APPENDIX A Capital Costs

1/22/2009					
1	1	••	15	AM	

	11:15 AM	В	C D	E
-	A			
1	<b>C</b>	H2M HILL P arame	etric Cost <u>E</u> stimating <u>S</u> ystem (CP	'ES)
2	<u> </u>	<u> </u>		/
	1			E
3	ļ	FAULINES DESI	GN & CONSTRUCTION COST MODUL	
4				
	File Version:	11/11/2008 Click for CPES QA/ QC	To Concrete Wall Thickness Help To Cost Summary Matrix To Unit Cost Database	
5		Click for CPES QA/QC		
6				
7				
8	Proi	ect Name:	Lebanon, Oregon	
9	-	ect Number:	382293	
10	-	ect Manager:	Paul Berg	_
	Estir	nator:	Paul Berg, Sheryl Stuart, Ed Meyer, John	
11			Sams, Mark Carlson, Paul Swaim, Russell Ford	
	Proj	ect Description:	First Phase 6 mgd Conventional Media	 Roundup to the
12	-		Filtration Plant	nearest:
13		ect Location (City):	Eugene	\$10,000
14 15		ect Location (State): ect Location (Country):	OREGON USA	—
16		ect Location (Country): struction Start (Month):	Jan	This Report is for
17		struction Start (Year):	2009	INTERNAL Distributio
18		struction Duration (months):	18	
19	Mid-	Point of Construction:	Oct/2009	This Report is for EXTERNAL Distribution
20		I		
	ltem	Is This Facility Included in	SCOPE OF PROJECT	Cost
21		Project? (Yes or No)		
22		Yes	Inline Rapid Mix: InlineRM	\$360,000
23		Yes	Vertical Turbine PS: RWpump	\$310,000
24		No	Ozone Serpentine: O3serp	\$0
25		Yes	Flocculation: Flocc	\$850,000
26	-	Yes	Lamella Clarifier: Plates	\$1,080,000
27	-	Yes	Filters: Filters	\$2,090,000
28	-	No	Pressure Membrane: Pressmemb	<u>\$0</u>
29	4	No Yee	Ozone O-U: O3overund	\$0
30	4	Yes	Concrete Clearwell: Clearconc	\$2,280,000
31	1	<u>No</u>	Steel Clearwell: ClearSteel	<u>\$0</u>
32 33	1	No Vos	Horizontal PS: FWpumph	<u>\$0</u> \$340,000
	•	Yes No	Vertical Turbine PS: FWpumpy On-Site Sodium Hypo: Hypogen	. ,
34	1	Yes	Liquid Chemical: Alum	\$0
35	•	No	Liquid Chemical: Alum	<u>\$280,000</u> \$0
36 37	1	Yes	Liquid Chemical: Coagpoiy Liquid Chemical: Filteraid	<u>\$0</u> \$180,000
37	1	Yes	Dry Chemical: SodaAsh	\$470,000
38	1	Yes	Liquid Chemical: Fluoride	\$220,000
40	1	No	Gravity Thickener: GravThick	\$220,000
40	1	Yes	Sludge Drying Beds: DryBeds	\$660,000
42	1	Yes	O&M Building: OMBIdg	\$580,000
43	1	No	Yard Piping: YardPipe	\$0
44	1	Yes	Liquid Chemical: BulkHypo	\$280,000
45	1			<i>+</i> <b>1</b> 00,000
46	1			
47	SUBTOTAL -	PROJECT COST		\$9,980,000
48				++,000,000
49	ADDITIONAL I	PROJECT COSTS:		
50	Demolitio		0%	\$0
51	Overall S		0%	\$0
52		nputer System	2%	\$200,000
53	Yard Elec		3%	\$300,000
54	Yard Pipi		5%	\$500,000

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	11:15 AM				- -
	A	В	С	D	E
55	Intake		0%		\$120,000
56	UD #2 Det	fault Description	0%		\$0
57		fault Description	0%		\$0
		vith Additional Project Costs	078		
58	SUBIUIAL	nin Additional Project Costs			\$11,100,000
59					
	CONTRACTOR				
61	Overhead		10%	\$11,100,000	\$1,110,000
62	Subtotal				\$12,210,000
63	Profit		5%	\$12,210,000	\$620,000
64	Subtotal				\$12,830,000
65	Mob/Bond	ds/Insurance	5%	\$12,830,000	\$650,000
66	Subtotal				\$13,480,000
67	Continger	ncy	30%	\$13,480,000	\$4,050,000
68	SUBTOTAL W				\$17,530,000
69		• -			. ,
	ESCAL ATION	(to Mid-Point of Construction	12.6%	\$17,530,000	\$2,210,000
70		with Escalation	12.070	÷,000,000	\$19,740,000
	SUDICIAL V				φ19,140,000
72		JUSTMENT FACTOR	101.1	<u> </u>	<b>*</b> ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~ ~~
			101.4	\$19,740,000	\$20,020,000
74	SUBIOTAL -	with Local Adjustment Factor			\$20,020,000
75					
76	RED FLAGS:				
77	1	Rock Excavation			
78	2	Pile Foundations			
79	3	Seismic Foundations			
80	4	Dewatering Conditions			
81	5	Wetlands Mitigation			
82	6	Weather Impacts			
83	7	Depth of Structures			
84	8	Local Building Code Restrict	ions		
	9	Coatings or Finishes			
85		Building or Architectural Con	siderations		
86	11	Client Material Preferences	ISIQUEI ALIONS		
87			-		
88	12	Client Equipment Preferences			
89	13	Piping Galleries, Piping Trend	ches, Piping Racks		
90	14	Yard Piping Complexity			
91	15	Existing Site Utilities (New, R			
92	16	I & C Automation (New or Ret			
93	17	Electrical Feed (New or Retro	ofit)		
94	18	Electrical Distribution			
95	19	Shoring			
96	20	Contamination			
97	21				
98	22				
99	23				
100	24				
101	25				
102	26				
102	27				
	TOTAL - RED	ELAGS			én
104	IUIAL - KED	r laug			\$0
105	011070711				A
106	SUBIOTAL -	CONSTRUCTION COST with I	kea riags		\$20,020,000
107					
108		JUSTMENT FACTOR CONSTRUCTION COST with I	0%	\$20,020,000	\$0 \$20,020,000

	1/22/2009 11:17 AM A	В	с		D	Pr
1		H2M HILL <u>P</u> arame		mating <u>S</u> y	stem (CPI	ES)
2						_
3		FACILITIES DESI	GN & CONSTRL	JCTION COS	ST MODULE	
	File Version:	11/11/2001 Click for CPES QA/ QC	To Concrete Wall Thickness Help	To Cost Summary Matrix	To Unit Cost Database	
-				,		]
			Lebanon, Oregon 382293	Lebanon, Oregon		
			Paul Berg			-
1	-	mator:	Paul Berg, Sheryl Stuart, I	Paul Mueller, Ed	1/	-
1			Meyer, John Sams, Paul S			
2	Proj	ect Description:	First Phase 6 mgd Pressu	re Membrane WTP		Roi
-	Proi	ect Location (City):	Eugene			
	-	ect Location (State):	OREGON			_
5		ect Location (Country):	USA			— ть
		struction Start (Month):	Jan			
		struction Start (Year): struction Duration (months):	2009 18			-
;		Point of Construction:	Oct/2009			
1						- 🖼 E>
	ltem	Is This Facility Included in	SCOPE OF P	ROJECT		
1		Project? (Yes or No)				
		No	Inline Rapid Mix: InlineRM			
} 		Yes	Vertical Turbine PS: RWp			
-		No	Ozone Serpentine: O3ser	<u>0</u>		
-		No	Flocculation: Flocc			_
5		No	Lamella Clarifier: Plates			
7 3		<u>No</u> Yes	Filters: Filters Pressure Membrane: Pres	omomb		
		No	Ozone O-U: O3overund	Sillening		
)		No	Concrete Clearwell: Clear	conc		
<u></u>		Yes	Steel Clearwell: ClearStee			
2		Yes	Horizontal PS: FWpumph	-		
5		No	Vertical Turbine PS: FWp	umpv		
1		No	On-Site Sodium Hypo: Hy			
5		Yes	Liquid Chemical: Alum			
6		No	Liquid Chemical: Coagpo	ly		
7		No	Liquid Chemical: Filteraid			
3		Yes	Dry Chemical: SodaAsh			
)		Yes	Liquid Chemical: Fluoride			
)		No	Gravity Thickener: GravT			
1		Yes	Sludge Drying Beds: Dry	<u>Beds</u>		
2		Yes	O&M Building: OMBIdg			
3		No	Yard Piping: YardPipe			
ŀ		Yes	Liquid Chemical: BulkHyp	<u>)0</u>		
5						
6	SUBTOTAL	PROJECT COST				
	SUBIUIAL -					+
8 9 🖌		PROJECT COSTS:				-
) <b>/</b>	Demolitio		0%			+
,	Overall Si		0%			+
2			2%			+
- 1	Plant Computer System		<u>∠</u> /0			1

Yard Electrical

Yard Piping

Intake

53

54

55

3%

5%

0%

\$9,700,000

\$300,000

\$490,000

\$120,000

\$0 \$0 \$200,000

Е

Roundup to the nearest: \$10,000

This Report is for INTERNAL Distribution

E This Report is for EXTERNAL Distributio

> \$0 \$390,000 \$0 \$0 \$0 \$0 \$5,720,000 \$0 \$0 \$940,000 \$440,000 \$0 \$0 \$240,000 \$0 \$0 \$410,000 \$210,000 \$0 \$490,000 \$580,000 \$0 \$280,000

A B C C	D E
56 UD #2 Default Description 0%	\$0
57 UD #3 Default Description 0%	\$0
58 SUBTOTAL with Additional Project Costs	\$10,810,000
59	
60 CONTRACTOR MARKUPS:	
	810,000 \$1,090,000
62 Subtotal	\$11,900,000
63 <b>Profit</b> 5% \$11,9	900,000 \$600,000
64 Subtotal	\$12,500,000
65 Mob/Bonds/Insurance 5% \$12,5	500,000 \$630,000
66 Subtotal	\$13,130,000
	130,000 \$3,940,000
	\$17,070,000
	070,000 \$2,160,000
71 SUBTOTAL with Escalation	\$19,230,000
72	i
	230,000 \$19,500,000
	\$19,500,000
	\$19,500,000
75	
76 <b>RED FLAGS</b> :	
77 <b>1</b> Rock Excavation	
78 2 Pile Foundations	
79 3 Seismic Foundations	
80   4   Dewatering Conditions	
82 6 Weather Impacts	
83 7 Depth of Structures	
84       8       Local Building Code Restrictions	
85 9 Coatings or Finishes	
86 10 Building or Architectural Considerations	
87 11 Client Material Preferences	
89       13       Piping Galleries, Piping Trenches, Piping Racks	
90 14 Yard Piping Complexity	
91 15 Existing Site Utilities (New, Retrofit, and Complexity)	
92 16 I & C Automation (New or Retrofit)	
93 17 Electrical Feed (New or Retrofit)	
94 18 Electrical Distribution	
96 20 Contamination	
97 21	
98 22	
99 23	
100 24	
102 26	
103 27	
104 TOTAL - RED FLAGS	\$0
105	
	£40 E00 000
	N19 300 000 0
106 SUBTOTAL - CONSTRUCTION COST with Red Flags	\$19,500,000
106   SUBTOTAL - CONSTRUCTION COST with Red Flags     107	
SUBTOTAL - CONSTRUCTION COST with Red Flags     107	\$19,500,000 500,000 \$0 \$19,500,000