dose	\$	-	\$ 142,029	20	20 9	95	\$-	\$	2,169,141	\$ 2,169,141	20	95	\$	10,652,179 \$	10,652,17
RZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,077,153	\$ 904,760) 0	0	5	\$ 2,077,153	\$	4,123,498	\$ 6,200,651	0	5	\$	4,523,798 \$	6,600,95
RZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #4A_0 to 5 yrs	\$	2,927,479	\$ 478,213	3 0	0	5	\$ 2,927,479	\$	2,179,485	\$ 5,106,964	0	5	\$	2,391,064 \$	5,318,54
RZ/Dosed Injection	Source Area IRZ / Injection	Initial	Alt #4A_0 to 5 yrs	\$	3,083,759	\$ 821,971	L 0	0	5	\$ 3,083,759	\$	3,746,184	\$ 6,829,944	0	5	\$	4,109,855 \$	7,193,61
RZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	-	\$ 904,760) 5	5	10	\$-	\$	3,527,757	\$ 3,527,757	5	10	\$	4,523,798 \$	4,523,79
RZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	356,104	\$ 380,628	3 5	5	10	\$ 304,656	\$	1,484,111	\$ 1,788,767	5	10	\$	1,903,140 \$	2,259,24
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 1	Alt #4A_5 to 10 yrs	\$	69,296	\$ 716,571	L 5	5	10	\$ 59,284	\$	2,793,990	\$ 2,853,274	5	10	\$	3,582,856 \$	3,652,15
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	-	\$ 904,760) 10	.0	20	\$-	\$	5,600,133	\$ 5,600,133	10	20	\$	9,047,595 \$	9,047,59
RZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #4A_10 to 20 yrs	\$	848,241	\$ 416,508	3 10	.0	20	\$ 620,848	\$	2,578,035	\$ 3,198,883	10	20	\$	4,165,083 \$	5,013,32
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #4A 10 to 20 yrs	\$	327,581	\$ 294,136	5 10	.0	20	\$ 239,764	\$	1,820,593	\$ 2,060,357	10	20	\$	2,941,356 \$	3,268,93
RZ/Dosed Injection	Central Area IRZ / Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ -	2(0	95	\$ -	\$	-	\$ -	20	95	\$	- \$	-
RZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #4A 20+ yrs	\$	-	\$ 88,342	2 20	20 9	95	\$ -	\$	1,349,205	\$ 1,349,205	20	95	\$	6,625,653 \$	6,625,6
RZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #4A_20+ yrs	\$	-	\$ 38,842			95	\$-	\$	593,216	\$ 593,216	20	95	\$	2,913,153 \$	2,913,15
U Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$ -	0	0 9	95	\$ 240,000	\$	-	\$ 240,000	0	95	\$	- \$	240,00
NU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796	\$ -	0	0 9	95	\$ 3,469,796		-	\$ 3,469,796	0	95	\$	- \$	3,469,79
NU Application	Agricultural Units	Initial	AU O&M Summary	\$	-	\$ 491,904	i 0		95	\$ -	•	4,717,193	\$ 14,717,193	0	95	, \$	46,730,889 \$	46,730,88
and Acquisition	Land Acquisition or Other	Initial	Alt 4a Land Acq	\$	1,012,600	\$ -	0			\$ 1,012,600		-	\$ 1,012,600	0	95	\$	- \$	1,012,60
							_											

Opt No. Initial Initial Initial Initial Initial Initial	Sheet Name NW Injection 40 gpm GMP&BCMP (Current)	Ś	Capital	Annual O&M	NPV to re Optimi: Begin		g <mark>/L Hexavalent (</mark> Capital	hromium** O&M x No. of years	Total Capital & O&M		ed Cash Flow to nization End	_		22-Feb-11 at Chromium**
No. Initial Initial Initial Initial	NW Injection 40 gpm	Ś	Capital		Optimi	zation	-	O&M x No.	-	Optim	nization	_	&M x No. of T	
No. Initial Initial Initial Initial	NW Injection 40 gpm	Ś	Capital		Optimi	zation	-	O&M x No.	-	Optim	nization	_	&M x No. of T	
No. Initial Initial Initial Initial	NW Injection 40 gpm	Ś	Capital				Capital		-	•		08		otal Capital &
Initial Initial Initial Initial Initial		Ś						or years	a oan				years	0&M
Initial Initial Initial		Ś											ycuis	
Initial Initial Initial		Ś												
Initial Initial	GMP&BCMP (Current)	T	- ¢	157,524	0	210	\$-	\$ 4,962,146	\$ 4,962,146	0	210	\$	33,080,142 \$	33,080,142
Initial		\$	- ç	420,200	0	10	\$ -	\$ 3,553,493	\$ 3,553,493	0	10	\$	4,202,000 \$	4,202,000
	GMP&BCMP (75%)	\$	- ¢	315,150	0	0	\$-	\$-	\$-	0	0	\$	- \$	-
Initial	GMP&BCMP (50%)	\$	- ¢	210,100	10	210	\$-	\$ 4,841,570	\$ 4,841,570	10	210	\$	42,020,000 \$	42,020,000
	Northern Extraction (5)	\$	1,675,800 \$	84,747	0	210	\$ 1,675,800	\$ 2,669,598	\$ 4,345,398	0	210	\$	17,796,873 \$	19,472,673
Initial	SCRIA Extraction	\$	- ¢	72,722	0	210	\$-	\$ 2,290,811	\$ 2,290,811	0	210	\$	15,271,690 \$	15,271,690
Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- ¢	73,576	0	10	\$-	\$ 622,210	\$ 622,210	0	10	\$	735,762 \$	735,762
Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	73,576	10	15	\$-	\$ 245,435	\$ 245,435	10	15	\$	367,881 \$	367,881
Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$	73,576	15	210	\$-	\$ 1,450,065	\$ 1,450,065	15	210	\$	14,347,366 \$	14,347,366
Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$	58,316	0	10	\$ -	\$ 493,163		0	10	\$	583,164 \$	583,164
Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	58,316	10	15	\$ -	\$ 194,531		10	15	\$	291,582 \$	291,582
Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$	58,316	15	210	\$-	\$ 1,149,320	\$ 1,149,320	15	210	\$	11,371,704 \$	11,371,704
Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,202,844 \$	126,247	0	10	\$ 3,202,844	\$ 1,067,631	\$ 4,270,475	0	10	\$	1,262,472 \$	4,465,316
Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	677,400 \$	126,247	10	15	\$ 495,805	\$ 421,134	\$ 916,939	10	15	\$	631,236 \$	1,308,636
Opt 2	Alt 5 PIPE-WELL (15+)	\$	885,600 \$	126,247	15	210	\$ 554,544	\$ 2,488,122	\$ 3,042,666	15	210	\$	24,618,206 \$	25,503,806
Initial	Alt 5 PIPE-WELL (0 - 10)	\$	1,526,995 \$	146,300	0	10	\$ 1,526,995	\$ 1,237,211	\$ 2,764,206	0	10	\$	1,463,000 \$	2,989,995
Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$	146,300	10	15	\$ -	\$ 488,026	\$ 488,026	10	15	\$	731,500 \$	731,500
Opt 2	Alt 5 PIPE-WELL (15+)	\$	- Ç	146,300	15	210	\$ -	\$ 2,883,329	\$ 2,883,329	15	210	\$	28,528,500 \$	28,528,500
Initial	Alt 5_PIPE-WELL (0 - 10)	\$	6,718,776 \$	617,320	0	10	\$ 6,718,776			0	10	\$	6,173,200 \$	12,891,976
Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	_ <u></u>	617,320	10	15	\$ -	\$ 2,059,248	\$ 2,059,248	10	15	\$	3,086,600 \$	3,086,600
Opt 2	Alt 5 PIPE-WELL (15+)	\$	- Ç	617,320	15	210	\$ -	\$ 12,166,349	\$ 12,166,349	15	210	\$	120,377,400 \$	120,377,400
Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,359,388	319,660	0	10	\$ 3,359,388	\$ 2,703,260	\$ 6,062,648	0	10	\$	3,196,600 \$	6,555,988
Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- ¢	319,660	10	15	\$ -	\$ 1,066,318	\$ 1,066,318	10	15	\$	1,598,300 \$	1,598,300
Opt 2	Alt 5_PIPE-WELL (15+)	\$	_ ¢	319,660	15	210	\$ -	\$ 6,299,966	\$ 6,299,966	15	210	\$	62,333,700 \$	62,333,700
		\$	916,197		0	10	\$ 916,197			0		\$		1,837,997
		\$	_		10		\$ -			10		\$		460,900
		\$	_ ¢		15		\$ -			15		\$		17,975,100
	EX-A	\$	8,012,515		0		\$ 8,012,515			0		\$		875,466,337
Initial		\$		-	0					0		\$	- \$	454,000
	Initial Opt 1 Opt 2 Initial	Initial Alt 5_PIPE-WELL (0 - 10) Opt 1 Alt 5_PIPE-WELL (10 - 15) Opt 2 Alt 5_PIPE-WELL (15+)	Initial Alt 5_PIPE-WELL (0 - 10) \$ Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ Opt 2 Alt 5_PIPE-WELL (15+) \$ Initial EX-A \$	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ Initial EX-A \$ 8,012,515 \$	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 92,180 Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 Opt 2 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 Initial EX-A \$ 8,012,515 \$ 4,130,732	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 92,180 0 Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 Opt 2 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 Initial EX-A \$ 8,012,515 \$ 4,130,732 0	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 92,180 0 10 Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 Opt 2 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 Initial EX-A \$ 8,012,515 \$ 4,130,732 0 210	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 92,180 0 10 \$ 916,197 Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 \$ - \$ 92,180 10 15 \$ - \$ 92,180 10 15 \$ - \$ 92,180 15 210 \$ - \$ 92,180 15 210 \$ - \$	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 92,180 0 10 \$ 916,197 \$ 779,536 Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 \$ - \$ 307,493 Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ 92,180 15 210 \$ - \$ 307,493 Initial EX-A \$ 8,012,515 \$ 4,130,732 0 210 \$ 8,012,515 \$ 130,121,346 Initial Alt 5 Land Acq \$ 454,000 \$ - 0 210 \$ 454,000 \$ -	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 92,180 0 10 \$ 916,197 \$ 779,536 \$ 1,695,733 Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 \$ - \$ 307,493 \$ 307,493 Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ 92,180 15 210 \$ - \$ 1,816,714 \$ 1,816,714 Initial EX-A \$ 8,012,515 \$ 4,130,732 0 210 \$ 8,012,515 \$ 138,133,861 Initial Alt 5 Land Acq \$ 454,000 \$ - \$ 454,000 \$ - \$ 454,000	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 92,180 0 10 \$ 916,197 \$ 779,536 \$ 1,695,733 0 Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 \$ - \$ 307,493 \$ 307,493 10 Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ 92,180 15 210 \$ - \$ 307,493 \$ 307,493 10 Initial EX-A \$ 8,012,515 \$ 4,130,732 0 210 \$ 8,012,515 \$ 138,133,861 0 Initial Alt 5 Land Acq \$ 454,000 \$ - \$ 454,000 \$ - \$ 454,000 0	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 916,197 \$ 779,536 \$ 1,695,733 0 10 Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 \$ - \$ 307,493 \$ 307,493 10 15 Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ 92,180 15 210 \$ - \$ 307,493 \$ 307,493 10 15 Initial EX-A \$ 8,012,515 \$ 4,130,732 0 210 \$ 8,012,515 \$ 138,133,861 0 210 Initial Alt 5 Land Acq \$ 454,000 \$ - 0 210 \$ 454,000 \$ - \$ 454,000 0 210	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 916,197 \$ 779,536 \$ 1,695,733 0 10 \$ Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 \$ - \$ 307,493 \$ 307,493 10 15 \$ Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ 92,180 15 210 \$ - \$ 307,493 \$ 307,493 10 15 \$ Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ 92,180 15 210 \$ - \$ 1,816,714 \$ 1,816,714 15 210 \$ Initial EX-A \$ 8,012,515 \$ 4,130,732 0 210 \$ 8,012,515 \$ 130,121,346 \$ 138,133,861 0 210 \$	Initial Alt 5_PIPE-WELL (0 - 10) \$ 916,197 \$ 916,197 \$ 779,536 \$ 1,695,733 0 10 \$ 921,800 \$ Opt 1 Alt 5_PIPE-WELL (10 - 15) \$ - \$ 92,180 10 15 \$ - \$ 307,493 \$ 307,493 10 15 \$ 460,900 \$ Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ 92,180 15 210 \$ - \$ 307,493 \$ 307,493 10 15 \$ 460,900 \$ Opt 2 Alt 5_PIPE-WELL (15+) \$ - \$ 92,180 15 210 \$ - \$ 1,816,714 15 210 \$ 17,975,100 \$ Initial EX-A \$ 8,012,515 \$ 4,130,732 0 210 \$ 8,012,515 \$ 138,133,861 0 210 \$ 867,453,822 \$ Initial Alt 5 Land Acq \$ 454,000 \$ - \$ 454,000

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Adde	ndum i	#2										Project Nun	nber:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							DV to re:	ach 1 2 uu	ıg/L Hexavalen	t Chromi	ium**		Non-discounte	d Cash Flow to	reach 1.2 ug/L H	lovavalon	at Chromium**
							Optimiz						Optim			iexavaien	
ALT	Area	Opt	Sheet Name		Capital Annua		Begin	End	Capital			Total Capital	Begin	End	O&M x No.	of T	Fotal Capital &
		No.			O&N					01	years	& O&M			years		O&M
Alternative 5 - Plume-Wide Pump and Tr	eat																
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	- \$ 157,	524	0	210	\$-	\$4	,962,146	\$ 4,962,146	0	210	\$ 33,080	,142 \$	33,080,14
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$ 420,	200	0	10	\$ -	\$3	,553,493	\$ 3,553,493	0	10	\$ 4,202	,000 \$	4,202,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$ 315,	150	0	0	\$-	\$	-	\$-	0	0	\$	- \$	-
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$ 210,	100	10	210	\$-	\$4	,841,570	\$ 4,841,570	10	210	\$ 42,020	,000 \$	42,020,00
Groundwater Extraction	Northern Extraction	Initial	Northern Extraction (5)	\$	1,675,800 \$ 84,		0	210	\$ 1,675,800	\$2	,669,598	\$ 4,345,398	0	210		,873 \$	19,472,67
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	\$	- \$ 72,	722	0	210	\$-	\$2	,290,811	\$ 2,290,811	0	210	\$ 15,271	,690 \$	15,271,69
Groundwater Extraction	DVD Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$ 73,	576	0	10	\$-	\$	622,210	\$ 622,210	0	10	\$ 735	,762 \$	735,76
Groundwater Extraction	DVD Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 73,	576	10	15	\$ -	\$	245,435	\$ 245,435	10	15	\$ 367	,881 \$	367,88
Groundwater Extraction	DVD Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 73,	576	15	210	\$-	\$1	,450,065	\$ 1,450,065	15	210	\$ 14,347	,366 \$	14,347,36
Groundwater Extraction	Gorman Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$ 58,	316	0	10	\$ -	\$	493,163	\$ 493,163	0	10	\$ 583	,164 \$	583,16
Groundwater Extraction	Gorman Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 58,	316	10	15	\$-	\$	194,531	\$ 194,531	10	15	\$ 291	,582 \$	291,58
Groundwater Extraction	Gorman Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 58,	316	15	210	\$-	\$1	.,149,320	\$ 1,149,320	15	210	\$ 11,371	,704 \$	11,371,70
Groundwater Extraction	Ranch or Other Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,202,844 \$ 126,	247	0	10	\$ 3,202,844	\$1	,067,631	\$ 4,270,475	0	10	\$ 1,262	,472 \$	4,465,31
Groundwater Extraction	Ranch or Other Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	677,400 \$ 126,	247	10	15	\$ 495,805	\$	421,134	\$ 916,939	10	15	\$ 631	,236 \$	1,308,63
Groundwater Extraction	Ranch or Other Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	885,600 \$ 126,	247	15	210	\$ 554,544	\$2	,488,122	\$ 3,042,666	15	210	\$ 24,618	,206 \$	25,503,80
Treated Injection	Northern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	1,526,995 \$ 146,	300	0	10	\$ 1,526,995	\$1	,237,211	\$ 2,764,206	0	10	\$ 1,463	,000 \$	2,989,99
Treated Injection	Northern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 146,	300	10	15	\$-	\$	488,026	\$ 488,026	10	15	\$ 731	,500 \$	731,50
Treated Injection	Northern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 146,	300	15	210	\$-	\$2	,883,329	\$ 2,883,329	15	210	\$ 28,528	,500 \$	28,528,50
Treated Injection	Southeast and East Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	6,718,776 \$ 617,	320	0	10	\$ 6,718,776	\$5	,220,473	\$ 11,939,249	0	10	\$ 6,173	,200 \$	12,891,97
Treated Injection	Southeast and East Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 617,	320	10	15	\$-	\$2	,059,248	\$ 2,059,248	10	15	\$ 3,086	,600 \$	3,086,60
Treated Injection	Southeast and East Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 617,	320	15	210	\$-	\$ 12	,166,349	\$ 12,166,349	15	210	\$ 120,377	,400 \$	120,377,40
Treated Injection	Southern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,359,388 \$ 319,	660	0	10	\$ 3,359,388	\$2	,703,260	\$ 6,062,648	0	10	\$ 3,196	,600 \$	6,555,98
Treated Injection	Southern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 319,	660	10	15	\$-	\$1	,066,318	\$ 1,066,318	10	15	\$ 1,598	,300 \$	1,598,30
Freated Injection	Southern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 319,	660	15	210	\$-	\$6	6,299,966	\$ 6,299,966	15	210	\$ 62,333	,700 \$	62,333,70
Freated Injection	Southwest Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	916,197 \$ 92,	180	0	10	\$ 916,197	\$	779,536	\$ 1,695,733	0	10	\$ 921	,800 \$	1,837,99
Treated Injection	Southwest Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 92,	180	10	15	\$-		307,493	\$ 307,493	10	15		,900 \$	460,90
Treated Injection	Southwest Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 92,	180	15	210	\$	\$ 1	,816,714	\$ 1,816,714	15	210	\$ 17,975	,100 \$	17,975,10
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A	\$	8,012,515 \$ 4,130,	732	0	210	\$ 8,012,515	\$ 130	,121,346	\$ 138,133,861	0	210	\$ 867,453	,822 \$	875,466,33
and Acquisition	Land Acquisition or Other	Initial	Alt 5 Land Acq	Ś	454,000 \$		0	210	\$ 454,000	Ś	_	\$ 454,000	0	210	\$	- Ś	454,00

OPINION OF PROBABLE COST	Hink	ley Feasi	bility Study Including Adde	endum #	#2								Project Number:	36385
Cost Breakdown Detail by Component													Date:	22-Feb-11
							roach 1 3	ug/L Hexavaler	+ Chromium**		Non discounts	d Cach Elaw ta	reach 1.2 ug/L Hexav	alant Chromium**
							mization	ug/L nexavaler	t Chromium ·			ization	reach 1.2 ug/L Hexav	
		Opt			Annual	Ора	mzation	-	O&M x No.	Total Capital	Optim	12011011	O&M x No. of	Total Capital &
ALT	Area	No.	Sheet Name		Capital O&M	Begiı	n End	Capital	of years	& O&M	Begin	End	years	O&M
Alternative 5 - Plume-Wide Pump and Tr	eat													
reshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 40 gpm	\$	- \$ 157,524	0	210	\$-	\$ 4,962,14	6 \$ 4,962,146	0	210	\$ 33,080,142	\$ 33,080,142
roundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	\$	- \$ 420,200	0	10	\$-	\$ 3,553,493	3 \$ 3,553,493	0	10	\$ 4,202,000	\$ 4,202,000
roundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	\$	- \$ 315,150	0	0	\$-	\$-	\$-	0	0	\$-	\$-
roundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	\$	- \$ 210,100	10	210	\$-	\$ 4,841,57	0 \$ 4,841,570	10	210	\$ 42,020,000	\$ 42,020,000
roundwater Extraction	Northern Extraction	Initial	Northern Extraction (5)	\$	1,675,800 \$ 84,747	0	210	\$ 1,675,800	\$ 2,669,598	8 \$ 4,345,398	0	210	\$ 17,796,873	\$ 19,472,673
roundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction	\$	- \$ 72,722	0	210	\$-	\$ 2,290,81	1 \$ 2,290,811	0	210	\$ 15,271,690	\$ 15,271,690
roundwater Extraction	DVD Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$ 73,576	0	10	\$-	\$ 622,210	0 \$ 622,210	0	10	\$ 735,762	\$ 735,762
roundwater Extraction	DVD Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 73,576	10	15	\$-	\$ 245,43	5 \$ 245,435	10	15	\$ 367,881	\$ 367,881
roundwater Extraction	DVD Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 73,576	15	210	\$-	\$ 1,450,06	5 \$ 1,450,065	15	210	\$ 14,347,366	\$ 14,347,366
roundwater Extraction	Gorman Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	- \$ 58,316	0	10	\$-	\$ 493,163	3 \$ 493,163	0	10	\$ 583,164	\$ 583,164
roundwater Extraction	Gorman Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 58,316	10	15	\$-	\$ 194,53	1 \$ 194,531	10	15	\$ 291,582	\$ 291,582
roundwater Extraction	Gorman Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 58,316	15	210	\$-	\$ 1,149,320	0 \$ 1,149,320	15	210	\$ 11,371,704	\$ 11,371,704
roundwater Extraction	Ranch or Other Extraction	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,202,844 \$ 126,247	0	10	\$ 3,202,844	\$ 1,067,63	1 \$ 4,270,475	0	10	\$ 1,262,472	\$ 4,465,316
roundwater Extraction	Ranch or Other Extraction	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	677,400 \$ 126,247	10	15	\$ 495,805	\$ 421,134	4 \$ 916,939	10	15	\$ 631,236	\$ 1,308,636
roundwater Extraction	Ranch or Other Extraction	Opt 2	Alt 5_PIPE-WELL (15+)	\$	885,600 \$ 126,247	15	210	\$ 554,544	\$ 2,488,122	2 \$ 3,042,666	15	210	\$ 24,618,206	\$ 25,503,806
reated Injection	Northern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	1,526,995 \$ 146,300	0	10	\$ 1,526,995	\$ 1,237,21	1 \$ 2,764,206	0	10	\$ 1,463,000	\$ 2,989,995
reated Injection	Northern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 146,300	10	15	\$-	\$ 488,020	5 \$ 488,026	10	15	\$ 731,500	\$ 731,500
reated Injection	Northern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 146,300	15	210	\$-	\$ 2,883,329	9 \$ 2,883,329	15	210	\$ 28,528,500	\$ 28,528,500
reated Injection	Southeast and East Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	6,718,776 \$ 617,320	0	10	\$ 6,718,776	\$ 5,220,473	3 \$ 11,939,249	0	10	\$ 6,173,200	\$ 12,891,976
reated Injection	Southeast and East Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 617,320	10	15	\$-	\$ 2,059,248	8 \$ 2,059,248	10	15	\$ 3,086,600	\$ 3,086,600
reated Injection	Southeast and East Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 617,320	15	210	\$-	\$ 12,166,349	9 \$ 12,166,349	15	210	\$ 120,377,400	\$ 120,377,400
reated Injection	Southern Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	3,359,388 \$ 319,660	0	10	\$ 3,359,388	\$ 2,703,26	0 \$ 6,062,648	0	10	\$ 3,196,600	\$ 6,555,988
reated Injection	Southern Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 319,660	10	15	\$-	\$ 1,066,31	8 \$ 1,066,318	10	15	\$ 1,598,300	\$ 1,598,300
reated Injection	Southern Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 319,660	15	210	\$-	\$ 6,299,96	5 \$ 6,299,966	15	210	\$ 62,333,700	\$ 62,333,700
reated Injection	Southwest Plume Fringe	Initial	Alt 5_PIPE-WELL (0 - 10)	\$	916,197 \$ 92,180	_	10	\$ 916,197	\$ 779,53		0	10	\$ 921,800	
reated Injection	Southwest Plume Fringe	Opt 1	Alt 5_PIPE-WELL (10 - 15)	\$	- \$ 92,180		15	\$-	\$ 307,493		10	15	\$ 460,900	
reated Injection	Southwest Plume Fringe	Opt 2	Alt 5_PIPE-WELL (15+)	\$	- \$ 92,180		210	\$-	\$ 1,816,714		15	210	\$ 17,975,100	\$ 17,975,100
roundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A	\$	8,012,515 \$ 4,130,732		210		\$ 130,121,34	5 \$ 138,133,861	0	210	\$ 867,453,822	
and Acquisition	Land Acquisition or Other	Initial	Alt 5 Land Acq	\$	454,000 \$ -	0	210		\$ -	\$ 454,000	0	210	\$ -	

TOTAL

\$ 27,429,515

\$ 26,916,864 \$ 193,598,496 \$ 220,515,36		\$	1,280,880,500	\$	1,308,310,015
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OPINION OF PROBABLE COST	Hinkl	ey Feas	ibility Study Including Addend	um #	2										P	roject Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
-									4		• 44						
							Optimi		ug/L Hexava	alent Chr	omium**			nization	o reacr	1.2 ug/L Hexaval	
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin	End	Capita	_	&M x No.	Total Capital & O&M	Begin	End	0		Total Capital & O&M
		INO.				UQIVI					of years	a Uaivi				years	Ualvi
Combined Alternative																	
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	Ś	_ (\$ 149,257	0	130	Ś	- \$	4,626,965	\$ 4,626,965	0	130	Ś	19,403,406 \$	19,403,406
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	Ś		\$ 420,200	0	15	Ś	- \$	4,955,191	\$ 4,955,191	0	15	Ś	6,303,000 \$	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ś	- 9	\$ 315,150	15	30	Ś	- \$	2,327,128	\$ 2,327,128	15	30	Ś	4,727,250 \$	
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś		\$ 210,100	30	130	Ś	- \$	2,484,084	\$ 2,484,084	30	130	Ś	21,010,000 \$	
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (Combined)	\$	2,623,560	\$ -	0	130	\$ 2,623,	560 \$	-	\$ 2,623,560	0	130	\$	- \$	
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	\$		\$ 86,274	0	40	\$	- \$	1,940,526	\$ 1,940,526	0	40	\$	3,450,973 \$	
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	\$		\$ 54,559	0	40	\$	- \$	1,227,175	\$ 1,227,175	0	40	\$	2,182,371 \$	
Groundwater Extraction	SCRIA Extraction	Initial	DVD_SCRIA Extr (60 gpm)	\$	742,200	\$ 55,755	10	40	\$ 543,	234 \$	782,564	\$ 1,325,798	10	40	\$	1,672,642 \$	2,414,842
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction for low dose	\$		\$ 142,029	40	130	\$	- \$	1,208,309	\$ 1,208,309	40	130	\$	12,782,615 \$	12,782,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #6_0 to 10 yrs	\$	2,394,426	\$ 904,760	0	10	\$ 2,394,	426 \$	7,651,254	\$ 10,045,681	0	10	\$	9,047,595 \$	11,442,022
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #6_0 to 10 yrs	\$	3,374,635	\$ 478,213	0	10	\$ 3,374,	635 \$	4,044,089	\$ 7,418,724	0	10	\$	4,782,128 \$	8,156,763
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #6_10 to 40 yrs	\$	- 9	\$ 904,760	10	40	\$	- \$	12,699,060	\$ 12,699,060	10	40	\$	27,142,786 \$	27,142,786
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #6_10 to 40 yrs	\$	937,022	\$ 539,845	10	40	\$ 685,	828 \$	7,577,182	\$ 8,263,010	10	40	\$	16,195,358 \$	17,132,379
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #6_40 to 42 yrs	\$	- 9	\$-	40	42	\$	- \$	-	\$-	40	42	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #6_40 to 42 yrs	\$	377,067	\$ 365,220	40	42	\$ 108,	213 \$	200,064	\$ 308,278	40	42	\$	730,440 \$	1,107,507
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #6_40 to 42 yrs	\$	107,733	\$ 652,153	40	42	\$ 30,	918 \$	357,244	\$ 388,162	40	42	\$	1,304,306 \$	1,412,039
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #6_42+ yrs	\$		\$ 88,342	42	130	\$	- \$	703,175	\$ 703,175	42	130	\$	7,774,100 \$	7,774,100
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #6_42+ yrs	\$		\$ 38,842	42	130	\$	- \$	309,170	\$ 309,170	42	130	\$	3,418,100 \$	3,418,100
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000	\$ -	0	130	\$ 240,	000 \$	-	\$ 240,000	0	130	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796	\$-	0	130	\$ 3,469,	796 \$	-	\$ 3,469,796	0	130	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$		\$ 491,904	0	130	\$	- \$	15,249,022	\$ 15,249,022	0	130	\$	63,947,533 \$	63,947,533
Land Acquisition	Land Acquisition or Other	Initial	Alt 6 Land Acq	\$	1,130,400	\$-	0	130	\$ 1,130,	400 \$	-	\$ 1,130,400	0	130	\$	- \$	1,130,400
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A (200 gpm)	\$	3,494,573	\$ 2,123,267	0	40	\$ 3,494,	573 \$	47,757,614	\$ 51,252,188	0	40	\$	84,930,690 \$	88,425,263
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Initial	Alt 6_PIPE-WELL (0-10)	\$	4,221,720	\$ 624,855	0	10	\$ 4,221,	720 \$	5,284,195	\$ 9,505,915	0	10	\$	6,248,552 \$	10,470,272
Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip)	Opt 1	Alt 6_PIPE-WELL (10-40)	\$	598,500 \$	\$ 624,811	10	40	\$ 438,	056 \$	8,769,750	\$ 9,207,807	10	40	\$	18,744,336 \$	19,342,836
TOTAL				\$	23,711,633				\$ 22,755,	361 \$	130,153,763	\$ 152,909,124			\$	315,798,180 \$	339,509,813

OPINION OF PROBABLE COST	Hinkl	ey Feasi	bility Study Including Addend	lum ‡	#2										l	Project Number:	36385
Cost Breakdown Detail by Component																Date:	22-Feb-11
							NPV to r	each 1	.2 ug/L	L Hexavalent C	hromium**		Non-discount	ed Cash Flow t	o reac	h 1.2 ug/L Hexavalen	t Chromium**
							Optim							nization			
ALT	Area	Opt No.	Sheet Name		Capital	Annual O&M	Begin			Capital	O&M x No. of years	Total Capital & O&M	Begin	End	0	&M x No. of To years	otal Capital & O&M
Combined Alternative																	
Freshwater Injection	Northwest Freshwater Injection	Initial	NW Injection 80 gpm	Ś	- \$	5 149,257	0	130	0 \$	_ (4,626,965	\$ 4,626,965	0	130	Ś	19,403,406 \$	19,403,406
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (Current)	Ś	- \$,	0		5 \$	_ (, ,	1 1	0	15	Ś	6,303,000 \$	6,303,000
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (75%)	Ś	_ ¢	5 315,150	15	30		_ (5 2,327,128		15	30	Ś	4,727,250 \$	4,727,250
Groundwater Monitoring Program	GMP Including BCMP	Initial	GMP&BCMP (50%)	Ś	_ ¢	5 210,100	30	130	•	_ (2,484,084	\$ 2,484,084	30	130	Ś	21,010,000 \$	21,010,000
Extraction for AU Application	Northern Extraction	Initial	Northern Extraction (Combined)	Ś	2,623,560 \$	<u> </u>	0	130		2,623,560		\$ 2,623,560	0	130	Ś	- \$	2,623,560
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction (5 wells)	Ś	- \$	86,274	0	40			5 1,940,526	\$ 1,940,526	0	40	Ś	3,450,973 \$	3,450,973
Groundwater Extraction	SCRIA Extraction	Initial	Supplemental SCRIA Extraction	Ś	- \$	54,559	0	40		- 9	5 1,227,175		0	40	Ś	2,182,371 \$	2,182,371
Groundwater Extraction	SCRIA Extraction	Initial	DVD SCRIA Extr (60 gpm)	\$	742,200 \$	55,755	10	40) \$	543,234	782,564	\$ 1,325,798	10	40	\$	1,672,642 \$	2,414,842
Groundwater Extraction	SCRIA Extraction	Initial	SCRIA Extraction for low dose	\$	- Ś	5 142,029	40	130	0\$	- 9	1,208,309	\$ 1,208,309	40	130	\$	12,782,615 \$	12,782,615
IRZ/Dosed Injection	Central Area IRZ / Injection	Initial	Alt #6 0 to 10 yrs	\$	2,394,426		0	10		2,394,426	5 7,651,254	\$ 10,045,681	0	10	\$	9,047,595 \$	11,442,022
IRZ/Dosed Injection	SCRIA / Dosed Injection	Initial	Alt #6 0 to 10 yrs	\$	3,374,635 \$	478,213	0	10) \$	3,374,635	4,044,089	\$ 7,418,724	0	10	\$	4,782,128 \$	8,156,763
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 1	Alt #6 10 to 40 yrs	\$	- \$	904,760	10	40) \$		5 12,699,060	\$ 12,699,060	10	40	\$	27,142,786 \$	27,142,786
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 1	Alt #6_10 to 40 yrs	\$	937,022 \$	539,845	10	40) \$	685,828	5 7,577,182	\$ 8,263,010	10	40	\$	16,195,358 \$	17,132,379
IRZ/Dosed Injection	Central Area IRZ / Injection	Opt 2	Alt #6 40 to 42 yrs	\$	- \$; -	40	42	\$	- 9	- ÷	\$ -	40	42	\$	- \$	-
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 2	Alt #6_40 to 42 yrs	\$	377,067 \$	365,220	40	42	\$	108,213	200,064	\$ 308,278	40	42	\$	730,440 \$	1,107,507
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 2	Alt #6_40 to 42 yrs	\$	107,733 \$	652,153	40	42	\$	30,918	357,244	\$ 388,162	40	42	\$	1,304,306 \$	1,412,039
IRZ/Dosed Injection	SCRIA / Dosed Injection	Opt 3	Alt #6_42+ yrs	\$	- \$	88,342	42	130	0\$		5 703,175	\$ 703,175	42	130	\$	7,774,100 \$	7,774,100
IRZ/Dosed Injection	Source Area IRZ / Injection	Opt 3	Alt #6_42+ yrs	\$	- \$	38,842	42	130	0\$	- 9	309,170	\$ 309,170	42	130	\$	3,418,100 \$	3,418,100
AU Application	Agricultural Units	Initial	AU Mods	\$	240,000 \$. -	0	130	0\$	240,000		\$ 240,000	0	130	\$	- \$	240,000
AU Application	Agricultural Units	Initial	New AU (Rev)	\$	3,469,796 \$	-	0	130	0\$	3,469,796	-	\$ 3,469,796	0	130	\$	- \$	3,469,796
AU Application	Agricultural Units	Initial	AU O&M Summary	\$	- \$	491,904	0	130	0\$	- 9	5 15,249,022	\$ 15,249,022	0	130	\$	63,947,533 \$	63,947,533
Land Acquisition	Land Acquisition or Other	Initial	Alt 6 Land Acq	\$	1,130,400 \$; -	0	130	0\$	1,130,400	-	\$ 1,130,400	0	130	\$	- \$	1,130,400
Groundwater Treatment	Ex-Situ Treatment (Chem Precip)	Initial	EX-A (200 gpm)	\$	3,494,573 \$	5 2,123,267	0	40) \$	3,494,573	6 47,757,614	\$ 51,252,188	0	40	\$	84,930,690 \$	88,425,263
Groundwater Extraction & O&M for plant and treated injection Groundwater Extraction & O&M for plant and treated injection	Ex-Situ Treatment (Chem Precip) Ex-Situ Treatment (Chem Precip)	Initial Opt 1	Alt 6_PIPE-WELL (0-10) Alt 6_PIPE-WELL (10-40)	\$ \$	4,221,720 \$ 598,500 \$	-	0 10	10 40		4,221,720 438,056 438,056			0 10	10 40	\$ \$	6,248,552 \$ 18,744,336 \$	10,470,272 19,342,836
TOTAL				\$	23,711,633				\$	22,755,361	3130,153,763	\$ 152,909,124		-	\$	315,798,180 \$	339,509,813

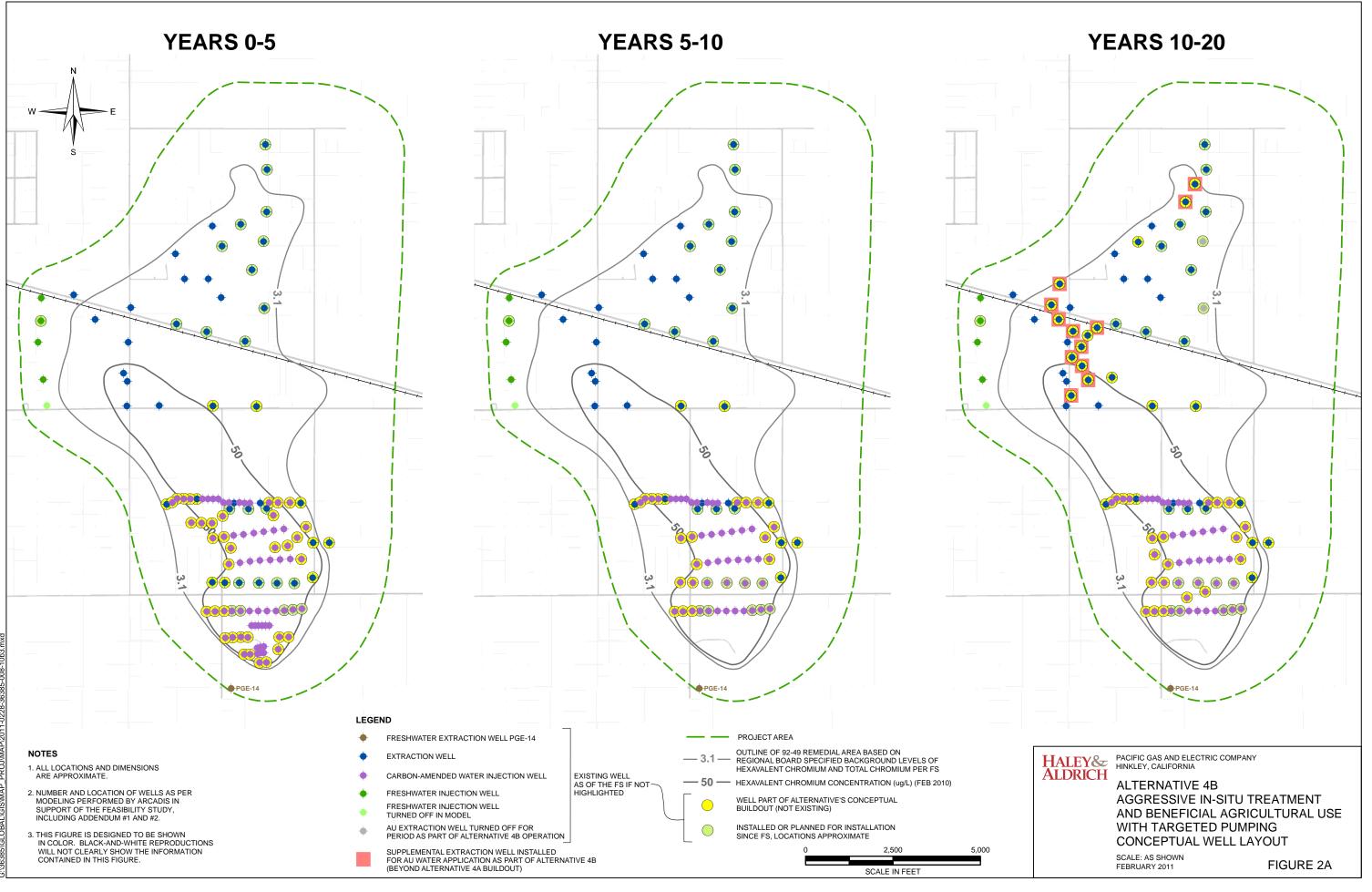
IUIA

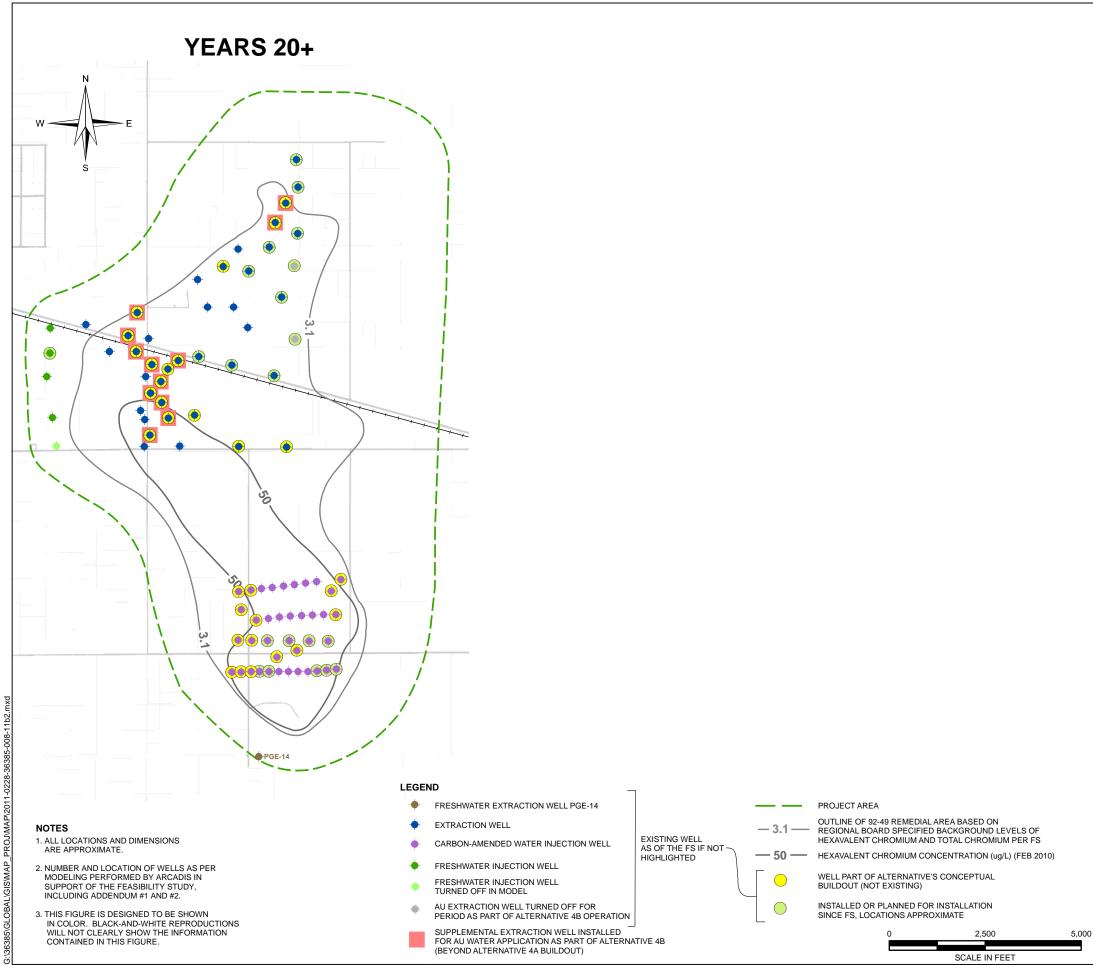
*Except for 80% mass reduction timeframe, durations based on fate & transport model performed by ARCADIS and represent time when the starting plume area has been reduced by 99 percent in the Remedial Area. The values in these tables represent the longer of Layers 1 and 3. Durations are capped at 1000 years for purposes of this costing and feasibility evaluation.

** Timeframe to reach 1.2 ug/L shown above, to the extent achieving this criteria is feasible, is based on modeling.

	Active Remediation	Duration of Operation and Estimated Cleanup Times													
Alternative	Component	0 years	5	50 years	10) years	200 years		300 years						
1: No Further Action	AUs	None	J												
	IRZs	None	}												
	Ex-situ Treat	None	J												
2: Containment	AUs		1	1		\$35M 🔴		\$36M 	\$36M						
	IRZs	None				50 ug/L		3.1 ug/L	1.2 ug/L						
	Ex-situ Treat	None													
3: Plume-Wide In-Situ	AUs	None													
Treatment	IRZs	● \$51M	1		\$130	M 🔶 \$13	33/								
	Ex-situ Treat	None													
4: Core In-Situ Treatment	AUs	● \$27M				\$50M 	\$50M								
and Beneficial Agricultura Use	l IRZs														
	Ex-situ Treat	None													
4A: Aggressive In-situ	AUs	<mark>)</mark> \$34M		\$79M <mark>-</mark>		\$82M									
Treatment and Beneficial Agricultural Use	IRZs					osage carbon RIA/Source Area									
	Ex-situ Treat	None													
4B: Aggressive In-situ	AUs	● \$34M	\$7		\$85M										
Treatment and Beneficial Agricultural Use with	IRZs	•	After 20 ye amendmer	ears, interm nt IRZ is ap	hittent low controls of the plied to SC	osage carbon RIA/Source Area									
Targeted Pumping	Ex-situ Treat	None													
* 5: Plume-Wide Pump	AUs	None													
and Treat	IRZs	None													
	Ex-situ Treat		\$180M			\$218M 	\$221M								
Combined Alternative	AUs	\$1211	1	i i	\$151M 	\$153M									
	IRZs		Af	tter 42 yea nendment	rs, intermitt IRZ is appl	ent low dosage carbon ed to SCRIA/Source Area									
	Ex-situ Treat		•												
 Alternative per FS (8/30/2010) Us = Agricultural Units RZs = In-situ Reactive Zones x-situ Treat = Includes pump and ex- 	situ treatment system	+ 3	60 ug/L 8.1 ug/L .2 ug/L**	when the by 99 pe	e starting p ercent in mo	o achieve the noted criteria ume area (within the respe- del Layers 1 and 3 (based eving this criteria is feasible	ctive Cr(VI) contour int on the modeling of alte	erval) is reduced	Net present value (N cost est. in millions (f reach criteria (rounde HALEY&						

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SCALE: AS SHOWN FEBRUARY 2011

FIGURE 2B

ALTERNATIVE 4B AGGRESSIVE IN-SITU TREATMENT AND BENEFICIAL AGRICULTURAL USE WITH TARGETED PUMPING CONCEPTUAL WELL LAYOUT

HALEY& PACIFIC GAS AND ELECTRIC COMPANY HINKLEY, CALIFORNIA



APPENDIX A

DETAILED EVALUATION OF ALTERNATIVE 4B

The following section evaluates Alternative 4B relative to the requirements established in Resolution No. 92-49, Part III.C, and the derived Site-specific remedial objectives (ROs) defined in Section 5 of the FS (Haley & Aldrich, 2010a). A selected alternative is required to satisfy the following key criteria: effectiveness, feasibility (implementability), and cost. The ROs defined in Section 5 of the FS are all included within the effectiveness criterion. This section discusses how Alternative 4B performs relative to these three key FS evaluation criteria.

Effectiveness

Alternative 4B applies the same combination of technologies as Alternative 4A of Addendum #1, including a more aggressive approach than Alternative 4, with additional infrastructure and longer in situ treatment operation. Alternative 4B varies from Alternative 4A after year 10 when additional extraction wells are installed within the plume in areas slow to respond to cleanup efforts based on modeling of Alternative 4A. These additional operational modifications should enable the Alternative 4B to reach the ROs in a shorter timeframe than the alternatives presented in the FS and Addendum #1. The following is a discussion of how Alternative 4B performs relative to the four measures of effectiveness.

- Cleanup to Background Conditions for Chromium: Alternative 4B is similar to Alternative 4A in its initial configuration. However, Alternative 4B relies on targeted extraction¹ within the SCRIA extraction, DVD AU extraction, and Gorman extraction areas after year 10. This change along with other modifications associated with Alternative 4B results in a 110 year reduction in the cleanup time frame to achieve background conditions relative to Alternative 4B and a 35 year reduction relative to Alternative 4A. Targeted extraction in Alternative 4B is located in recalcitrant areas identified in Alternative 4A groundwater modeling to reduce the remedy timeframe. Alternative 4B exhibits a moderate likelihood of achieving this criterion.
- Restore Beneficial Use: Like Alternative 4A, Alternative 4B combines AUs and IRZs to contain the plume, reduce hexavalent chromium (Cr[VI]) concentrations/mass, and reduce the Cr(VI) footprint. Aggressive IRZ treatment in the plume core reduces Cr(VI) mass, which helps achieve the chromium MCL remedial objective, and restore beneficial use as quickly as possible. Note that similar to Alternative 4A, use of IRZ treatment within the plume core for Alternative 4B will result in the localized formation of dissolved iron, manganese, and/or arsenic byproducts. Byproduct concentrations may at times exceed drinking water standards. While these byproducts are not expected to persist in the aquifer, they will reduce the beneficial use of groundwater while they are present at concentrations that exceed drinking water standards.
- Chromium Plume Containment: Alternative 4B involves a similar level of overall hydraulic containment as Alternative 4A; the flow in the plume toe area is consistent between these two alternatives, but the configuration is modified over time to reduce the remedy duration. The groundwater extraction configuration remains the same as Alternative 4A during the first 10 years of operation, but is adjusted after year 10 when 12 new extraction wells are installed within recalcitrant portions of the SCRIA extraction, DVD AU extraction, and Gorman AU extraction areas. The 12 new targeted extraction wells will provide 100 gpm of withdrawal for application on AUs located in the distal portion of the plume; this flow replaces 100 gpm from

¹ It should be noted that the targeted extraction noted above replaces two existing extraction wells; the rest of the existing wells will continue to operate unless otherwise indicated.

two existing extraction wells that will be shut down (Figure 2). Withdrawal of water associated with IRZ activities will occur in the plume core area, and will be amended with carbon and injected inside the plume to reduce plume mass and footprint, targeting areas of higher Cr(VI) concentration. Similar to the other alternatives presented, Alternative 4B includes the limited injection of clean groundwater into the northwest side of the plume, to enhance plume boundary control in that direction. In addition, three extraction wells would be located east of the SCRIA to improve plume capture and reduce cleanup duration. To evaluate the effectiveness of this alternative on plume containment, a groundwater fate and transport model was used to evaluate the plume containment characteristics. Modeling results indicate that Alternative 4B establishes robust hydraulic control over the plume boundaries, and is anticipated to effectively contain the plume.

Productive Use of Groundwater Resource: Alternative 4B involves six AUs. Aggressive core treatment, targeted extraction in recalcitrant areas, combined with plume containment and agricultural application results in the highest productive use of groundwater for the alternatives considered. Through this treatment approach, Site groundwater would be used at its highest and best current productive use, agricultural application and fodder crop production. The agricultural application is also beneficial to water supply in the basin because it uses an already marginal or unusable resource (groundwater impacted by nitrate/TDS) for crop production, replacing the need for local farmers to import water for the same fodder crop.

Implementability

Implementability is defined by how readily constructed and technically feasible the alternative is, considering Site-specific factors that may affect constructability, the technical complexity of the alternative, administrative feasibility (e.g., availability of property, permitting), availability of services and materials to implement the alternative, and other relevant considerations.

Alternative 4B is moderately easy to implement. It consists of the aggressive use of technologies that are already being used at the Site, and expands them into areas near existing treatment areas (DVD AU, Gorman AUs, Central Area IRZ, Source Area IRZ, and SCRIA IRZ). Similar to Alternative 4A, Alternative 4B combines major elements from Alternative 4 presented in the FS with a larger version of the Central Area IRZ program for plume core treatment, and the overall extension of the Central Area, SCRIA, and Source Area IRZ program operating durations. Like Alternative 4A, Alternative 4B capitalizes on a large portion of the existing infrastructure at the Site, though it involves even more expansion of certain remediation components by adding wells to improve groundwater extraction in certain areas of the plume toe that were recalcitrant to cleanup based on Alternative 4A groundwater modeling. Similar to other alternatives, potential challenges to implementing this alternative relate to access to non-PG&E owned property needed for extraction, injection, or water conveyance systems.

Similar to Alternative 4A, Alternative 4B is anticipated to consist of a modification to the General Permit. A modification/simplification of the agricultural treatment permit process, as well as a modification of the monitoring program consistent with the other agricultural application processes, is critical to implementation of this approach.

Overall, this alternative is moderately easy to implement.

Costs

Consistent with the FS and Addendum #1, the development of representative costs for Alternative 4B utilized the United States Environmental Protection Agency guidance for preparing feasibility studies (USEPA 2000). Costing methods presented herein are consistent with the FS and its supplemental data submittal dated 14 October, 2010 (Haley & Aldrich, 2010a and b), and Addendum #1. Two life-cycle costs are provided for each alternative, one that is "discounted" to account for inflation and interest (as "net present value" [NPV]) and one that is "non-discounted." Quantities and unit costs were selected based on contractor experience at the Hinkley Site and at other sites with similar impacts and subsurface conditions. Primary assumptions or considerations that were taken into account in the preparation of the alternative costs include:

- Costs were based on 2010/2011 values;
- For the NPV costing scenario, future capital and O&M costs were adjusted using a discount value of 3.17 percent, which accounts for inflation;
- The non-discounted costing scenario assumes all costs are in today's dollars;
- A 20 percent contingency was used on capital costs and a contingency of 10 percent was used on O&M costs, based on engineering judgment; and
- Remedy durations to meet the key remedial objectives for each alternative were estimated through the use of fate and transport modeling simulations, and were estimated based on the time when the starting plume area for the respective concentration value (e.g., 50 μ g/L, 3.1 μ g/L, and 1.2 μ g/L) were reduced by 99 percent in Model Layers 1 and 3.

Based on these assumptions, the presented costs have an approximate expected accuracy range of -30 percent to +50 percent. Table 2 summarizes the estimated time frame to reach the 50 μ g/L chromium MCL, 80 percent mass removal, and background, as well as the non-discounted and discounted NPV cost estimate to reach background for Alternative 4B in addition to each of the alternatives presented in the FS and Addendum #1. Table 3 provides a cost breakdown based on the area and remedy type for each alternative. In summary, the resultant estimated life cycle costs for Alternative 4B to achieve background are:

■ \$109M (non-discounted) and \$75.9M NPV (discounted)

- 1. Haley & Aldrich, Inc. 2010a. Feasibility Study, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. 30 August.
- 2. Haley & Aldrich, Inc. 2010b. Hinkley Feasibility Study Supplemental Data Submittal. 14 October.
- 3. Pacific Gas and Electric Company (PG&E). 2010. Addendum #1 to the Feasibility Study, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. 31 January.
- 4. United States Environmental Protection Agency (USEPA)/Army Corps of Engineers. 2000. A Guide to Developing and Documenting Cost Estimates During the Feasibility Study. EPA 540-R-00-002, OSWER 9355.0-75. July.

APPENDIX B

GROUNDWATER MODELING OUTPUT FOR ALTERNATIVE 4B

