FINAL
CONSTRUCTION COMPLETION REPORT
FOR THE
McLAREN TAILINGS ABANDONED MINE SITE
RECLAMATION PROJECT
DEQ CONTRACT NO. 41001

Prepared for:

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February 18, 2011

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LIST OF APPENDICES
(Appendices A through J are provided in electronic format)

LIST OF ACRONYMS

AML – Abandoned Mine Land
AMRB – Abandoned Mine Reclamation Bureau
bcy – bank cubic yards
BMPs – Best Management Practices
CCR – Construction Completion Report
COCs – Contaminants of Concern
cy – cubic yards
DAC – Data Acquisition Control
DEQ – Montana Department of Environmental Quality
DOJ – U.S. Department of Justice
DSL – Department of State Lands
EEE/CA - Expanded Engineering Evaluation/Cost Analysis
EPA – U.S. Environmental Protection Agency
GSM – Golden Sunlight Mine
HDPE – High Density Polyethylene
MSE- Mechanically Stabilized Earth
MWCB – Mine Waste Cleanup Bureau
Knife River – Knife River-Yellowstone Division
Pioneer – Pioneer Technical Services, Inc.
P.O. – Post Office
PVC - Polyvinyl Chloride
QA – Quality Assurance
U.S. – United States
USFS – U.S. Department of Agriculture/Forest Service

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The McLaren Tailings Abandoned Mine Site (Site) is an abandoned hardrock mine/mill site listed on the Montana Department of Environmental Quality/Mine Waste Cleanup Bureau (DEQ/MWCB) (formally the Department of State Lands/Abandoned Mine Reclamation Bureau [DSL/AMRB]) Priority Sites List. At the McLaren Tailings Abandoned Mine Site, identified waste sources including mill tailings and waste rock are located within the historic channel and floodplain of Soda Butte Creek. The waste materials discharge acid mine drainage impacting water quality and sediment quality in Soda Butte Creek. The contaminants of concern (COCs) include aluminum, arsenic, barium, cadmium, chromium, copper, mercury, iron, lead, manganese, nickel, and zinc. Surface water downstream from the site contained elevated concentrations of iron and manganese.

The purpose of this reclamation project is to limit human and environmental exposure to the COCs, reduce the mobility and migration of these COCs, and mitigate impacts to the local surface water and groundwater. The reclamation project plan involves removal of waste materials from designated areas and transportation of stabilized tailings to an on-site repository.

Due to the short construction seasons at the McLaren Tailings Abandoned Mine Site and the large volume of mine wastes present, the project is to be completed over a six-year period. The implementation of the McLaren Tailings Abandoned Mine Reclamation Project will be completed over 6 consecutive construction seasons consisting of **1,963** calendar days with winter shutdown periods. The 2010 reclamation project construction season was started on June 1, 2010 and was shutdown on October 28, 2010 for the winter. This 2010 Construction Completion Report (CCR) documents the work completed by the Contractor during the 2010 construction season.

1.2 LOCATION AND ACCESS

The McLaren Tailings Abandoned Mine Site Reclamation Project ("Site") is located in Park County in Section 25 of Township 9 South, Range 14 East of the Montana Principal Meridian. The Site is accessed by traveling 1/4 mile east of Cooke City, Montana, along Montana Highway 212 and turning south onto a dirt road that exits the highway. The Site is located less than 500 feet south of the highway and encompasses an area of approximately 20 acres.

1.3 LAND OWNERSHIP

In an effort to implement the McLaren Tailings Abandoned Mine Site reclamation project as efficiently as possible and secure a location for a mine waste repository, the DEQ purchased the property from Camjac, Inc. and an additional 3.09 adjacent acres from the U.S. Department of Agriculture/Forest Service (USFS). This property transfer was performed under an Agreement and Covenant Not to Sue (Agreement) executed February 6, 2008 between the U.S. Department of Justice (DOJ), U.S. Environmental Protection Agency (EPA), and DEQ. This agreement requires that DEQ perform monitoring, maintenance, and related activities at the McLaren

Tailings Abandoned Mine Site. The DOJ/EPA/DEQ agreement is provided electronically in Appendix A.

1.4 SITE HISTORY

An Expanded Engineering Evaluation/Cost Analysis (EEE/CA) was completed in 2002. Results of environmental and engineering investigations performed prior to 2002 are summarized in the *Draft Final Engineering Evaluation/Cost Analysis for the McLaren Tailings Site Cooke City, Montana* (DEQ/MWCB-Pioneer, 2002). The preferred reclamation alternative was Alternative 5b: On-Site Disposal in an Un-Lined Repository with a Multi-Layered Cap. All mine waste materials currently located at the site (tailings impoundment and dam, waste rock dump, and materials within the old stream channel) were to be excavated and disposed of in an on-site repository constructed on the elevated bench located southwest of the current location of the tailings impoundment. The multi-layered cap installed on the repository was to consist of an impermeable liner, a drainage layer, and the vegetated cover component of the cap, which would be a minimum of two feet thick.

Additional investigations were completed in September 2008 to support the site reclamation design for the McLaren Tailings Abandoned Mine Site. The field investigations included a groundwater investigation and monitoring in the area of the proposed on-site repository location, existing cover soil investigation, repository investigation, source area investigation, groundwater investigation within the tailings area, surface water investigation, geotechnical investigation, stream channel investigation, seismic stability analysis, and haul route analysis. A detailed description of the results can be found in the *Final Reclamation Design Report for the McLaren Tailings Abandoned Mine Site Cooke City, Montana* (DEQ/MWCB-Pioneer, 2009). The results of these investigations were utilized to develop the final reclamation design and construction bid package completed in October 2009.

On April 2, 2010, DEQ executed an Agreement with Knife River to implement the McLaren Tailings Abandoned Mine Site Project under DEQ Contract #410010. On June 1, 2010, Knife River mobilized to the McLaren Tailings Abandoned Mine Site to initiate the construction activities for the McLaren Tailings Abandoned Mine Site Reclamation Project. The first construction season has been completed and the project will continue for the next five construction seasons. This CCR summarizes the construction activities associated with the 2010 construction season.

2.0 RESPONSIBLE PARTIES

2.1 DEQ/MWCB COORDINATION

From 2008 through 2010, DEQ/MWCB Project Manager, Mr. Tom Henderson, Reclamation Specialist, was responsible for coordination of planning phases of the project, as well as for providing technical and regulatory review during the design process, development of the construction bid package and bidding process, regulatory oversight and implementation of the construction project.

Mr. Tom Henderson
Montana Department of Environmental Quality
Mine Waste Cleanup Bureau
P.O. Box 200901
Helena, Montana 59620
Telephone: 1-406-841-5052

2.2 CONTRACTOR

The Contractor for the project was Knife River – Yellowstone Division (Knife River). The Contractor's address and telephone number are as follows:

Knife River – Yellowstone Division
1375 4th Ave. North, Suite C
P.O. Box 1498
Billings, Montana 59101
Telephone: (406) 651-2520

Mr. Van Hildreth served as Knife River's Project Manager and Mr. Tom Lester served as Knife River's Project Superintendent.

2.3 RECLAMATION AND ENGINEERING PLANNING

Under contract with the DEQ/MWCB, Pioneer Technical Services, Inc. (Pioneer) was responsible for planning and providing documentation necessary to facilitate resource managers with the appropriate decision-making tools necessary for full-scale reclamation at the site. Pioneer was also responsible for preparing the final design and engineering specifications for the reclamation project. Under contract with the DEQ/MWCB, Pioneer was responsible for construction oversight. The engineer's address and telephone number are as follows:

Pioneer Technical Services, Inc.
P.O. Box 3445
63½ West Broadway
Butte, Montana 59702
Telephone: 1-406-782-5177

2.4 CONSTRUCTION MONITORING AND QUALITY ASSURANCE INSPECTION

Pioneer performed the quality assurance (QA) inspection for the project. Mr. Doug Richmond functioned as the full-time, on-site inspector. Mr. Joe McElroy, Mr. Will Goldberg, and Mr. Marty Bennett functioned as the design engineers and part-time on-site inspectors, and Mr. McElroy functioned as the Project Manager.

3.0 CHRONOLOGICAL LISTING OF EVENTS

3.1 PRE-BID CONFERENCE

A Pre-Bid Conference was held at the project site on October 28, 2009. Fifty contractors attended the Pre-Bid Conference. Copies of the Pre-Bid Conference agenda and meeting minutes are included in Appendix A.

3.2 GOLDEN SUNLIGHT MINE SITE VISIT

Transportation of stabilized tailings to the Golden Sunlight Mine (GSM) facility located in Whitehall, Montana was included in Alternatives A-2 and A-3 of the Bid Documents. A site visit was held on February 2, 2010 at the GSM facility. Eight contractors attended the GSM site visit. A list of the attendees and a copy of the questions and answers is included in Appendix A.

3.3 BID DATE

The bid opening date for the project was February 18, 2010 at 2:00 p.m. at the DEQ/MWCB office, which is located at 1100 North Last Chance Gulch in Helena, Montana.

3.4 BID OPENING

Three qualified bidders responded with bids. The bids and the Engineer's estimate are summarized in Table 3.1. DEQ evaluated the three alternatives (Bid Alternatives A-1, A-2, and A-3), and determined that Bid Alternative A-2 would be awarded.

3.5 CONTRACT AWARD

The Contract was awarded to Knife River, the lowest bidder for Bid Alternative A-2. A Pre-Award Conference was held on March 23, 2010, at the DEQ/MWCB office, representatives from Knife River, Pioneer, and DEQ/MWCB were present. The Knife River bid was discussed, along with their ability to complete the project on time. Knife River affirmed that they could complete the project for the amount bid, in the time frame specified (1,963 working days), and with the equipment listed. Knife River also indicated that the subcontracted portion of Knife River's bid did not exceed 50% of the contract amount. Pioneer's analysis performed on March 25, 2010 indicated that approximately 37 percent of the work was anticipated to be performed by subcontractors. Other items discussed included: project organization; site conditions and constraints; submittals; sequencing; equipment; and subcontractors. The Notice of Award was sent to Knife River by the DEQ/MWCB on April 2, 2010. The Notice of Award can be found electronically in Appendix A.

TABLE 3.1 Bid Summary for McLaren Mine Reclamation Project

BID TABULATION				Engineer Estimate		Knife River		Oftedal Construction, Inc.		Shumaker Trucking	
Bid Item No.	Description	Est Quan	Units	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
1	**Mobilization, Bonding and Insurance**										
1a	Mobilization, Bonding and Insurance	1	L.S.		$1,218,826.24		$ 1,900,000.00		$ 1,930,000.00		$ 2,000,000.00
2	**Facilities and Infrastrucutre**										
2a	Provide and Install West Bridge	1	L.S.		$396,839.18		$ 500,000.00		$ 380,000.00		$ 1,336,000.00
2b	Provide and Install East Bridge	1	L.S.		$189,152.47		$ 285,250.00		$ 125,000.00		$ 1,100,000.00
2c	Construct Temporary Haul Roads	3,600	L.F.	$28.00	$100,800.00	$ 35.00	$ 126,000.00	$ 25.00	$ 90,000.00	$ 20.00	$ 72,000.00
2d	Maintain and Obliterate Temporary Haul Roads	1	L.S.		$41,056.40		$ 120,900.00		$ 110,000.00		$ 70,000.00
2e	Clear, Grub and Timber Removal	1	L.S.		$63,558.10		$ 150,000.00		$ 200,000.00		$ 93,500.00
2f	Provide, Install and Remove Jersey Barriers	48	EA	$1,900.01	$91,200.41	$ 673.00	$ 32,304.00	$ 700.00	$ 33,600.00	$ 600.00	$ 28,800.00
3	**Provide and Install Electrical Systems**										
3a(S)	Provide and Install Electrical Systems	1	L.S		$228,425.60		$ 508,000.00		$ 360,000.00		$ 524,000.00
4	**Well Abandonment**										
4a	Well Abandonment	20	EA	$950.00	$19,000.00	$ 1,067.00	$ 21,340.00	$ 3,000.00	$ 60,000.00	$ 1,000.00	$ 20,000.00
5	**Initial Construction Dewatering System**										
5a	Install Temporary Submersible Pump	4	EA	$981.60	$3,926.40	$ 5,000.00	$ 20,000.00	$ 5,000.00	$ 20,000.00	$ 1,200.00	$ 4,800.00
5b	Provide and Install Temporary Piping System to Storm Water Channel #5	1	L.S.		$7,095.00		$ 15,200.00		$ 25,000.00		$ 15,000.00
5c	Initial Start Up, Monthly Operation, and Maintenance of Initial Construction Dewatering System	5	MONTH	$2,649.10	$13,245.51	$ 5,000.00	$ 25,000.00	$ 10,000.00	$ 50,000.00	$ 2,000.00	$ 10,000.00
5d	Disassemble Initial Construction Dewatering System	1	L.S.		$2,404.74		$ 1,000.00		$ 15,000.00		$ 3,200.00
6	**Dewatering Control Building**										
6a	Grade and Install 6 inch Base Course Building Pad	1	L.S.		$5,000.00		$ 148,900.00		$ 30,000.00		$ 230,200.00
6b	Install Concrete Footings and Concrete Slabs	1	L.S.		$76,525.28		$ 95,200.00		$ 100,000.00		$ 163,000.00
6c	Provide and Install Dewatering Control Building	1	L.S.		$60,000.00		$ 158,700.00		$ 250,000.00		$ 288,000.00
6d	Provide and Install Insulation	1	L.S.		$14,800.00		$ 38,100.00		$ 75,000.00		$ 158,000.00
6e	Provide and Install Heating System	1	L.S.		$8,700.00		$ 31,700.00		$ 45,000.00		$ 134,000.00
6f	Remove Dewatering Control Building	1	L.S.		$36,100.00		$ 12,700.00		$ 110,000.00		$ 125,000.00
7	**Sediment Pond Construction**										
7a	Construct Sediment Detention Pond	1	L.S.		$80,151.75		$ 190,000.00		$ 35,000.00		$ 255,000.00
7b	Provide and Install Sediment Detention Pond Inlet #1	1	L.S.		$21,405.00		$ 7,110.00		$ 12,000.00		$ 6,000.00
7c	Provide and Install Sediment Detention Pond Inlet #2	1	L.S.		$10,805.50		$ 4,950.00		$ 10,000.00		$ 6,000.00
7d	Provide and Install Perimeter Water Bypass	1	L.S.		$6,582.00		$ 5,841.00		$ 7,000.00		$ 6,000.00
7e	Provide and Install Sediment Detention Pond Outlet Structure	1	L.S.		$32,300.00		$ 35,000.00		$ 38,000.00		$ 50,000.00
7f	Provide and Install Sediment Detention Pond Liner	6,896	S.Y	$6.66	$45,912.24	$ 10.50	$ 72,408.00	$ 9.00	$ 62,064.00	$ 10.00	$ 68,960.00
7g(S)	Provide, Install and Remove Gunderbooms	2	EA	$40,000.00	$ 80,000.00	$ 53,200.00	$ 106,400.00	$ 75,000.00	$ 150,000.00	$ 103,000.00	$ 206,000.00
7h	Provide, Install and Remove Wildlife Exclusion Fence	1,660	LF	$10.00	$ 16,600.00	$ 26.50	$ 43,990.00	$ 25.00	$ 41,500.00	$ 10.00	$ 16,600.00
7i	Remove Sediment Detention Pond	1	L.S.		$6,271.59		$ 10,000.00		$ 75,000.00		$ 25,000.00

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Bid Item No.	Description	Est Quan	Units	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
8	**Phase I Dewatering System Installation**										
8a	Phase I Dewatering System Installation	1	L.S.		$156,000		$ 175,000.00		$ 230,000.00		$ 210,000.00
8b	Miscellaneous Phase I Dewatering Equipment and Operation	3	Construction Schedule	$56,000	$168,000.00	$27,900.00	$ 83,700.00	$15,000.00	$ 45,000.00	$250,000.00	$ 750,000.00
9	**Dewatering Control Building Piping, Valves, and Instrumentation**										
9a	Provide and Install 2 inch Schedule 40 PVC Pipe	240	L.F.	$3.59	$860.93	$ 21.50	$ 5,160.00	$ 20.00	$ 4,800.00	$ 20.00	$ 4,800.00
9b	Provide and Install 3 inch Schedule 40 PVC Pipe	100	L.F.	$4.00	$400.00	$ 23.00	$ 2,300.00	$ 20.00	$ 2,000.00	$ 25.00	$ 2,500.00
9c	Provide and Install 4 inch Schedule 40 PVC Pipe	100	L.F.	$5.44	$544.00	$ 33.00	$ 3,300.00	$ 20.00	$ 2,000.00	$ 60.00	$ 6,000.00
9d	Provide and Install 6 inch Schedule 40 PVC Pipe	10	L.F.	$11.52	$115.20	$ 39.50	$ 395.00	$ 25.00	$ 250.00	$ 85.00	$ 850.00
9e	Provide and Install 8 inch Schedule 40 PVC Pipe	140	L.F.	$17.76	$2,486.40	$ 51.00	$ 7,140.00	$ 25.00	$ 3,500.00	$ 65.00	$ 9,100.00
9f	Provide and Install 8 inch Schedule 40 PVC Pipe Coupling	1	E.A.	$35.20	$35.20	$ 330.00	$ 330.00	$ 65.00	$ 65.00	$ 200.00	$ 200.00
9g	Provide and Install 2-inch 90 degree Schedule 40 PVC Elbow	17	E.A.	$3.92	$66.64	$ 108.00	$ 1,836.00	$ 30.00	$ 510.00	$ 100.00	$ 1,700.00
9h	Provide and Install 3-inch 90 degree Schedule 40 PVC Elbow	4	E.A.	$9.60	$38.40	$ 152.00	$ 608.00	$ 35.00	$ 140.00	$ 55.00	$ 220.00
9i	Provide and Install 4-inch 90 degree Schedule 40 PVC Elbow	10	E.A.	$17.60	$176.00	$ 165.00	$ 1,650.00	$ 40.00	$ 400.00	$ 85.00	$ 850.00
9j	Provide and Install 6-inch 90 degree Schedule 40 PVC Elbow	1	E.A.	$41.60	$41.60	$ 190.00	$ 190.00	$ 70.00	$ 70.00	$ 125.00	$ 125.00
9k	Provide and Install 8-inch 90 degree Schedule 40 PVC Elbow	8	E.A.	$104.00	$832.00	$ 254.00	$ 2,032.00	$ 150.00	$ 1,200.00	$ 166.00	$ 1,328.00
9l	Provide and Install 8-inch X 8-inch x 6-inch 45 degree Schedule 40 PVC Reducing Wye	1	E.A.	$825.60	$825.60	$ 787.00	$ 787.00	$ 200.00	$ 200.00	$ 700.00	$ 700.00
9m	Provide and Install 2-inch X 2-inch X 2-inch Schedule 40 PVC Pipe Tee	28	E.A.	$9.60	$268.80	$ 110.00	$ 3,080.00	$ 50.00	$ 1,400.00	$ 112.00	$ 3,136.00
9n	Provide and Install 3-inch X 3-inch X 3-inch Schedule 40 PVC Pipe Tee	6	E.A.	$30.40	$182.40	$ 116.00	$ 696.00	$ 60.00	$ 360.00	$ 150.00	$ 900.00
9o	Provide and Install 4-inch X 4-inch X 4-inch Schedule 40 PVC Pipe Tee	2	E.A.	$20.80	$41.60	$ 178.00	$ 356.00	$ 70.00	$ 140.00	$ 165.00	$ 330.00
9p	Provide and Install 8-inch X 8-inch X 8-inch Schedule 40 PVC Pipe Tee	2	E.A.	$147.20	$294.40	$ 444.00	$ 888.00	$ 250.00	$ 500.00	$ 550.00	$ 1,100.00
9q	Provide and Install 2-inch Schedule 40 PVC Pipe End Cap	14	E.A.	$1.60	$22.40	$ 109.00	$ 1,526.00	$ 25.00	$ 350.00	$ 45.00	$ 630.00
9r	Provide and Install 3-inch Schedule 40 PVC Pipe End Cap	3	E.A.	$5.60	$16.80	$ 105.00	$ 315.00	$ 30.00	$ 90.00	$ 55.00	$ 165.00
9s	Provide and Install 4-inch Schedule 40 PVC Pipe End Cap	1	E.A.	$8.16	$8.16	$ 152.00	$ 152.00	$ 35.00	$ 35.00	$ 65.00	$ 65.00
9t	Provide and Install 8-inch Schedule 40 PVC Pipe End Cap	4	E.A.	$49.60	$198.40	$ 203.00	$ 812.00	$ 90.00	$ 360.00	$ 75.00	$ 300.00

TABLE 3.1 Bid Summary for McLaren Mine Reclamation Project

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Bid Item No.	Description	Est Quan	Units	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
9u	Provide and Install 8-inch X 2-inch Schedule 40 PVC Clamp on Saddle	27	E.A.	$368.00	$9,936.00	$ 241.00	$ 6,507.00	$ 250.00	$ 6,750.00	$ 140.00	$ 3,780.00
9v	Provide and Install 8-inch X 3-inch Schedule 40 PVC Saddle	6	E.A.	$420.80	$2,524.80	$ 254.00	$ 1,524.00	$ 350.00	$ 2,100.00	$ 185.00	$ 1,110.00
9w	Provide and Install 8-inch X 4-inch Schedule 40 PVC Saddle	3	E.A.	$444.80	$1,334.40	$ 406.00	$ 1,218.00	$ 350.00	$ 1,050.00	$ 250.00	$ 750.00
9x	Provide and Install 4-inch X 2-inch Schedule 40 PVC Reducer	6	E.A.	$16.80	$100.80	$ 165.00	$ 990.00	$ 50.00	$ 300.00	$ 75.00	$ 450.00
9y	Provide and Install 3-inch X 2-inch Schedule 40 PVC Reducer	8	E.A.	$8.16	$65.28	$ 165.00	$ 1,320.00	$ 40.00	$ 320.00	$ 75.00	$ 600.00
9z	Provide and Install 4-inch Schedule 40 PVC Check Valve	2	E.A.	$892.80	$1,785.60	$ 2,158.00	$ 4,316.00	$ 100.00	$ 200.00	$ 2,050.00	$ 4,100.00
9aa	Provide and Install 2-Inch Air Relief Valve	17	E.A.	$187.20	$3,182.40	$ 279.00	$ 4,743.00	$ 80.00	$ 1,360.00	$ 192.00	$ 3,264.00
9ab	Provide and Install 3-Inch Pipe Hangers	3	E.A.	$4.80	$14.40	$ 343.00	$ 1,029.00	$ 30.00	$ 90.00	$ 150.00	$ 450.00
9ac	Provide and Install 8-Inch Pipe Hangers	10	E.A.	$12.80	$128.00	$ 406.00	$ 4,060.00	$ 60.00	$ 600.00	$ 300.00	$ 3,000.00
9ad	Provide and Install 2-inch Flow Meter	12	E.A.	$1,696.00	$20,352.00	$ 2,412.00	$ 28,944.00	$ 4,000.00	$ 48,000.00	$ 2,500.00	$ 30,000.00
9ae	Provide and Install 8-inch Flow Meter	1	E.A.	$6,739.95	$6,739.95	$ 6,602.00	$ 6,602.00	$ 8,800.00	$ 8,800.00	$ 7,500.00	$ 7,500.00
9af	Provide and Install 2-inch Gate Valve	13	E.A.	$80.00	$1,040.00	$ 203.00	$ 2,639.00	$ 200.00	$ 2,600.00	$ 62.00	$ 806.00
9ag	Provide and Install 3-inch Gate Valve	4	E.A.	$187.20	$748.80	$ 267.00	$ 1,068.00	$ 500.00	$ 2,000.00	$ 185.00	$ 740.00
9ah	Provide and Install 4-inch Gate Valve	1	E.A.	$640.00	$640.00	$ 508.00	$ 508.00	$ 700.00	$ 700.00	$ 333.00	$ 333.00
9ai	Provide and Install 6-inch Lever Handle Type Butterfly Valve	1	E.A.	$480.00	$480.00	$ 533.00	$ 533.00	$ 500.00	$ 500.00	$ 440.00	$ 440.00
9aj	Provide and Install 8-inch Lever Handle Type Butterfly Valve	3	E.A.	$1,120.00	$3,360.00	$ 736.00	$ 2,208.00	$ 610.00	$ 1,830.00	$ 800.00	$ 2,400.00
9ak	Provide and Install 6-inch ANSI PVC Flange for 6" Butterfly Valve	2	E.A.	$57.60	$115.20	$ 203.00	$ 406.00	$ 140.00	$ 280.00	$ 125.00	$ 250.00
9al	Provide and Install 8-inch ANSI PVC Flange	8	E.A.	$96.00	$768.00	$ 241.00	$ 1,928.00	$ 160.00	$ 1,280.00	$ 150.00	$ 1,200.00
9am	Provide and Install 2-inch PVC Ball Valve	26	E.A.	$27.20	$707.20	$ 178.00	$ 4,628.00	$ 150.00	$ 3,900.00	$ 85.00	$ 2,210.00
9an	Provide and Install 3-inch PVC Ball Valve	8	E.A.	$107.20	$857.60	$ 216.00	$ 1,728.00	$ 250.00	$ 2,000.00	$ 180.00	$ 1,440.00
9ao	Provide and Install 4-inch PVC Ball Valve	8	E.A.	$196.80	$1,574.40	$ 279.00	$ 2,232.00	$ 410.00	$ 3,280.00	$ 200.00	$ 1,600.00
9ap	Provide and Install 2-inch Unistrut Clamp	42	E.A.	$17.60	$739.20	$ 165.00	$ 6,930.00	$ 24.00	$ 1,008.00	$ 35.00	$ 1,470.00
9aq	Provide and Install 3-inch Unistrut Clamp	12	E.A.	$33.60	$403.20	$ 190.00	$ 2,280.00	$ 24.00	$ 288.00	$ 75.00	$ 900.00
9ar	Provide and Install 4-inch Unistrut Clamp	7	E.A.	$52.80	$369.60	$ 216.00	$ 1,512.00	$ 25.00	$ 175.00	$ 75.00	$ 525.00
9as	Provide and Install 8-inch Unistrut Clamp	11	E.A.	$80.00	$880.00	$ 203.00	$ 2,233.00	$ 30.00	$ 330.00	$ 100.00	$ 1,100.00
9at	Provide and Install Unistrut "L" Bracket	4	E.A.	$16.00	$64.00	$ 305.00	$ 1,220.00	$ 25.00	$ 100.00	$ 320.00	$ 1,280.00
9au	Provide and Install Unistrut Channel	126	L.F.	$6.88	$866.88	$ 33.00	$ 4,158.00	$ 25.00	$ 3,150.00	$ 22.00	$ 2,772.00
9av	Provide and Install 2-inch Female Cam-Lok	5	E.A.	$ 17.60	$88.00	$ 203.00	$ 1,015.00	$ 80.00	$ 400.00	$ 150.00	$ 750.00
9aw	Provide and Install 2-inch Male Cam-Lok	5	E.A.	$8.00	$40.00	$ 190.00	$ 950.00	$ 80.00	$ 400.00	$ 75.00	$ 375.00
9ax	Provide and Install 4-inch Female Cam-Lok	9	E.A.	$40.00	$360.00	$ 203.00	$ 1,827.00	$ 110.00	$ 990.00	$ 70.00	$ 630.00
9ay	Provide and Install 4-inch Male Cam-Lok	11	E.A.	$20.80	$228.80	$ 203.00	$ 2,233.00	$ 110.00	$ 1,210.00	$ 75.00	$ 825.00
9az	Provide and Install 4-inch Cam-Lok Protective Cover	2	E.A.	$12.80	$25.60	$ 330.00	$ 660.00	$ 90.00	$ 180.00	$ 260.00	$ 520.00

TABLE 3.1 Bid Summary for McLaren Mine Reclamation Project

BID TABULATION				Engineer Estimate		Knife River		Oftedal Construction, Inc.		Shumaker Trucking	
Bid Item No.	Description	Est Quan	Units	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
9ba	Provide and Install 8-inch Male Cam-Lok	1	E.A.	$72.00	$72.00	$ 432.00	$ 432.00	$ 210.00	$ 210.00	$ 325.00	$ 325.00
9bb	Provide and Install 8-inch Cam-Lok Protective Cover	1	E.A.	$32.00	$32.00	$ 432.00	$ 432.00	$ 210.00	$ 210.00	$ 300.00	$ 300.00
9bc	Provide and Install 3-inch Poly Tank Fitting (Bulkhead)	2	E.A.	$100.80	$201.60	$ 279.00	$ 558.00	$ 200.00	$ 400.00	$ 300.00	$ 600.00
9bd	Provide and Install 4-inch Poly Tank Fitting (Bulkhead)	7	E.A.	$320.00	$2,240.00	$ 394.00	$ 2,758.00	$ 280.00	$ 1,960.00	$ 350.00	$ 2,450.00
9be	Provide and Install 6-inch Poly Tank Fitting (Bulkhead)	2	E.A.	$448.00	$896.00	$ 597.00	$ 1,194.00	$ 290.00	$ 580.00	$ 600.00	$ 1,200.00
9bf	Provide and Install 2-inch Schedule 40 PVC Union	30	E.A.	$17.60	$528.00	$ 165.00	$ 4,950.00	$ 70.00	$ 2,100.00	$ 66.00	$ 1,980.00
9bg	Provide and Install 4-inch Pipe Penetration Boot	2	E.A.	$240.00	$480.00	$ 368.00	$ 736.00	$ 140.00	$ 280.00	$ 220.00	$ 440.00
9bh	Provide and Install 8-inch Pipe Penetration Boot	1	E.A.	$360.00	$360.00	$ 521.00	$ 521.00	$ 250.00	$ 250.00	$ 350.00	$ 350.00
9bi	Provide and Install 2-Inch Flex Hose	32	L.F.	$6.40	$204.80	$ 14.00	$ 448.00	$ 30.00	$ 960.00	$ 10.00	$ 320.00
9bj	Provide and Install 4-Inch Flex Hose	32	L.F.	$24.00	$768.00	$ 20.50	$ 656.00	$ 33.00	$ 1,056.00	$ 18.00	$ 576.00
9bk	Provide and Install Eye Wash Station	2	E.A.	$336.00	$672.00	$ 648.00	$ 1,296.00	$ 400.00	$ 800.00	$ 543.00	$ 1,086.00
9bl	Provide and Install 4-Inch FemaleThread Adaptor to Threaded Male Cam-Lock to PVC	11	E.A.	$12.80	$140.80	$ 190.00	$ 2,090.00	$ 33.00	$ 363.00	$ 75.00	$ 825.00
9bm	Provide and Install 2-Inch FemaleThread Adaptor to Threaded Male Cam-Lock to PVC	5	E.A.	$4.80	$24.00	$ 190.00	$ 950.00	$ 33.00	$ 165.00	$ 75.00	$ 375.00
9bn	Provide and Install 3/4-Inch Petcocks Brass	6	E.A.	$83.20	$499.20	$ 178.00	$ 1,068.00	$ 120.00	$ 720.00	$ 75.00	$ 450.00
9bo	Provide and Install 8-Inch by 3/4-Inch PVC Tapping Saddle	6	E.A.	$192.00	$1,152.00	$ 254.00	$ 1,524.00	$ 315.00	$ 1,890.00	$ 175.00	$ 1,050.00
9bp	Provide and Install 3-inch Flow Meter	5	E.A.	$3,680.00	$18,400.00	$ 1,778.00	$ 8,890.00	$ 5,000.00	$ 25,000.00	$ 2,000.00	$ 10,000.00
9bq	Provide and Install 4-inch Flow Meter	1	E.A.	$4,744.00	$4,744.00	$ 2,285.00	$ 2,285.00	$ 5,500.00	$ 5,500.00	$ 2,500.00	$ 2,500.00
9br	Provide and Install 3-inch ANSI PVC Flange	10	E.A.	$88.00	$880.00	$ 178.00	$ 1,780.00	$ 130.00	$ 1,300.00	$ 100.00	$ 1,000.00
9bs	Provide and Install 4-inch ANSI PVC Flange	2	E.A.	$137.60	$275.20	$ 178.00	$ 356.00	$ 130.00	$ 260.00	$ 192.00	$ 384.00
10	**Provide and Install Water Treatment System**										
10a	Provide and Install Horizonal Screw Conveyor	1	L.S.		$11,420.98		$ 38,100.00		$ 24,000.00		$ 38,500.00
10b	Provide and Install 600 Gallon Lime Slurry Tanks	2	E.A.	$3,890.19	$7,780.38	$ 25,400.00	$ 50,800.00	$ 3,300.00	$ 6,600.00	$ 20,900.00	$ 41,800.00
10c	Provide and Install 3/4 HP Lime Slurry Mixers	2	E.A.	$4,029.98	$8,059.95	$ 12,700.00	$ 25,400.00	$ 2,600.00	$ 5,200.00	$ 11,000.00	$ 22,000.00
10d	Provide and Install Tank Level Indicator	1	E.A.	$3,302.45	$3,302.45	$ 12,700.00	$ 12,700.00	$ 1,400.00	$ 1,400.00	$ 11,000.00	$ 11,000.00
10e	Provide and Install Air Actuated Knife Valves	2	E.A.	$6,777.46	$13,554.92	$ 6,348.00	$ 12,696.00	$ 2,100.00	$ 4,200.00	$ 5,500.00	$ 11,000.00
10f	Provide and Install 3-Gallon Air Compressor	1	L.S.		$450.00		$ 2,539.00		$ 1,710.00		$ 2,200.00
10g	Provide and Install 2 HP Lime Slurry Pump	1	E.A.	$5,449.35	$5,449.35	$ 31,700.00	$ 31,700.00	$ 10,600.00	$ 10,600.00	$ 27,500.00	$ 27,500.00
10h	Provide and Install Dosing Tank and Stand	1	E.A.	$3,482.05	$3,482.05	$ 15,200.00	$ 15,200.00	$ 9,300.00	$ 9,300.00	$ 13,200.00	$ 13,200.00
10i	Provide and Install Dosing Tank Mixer	1	E.A.	$4,029.98	$4,029.98	$ 12,700.00	$ 12,700.00	$ 3,380.00	$ 3,380.00	$ 11,000.00	$ 11,000.00
10j	Provide and Install pH Probe and Controller	4	E.A.	$2,277.52	$9,110.06	$ 2,500.00	$ 10,000.00	$ 2,850.00	$ 11,400.00	$ 2,200.00	$ 8,800.00
10k (S)	Provide and Install RCTS-60HS	1	E.A.	$84,094.29	$84,094.29	$ 190,500.00	$ 190,500.00	$ 150,000.00	$ 150,000.00	$ 165,000.00	$ 165,000.00
10l	Provide and Install Lime Silo	1	L.S.		$30,000.00		$ 76,200.00		$ 44,900.00		$ 71,500.00
10m	Provide and Install Staircase and Platform	1	L.S.		$2,200.00		$ 31,700.00		$ 12,000.00		$ 27,500.00
11	**Flocculant System**										

TABLE 3.1 Bid Summary for McLaren Mine Reclamation Project

BID TABULATION				Engineer Estimate		Knife River		Oftedal Construction, Inc.		Shumaker Trucking	
Bid Item No.	**Description**	**Est Quan**	**Units**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**
11a	Provide and Install 200 Gallon Flocculant Mixing Tank	1	EA	$3,890.19	$3,890.19	$ 11,400.00	$ 11,400.00	$ 631.00	$ 631.00	$ 9,900.00	$ 9,900.00
11b	Provide and Install 3/4 HP mixer	1	EA	$4,029.98	$4,029.98	$ 12,700.00	$ 12,700.00	$ 2,600.00	$ 2,600.00	$ 11,000.00	$ 11,000.00
11c	Provide and Install Peristaltic Pump, Tubing, and PVC Pipe	1	L.S.		$3,916.13		$ 11,400.00		$ 3,050.00		$ 9,900.00
12	**Water Treatment System Operation, Maintenance and Monitoring**										
12a	Summer Operation, Maintenance, and Monitoring	15	30 Calendar Days	$16,824.47	$252,367.01	$ 22,900.00	$ 343,500.00	$ 35,000.00	$ 525,000.00	$ 30,000.00	$ 450,000.00
12b	Winter Operation, Maintenance, and Monitoring	21	30 Calendar Days	$12,369.13	$259,751.72	$ 24,100.00	$ 506,100.00	$ 25,000.00	$ 525,000.00	$ 7,500.00	$ 157,500.00
12c	Snow Removal	148	EA	$269.00	$39,812.00	$ 190.00	$ 28,120.00	$ 1,260.00	$ 186,480.00	$ 750.00	$ 111,000.00
12d	Provide, Store, and Handle Anionic Flocculant	6	55-gallon drums	$337.00	$2,022.00	$ 2,539.00	$ 15,234.00	$ 1,220.00	$ 7,320.00	$ 1,500.00	$ 9,000.00
12e	Provide, Store, and Handle Hydrated Lime Product	198	Tons	$231.00	$45,738.00	$ 216.00	$ 42,768.00	$ 194.00	$ 38,412.00	$ 225.00	$ 44,550.00
13	**Maintenance of Major Equipment**										
13a	Lime Screw Conveyor Shear Pins/Flex Coupling	1	EA	$60.00	$60.00	$ 8,634.00	$ 8,634.00	$ 1,380.00	$ 1,380.00	$ 7,500.00	$ 7,500.00
13b	Lime Screw Coveyor Motor	1	EA	$3,426.29	$3,426.29	$ 3,047.00	$ 3,047.00	$ 2,330.00	$ 2,330.00	$ 2,600.00	$ 2,600.00
13c	Lime Slurry and Dosing Tank Mixers	1	EA	$4,029.98	$4,029.98	$ 6,095.00	$ 6,095.00	$ 2,600.00	$ 2,600.00	$ 5,300.00	$ 5,300.00
13d	Flocculant Tank Mixer	1	EA	$4,029.98	$4,029.98	$ 6,095.00	$ 6,095.00	$ 2,600.00	$ 2,600.00	$ 5,300.00	$ 5,300.00
13e	Lime Slurry Pump	1	EA	$5,449.35	$5,449.35	$ 14,100.00	$ 14,100.00	$ 10,600.00	$ 10,600.00	$ 14,000.00	$ 14,000.00
13f	Peristaltic Pump	1	EA	$2,714.98	$2,714.98	$ 4,825.00	$ 4,825.00	$ 3,050.00	$ 3,050.00	$ 4,200.00	$ 4,200.00
13g	Peristaltic Pump Head Assembly	1	EA	$562.59	$562.59	$ 2,412.00	$ 2,412.00	$ 388.00	$ 388.00	$ 2,100.00	$ 2,100.00
13h	Tank Level Indicators	1	EA	$3,302.45	$3,302.45	$ 6,095.00	$ 6,095.00	$ 831.00	$ 831.00	$ 5,300.00	$ 5,300.00
13i	Influent Line 8" Flow Meter	1	EA	$6,739.95	$6,739.95	$ 7,491.00	$ 7,491.00	$ 8,520.00	$ 8,520.00	$ 6,500.00	$ 6,500.00
13j	pH Probe and Controller	1	EA	$2,277.52	$2,277.52	$ 6,095.00	$ 6,095.00	$ 2,850.00	$ 2,850.00	$ 5,300.00	$ 5,300.00
13k	RCTS-60 Motor	1	EA	$5,740.00	$5,740.00	$ 2,793.00	$ 2,793.00	$ 941.00	$ 941.00	$ 2,400.00	$ 2,400.00
13l	5-HP Submersible Pump	1	EA	$2,000.20	$2,000.20	$ 4,571.00	$ 4,571.00	$ 3,290.00	$ 3,290.00	$ 4,000.00	$ 4,000.00
13m	7-HP Submersible Pump	1	EA	$2,412.70	$2,412.70	$ 5,079.00	$ 5,079.00	$ 3,750.00	$ 3,750.00	$ 4,400.00	$ 4,400.00
13n	1-HP Submersible Pump	1	EA	$977.20	$977.20	$ 3,047.00	$ 3,047.00	$ 1,870.00	$ 1,870.00	$ 2,600.00	$ 2,600.00
13o	1.5-HP Submersible Pump	1	EA	$981.60	$981.60	$ 3,047.00	$ 3,047.00	$ 1,880.00	$ 1,880.00	$ 2,600.00	$ 2,600.00
13p	2-inch Flow Meter	1	EA	$1,696.00	$1,696.00	$ 3,809.00	$ 3,809.00	$ 3,940.00	$ 3,940.00	$ 3,300.00	$ 3,300.00
13q	3-inch Flow Meter	1	EA	$3,680.00	$3,680.00	$ 3,174.00	$ 3,174.00	$ 4,010.00	$ 4,010.00	$ 2,800.00	$ 2,800.00
13r	4-inch Flow Meter	1	EA	$4,744.00	$4,744.00	$ 3,682.00	$ 3,682.00	$ 4,350.00	$ 4,350.00	$ 3,200.00	$ 3,200.00
13s	Sediment Pond Sludge Removal	6	EA	$32,150.00	$192,900.00	$ 44,400.00	$ 266,400.00	$ 39,800.00	$ 238,800.00	$ 3,900.00	$ 23,400.00
13t	Cleaning of IWT RCTS-60HS Unit	3	EA	$4,198.56	$12,595.68	$ 1,905.00	$ 5,715.00	$ 2,480.00	$ 7,440.00	$ 2,800.00	$ 8,400.00
14	**Construct, Operate and Maintain Phase II Dewatering System**										
14a	Construct, Operate, and Maintain Phase II Dewatering System	1	L.S.		$80,000.00		$ 23,800.00		$ 30,000.00		$ 10,000.00

TABLE 3.1 Bid Summary for McLaren Mine Reclamation Project

BID TABULATION				Engineer Estimate		Knife River		Oftedal Construction, Inc.		Shumaker Trucking	
Bid Item No.	Description	Est Quan	Units	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
15	**Stabilization /Dehydration of Mine Wastes**										
15a	Strip, load, Haul and Stockpile Cover Soils	48,128	C.Y.	$7.81	$375,688.36	$ 7.00	$ 336,896.00	$ 6.00	$ 288,768.00	$ 4.00	$ 192,512.00
15b	Provide, Store, and Handle Quick Lime Product	13,400	TON	$157.00	$2,103,800.00	$ 260.00	$ 3,484,000.00	$ 190.00	$ 2,546,000.00	$ 200.00	$ 2,680,000.00
15c	Stabilization of Tailings and Other Saturated Mine Wastes/Impacted Soils	168,915	B.C.Y.	$11.17	$1,886,485.31	$ 22.50	$ 3,800,587.50	$ 20.00	$ 3,378,300.00	$ 18.00	$ 3,040,470.00
16	**Excavate Repository and Stockpile Soil**										
16a	Excavate Repository and Stockpile Soil	60,400	B.C.Y.	$2.80	$169,120.00	$ 5.00	$ 302,000.00	$ 7.00	$ 422,800.00	$ 3.00	$ 181,200.00
16b	Construct Earthen Dams	1	L.S.		$9,819.99		$ 20,300.00		$ 8,000.00		$ 10,000.00
16c	Partially Backfill Existing Dry Channel	1	L.S.		$10,975.28		$ 35,800.00		$ 35,000.00		$ 26,500.00
17	**Install Repository Cap**										
17a	Provide and Install Interim Cap	43,750	S.Y.	$5.50	$240,625.00	$ 7.00	$ 306,250.00	$ 10.00	$ 437,500.00	$ 3.00	$ 131,250.00
17b (S)	Provide and Install Geocushion	26,500	S.Y.	$2.25	$59,625.00	$ 3.10	$ 82,150.00	$ 4.00	$ 106,000.00	$ 3.00	$ 79,500.00
17c (S)	Provide and Install HDPE Cap Liner	26,500	S.Y.	$5.60	$148,400.00	$ 14.50	$ 384,250.00	$ 7.00	$ 185,500.00	$ 6.00	$ 159,000.00
17d (S)	Provide and Install Geocomposite Drainage Material	26,500	S.Y.	$5.00	$132,500.00	$ 5.40	$ 143,100.00	$ 7.00	$ 185,500.00	$ 5.25	$ 139,125.00
17e	Install Repository Cover Soil Cap	25,000	C.Y.	$3.60	$90,000.00	$ 9.80	$ 245,000.00	$ 12.00	$ 300,000.00	$ 6.00	$ 150,000.00
18	**Organic Amendment**										
18a	Organic Amendment	6,818	Dry Tons	$198.00	$1,349,964.00	$ 144.00	$ 981,792.00	$ 155.00	$ 1,056,790.00	$ 262.50	$ 1,789,725.00
19	**Backfill Excavated Areas with Amended Cover Soil**										
19a	Backfill Excavated Areas with Amended Cover Soil	43,560	L.C.Y.	$6.00	$261,360.00	$ 10.00	$ 435,600.00	$ 8.00	$ 348,480.00	$ 6.00	$ 261,360.00
20	**Stream Reconstruction**										
20a	Soda Butte Creek Reconstruction	1,475	L.F.	$548.00	$808,300.00	$ 300.00	$ 442,500.00	$ 450.00	$ 663,750.00	$ 375.00	$ 553,125.00
20b	Miller Creek Reconstruction	525	L.F.	$548.00	$287,700.00	$ 300.00	$ 157,500.00	$ 350.00	$ 183,750.00	$ 375.00	$ 196,875.00
20c	Soda Butte Creek Grade Control Structures	32	EA	$5,930.43	$189,773.91	$ 4,004.00	$ 128,128.00	$ 12,000.00	$ 384,000.00	$ 20,000.00	$ 640,000.00
20d	Miller Creek Grade Control Structures	14	EA	$5,930.43	$83,026.09	$ 4,200.00	$ 58,800.00	$ 12,000.00	$ 168,000.00	$ 20,000.00	$ 280,000.00
20e	Install Isolation Cofferdams	3	EA	$3,600.00	$10,800.00	$ 8,533.00	$ 25,599.00	$ 10,000.00	$ 30,000.00	$ 7,500.00	$ 22,500.00
20f	Install Willow Fascines	400	L.F.	$13.00	$5,200.00	$ 14.00	$ 5,600.00	$ 56.00	$ 22,400.00	$ 14.00	$ 5,600.00
20g	Install Willow Brush Layer	1,300	L.F.	$9.00	$11,700.00	$ 12.50	$ 16,250.00	$ 6.00	$ 7,800.00	$ 12.00	$ 15,600.00
20h	Install Tree Boles with Root Wads	1	L.S.		$23,500.00		$ 4,292.00		$ 12,000.00		$ 5,000.00
20i	Install Log Grade Control Structures	2	EA	$3,726.27	$7,452.54	$ 1,682.00	$ 3,364.00	$ 1,500.00	$ 3,000.00	$ 5,000.00	$ 10,000.00
20j	Install Log Wing Deflectors	3	EA	$414.03	$1,242.09	$ 1,082.00	$ 3,246.00	$ 1,500.00	$ 4,500.00	$ 2,500.00	$ 7,500.00
20k	Backfill and Grade Former Soda Butte Creek Channel	1	L.S.		$48,000.00		$ 21,900.00		$ 40,000.00		$ 30,000.00
20l	Relocate East Bridge	1	L.S.		$18,965.57		$ 44,400.00		$ 35,000.00		$ 25,000.00
20m	Remove and Dispose of West Bridge	1	L.S.		$24,841.81		$ 31,700.00		$ 55,000.00		$ 25,000.00
21	**Storm Water Control Systems**										
21a	Construct Type 1 Grass Lined Channel	700	L.F.	$60.00	$42,000.00	$ 65.00	$ 45,500.00	$ 50.00	$ 35,000.00	$ 50.00	$ 35,000.00
21b	Construct Type 2 Grass Lined Channel	380	L.F.	$76.00	$28,880.00	$ 80.50	$ 30,590.00	$ 50.00	$ 19,000.00	$ 50.00	$ 19,000.00
21c	Construct Type 3 Grass Lined Channel	400	L.F.	$62.00	$24,800.00	$ 59.50	$ 23,800.00	$ 50.00	$ 20,000.00	$ 50.00	$ 20,000.00
21d	Construct Type 3 Riprap Channel	10	L.F.	$185.00	$1,850.00	$ 247.00	$ 2,470.00	$ 300.00	$ 3,000.00	$ 50.00	$ 500.00
21e	Construct Grouted Riprap Channel	120	L.F.	$152.00	$18,240.00	$ 179.00	$ 21,480.00	$ 300.00	$ 36,000.00	$ 200.00	$ 24,000.00

TABLE 3.1 Bid Summary for McLaren Mine Reclamation Project

BID TABULATION				Engineer Estimate		Knife River		Oftedal Construction, Inc.		Shumaker Trucking	
Bid Item No.	Description	Est Quan	Units	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
21f	Construct Storm Water Drain System	720	L.F.	$100.00	$72,000.00	$ 63.00	$ 45,360.00	$ 100.00	$ 72,000.00	$ 75.00	$ 54,000.00
21g	Construct Repository Grouted Riprap Lined V-Channel	710	L.F.	$170.00	$120,700.00	$ 196.00	$ 139,160.00	$ 300.00	$ 213,000.00	$ 200.00	$ 142,000.00
21h	Construct RPP Lined Channel	190	L.F.	$72.00	$13,680.00	$ 39.50	$ 7,505.00	$ 50.00	$ 9,500.00	$ 30.00	$ 5,700.00
21i	Install 36" HDPE Culvert	1	L.S.		$65,988.11		$ 6,873.00		$ 1,000.00		$ 6,000.00
21j	Install 24" HDPE Culvert	1	L.S.		$3,500.00		$ 2,167.00		$ 7,000.00		$ 4,500.00
21k	Install 36" inch Temporary HDPE/CMP Culvert	1	L.S.		$8,184.87		$ 7,387.00		$ 10,000.00		$ 6,000.00
22	**Install Erosion Control Mat**										
22a	Install Erosion Control Mat	8,100	S.Y.	$4.09	$33,110.66	$ 4.40	$ 35,640.00	$ 5.00	$ 40,500.00	$ 3.50	$ 28,350.00
23	**Fertilize and Seed**										
23a	Upland Areas	31	AC	$1,200.00	$37,200.00	$ 1,320.00	$ 40,920.00	$ 1,200.00	$ 37,200.00	$ 1,000.00	$ 31,000.00
23b	Riparian Areas (Streambanks)	0.8	AC	$3,000.00	$2,400.00	$ 8,100.00	$ 6,480.00	$ 1,200.00	$ 960.00	$ 7,000.00	$ 5,600.00
24	**Mulch**						$ -				
24a	Straw Mulch	26	AC	$2,500.00	$65,000.00	$ 3,335.00	$ 86,710.00	$ 800.00	$ 20,800.00	$ 2,000.00	$ 52,000.00
24b	Hydromulch	5	AC	$3,200.00	$16,000.00	$ 4,099.00	$ 20,495.00	$ 2,500.00	$ 12,500.00	$ 3,500.00	$ 17,500.00
25	**Plant Tree and Shrub Tubelings**										
25a	Plant Russet Buffaloberry Shrub Tubelings	600	EA	$6.00	$3,600.00	$ 14.00	$ 8,400.00	$ 6.00	$ 3,600.00	$ 15.00	$ 9,000.00
25b	Plant Douglas-fir Tree Seedlings	400	EA	$6.00	$2,400.00	$ 14.00	$ 5,600.00	$ 6.00	$ 2,400.00	$ 15.00	$ 6,000.00
26	**Install Construction BMPs**										
26a (S)	Install Compost Filter Sox	1,800	L.F.	$20.00	$36,000.00	$ 9.90	$ 17,820.00	$ 4.00	$ 7,200.00	$ 9.00	$ 16,200.00
26b	Install Stream Protection Structures	1,040	L.F.	$15.00	$15,600.00	$ 12.00	$ 12,480.00	$ 50.00	$ 52,000.00	$ 15.00	$ 15,600.00
26c	Install Stone Check Dams	6	EA	$180.00	$1,080.00	$ 443.00	$ 2,658.00	$ 500.00	$ 3,000.00	$ 900.00	$ 5,400.00
	TOTAL BASE BID PRICE:				**$13,407,089**	**$**	**19,037,281.50**	**$**	**18,294,810.00**	**$**	**20,653,082.00**

TABLE 3.1 Bid Summary for McLaren Mine Reclamation Project

BID TABULATION				Engineer Estimate		Knife River		Oftedal Construction, Inc.		Shumaker Trucking	
Bid Item No.	**Description**	**Est Quan**	**Units**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**
A-2	**Excavate, Load, Haul, Stockpile, Scale and Transport Stabilized Tailings Materials to Off-Site Processing Facility**										
A-2a	Provide, Install and Remove Truck Scale	1	Construction Schedule	$340,260.88	$340,260.88	$ 100,000.00	$ 100,000.00	$ 20,800.00	$ 20,800.00	$ 50,000.00	$ 50,000.00
A-2b	Excavate, Load, Haul, Stockpile, and Transport Stabilized Tailings Materials to Off-Site Processing Facility	68,700	Ton	$85.00	$5,839,500.00	$ 63.50	$ 4,362,450.00	$ 79.00	$ 5,427,300.00	$ 99.00	$ 6,801,300.00
A-2c	Excavate, Load, Haul, Place and Compact Stabilized Tailings, Mine Wastes and Impacted Soils in the Repository	148,800	C.Y.	$9.25	$1,376,400.00	$ 5.00	$ 744,000.00	$ 6.10	$ 907,680.00	$ 6.00	$ 892,800.00
	TOTAL BID ALTERNATIVE No. 2 PRICE:				**$7,556,160.88**		**$5,206,450.00**		**$6,355,780.00**		**$7,744,100.00**
	TOTAL BID PRICE				**$20,963,249.47**		**$24,243,731.50**		**$24,650,590.00**		**$28,397,182.00**

3.6 CONTRACT AGREEMENT

The Contract Agreement with Knife River was executed on April 16, 2010. The Notice to Proceed was issued on May 5, 2010, with a start date no later than June 1, 2010. The original contract time was 1,963 consecutive calendar days which was not increased during the 2010 construction seasoned/schedule. The anticipated completion date for the McLaren Tailings Abandoned Mine Reclamation Project is October 15, 2015. The Contract Agreement is provided in Appendix A.

3.7 CONSTRUCTION START-UP

A Pre-Construction Meeting was held at Montana Tech in Butte, MT on May 3, 2010. A copy of the Pre-Construction Meeting Minutes is included in Appendix A. The proposed Knife River construction schedule and sequencing was discussed. Other items discussed included the Health and Safety Plan, Quality Control Plan, Dust Control, Traffic Control Plan, numerous material submittals, surveying needs, access to the site without the bridges, public perceptions, submittal and pay request processes, and the fuel adjustment submittal. Bi-weekly progress meetings were scheduled for every other Wednesday at 8:00 a.m. during the construction season. The meetings were held at the Pioneer Field Office located in Cooke City, Montana, with site visits conducted after the meeting. Knife River stated that their normal work week would consist of five 10-hour days.

Knife River mobilized equipment to the site on June 1, 2010 and started work on June 2, 2010.

3.8 PROJECT SUBMITTALS

Prior to the start of construction, Knife River provided the required submittals as specified in the Pre-Construction Meeting and the Special Provisions. The submittal process is ongoing throughout the completion of the McLaren Tailings Abandoned Mine Site. Prior to starting a project task, Knife River submits the required materials submittals, plans, and certifications to the Engineer for approval. The reviewed and approved project submittals for 2010 for the McLaren Tailings Abandoned Mine Reclamation Project are provided in Appendix A.

3.9 2010 CONSTRUCTION OVERVIEW

Knife River started 2010 construction season work on June 2, 2010 and completed all 2010 construction activities on October 28, 2010. The work will be completed over 6 consecutive construction seasons with winter shutdowns typically from mid-October to early June of each year.

Construction activities during the month of June 2010 included the following:

- Mobilized equipment and materials;
- Installed Best Management Practices (BMPs) including filter sox, silt fencing, and stream protection structures;
- Installed traffic control signage;

- Improved site access from Highway 212;
- Cleared and grubbed trees and wood debris;
- Constructed Mechanically Stabilized Earth (MSE) embankment mock-up;
- Salvaged and stockpiled cover soils in area of haul roads;
- Excavated waste rock for haul road construction;
- Constructed a portion of the haul roads;
- Constructed the east bridge supersill subgrade;
- Prepared the subgrade and constructed MSE north and south embankments for the west bridge;
- Installed the east bridge over Soda Butte Creek;
- Constructed Dewatering Control Building pad; and
- Conducted initial excavation of the on-site repository.

Construction activities during the month of July 2010 included the following:

- Continued construction of the Dewatering Control Building pad;
- Excavated an open drain to dewater the hillside south of the Dewatering Control Building;
- Continued excavation of the on-site repository;
- Partially backfilled existing dry channel present within repository footprint;
- Continued clearing and grubbing activities;
- Installed additional silt fence;
- Installed the diesel storage tank and containment;
- Conducted initial construction of building footings and foundations;
- Installed 30-inch drop structure for the Dewatering Control Building;
- Completed the south MSE embankment for the west bridge;
- Installed the west bridge;
- Constructed the east and west buttress dams in the repository;
- Installed the Storm Water Channel #5 culvert;
- Abandoned the three repository monitoring wells (MW-1, MW-2, and MW-3) and pumping well PW-1 using bentonite chips; and
- Installed the jersey barriers along the site access.

Construction activities during the month of August 2010 included the following:

- Poured the building footings and foundations;
- Continued excavation of the on-site repository;
- Excavated on-site riprap from the repository;
- Salvaged and stockpiled cover soil from a portion of sediment pond area;
- Installed the pitless adaptors on the pumping wells;
- Initiated lime stabilization of tailings with the ALLU system;
- Delivered lime guppy and quicklime to site;
- Installed and operated initial construction dewatering system;
- Installed Sediment Pond Inlets #1 and #2 and perimeter water bypass piping to location outside building footing and foundations;
- Delivered compost and amended cover soils;
- Installed buried piping for C-3 series pumping wells;

- Installed concrete for the building floor; and
- Chipped timber and wood debris and stockpiled on-site.

Construction activities during the month of September 2010 included the following:

- Installed amended cover soils on the south slope on east end of the site;
- Constructed the steel Dewatering Control Building;
- Continued delivery of compost and quick lime;
- Constructed Storm Water Channels #4 and #5
- Installed the pitless adaptor and buried piping for C2-1 and C2-2 pumping wells;
- Installed the site transformers;
- Dewatered the tailings excavation;
- Excavated tailings;
- Stabilized tailings using the ALLU system;
- Stockpiled tailings in the repository;
- Fertilized, seeded and installed erosion control mat on south slope on east end of the site;
- Installed building insulation;
- Installed underground wiring to C3 series pumping wells;
- Hydro mulched and seeded cover soil stockpiles; and
- Removed the initial construction dewatering system.

Construction activities during the month of October 2010 consisted of the following:

- Continued tailings stabilization;
- Constructed a portion of the sediment pond from Station 1+00 to 2+85;
- Continued delivery of quick lime;
- Continued installation of building insulation;
- Constructed electrical room in building;
- Dewatered tailings excavation;
- Excavated tailings;
- Stabilized tailings using the ALLU system;
- Completed the Dewatering Control Building;
- Installed a grade control structure at west end of repository;
- Installed the heating system and overhead door in building;
- Installed interim cap over stockpiled tailings;
- Implemented winter shutdown punch list; and
- Decontaminated equipment, and secured the site for winter.

All activities were completed and the site secured on October 28, 2010.

3.10 WORK DIRECTIVE CHANGES

During the 2010 construction season at the McLaren Tailings Abandoned Mine Site Reclamation Project a total of 18 Work Directive Changes were executed. Six of these Work Directive Changes resulted in the change order outlined in the section below. The executed Work Directive Changes are provided in Appendix A.

3.11 CHANGE ORDERS

One change order was issued for the project during the 2010 construction season. A copy of the change order is included in Appendix B. Change Order #1 increased the total contract amount by $24,912.60. The following is a description and justification provided in Change Order #1.

"Additional MSE materials were required to ensure the stability of the north and south bridge abutments for the West Bridge. After removal of the trees, and clearing and grubbing there was additional MSE construction on the west ends of the north and south abutments. The backfilling of these areas required additional materials and installation time.

There was an inconsistency between the pipe size for pumping well C3-10 on Sheets GW-24 and GWD-1. The correct pipe size for pumping well C3-10 was 3 inches. The installation of the 3-inch pipe ensured that the maximum flow rate could be obtained from well C3-10.

The pumping wells for the project were designed to obtain a maximum flow rate. To obtain the required flow rates each pumping well was designed with a specific pipe size as shown on the Construction Drawings. This pipe size included the piping from the pitless adaptor to the submersible pump. The drop pipe specified on Sheet GWD-2 of the Construction Drawings was a 2-inch polyvinyl chloride (PVC) pipe. Pumping wells C2-1, C2-2, C2-3, C3-1, C3-3, and C3-9 require the drop pipe size as specified in the table on Sheet GWD-2 of the Construction Drawings and not the 2-inch drop pipe as shown. The installation of a 2-inch pipe restricted flows resulting in lower flow rates. The installation of the specified pipe size ensured that the maximum flow rates from pumping wells C2-1, C2-2, C2-3, C3-1, C3-3, and C3-9 was obtained.

It was specified that the piping to the dewatering wells would be sloped so that the water in the piping would drain back to the pumping wells. In preparing to install the piping for the C-3 series wells located on the north side of the site, it was determined that there was a low area in the area of C3-8 and to get piping to slope back to the wells would require that the piping trench be in excess of 12 feet deep. Excavation to these depths created a safety concern, therefore, it was determined that the pitless adaptors would be installed at 6 feet below the ground surface at each well and a tee and valve be installed in the building so each of the wells and their associated piping could be blown out for the winter shutdown. For the wells that require a Gould's pump (C3-1, C3-3, C2-1, C2-2, C2-3), the Contractor installed a drain back valve just above the pump so the piping could be drained back into the well. The Contractor installed the piping from the building to C3-9 and C3-10 so that water would drain back to the wells. This change removes the safety concerns associated with the deep trenching activities and provides an alternate method of draining the pumping well piping.

A 4–inch pitless adaptor was to be installed in pumping well C3-9 to accommodate the 4-inch high density polyethylene (HDPE) piping and the expected flow rates. Well C3-9 was installed utilizing 8-inch casing. The 8-inch steel casing would not accommodate the installation of the 4-inch pitless adaptor (casing too small). Therefore, to accommodate the installation of the pitless adaptor, the Contractor was instructed to install a 13-inch casing on the upper 8 feet of well C3-9. This allowed the installation of the 4-inch pitless adaptor.

It was determined that the specified dosing tank for the water treatment system would not support the weight of the Appcor mixer specified in Bid Item 10i, " Provide and Install Dosing Tank Mixer" and on Sheet GWD-35 of the Construction Drawings. To support the weight of the Appcor mixer an external stand would be required to support the mixer. The Contractor will fabricate and install the external mixer stand to support the mixer for the dosing tank."

3.12 WORK STOPPAGES

There were no official work stoppages during the 2010 construction season/schedule.

3.13 WORK PROGRESS

Initially work was slowed during the month of June by wet site conditions and the delivery of materials and equipment to the site. This was overcome by the Contractor and work progressed well. In August, Knife River requested that they be allowed to stabilize tailings ahead of schedule to become familiar with and identify problems associated with the ALLU Systems that would be utilized to stabilize the tailings. The DEQ concurred and Knife River obtained the necessary equipment to initiate stabilization of the tailings. The ALLU equipment was mobilized to the site on August 9, 2010. Several difficulties were encountered stabilizing the tailings using the ALLU system. Injection of the quicklime into the tailings was affected by frequent plugging of the power mixer, and plugging of the system feed lines. The *in-situ* mixing of the lime and tailings was limited by the cohesiveness of the tailings, especially in the upper interval where groundwater was absent. Unexpected system shutdowns occurred due to the programming in the Data Acquisition Controller (DAC). Knife River addressed the lime feed and mixing problems by modifying the feed hose diameter, reducing lime application rates, changing cutting teeth and utilizing modified nozzles, and stabilizing tailings in truck boxes and in stockpiles. The plugging issues associated with the quick lime (3/8-inch minus product) persisted throughout the season. A finer quicklime product (1/8-inch minus product) was tested near the end of the season and significantly reduced the frequency of plugging incidents. The stabilization of tailings was very slow from August 9, 2010 until first or second week in September 2010. From mid-September 2010 until October 13, 2010 production was better but slower than production anticipated by the Knife River. Knife River is considering an alternate stabilization method as back up to ALLU system shut downs during the 2011 construction activities.

In addition, weather conditions slowed the work on the McLaren Tailings Abandoned Mine Site Reclamation Project. During the 2010 Construction season there were five weather days. The following are a list of the documented weather days:

- July 6, 2010;
- September 1, 2010;
- September 10, 2010;
- October 8, 2010; and
- October 11, 2010.

3.14 REQUESTS FOR PAYMENT

Knife River issued 5 Requests for Payment for the project. Copies of the Requests for Payment are included electronically in Appendix C.

Pay Request #1 for $1,510,597.96 less retainages for the Work completed from project start-up through June 30, 2010.

Pay Request #2 for $619,559.54 less retainages for the Work completed from July 1, 2010 through July 26, 2010.

Pay Request #3 for $369,781.52 less retainages for the Work completed from August 1, 2010 through August 31, 2010.

Pay Request #4 for $848,125.42 less retainages for the Work completed from September 1, 2010 through September 30, 2010.

Pay Request #5 for $323,966.59 less retainages for the Work completed from October 1, 2010 through October 31, 2010.

3.15 2010 WINTER SHUTDOWN

The 2010 construction season ended on October 28, 2010. Due to the elevation of the McLaren Tailings Abandoned Mine Site project, substantial snowfall and severe cold conditions are experienced fairly early in the fall bringing normal construction activities to a halt.

3.16 2010 WINTER SHUTDOWN INSPECTION

As part of the 2010 winter shutdown, Pioneer and DEQ representatives conducted an inspection of the BMPs on October 13, 2010 prior to demobilization of equipment from the site. The punch list items for winter shut down were completed between October 13, 2010 and October 15, 2010. All earthwork was completed on October 15, 2010. Work continued inside the Dewatering Control Building from October 15, 2010 to October 28, 2010. Prior to winter shutdown on the Dewatering Control Building, all equipment and materials were moved inside the building for storage. Pioneer conducted an inspection of the building on October 28, 2010 and secured the building and gates for the winter. Details of the inspections can be found on the completed daily inspection logs/field notes for the McLaren Tailings Abandoned Mine Site Reclamation Project are provided in Appendix D.

4.0 2010 CONSTRUCTION

4.1 SUMMARY OF THE PROJECT

The 2010 project construction consisted of the following:

- Mobilized and demobilized equipment;

- Constructed BMPs;
- Constructed Highway access;
- Installed 2 modular steel bridges for temporary stream crossings;
- Excavated waste rock materials for haul road construction;
- Constructed storm water control Channels #4 and #5;
- Provided 272.5 dry tons of compost to amend cover soils for storm water Channels #4 and #5 construction and capping of south slope;
- Installed amended cover soil and erosion control mat on south slope;
- Constructed Site haul roads;
- Salvaged 11,262 bank cubic yards (bcy) of cover soil from Dewatering Control Building pad and haul roads;
- Graded Dewatering Control Building subgrade to lines and grades;
- Excavated 11,154 bcy of tailings materials from under Dewatering Control Building and sediment detention pond areas;
- Backfilled excavation area with structural fill materials to achieve the Dewatering Control Building subgrade;
- Provided and installed Sediment Pond Inlets #1 and #2 and perimeter water bypass piping through building floor and past building footings;
- Installed pitless adaptors at each pumping well and buried piping to building floor;
- Installed building footings and concrete slab;
- Provided and installed 42-foot by 54-foot pre-fabricated steel building;
- Installed heating systems for building;
- Installed French drain system off southeast corner of Dewatering Control Building;
- Cleared and grubbed Site and removed timber from repository area;
- Chipped and stockpiled wood debris;
- Partially backfilled existing dry channel within repository footprint
- Excavated 46,700 bcy from repository for cover soil and structural fill materials;
- Implemented initial construction dewatering;
- Provided, stored and handled 370 tons of quick lime;
- Stabilized 11,154 bcy of tailings;
- Excavated, loaded, hauled, and placed 8,923 bcy of stabilized tailings, mine wastes, and impacted soils in repository;
- Backfilled excavation north of sediment pond with waste rock materials between Station 1+00 to 2+85;
- Installed interim cap over tailings stockpiles in repository; and
- Fertilized, seeded, and mulched cover soil stockpiles.

The area was secured for the winter on October 28, 2010 and 2011 construction activities will begin when Site conditions permit. Activities are tentatively scheduled to start on June 1, 2011 but are flexible depending on weather conditions.

4.2 MAJOR EQUIPMENT LIST

Table 4-1 lists the major pieces of equipment used on this project.

TABLE 4-1
EQUIPMENT USED AT McLAREN TAILINGS ABANDONED MINE SITE
RECLAMATION PROJECT 2010 CONSTRUCTION SEASON

TYPE	MAKE/MODEL	SIZE/CAPACITY
Rubber-Tired Loader	CAT 938E	5 cy
Rubber-Tired Backhoe	John Deere 310SG	
Track Excavator	Komatsu PC 400	5 cy
Track Excavator	CAT 336D	3 cy
Track Excavator	CAT 320	3 cy
Off-Road Trucks (2 each)	John Deere 350D	35 Ton
Off-Road Truck	Volvo 635E	35 Ton
Track Bulldozers (2 each)	John Deere 850J	
Compactor	Volvo	Smooth Drum Roller
Water Truck	CAT Articulating	5,000 Gallons
Fork Lift	CAT	
Water Pump	Gorman Rupp 10 Series	
Fuel Truck		
Semi Tractor		Lime Pup
Skidsteer	Bobcat	
Tub Grinder		
PF 7+7 Pressure Feeder	ALLU	14 cubic meters
PF 7 Pressure Feeder	ALLU	7 cubic meters

cy – cubic yards

4.3 CONTRACTOR EMPLOYEES

The Contractor utilized 3 to 11 employees on the project site at various times; the majority of the labor involved 5 to 7 equipment operators, with the remaining personnel serving in a supervisory capacity.

4.4 SUBCONTRACTORS

During the implementation of the project, Knife River utilized the following subcontractors to complete specific project tasks.

Northwest Linings & Geotextile Products, Inc.
21000 77th Avenue
Kent, Washington 98032
Phone: (253)-872-0244
Project Tasks: Installed interim cap on stabilized tailings stockpiles

COP Construction
242 S 64th Street West
Billings, Montana 59106
Phone: (406)-656-4632
Fax: 406-656-4808
Project Tasks: Installed Dewatering Control Building and piping.

Quality Landscape and Seeding
191 Lower Lynch Creek Road
Plains, Montana 59859-9556
Phone: (406) 826-7300
Project Tasks: Performed hydro-seeding and installed filter sox BMPs.

Rocky Mountain Compost
3060 Farley Lane
Billings, Montana 59101
Phone: (406) 690-4451
Project Tasks: Supplied compost.

Tri-State Truck & Equipment
5250 Midland Road
Billings, Montana 59105
Phone - (406) 245-318
Project Tasks: Provided mobile equipment maintenance.

Stormwater Construction
7654 2nd Street NW
Havre, Montana 59501
Phone (406) 265-2070
Project Tasks: Constructed west bridge embankments and storm water Channels #4 and #5.

Northern Industrial Hygiene
201 South 30th Street
Billings, Montana 59101
Phone: (406) 245-7766
Project Tasks: Provided health and safety services for Knife River.

HKM
222 North 32nd Street, Suite 700
Billings, Montana 59101
Phone (406) 656-6399
Project Tasks: Provided QA/QC services for Knife River.

Dick Irvin Trucking
575 Wilson
Box 950
Shelby, Montana 59474
Phone: (406) 434-5583
Project Tasks: Transported quick lime to the project site.

ALLU
Cross Country Pipeline Supply
2420 Uravan Street
Aurora, Colorado 80011-3535
Phone (303) 361-6797
Project Tasks: Provided lime mixing equipment for tailings stabilization.

Alpine Reflections
114 Rock Road
Belgrade, Montana 59714
Phone: (406) 388-2265
Project Tasks: Performed hand fertilizing, seeding, and erosion control mat installation.

DW Burns Plumbing
310 Story Rd
Emigrant, Montana 59027
Phone: (406)-333-486
Project Tasks: Provided and installed building heaters.

Kaufman Overhead Doors
133 Barnett Lane
Bozeman, Montana 59715-9623
Phone: (406) 586-9636
Project Tasks: Provided and installed overhead door.

4.5 CONSTRUCTION ACTIVITIES

4.5.1 Project Oversight

During construction, Pioneer provided project oversight for the McLaren Tailings Abandoned Mine Site Reclamation Project. The responsibility of the oversight personnel is to ensure that the Contractor is implementing the work as specified in the construction bid document and communicate discrepancies to the Engineer, Owner, and the Contractor. In addition, the oversight personnel documented the implementation of the project. This documentation consists of daily field notes. The daily field notes for the McLaren Tailings Abandoned Mine Site Reclamation Project are provided in Appendix D.

4.5.2 Quality Assurance

During the construction activities, it is necessary to perform QA measures to ensure the project was being implemented as specified in the Construction Bid Package. These QA measures at the McLaren Tailings Abandoned Mine Site consisted of sampling amended cover soils for organic matter content, sampling compost for moisture content, sampling for geotechnical parameters (soil proctors), compaction testing of the structural fill and repository materials, structural concrete testing, and stabilized tailings moisture testing. Laboratory data sheets and results for the sampling and testing conducted during the construction activities at the McLaren Tailings Abandoned Mine Site Reclamation Project can be found electronically in Appendix E.

4.5.3 Project Information

Additional project information collected to document the project includes compost scale tickets, quick lime scale tickets, seed tickets, and straw weed-free certifications. This project information can be found electronically in Appendix F.

4.5.4 Bi-Weekly Progress Meetings

Bi-weekly progress meetings were held during the McLaren Tailings Abandoned Mine Site Reclamation Project. The progress meetings were held at Pioneer's field office located in Cooke City, Montana. The dates and location of the weekly progress meeting were mutually agreed upon by the Contractor, Owner, and Engineer and were typically held at 8:00 a.m. on every other Wednesday during the project. Knife River prepared an agenda and conducted each bi-weekly progress meeting. The meetings identified decisions required, scheduling, milestones accomplished, opportunities, problems, and corrective actions. Each meeting included a discussion of the work to be done in the two weeks following the meeting (two-week look-ahead). Field visits were conducted after each progress meeting. The bi-weekly progress meeting agenda and meeting notes are included electronically in Appendix G.

4.5.5 Daily Activities

Detailed descriptions of the daily construction activities are included electronically in the Daily Project Logs in Appendix H, and Knife River's Quality Control Reports provided electronically in Appendix I.

4.5.6 Construction Photographs

Daily construction photos were taken by oversight personnel to document construction activities and the implementation of the project. The photographs have been assembled into daily photo logs and provided electronically in Appendix J.

5.0 QUANTITIES USED

5.1 PROJECT SUMMARY

The 2010 construction activities were completed in 150 consecutive calendar days. Table 5-1 summarizes the final quantities and costs associated with each pay item for the 2010 construction season. Table 5-1 also lists the Change Orders (modifications) that were not part of the original contract.

6.0 ANNUAL PROJECT COSTS

The 2010 construction costs for the McLaren Tailings Abandoned Mine Site reclamation project was $3,905,391.85. During the 2010 construction season there was one change order that increased the contract amount by $24,912.60.

The 2010 construction inspection and management costs were $224,315.41.

7.0 POST 2010 CONSTRUCTION

7.1 SITE CONDITIONS AFTER COMPLETION

The McLaren Tailings Abandoned Mine Site Reclamation Project is 16% completed. Storm water controls (Channel #4 and #5), BMPs, and interim caps have been installed to protect the construction completed in 2010 and Soda Butte Creek from storm water run-off from the site.

7.2 MAINTENANCE OR FOLLOW-UP

Follow-up or maintenance of the site will be determined based on the start up of the 2011 construction activities. All maintenance will be incorporated into the 2011 construction activities.

7.3 2010 AS-BUILT DRAWINGS

Pioneer prepared the As-Built Drawings for the 2010 construction season. The As-Built Drawings were based on field survey data and field notes. The As-Built Drawings represent the site conditions after completion of 2010 construction season. The As-Built Drawings are provided in hard copy in Appendix K.

TABLE 5.1: 2010 Construction Quantities and Costs

Pay Item No.		ITEM DESCRIPTION	UNIT	PROJECT EST. QNTY	UNIT BID PRICE	2010 CONSTRUCTION TOTAL Quantity	Cost	% Comp.
		BASE BID SCHEDULE*						
1. Mobilization, Demobilization, Bonding, and Insurance								
	1	Mobilization, Demobilization, Bonding, and Insurance	LS	1.00	$ 1,900,000.00	0.50	$950,000.00	50%
2	**Facilities and Infrastrucutre**							
a		Provide and Install West Bridge	L.S.	1	$ 500,000.00	1.00	$500,000.00	100%
b		Provide and Install East Bridge	L.S.	1	$ 285,250.00	1.00	$285,250.00	100%
c		Construct Temporary Haul Roads	L.F.	3,600	$ 35.00	900.00	$31,500.00	25%
d		Maintain and Obliterate Temporary Haul Roads	L.S.	1	$ 120,900.00	0.200	$24,180.00	20%
e		Clear, Grub and Timber Removal	L.S.	1	$ 150,000.00	0.90	$135,000.00	90%
f		Provide, Install and Remove Jersey Barriers	EA	48	$ 673.00	40.00	$26,920.00	83%
3		**Provide and Install Electrical Systems**						
a (S)		Provide and Install Electrical Systems	L.S	1	$ 508,000.00	0.14	$71,120.00	14%
4		**Well Abandonment**						
a		Well Abandonment	EA	20	$ 1,067.00	1.00	$1,067.00	5%
5		**Initial Construction Dewatering System**						
a		Install Temporary Submersible Pump	EA	4	$ 5,000.00	4.00	$20,000.00	100%
b		Provide and Install Temporary Piping System to Storm Water Channel #5	L.S.	1	$ 15,200.00	1.00	$15,200.00	100%
c		Initial Start Up, Monthly Operation, and Maintenance of Initial Construction Dewatering System	MONTH	5	$ 5,000.00	0.60	$3,000.00	12%
d		Disassemble Initial Construction Dewatering System	L.S.	1	$ 1,000.00	0.00	$0.00	0%
6		**Dewatering Control Building**						
a		Grade and Install 6 inch Base Course Building Pad	L.S.	1	$ 148,900.00	0.98	$145,922.00	98%
b		Install Concrete Footings and Concrete Slabs	L.S.	1	$ 95,200.00	1.00	$95,200.00	100%
c		Provide and Install Dewatering Control Building	L.S.	1	$ 158,700.00	0.90	$142,830.00	90%
d		Provide and Install Insulation	L.S.	1	$ 38,100.00	1.00	$38,100.00	100%
e		Provide and Install Heating System	L.S.	1	$ 31,700.00	0.50	$15,850.00	50%
f		Remove Dewatering Control Building	L.S.	1	$ 12,700.00	0.00	$0.00	0%
7		**Sediment Pond Construction**						
a		Construct Sediment Detention Pond	L.S.	1	$ 190,000.00	0.15	$28,500.00	15%
b		Provide and Install Sediment Detention Pond Inlet #1	L.S.	1	$ 7,110.00	0.50	$3,555.00	50%
c		Provide and Install Sediment Detention Pond Inlet #2	L.S.	1	$ 4,950.00	0.50	$2,475.00	50%
d		Provide and Install Perimeter Water Bypass	L.S.	1	$ 5,841.00	1.00	$5,841.00	100%
e		Provide and Install Sediment Detention Pond Outlet Structure	L.S.	1	$ 35,000.00	0.00	$0.00	0%
f		Provide and Install Sediment Detention Pond Liner	S.Y	6,896	$ 10.50	0.00	$0.00	0%
g (S)		Provide, Install and Remove Gunderbooms	EA	2	$ 53,200.00	0.00	$0.00	0%
h		Provide, Install and Remove Wildlife Exclusion Fence	LF	1,660	$ 26.50	0.00	$0.00	0%
i		Remove Sediment Detention Pond	L.S.	1	$ 10,000.00	0.00	$0.00	0%
8		**Phase I Dewatering System Installation**						
a		Phase I Dewatering System Installation	L.S.	1	$ 175,000.00	0.60	$105,000.00	60%
b		Miscellaneous Phase I Dewatering Equipment and Operation	Schedule	3	$27,900.00	0.75	$20,925.00	25%
9		**Dewatering Control Building Piping, Valves, and Instrumentation**						
a		Provide and Install 2 inch Schedule 40 PVC Pipe	L.F.	240	$ 21.50	0.00	$0.00	0%
b		Provide and Install 3 inch Schedule 40 PVC Pipe	L.F.	100	$ 23.00	0.00	$0.00	0%
c		Provide and Install 4 inch Schedule 40 PVC Pipe	L.F.	100	$ 33.00	0.00	$0.00	0%
d		Provide and Install 6 inch Schedule 40 PVC Pipe	L.F.	10	$ 39.50	0.00	$0.00	0%
e		Provide and Install 8 inch Schedule 40 PVC Pipe	L.F.	140	$ 51.00	0.00	$0.00	0%
f		Provide and Install 8 inch Schedule 40 PVC Pipe Coupling	E.A.	1	$ 330.00	0.00	$0.00	0%
g		Provide and Install 2-inch 90 degree Schedule 40 PVC Elbow	E.A.	17	$ 108.00	0.00	$0.00	0%
h		Provide and Install 3-inch 90 degree Schedule 40 PVC Elbow	E.A.	4	$ 152.00	0.00	$0.00	0%
i		Provide and Install 4-inch 90 degree Schedule 40 PVC Elbow	E.A.	10	$ 165.00	0.00	$0.00	0%
j		Provide and Install 6-inch 90 degree Schedule 40 PVC Elbow	E.A.	1	$ 190.00	0.00	$0.00	0%
k		Provide and Install 8-inch 90 degree Schedule 40 PVC Elbow	E.A.	8	$ 254.00	0.00	$0.00	0%
l		Provide and Install 8-inch X 8-inch x 6-inch 45 degree Schedule 40 PVC Reducing Wye	E.A.	1	$ 787.00	0.00	$0.00	0%
m		Provide and Install 2-inch X 2-inch X 2-inch Schedule 40 PVC Pipe Tee	E.A.	28	$ 110.00	0.00	$0.00	0%
n		Provide and Install 3-inch X 3-inch X 3-inch Schedule 40 PVC Pipe Tee	E.A.	6	$ 116.00	0.00	$0.00	0%
o		Provide and Install 4-inch X 4-inch X 4-inch Schedule 40 PVC Pipe Tee	E.A.	2	$ 178.00	0.00	$0.00	0%

TABLE 5.1: 2010 Construction Quantities and Costs

Pay Item No.		ITEM DESCRIPTION	UNIT	PROJECT EST. QNTY.	UNIT BID PRICE	2010 CONSTRUCTION TOTAL Quantity	Cost	% Comp.
p		Provide and Install 8-inch X 8-inch X 8-inch Schedule 40 PVC Pipe Tee	E.A.	2	$ 444.00	0.00	$0.00	0%
q		Provide and Install 2-inch Schedule 40 PVC Pipe End Cap	E.A.	14	$ 109.00	0.00	$0.00	0%
r		Provide and Install 3-inch Schedule 40 PVC Pipe End Cap	E.A.	3	$ 105.00	0.00	$0.00	0%
s		Provide and Install 4-inch Schedule 40 PVC Pipe End Cap	E.A.	1	$ 152.00	0.00	$0.00	0%
t		Provide and Install 8-inch Schedule 40 PVC Pipe End Cap	E.A.	4	$ 203.00	0.00	$0.00	0%
u		Provide and Install 8-inch X 2-inch Schedule 40 PVC Clamp on Saddle	E.A.	27	$ 241.00	0.00	$0.00	0%
v		Provide and Install 8-inch X 3-inch Schedule 40 PVC Saddle	E.A.	6	$ 254.00	0.00	$0.00	0%
w		Provide and Install 8-inch X 4-inch Schedule 40 PVC Saddle	E.A.	3	$ 406.00	0.00	$0.00	0%
x		Provide and Install 4-inch X 2-inch Schedule 40 PVC Reducer	E.A.	6	$ 165.00	0.00	$0.00	0%
y		Provide and Install 3-inch X 2-inch Schedule 40 PVC Reducer	E.A.	8	$ 165.00	0.00	$0.00	0%
z		Provide and Install 4-inch Schedule 40 PVC Check Valve	E.A.	2	$ 2,158.00	0.00	$0.00	0%
aa		Provide and Install 2-Inch Air Relief Valve	E.A.	17	$ 279.00	0.00	$0.00	0%
ab		Provide and Install 3-Inch Pipe Hangers	E.A.	3	$ 343.00	0.00	$0.00	0%
ac		Provide and Install 8-Inch Pipe Hangers	E.A.	10	$ 406.00	0.00	$0.00	0%
ad		Provide and Install 2-inch Flow Meter	E.A.	12	$ 2,412.00	0.00	$0.00	0%
ae		Provide and Install 8-inch Flow Meter	E.A.	1	$ 6,602.00	0.00	$0.00	0%
af		Provide and Install 2-inch Gate Valve	E.A.	13	$ 203.00	0.00	$0.00	0%
ag		Provide and Install 3-inch Gate Valve	E.A.	4	$ 267.00	0.00	$0.00	0%
ah		Provide and Install 4-inch Gate Valve	E.A.	1	$ 508.00	0.00	$0.00	0%
ai		Provide and Install 6-inch Lever Handle Type Butterfly Valve	E.A.	1	$ 533.00	0.00	$0.00	0%
aj		Provide and Install 8-inch Lever Handle Type Butterfly Valve	E.A.	3	$ 736.00	0.00	$0.00	0%
ak		Provide and Install 6-inch ANSI PVC Flange for 6" Butterfly Valve	E.A.	2	$ 203.00	0.00	$0.00	0%
al		Provide and Install 8-inch ANSI PVC Flange	E.A.	8	$ 241.00	0.00	$0.00	0%
am		Provide and Install 2-inch PVC Ball Valve	E.A.	26	$ 178.00	0.00	$0.00	0%
an		Provide and Install 3-inch PVC Ball Valve	E.A.	8	$ 216.00	0.00	$0.00	0%
ao		Provide and Install 4-inch PVC Ball Valve	E.A.	8	$ 279.00	0.00	$0.00	0%
ap		Provide and Install 2-inch Unistrut Clamp	E.A.	42	$ 165.00	0.00	$0.00	0%
aq		Provide and Install 3-inch Unistrut Clamp	E.A.	12	$ 190.00	0.00	$0.00	0%
ar		Provide and Install 4-inch Unistrut Clamp	E.A.	7	$ 216.00	0.00	$0.00	0%
as		Provide and Install 8-inch Unistrut Clamp	E.A.	11	$ 203.00	0.00	$0.00	0%
at		Provide and Install Unistrut "L" Bracket	E.A.	4	$ 305.00	0.00	$0.00	0%
au		Provide and Install Unistrut Channel	L.F.	126	$ 33.00	0.00	$0.00	0%
av		Provide and Install 2-inch Female Cam-Lok	E.A.	5	$ 203.00	0.00	$0.00	0%
aw		Provide and Install 2-inch Male Cam-Lok	E.A.	5	$ 190.00	0.00	$0.00	0%
ax		Provide and Install 4-inch Female Cam-Lok	E.A.	9	$ 203.00	0.00	$0.00	0%
ay		Provide and Install 4-inch Male Cam-Lok	E.A.	11	$ 203.00	0.00	$0.00	0%
az		Provide and Install 4-inch Cam-Lok Protective Cover	E.A.	2	$ 330.00	0.00	$0.00	0%
ba		Provide and Install 8-inch Male Cam-Lok	E.A.	1	$ 432.00	0.00	$0.00	0%
bb		Provide and Install 8-inch Cam-Lok Protective Cover	E.A.	1	$ 432.00	0.00	$0.00	0%
bc		Provide and Install 3-inch Poly Tank Fitting (Bulkhead)	E.A.	2	$ 279.00	0.00	$0.00	0%
bd		Provide and Install 4-inch Poly Tank Fitting (Bulkhead)	E.A.	7	$ 394.00	0.00	$0.00	0%
be		Provide and Install 6-inch Poly Tank Fitting (Bulkhead)	E.A.	2	$ 597.00	0.00	$0.00	0%
bf		Provide and Install 2-inch Schedule 40 PVC Union	E.A.	30	$ 165.00	0.00	$0.00	0%
bg		Provide and Install 4-inch Pipe Penetration Boot	E.A.	2	$ 368.00	0.00	$0.00	0%
bh		Provide and Install 8-inch Pipe Penetration Boot	E.A.	1	$ 521.00	0.00	$0.00	0%
bi		Provide and Install 2-Inch Flex Hose	L.F.	32	$ 14.00	0.00	$0.00	0%
bj		Provide and Install 4-Inch Flex Hose	L.F.	32	$ 20.50	0.00	$0.00	0%
bk		Provide and Install Eye Wash Station	E.A.	2	$ 648.00	0.00	$0.00	0%
bl		Provide and Install 4-Inch Female Thread Adaptor to Threaded Male Cam-Lock to PVC	E.A.	11	$ 190.00	0.00	$0.00	0%
bm		Provide and Install 2-Inch Female Thread Adaptor to Threaded Male Cam-Lock to PVC	E.A.	5	$ 190.00	0.00	$0.00	0%
bn		Provide and Install 3/4-Inch Petcocks Brass	E.A.	6	$ 178.00	0.00	$0.00	0%
bo		Provide and Install 8-Inch by 3/4-Inch PVC Tapping Saddle	E.A.	6	$ 254.00	0.00	$0.00	0%
bp		Provide and Install 3-inch Flow Meter	E.A.	5	$ 1,778.00	0.00	$0.00	0%
bq		Provide and Install 4-inch Flow Meter	E.A.	1	$ 2,285.00	0.00	$0.00	0%
br		Provide and Install 3-inch ANSI PVC Flange	E.A.	10	$ 178.00	0.00	$0.00	0%
bs		Provide and Install 4-inch ANSI PVC Flange	E.A.	2	$ 178.00	0.00	$0.00	0%

TABLE 5.1: 2010 Construction Quantities and Costs

Pay Item No.		ITEM DESCRIPTION	UNIT	PROJECT EST. QNTY	UNIT BID PRICE	2010 CONSTRUCTION TOTAL Quantity	Cost	% Comp.
10		**Provide and Install Water Treatment System**						
a		Provide and Install Horizonal Screw Conveyor	L.S.	1	$ 38,100.00	0.00	$0.00	0%
b		Provide and Install 600 Gallon Lime Slurry Tanks	E.A.	2	$ 25,400.00	1.80	$45,720.00	90%
c		Provide and Install 3/4 HP Lime Slurry Mixers	E.A.	2	$ 12,700.00	0.00	$0.00	0%
d		Provide and Install Tank Level Indicator	E.A.	1	$ 12,700.00	0.00	$0.00	0%
e		Provide and Install Air Actuated Knife Valves	E.A.	2	$ 6,348.00	0.00	$0.00	0%
f		Provide and Install 3-Gallon Air Compressor	L.S.	1	$ 2,539.00	0.00	$0.00	0%
g		Provide and Install 2 HP Lime Slurry Pump	E.A.	1	$ 31,700.00	0.00	$0.00	0%
h		Provide and Install Dosing Tank and Stand	E.A.	1	$ 15,200.00	0.90	$13,680.00	90%
i		Provide and Install Dosing Tank Mixer	E.A.	1	$ 12,700.00	0.00	$0.00	0%
j		Provide and Install pH Probe and Controller	E.A.	4	$ 2,500.00	0.00	$0.00	0%
k (S)		Provide and Install RCTS-60HS	E.A.	1	$ 190,500.00	0.90	$171,450.00	90%
l		Provide and Install Lime Silo	L.S.	1	$ 76,200.00	0.00	$0.00	0%
m		Provide and Install Staircase and Platform	L.S.	1	$ 31,700.00	0.00	$0.00	0%
11		**Flocculant System**						
a		Provide and Install 200 Gallon Flocculant Mixing Tank	EA	1	$ 11,400.00	0.00	$0.00	0%
b		Provide and Install 3/4 HP mixer	EA	1	$ 12,700.00	0.00	$0.00	0%
c		Provide and Install Peristaltic Pump, Tubing, and PVC Pipe	L.S.	1	$ 11,400.00	0.00	$0.00	0%
12		**Water Treatment System Operation, Maintenance and Monitoring**						
a		Summer Operation, Maintenance, and Monitoring	30 Calendar Days	15	$ 22,900.00	0.00	$0.00	0%
b		Winter Operation, Maintenance, and Monitoring	30 Calendar Days	21	$ 24,100.00	0.00	$0.00	0%
c		Snow Removal	EA	148	$ 190.00	0.00	$0.00	0%
d		Provide, Store, and Handle Anionic Flocculant	55-gallon drums	6	$ 2,539.00	0.00	$0.00	0%
e		Provide, Store, and Handle Hydrated Lime Product	Tons	198	$ 216.00	0.00	$0.00	0%
13		**Maintenance of Major Equipment**						
a		Lime Screw Conveyor Shear Pins/Flex Coupling	EA	1	$ 8,634.00	0.00	$0.00	0%
b		Lime Screw Coveyor Motor	EA	1	$ 3,047.00	0.00	$0.00	0%
c		Lime Slurry and Dosing Tank Mixers	EA	1	$ 6,095.00	0.00	$0.00	0%
d		Flocculant Tank Mixer	EA	1	$ 6,095.00	0.00	$0.00	0%
e		Lime Slurry Pump	EA	1	$ 14,100.00	0.00	$0.00	0%
f		Peristaltic Pump	EA	1	$ 4,825.00	0.00	$0.00	0%
g		Peristaltic Pump Head Assembly	EA	1	$ 2,412.00	0.00	$0.00	0%
h		Tank Level Indicators	EA	1	$ 6,095.00	0.00	$0.00	0%
i		Influent Line 8" Flow Meter	EA	1	$ 7,491.00	0.00	$0.00	0%
j		pH Probe and Controller	EA	1	$ 6,095.00	0.00	$0.00	0%
k		RCTS-60 Motor	EA	1	$ 2,793.00	0.00	$0.00	0%
l		5-HP Submersible Pump	EA	1	$ 4,571.00	0.00	$0.00	0%
m		7-HP Submersible Pump	EA	1	$ 5,079.00	0.00	$0.00	0%
n		1-HP Submersible Pump	EA	1	$ 3,047.00	0.00	$0.00	0%
o		1.5-HP Submersible Pump	EA	1	$ 3,047.00	0.00	$0.00	0%
p		2-inch Flow Meter	EA	1	$ 3,809.00	0.00	$0.00	0%
q		3-inch Flow Meter	EA	1	$ 3,174.00	0.00	$0.00	0%
r		4-inch Flow Meter	EA	1	$ 3,682.00	0.00	$0.00	0%
s		Sediment Pond Sludge Removal	EA	6	$ 44,400.00	0.00	$0.00	0%
t		Cleaning of IWT RCTS-60HS Unit	EA	3	$ 1,905.00	0.00	$0.00	0%
14		**Construct, Operate and Maintain Phase II Dewatering System**						
a		Construct, Operate, and Maintain Phase II Dewatering System	L.S.	1	$ 23,800.00	0.00	$0.00	0%
15		**Stabilization /Dehydration of Mine Wastes**						
a		Strip, load, Haul and Stockpile Cover Soils	C.Y.	48,128	$ 7.00	11,262.00	$78,834.00	23%
		Fuel Adjustment pay request #2 See attached fuel calculations		500	$ 0.04	500.00	$20.00	100%
		Fuel Adjustment pay request #3 See attached fuel calculations		200	$ 0.08	200.00	$16.00	100%
		Fuel Adjustment pay request #4 See attached fuel calculations		4,800	$ 0.10	4,800.00	$480.00	100%
		Fuel Adjustment pay request #5 See attached fuel calculations		1,262	$ 0.14	1,262.00	$176.68	100%
b		Provide, Store, and Handle Quick Lime Product	TON	13,400	$ 260.00	370.21	$96,254.60	3%
		Fuel Adjustment pay request #3 See attached fuel calculations		127.93	$ 1.46	127.93	$186.78	100%
		Fuel Adjustment pay request #4 See attached fuel calculations		181.61	$ 1.86	181.61	$337.79	100%
		Fuel Adjustment pay request #5 See attached fuel calculations		60.67	$ 2.61	60.67	$158.35	100%

TABLE 5.1: 2010 Construction Quantities and Costs

Pay Item No.		ITEM DESCRIPTION	UNIT	PROJECT EST. QNTY	UNIT BID PRICE	2010 CONSTRUCTION TOTAL Quantity	Cost	% Comp.
c		Stabilization of Tailings and Other Saturated Mine Wastes/Impacted Soils	B.C.Y.	168,915	$ 22.50	11,154.00	$250,965.00	7%
		Fuel Adjustment pay request #4 See attached fuel calculations		8,400.00	$ 0.25	8,400.00	$2,100.00	100%
		Fuel Adjustment pay request #5 See attached fuel calculations		2,754	$ 0.34	2,754.00	$936.36	100%
16		**Excavate Repository and Stockpile Soil**						
a		Excavate Repository and Stockpile Soil	B.C.Y.	60,400	$ 5.00	47,600.00	$238,000.00	79%
		Fuel Adjustment pay request #2 See attached fuel calculations		27,000	$ 0.03	27,000.00	$810.00	100%
		Fuel Adjustment pay request #3 See attached fuel calculations		5,500	$ 0.07	5,500.00	$385.00	100%
		Fuel Adjustment pay request #4 See attached fuel calculations		5,900	$ 0.09	5,900.00	$531.00	100%
		Fuel Adjustment pay request #5 See attached fuel calculations		9,200	$ 0.13	9,200.00	$1,196.00	100%
b		Construct Earthen Dams	L.S.	1	$ 20,300.00	1.00	$20,300.00	100%
c		Partially Backfill Existing Dry Channel	L.S.	1	$ 35,800.00	1.00	$35,800.00	100%
17		**Install Repository Cap**						
a		Provide and Install Interim Cap	S.Y.	43,750	$ 7.00	4,638.00	$32,466.00	11%
b (S)		Provide and Install Geocushion	S.Y.	26,500	$ 3.10	0.00	$0.00	0%
c (S)		Provide and Install HDPE Cap Liner	S.Y.	26,500	$ 14.50	0.00	$0.00	0%
d (S)		Provide and Install Geocomposite Drainage Material	S.Y.	26,500	$ 5.40	0.00	$0.00	0%
e		Install Repository Cover Soil Cap	C.Y.	25,000	$ 9.80	0.00	$0.00	0%
18		**Organic Amendment**						
a		Organic Amendment	Dry Tons	6,818	$ 144.00	272.51	$39,241.44	4%
		Fuel Adjustment pay request #3 See attached fuel calculations		234.76	$ 3.58	234.76	$840.44	100%
		Fuel Adjustment pay request #4 See attached fuel calculations		37.75	$ 4.57	37.75	$172.52	100%
19		**Backfill Excavated Areas with Amended Cover Soil**						
a		Backfill Excavated Areas with Amended Cover Soil	L.C.Y.	43,560	$ 10.00	2,250.00	$22,500.00	5%
		Fuel Adjustment pay request #4 See attached fuel calculations		2,800.00	$ 0.22	2,800.00	$616.00	100%
		Fuel Adjustment pay request #5 See attached fuel calculations		1,550	$ 0.30	1,550.00	($465.00)	100%
20		**Stream Reconstruction**						
a		Soda Butte Creek Reconstruction	L.F.	1,475	$ 300.00	0.00	$0.00	0%
b		Miller Creek Reconstruction	L.F.	525	$ 300.00	0.00	$0.00	0%
c		Soda Butte Creek Grade Control Structures	EA	32	$ 4,004.00	1.00	$4,004.00	3%
d		Miller Creek Grade Control Structures	EA	14	$ 4,200.00	0.00	$0.00	0%
e		Install Isolation Cofferdams	EA	3	$ 8,533.00	0.00	$0.00	0%
f		Install Willow Fascines	L.F.	400	$ 14.00	0.00	$0.00	0%
g		Install Willow Brush Layer	L.F.	1,300	$ 12.50	0.00	$0.00	0%
h		Install Tree Boles with Root Wads	L.S.	1	$ 4,292.00	0.00	$0.00	0%
i		Install Log Grade Control Structures	EA	2	$ 1,682.00	0.00	$0.00	0%
j		Install Log Wing Deflectors	EA	3	$ 1,082.00	0.00	$0.00	0%
k		Backfill and Grade Former Soda Butte Creek Channel	L.S.	1	$ 21,900.00	0.00	$0.00	0%
l		Relocate East Bridge	L.S.	1	$ 44,400.00	0.00	$0.00	0%
m		Remove and Dispose of West Bridge	L.S.	1	$ 31,700.00	0.00	$0.00	0%
21		**Storm Water Control Systems**						
a		Construct Type 1 Grass Lined Channel	L.F.	700	$ 65.00	208.00	$13,520.00	30%
b		Construct Type 2 Grass Lined Channel	L.F.	380	$ 80.50	0.00	$0.00	0%
c		Construct Type 3 Grass Lined Channel	L.F.	400	$ 59.50	400.00	$23,800.00	100%
d		Construct Type 3 Riprap Channel	L.F.	10	$ 247.00	35.00	$8,645.00	350%
e		Construct Grouted Riprap Channel	L.F.	120	$ 179.00	0.00	$0.00	0%
f		Construct Storm Water Drain System	L.F.	720	$ 63.00	66.00	$4,158.00	9%
g		Construct Repository Grouted Riprap Lined V-Channel	L.F.	710	$ 196.00	0.00	$0.00	0%
h		Construct RPP Lined Channel	L.F.	190	$ 39.50	160.00	$6,320.00	84%
i		Install 36" HDPE Culvert	L.S.	1	$ 6,873.00	1.00	$6,873.00	100%
j		Install 24" HDPE Culvert	L.S.	1	$ 2,167.00	0.00	$0.00	0%
k		Install 36" inch Temporary HDPE/CMP Culvert	L.S.	1	$ 7,387.00	0.00	$0.00	0%
22		**Install Erosion Control Mat**						
a		Install Erosion Control Mat	S.Y.	8,100	$ 4.40	6,461.00	$28,428.40	80%
23		**Fertilize and Seed**						
a		Upland Areas	AC	31	$ 1,320.00	3.75	$4,950.00	12%
b		Riparian Areas (Streambanks)	AC	0.8	$ 8,100.00	0.00	$0.00	0%
24		**Mulch**						
a		Straw Mulch	AC	26	$ 3,335.00	0.00	$0.00	0%
b		Hydromulch	AC	5	$ 4,099.00	2.35	$9,632.65	47%

TABLE 5.1: 2010 Construction Quantities and Costs

Pay Item No.		ITEM DESCRIPTION	UNIT	PROJECT EST. QNTY	UNIT BID PRICE	2010 CONSTRUCTION TOTAL Quantity	Cost	% Comp.
25		**Plant Tree and Shrub Tubelings**						
a		Plant Russet Buffaloberry Shrub Tubelings	EA	600	$ 14.00	0.00	$0.00	0%
b		Plant Douglas-fir Tree Seedlings	EA	400	$ 14.00	0.00	$0.00	0%
26		**Install Construction BMPs**						
a (S)		Install Compost Filter Sox	L.F.	1,800	$ 9.90	2,026.00	$20,057.40	113%
b		Install Stream Protection Structures	L.F.	1,040	$ 12.00	936.00	$11,232.00	90%
c		Install Stone Check Dams	EA	6	$ 443.00	6.00	$2,658.00	100%
A-2		**Excavate, Load, Haul, Stockpile, Scale and Transport Stabilized Tailings Materials to Off-Site Processing Facility**						
A-2a		Provide, Install and Remove Truck Scale	Construction Schedule	1	$ 100,000.00	0.00	$0.00	0%
A-2b		Excavate, Load, Haul, Stockpile, and Transport Stabilized Tailings Materials to Off-Site Processing Facility	Ton	68,700	$ 63.50	0.00	$0.00	0%
A-2c		Excavate, Load, Haul, Place and Compact Stabilized Tailings, Mine Wastes and Impacted Soils in the Repository	C.Y.	148,800	$ 5.00	4,550.00	$22,750.00	3%
		Fuel Adjustment pay request #4 See attached fuel calculations		4,000.00	$ 0.11	4,000.00	$440.00	100%
		Fuel Adjustment pay request #5 See attached fuel calculations		550	$ 0.16	550.00	$88.00	100%
CHANGE ORDERS								
1		Change Order #1	LS	1	$ 24,912.60	0.67	$16,691.44	67%
		TOTAL 2010 CONTRACT AMOUNT					$3,905,391.85	**16.09%**

8.0 REFERENCES

DEQ/MWCB-Pioneer, 1995. Montana Department of State Lands, Abandoned Mine Reclamation Bureau of Abandoned Hardrock Mine Priority Sites 1995 Summary Report. April 1995.

DEQ/MWCB-Pioneer, 2002. Draft Final Expanded Engineering/Cost Analysis for the McLaren Tailings Abandoned Mine Site (EEE/CA). May 2002.

DEQ/MWCB-Pioneer, 2009. Final Reclamation Design Report for the McLaren Tailings Abandoned Mine Site Cooke City, Montana. April 2009.