Exhibit B
CDM Smith
City of Aurora
Corrosion Control Optimization Study

TASK NO.	STUDY PROJECT TASKS	SENIOR PROCESS ENGINEER	TECHNICAL REVIEW	TECHNICAL REVIEW (DR. GIAMMAR)	PROJECT MANAGER	CORROSION LEAD	PROJECT ENGINEER	GIS/CADD	JUNIOR PROJECT ENGINEER/O&M SPECIALIST	ELEC / I&C ENGINEER	SUPPORT STAFF	LABOR HOURS TOTAL	LABOR COST TOTAL	DIRECT COSTS	TASK TOTAL
	Average Hourly Rate	$280 /HR.	$350 /HR.	$230 /HR.	$225 /HR.	$296 /HR.	$195 /HR.	$132 /HR.	$135 /HR.	$227 /HR.	$115 /HR.				
						HOURS									
1.0	**Task 1 - Project Kickoff Meeting and Data Collection**														**$15,755**
	1.1 Kickoff Meeting and Project Planning	4		4	8	14	14		16		8	68	$13,807	$200	
	1.2 Data Collection Memorandum				2	2	2				1	7	$1,548	$200	
2.0	**Task 2 - Operational and Existing Data Review**														**$45,320**
	2.1 Review Existing Data/ Lead and Water Quality Data	2			1	8	16	24	30		6	87	$14,207		
	2.2 Review GIS Data and Map DS				1	2	4	40	4			51	$7,432		
	2.3 Testing Plan and Coordination with City and IEPA	2		2	1	12	16		8		2	43	$9,237	$200	
	2.4.1 Technical Memorandum Summarizing Water Quality Data Review	2		2	1	2	8		24		2	41	$6,880	$100	
	2.4.2 MOU with IEPA Regarding Testing Plan	2	2	2	1	4	4		8			23	$4,994	$100	
	2.4.3 Review Meeting with City	2			1	4						7	$1,969	$200	
3.0	**Task 3 - Desktop-Top Study (Modeling)**														**$40,658**
	3.1 Desktop Modeling	2		6		4	8		40			60	$10,105		
	3.2.1 Technical Memorandum Summarizing Desktop Model	4	2	2		2	8		32			50	$8,769	$200	
	3.2.2 Finalize Corrosion Control Study Plan	4		4	2	16	24		52			102	$18,958		
	3.2.3 Review Meeting with City and IEPA			2		4	4					10	$2,426	$200	
4.0	**Task 4 -Harvesting Customer Service Lines**														**$10,040**
	4.1 Provide Protocol for Harvesting Lead Service Lines and Post Replacement Guidance	2		2	2	8	8		8		2	32	$6,715		
	4.2 Two-days of Site Visits During Pipe Harvesting						16					16	$3,125	$200	
5.0	**Task 5- Demonstration Study Tool**														**$848,988**
	Pipe Loop Study Design, Construction and Start-up														
	5.1 Develop Pipe Loop Operations/QAQC Plan and Testing Meeting	4	4	4	1	8	12		40		2	75	$14,025		
	5.2 Develop Concept Design for Pipe Loops and Review Meeting	8	2	4	1	8	24		24		2	73	$14,622		
	5.3 Procurement of Materials and Installation of Four Pipe Loops	2			32	8	40		32			114	$22,275	$232,500	
	5.3.1 Distribution System Pipe Loop (Number 5)					8	16		24	8		56	$10,559	$49,680	
	5.4 Pipe Loop Startup				8	8	32		40	16		104	$19,465		
	5.4.1 Installing and Startup of Chemical Pumps During Switch to Testing Phase					2	8		24	8		42	$7,220		
	5.5. Pipe Loop Maintenance					4	32		104			140	$21,521		
	Data Analysis and Recommendations														
	5.6.1 Conditioning Sampling (26 weeks)						18		208			226	$31,689	$3,120	
	5.6.2 Weekly Sampling (52 weeks)					8	48		416			472	$68,090	$6,240	
	5.6.3 Lab Costs (Direct Cost to First Environmental) - Exhibit B.1													$185,607	
	5.6.3.1 Lab Costs for Distribution System Pipe Loop - Exhibit B.1														
	5.6.4 On-Site Lab Equipment and Supplies											0	$0	$5,000	
	5.6.5 Review Weekly Data and Evaluate on Monthly Basis	8		12	4	24	72		128		52	300	$50,386		
	5.6.6 Monthly Meetings/Conference Calls		12	12		18	36		54		8	140	$27,555		
	5.6.7 Review Meeting with the City and IEPA			4	8	8					2	22	$5,319	$200	
	5.7 Scale Analysis (up to 18 by Washington University Lab)	4		18		2	4		15			43	$8,665	$22,050	
	5.7.1 Technical Memorandum Summarizing Scale Analysis			18	2	2	12					34	$7,526	$600	
	5.8 Partial System Testing Review with City and IEPA	2	2			4	16					24	$5,569		
	5.9 Technical Memorandum of Results	8	4	4	4	16	40		80		4	160	$29,306	$200	
6.0	**Task 6 - Final Report and Recommendations**														**$56,357**
	6.1 Develop Draft Report	8	4	8	4	20	40	8	80		8	180	$32,928		
	6.2 Review Meeting with City and IEPA	4	4	4	4	8					2	26	$6,939	$200	
	6.3 Committees and City Council Presentations				4	12	12				4	32	$7,257	$200	
	6.4 Final Report	2		2	2	4	8	4	16		8	46	$7,833	$1,000	
7.0	**Task 7 - Conceptual Design of Optimized Corrosion Control Program**														**$89,339**
	7.1 Conceptual Design Development	8	4		36	16	32	80	64	60		300	$55,588	$500	
	7.2 OPCC/Cost Estimate				4		16		12	16		48	$9,279		
	7.3 Concept Design Technical Memorandum and Review Meeting	8			8	8	24		40	32		120	$23,772	$200	
8.0	**Task 8 - Project Management**														**$61,930**
	8.1 Communications and Project Management Plan				12	2	2				2	18	$3,913		
	8.2 Project Team SharePoint				8				12		2	22	$3,655		
	8.3 Internal Coordination Meetings				16	16	4				2	38	$9,349		
	8.4 Monthly Reporting				48	12					48	108	$19,873	$3,000	
	8.5 Schedule and Budget Tracking				80						36	116	$22,140		
	8.6 Workshops and Presentations (included elsewhere)														
	TOTAL	**92**	**40**	**116**	**306**	**308**	**680**	**156**	**1,635**	**140**	**203**	**3,676**	**$656,489**	**$511,897**	**$1,168,390**