Remediation Cost Estimate Summary

Former Peregrine (US) Inc. Coldwater Road Facility
MLC ID 1327

February 26, 2010
Revised May 2010

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Background Information

The former Peregrine (US) Inc. (Peregrine) Coldwater Road Plant (site) is located northeast of the City of Flint in Genesee Township, Genesee County, Michigan at G1245 East Coldwater Road. All of the plant buildings have been demolished down to the foundations and slabs, which were left in place. The property is currently used periodically for product storage and container management, with fencing around the entire property. It is bounded on the east by the CSX Transportation property and rail line; on the south by Coldwater Road and commercial properties; on the north by the Coldwater Road Landfill Site (Motors Liquidation Company [MLC] ID 1103), including an approved Resource Conservation and Recovery Act (RCRA) Part B permitted plating waste landfill, which has been closed; and on the west by Horton Road, residential property, and Highway 475 North. Perimeter barriers include fencing around the site and the associated concrete building slabs. There are no surface-water bodies on the property. There are wetland areas on the Coldwater Road Landfill site north of the site, and Mott Lake, a dammed portion of the Flint River, is located 2 miles southeast of the former plant.

General Motors Corporation (formerly GM, now MLC) acquired the property that the plant was located on as vacant land in 1951 from several private parties. The Buick Motor Division started construction of the plant buildings that same year. The plant was operated by various GM business units, including Delphi, until GM sold the site to Peregrine in December 1996. Peregrine ceased operations in 1998 and GM's subsidiary, REALM, acquired the property in August 1999. From October 1999 to October 2000, the Administration Building was leased to GM as a Transition Center/Jobs Bank. REALM completed environmental decommissioning and demolition of all abovegrade structures in June 2001.

Prior to demolition, the facility was used by Delphi and Peregrine from 1995 to 1999 for the manufacture of the following automobile components: window regulators, door hinges, door modules, and seat adjusters. The latter two processes were discontinued upon transfer of the facility to Peregrine in December 1996. Manufacturing operations occurred in the main manufacturing building (Building 44), including window regulators, door hinges, door modules, seat adjusters, and other operations. Some component parts were heat-treated in the presence of barium salts to harden the steel. No machining, painting, heat treating, or plating was reported to take place in the facility after Peregrine commenced operations on January 2, 1997.

Other historical operations that were conducted at the facility (Delphi and/or Peregrine) used a variety of chemicals, including oils, greases, solvents, water treatment chemicals, minor amounts of paint, and barium salts for heat treating. Wastewaters generated by Delphi during washing activities were treated on site prior to discharge to the local publicly owned treatment works. On-site wastewater treatment plant (WWTP) operations were discontinued at the time of the property transfer to Peregrine in December 1996, and the WWTP was subsequently demolished by GM. Wastewaters generated by Peregrine during its parts stamping and manufacturing operations were subsequently managed through aboveground wastewater storage tanks formerly located in the northwest corner of the main manufacturing building (Building 44). These tanks were periodically emptied by a contracted waste hauler for off-site treatment and disposal.

Prior to the manufacture of automobile components by Delphi and Peregrine in 1995, historical activities at the facility consisted of a variety of other automotive parts-related operations. One of these historical operations was the former plating operations, for which there were reported to be 13 chrome plating lines and two zinc barrel plating lines. Other known historical processes included die casting, solvent-based adhesive/gluing, and painting operations.

Surrounding land use in the area consists of industrial and residential to the north, commercial and residential to the south, industrial to the east, and residential to the west.

Selected background information is provided below:

- Site Location
  1245 E. Coldwater Road
  Genesee Township, Michigan

- USEPA ID Numbers
  MIR000020743

Real Estate Information

The property is located northeast of the City of Flint in Genesee Township, Genesee County, Michigan. The site is assessed as vacant industrial manufacturing. The former buildings on the site were removed but the foundations and slabs remain. The entire property is paved and fenced. The property is zoned as I-2 -Heavy Industrial. There are currently no infrastructure or utilities on the property.

Environmental History

Several environmental investigations were conducted at the site as part of the property transfer from GM to Peregrine in December 1996. These investigations provided information regarding the solid waste management units and Areas of Concern identified by TechLaw during the Preliminary Assessment/Visual Site Inspection (September 1998), as well as other Areas of Interest (AOIs) identified in the Documentation of Current Conditions (DOCC) Report (March 31, 2000).

RCRA Facility Investigation (RFI) activities and various interim measures were conducted between 2000 and 2005. A summary is provided below:

- November 2000: RFI Report to Michigan Department of Natural Resources and Environment (MDNRE).

- March 2001: Comments on RFI Report from MDNRE.

- April 2001: RFI Addendum #1 to MDNRE.

- October 2001: Building Demolition Assessment (BDA)/Building Demolition (BD)/Demolition completed.

- 2001: Additional delineation and remediation activities in basement to facilitate demolition, pursuant to RFI Addendum #1.

- March 2002: Response to Comments on RFI Report to MDNRE, including RFI Addendum #2.

- 2002-2003: Additional delineation at AOIs and groundwater not in an aquifer investigation, pursuant to Addendum #2.

- 2004: Excavation of oil-impacted areas and soil exceeding criteria.

- 2005: Draft of Revised RFI Report prepared but not submitted to MDNRE.

Current Environmental Issues

Analytical data for the site, generated as part of the RFI, indicate that there were exceedances of Part 201 Generic Industrial Criteria in soil; however, all the locations with soil exceedances have been excavated and replaced with clean fill by GM. Analytical data indicates that there are exceedances of Michigan's Part 201 Generic Industrial Drinking Water Criteria in perched water at select locations. At all locations where a historical groundwater sample indicated an exceedance of Michigan's Part 201 Generic Industrial Drinking Water Criteria, at least one subsequent sample indicated analytical results below these criteria, with the exception of wells near the former drum storage area (MW-14 and DSA_MW-01), and wells that had a historical arsenic concentration below the historical drinking water criteria, but that exceed the current drinking water value for arsenic (MW-3, MW-4, and PFW-1). The former drum storage area has been remediated by excavating soil with concentrations above Michigan's Part 201 Generic Industrial Drinking Water Protection Criteria and replacing it with clean fill.

Remediation Scope of Work and Cost Estimate

This "Remediation Scope of Work and Cost Estimate" summarizes the discussions and agreements between MLC and applicable environmental regulatory agencies in connection with the plan of reorganization or liquidation for MLC, including the establishment of a post-confirmation trust to complete remediation. The objectives of this Remediation Scope of Work and Cost Estimate are to: i) describe activities and associated, assumed costs that are focused on MLC's goal of bringing the site to regulatory closure within the timeframes indicated in the accompanying "Project Schedule" table; and/or ii) describe any necessary long-term operation, maintenance, and monitoring tasks and associated, assumed costs that may be required for maintaining an environmentally protective remedy for the specified timeframe.

The scope of work presented below is based on the assumptions concerning conditions, rates, other costs, and other variables stated herein and in referenced documents. Significant variances

from these assumptions may result, if more favorable, in reductions in the scope and/or costs, and if less favorable, in increased or different scope and/or costs.

The anticipated work to be performed at the site includes the completion of outstanding reports, implementation of a deed restriction, installation of two monitoring wells, 30 years of groundwater monitoring, monitoring well abandonment, and ongoing inspections and maintenance of the security fence. The remediation cost estimates reflect these activities and are described in more detail below.

The remediation cost estimate for this site in current dollars (2010) is $1,633,178. This cost is based on a total Estimated Baseline/Engineering Cost of $1,416,280 and a contingency of $139,128 (ranging between 0 and 10 percent on a per task basis), as well as an Agency Oversight cost of $77,770. The Remediation Cost Estimate Summary spreadsheet provides a year-by-year breakdown of costs for each task included in this estimate. In addition, Appendix A includes a more detailed cost breakdown that supports these estimates.

Complete and Submit BDA/BD Reports

The draft BDA/BD Report and Contractor Performance Review Report will be completed and submitted to the MDNRE. The Estimated Baseline/Engineering Cost for this activity is $15,000 and is anticipated to be completed in 2010. The principal elements contained in this cost include labor and expenses.

Complete and Submit Environmental Indicator (EI) Report and RFI Reports

The Draft RFI Report must be completed and EI Determination Report will be completed and submitted to the MDNRE. The Estimated Baseline/Engineering Cost for this activity is $75,000 and is anticipated to be completed in 2010. The principal elements contained in this cost include labor and expenses.

Complete Interim Measures Report and Statement of Basis

The Interim Measures Report and Statement of Basis will be completed and submitted to the MDNRE. The Estimated Baseline/Engineering Cost for this activity is $125,000 and is anticipated to be completed in 2010. The principal elements contained in this cost include labor and expenses.

Develop and File Deed Restrictions

A restrictive covenant will be implemented for the site in the form of a deed restriction to restrict future site use to industrial/commercial purposes and to prohibit on-site groundwater use. The deed restriction will be recorded against the property title with the Registry of Deeds. The Estimated Baseline/Engineering Cost for this activity is $40,000 and is anticipated to be completed in 2010. The principal elements contained in this cost include labor and expenses.

Agency Coordination, Negotiation, and Reporting

Meetings and correspondence with the MDNRE will be completed in order to obtain concurrence from MDNRE that no further action is necessary. It is assumed that the MDNRE will agree that no further action is necessary, once it has received and reviewed all outstanding documentation outlined above. The Estimated Baseline/Engineering Cost for this activity is $25,000 and is anticipated to be completed in 2010. The principal elements contained in this cost include labor and expenses.

Project Management and Reporting

Project management activities are expected to include regulatory communication, client communication, cost tracking, subcontracting, scheduling, reporting, and other non-task related activities. The cost for project management was calculated based on the anticipated activities that will be performed for the site in 2010. The Estimated Baseline/Engineering Cost for this activity is $40,000 and is anticipated to be completed in 2010. The principal elements contained in this cost include labor and expenses.

Installation of Two Deep Monitoring Wells

Two additional wells will be installed into the deeper glacial drift aquifer. The depths, installation details, and locations of these wells will be determined based on negotiations with the MDNRE; however, the estimate assumes the construction of the two wells will be similar to well PFW-1, which is approximately 86 feet deep.

The Estimated Baseline/Engineering Cost for this activity is $57,530 (assumes $28,765 per well) and is anticipated to be completed in 2010. The principal elements contained in this cost include labor, drilling, and expenses.

Groundwater Monitoring Network Maintenance

This task includes the resurvey, redevelopment, and miscellaneous repair of 11 groundwater monitoring wells. Three monitoring wells no longer in use at the site will be abandoned. The Estimated Baseline/Engineering Cost for this activity is $29,500 and is anticipated to be completed in 2010. The principal elements contained in this cost include labor and expenses.

Groundwater Monitoring

Groundwater monitoring of 13 monitoring wells (nine shallow and four drift aquifer wells) will be completed quarterly for a period of 5 years, semiannually for a period of 5 years, and then annually for a period of 20 years. Tasks include gauging water levels and low-flow purging and sampling of the 13 wells. The annual Estimated Baseline/Engineering Cost for this activity is $78,540 per year for the first 5 years of quarterly groundwater monitoring ($392,700, between 2010 and 2014), $39,270 per year for the next 5 years of semiannual groundwater monitoring ($196,350, between 2015 and 2019), and $19,635 per year for the final 20 years of annual groundwater monitoring ($392,700, between 2020 and 2039). This anticipated reduction in the

groundwater monitoring activities is based on the assumption that constituent concentrations in groundwater will continue to be consistent and/or declining, which demonstrates a stabilized condition for groundwater.

The total undiscounted life cycle cost for this activity is $981,750, should this entire scope of work be implemented between 2010 and 2039. The principal elements contained in this cost include labor, expenses, and analytical costs to conduct these monitoring events. This monitoring is anticipated to prove that the shallow and deep aquifers are not impacted, and therefore, the full extent of the monitoring budget may not be exhausted.

Groundwater Monitoring Well Abandonment

After long-term monitoring is complete, the remaining wells at the site will be abandoned. This task includes abandoning 12 monitoring wells, including nine shallow and three drift wells. The fourth drift well is located on the Coldwater Landfill property and is addressed as part of that estimate. The wells will be abandoned in accordance with the MDNRE regulations and a Well Closure Report will be submitted.

The Estimated Baseline/Engineering Cost for this activity is $27,500, and is anticipated to be completed in 2039.

Regulatory Requirements

The regulatory requirements for the site are RCRA corrective action.

Project Schedule and Estimated Cost

The project schedule and estimated cost for the anticipated work to be performed is presented below.

Timeframe	Event	Responsibility	Estimated Baseline/Engineering Cost[1,2]
2010	Complete and Submit BDA/BD Reports	MLC	$15,000
2010	Complete and Submit EI Report and RFI Reports	MLC	$75,000
2010	Complete IM Report and Statement of Basis	MLC	$125,000
2010	Develop and File Deed Restrictions	MLC	$40,000
2010	Agency Coordination, Negotiation and Reporting	MLC	$25,000
2010	Project Management and Reporting	MLC	$40,000
2010	Installation of Two Deep Monitoring Wells	MLC	$57,530
2010	Groundwater Monitoring Network Maintenance	MLC	$29,500

Timeframe	Event	Responsibility	Estimated Baseline/Engineering Cost[1,2]
2010 to 2039	Groundwater Monitoring	MLC	$981,750
2039	Groundwater Monitoring Well Abandonment	MLC	$27,500

Notes:
1. Contingency not included in cost table.
2. Agency oversight cost not included. As shown below in the Remediation Cost Estimate Summary, the Agency oversight cost for each year assumed 5 percent of the sum of the total Estimated Baseline/Engineering Cost for the year and the specified contingency amount.

		Remediation Cost Estimate Summary																					
Year	No.	Complete and Submit BDA/BD Reports	Contingency	Complete and Submit EI Reports and RFI Report	Contingency	Complete IM Report and Statement of Basis	Contingency	Develop and File Deed Restrictions	Contingency	Agency Coord./ Negotiation & Reporting	Contingency	Project Management & Coordination	Contingency	Installation of New Deep Monitoring Wells	Contingency	Groundwater Monitoring Network Maintenance	Contingency	Groundwater Monitoring	Contingency	Monitoring Well Abandonment	Contingency	Agency Oversight
2010	1	$ 15,000	10%	$ 75,000	10%	$ 125,000	10%	$ 40,000	10%	$ 25,000	0%	$ 40,000	10%	$ 57,530	10%	$ 29,500	10%	$ 78,540	10%	$ -	0%	$ 26,581
2011	2	$ -	0%	$ -	10%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 78,540	10%	$ -	0%	$ 4,320
2012	3	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 78,540	10%	$ -	0%	$ 4,320
2013	4	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 78,540	10%	$ -	0%	$ 4,320
2014	5	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 78,540	10%	$ -	0%	$ 4,320
2015	6	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 39,270	10%	$ -	0%	$ 2,160
2016	7	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 39,270	10%	$ -	0%	$ 2,160
2017	8	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 39,270	10%	$ -	0%	$ 2,160
2018	9	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 39,270	10%	$ -	0%	$ 2,160
2019	10	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 39,270	10%	$ -	10%	$ 2,160
2020	11	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2021	12	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2022	13	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2023	14	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2024	15	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2025	16	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2026	17	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2027	18	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2028	19	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2029	20	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2030	21	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2031	22	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2032	23	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2033	24	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2034	25	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2035	26	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2036	27	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2037	28	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2038	29	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ -	0%	$ 1,080
2039	30	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ -	0%	$ 19,635	10%	$ 27,500	10%	$ 2,592

Appendix A

Notes and Calculations

APPENDIX A - Notes and Calculations
MLC Site 1327 - Former Peregrine (US) Inc. Coldwater Road Facility

Complete and Submit BDA/BD Reports (2010)

	Estimated Quantity	Unit	Unit Cost*	Estimated Cost
Building Demoltion Assesment				
Project Manager	14	Hours	$ 125.00	$ 1,750.00
Project Engineer	10	Hours	$ 85.00	$ 850.00
Technician	6	Hours	$ 85.00	$ 510.00
Database	10	Hours	$ 80.00	$ 800.00
Drafter	5	Hours	$ 75.00	$ 375.00
Clerical/Word Processor	5	Hours	$ 50.00	$ 250.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 150.00	$ 150.00
Building Demolition Report				
Project Manager	15	Hours	$ 125.00	$ 1,875.00
Project Engineer	12	Hours	$ 85.00	$ 1,020.00
Technician	10	Hours	$ 85.00	$ 850.00
Database	10	Hours	$ 80.00	$ 800.00
Drafter	8	Hours	$ 75.00	$ 600.00
Clerical/Word Processor	7	Hours	$ 50.00	$ 350.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 150.00	$ 150.00
Contractor Performance Review Report				
Project Manager	15	Hours	$ 125.00	$ 1,875.00
Project Engineer	20	Hours	$ 85.00	$ 1,700.00
Technician	4	Hours	$ 85.00	$ 340.00
Database	0	Hours	$ 80.00	$ -
Drafter	2	Hours	$ 75.00	$ 150.00
Clerical/Word Processor	10	Hours	$ 50.00	$ 500.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 150.00	$ 150.00
	Total Complete and Submit BDA/BD Reports			**$ 15,000.00**

Complete and Submit EI Reports and RFI Report (2010)

	Estimated Quantity	Unit	Unit Cost	Estimated Cost
Environmental Indicators Report				
Project Manager	20	Hours	$ 125.00	$ 2,500.00
Project Engineer	30	Hours	$ 85.00	$ 2,550.00
Technician	40	Hours	$ 85.00	$ 3,400.00
Database	4	Hours	$ 80.00	$ 320.00
Drafter	10	Hours	$ 75.00	$ 750.00
Clerical/Word Processor	12	Hours	$ 50.00	$ 600.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 1,500.00	$ 1,500.00
Remediation Feasability and Investigation Report				
Project Manager	140	Hours	$ 125.00	$ 17,500.00
Project Engineer	220	Hours	$ 85.00	$ 18,700.00
Technician	140	Hours	$ 85.00	$ 11,900.00
Database	80	Hours	$ 80.00	$ 6,400.00
Drafter	74	Hours	$ 75.00	$ 5,550.00
Clerical/Word Processor	36	Hours	$ 50.00	$ 1,800.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 1,500.00	$ 1,500.00
	Total Complete and Submit EI Reports and RFI Report			**$ 75,000.00**

APPENDIX A - Notes and Calculations
MLC Site 1327 - Former Peregrine (US) Inc. Coldwater Road Facility

Complete IM Report and Statement of Basis (2010)	Estimated Quantity	Unit	Unit Cost	Estimated Cost
Iterim Measures Report				
Project Manager	160	Hours	$ 125.00	$ 20,000.00
Project Engineer	280	Hours	$ 85.00	$ 23,800.00
Technician	160	Hours	$ 85.00	$ 13,600.00
Database	80	Hours	$ 80.00	$ 6,400.00
Drafter	80	Hours	$ 75.00	$ 6,000.00
Clerical/Word Processor	36	Hours	$ 50.00	$ 1,800.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 1,500.00	$ 1,500.00
Statement of Basis				
Project Manager	120	Hours	$ 125.00	$ 15,000.00
Project Engineer	200	Hours	$ 85.00	$ 17,000.00
Technician	120	Hours	$ 85.00	$ 10,200.00
Database	40	Hours	$ 80.00	$ 3,200.00
Drafter	40	Hours	$ 75.00	$ 3,000.00
Clerical/Word Processor	40	Hours	$ 50.00	$ 2,000.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 1,500.00	$ 1,500.00
	Total Complete IM Report and Statement of Basis			**$ 125,000.00**

Develop and File Deed Restrictions (2010)	Estimated Quantity	Unit	Unit Cost	Estimated Cost
Develop and File Deed Restrictions				
Project Manager	80	Hours	$ 125.00	$ 10,000.00
Project Engineer	100	Hours	$ 85.00	$ 8,500.00
Technician	20	Hours	$ 85.00	$ 1,700.00
Database	20	Hours	$ 80.00	$ 1,600.00
Drafter	20	Hours	$ 75.00	$ 1,500.00
Clerical/Word Processor	14	Hours	$ 50.00	$ 700.00
Deed Restriction Legal & Filing Fees	1	Lump Sum	$ 15,000.00	$ 15,000.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 1,000.00	$ 1,000.00
	Total Develop and File Deed Restrictions			**$ 40,000.00**

Agency Coord./Negotiation & Reporting (2010)	Estimated Quantity	Unit	Unit Cost	Estimated Cost
Agency Coord./Negotiation & Reporting				
Project Manager	80	Hours	$ 125.00	$ 10,000.00
Project Engineer	100	Hours	$ 85.00	$ 8,500.00
Technician	20	Hours	$ 85.00	$ 1,700.00
Database	20	Hours	$ 80.00	$ 1,600.00
Drafter	20	Hours	$ 75.00	$ 1,500.00
Clerical/Word Processor	14	Hours	$ 50.00	$ 700.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 1,000.00	$ 1,000.00
	Total Agency Coord./Negotiation & Reporting			**$ 25,000.00**

Project Management and Coordination (2010)	Estimated Quantity	Unit	Unit Cost	Estimated Cost
Project Management and Coordination				
Project Manager	120	Hours	$ 125.00	$ 15,000.00
Project Engineer	120	Hours	$ 85.00	$ 10,200.00
Technician	40	Hours	$ 85.00	$ 3,400.00
Database	40	Hours	$ 80.00	$ 3,200.00
Drafter	40	Hours	$ 75.00	$ 3,000.00
Clerical/Word Processor	24	Hours	$ 50.00	$ 1,200.00
Expenses (copying/postage etc..)	1	Lump Sum	$ 4,000.00	$ 4,000.00

Total Project Management and Coordination	**$**	**40,000.00**

APPENDIX A - Notes and Calculations
MLC Site 1327 - Former Peregrine (US) Inc. Coldwater Road Facility

Installation of 2 New Deep Monitoring Wells (2010)				
	Estimated Quantity	Unit	Unit Cost	Estimated Cost
Installation of Monitoring Wells				
Drilling Subcontractor	1	Lump Sum	$ 12,500.00	$ 12,500.00
Survey Subcontractor	1	Lump Sum	$ 2,180.00	$ 2,180.00
Disposal Subcontractor	1	Lump Sum	$ 2,000.00	$ 2,000.00
Disbursments	1	Lump Sum	$ 150.00	$ 150.00
Project Manager	4	Hours	$ 125.00	$ 500.00
Project Engineer	14	Hours	$ 85.00	$ 1,190.00
Technician	69	Hours	$ 85.00	$ 5,865.00
Database	2	Hours	$ 80.00	$ 160.00
Drafter	2	Hours	$ 75.00	$ 150.00
Clerical/Word Processor	1	Hours	$ 50.00	$ 50.00
Travel	6	Day	$ 100.00	$ 600.00
Field Equipment & Expenses	1	Lump Sum	$ 1,000.00	$ 1,000.00
Analytical Lab Costs - Soil Samples	4	Sample	$ 280.00	$ 1,120.00
Analytical Lab Costs - Waste Samples	2	Sample	$ 350.00	$ 700.00
Data Management / Validation	1	Lump Sum	$ 600.00	$ 600.00
			Total per Well	**$ 28,765.00**
	Total Installation of 2 New Deep Monitoring Wells			**$ 57,530.00**

Groundwater Monitoring Network Maintenance (2010)				
	Estimated Quantity	Unit	Unit Cost	Estimated Cost
Resurvey, Redevelop, Repair, and Abandon 3 Wells				
Survey Subcontractor	1	Lump Sum	$ 2,625.00	$ 2,625.00
Abandon Monitoring Wells	3	Wells	$ 2,000.00	$ 6,000.00
Mob/Demob	1	Unit	$ 2,000.00	$ 2,000.00
Project Manager	5	Hours	$ 125.00	$ 625.00
Project Engineer	20	Hours	$ 85.00	$ 1,700.00
Technician	120	Hours	$ 85.00	$ 10,200.00
Drafter	8	Hours	$ 75.00	$ 600.00
Clerical/Word Processor	5	Hours	$ 50.00	$ 250.00
Travel	15	Day	$ 100.00	$ 1,500.00
Field Equipment & Expenses	1	Lump Sum	$ 2,500.00	$ 2,500.00
Reporting	1	Unit	$ 1,500.00	$ 1,500.00
	Total Groundwater Monitoring Network Maintenance			**$ 29,500.00**

APPENDIX A - Notes and Calculations
MLC Site 1327 - Former Peregrine (US) Inc. Coldwater Road Facility

Groundwater Monitoring and Reporting (2010-2039)

5 years of quarterly groundwater monitoring (2010-2014)
5 years of semi-annual groundwater monitoring (2015-2019)
20 years of annual groundwater monitoring (2020-2039)

	Estimated Quantity per Event	Unit	Unit Cost	Estimated Event Cost
Groundwater Monitoring and Reporting (per event)				
Project Manager	4	Hours	$ 125.00	$ 500.00
Project Engineer	8	Hours	$ 85.00	$ 680.00
Technician	60	Hours	$ 85.00	$ 5,100.00
Database	6	Hours	$ 80.00	$ 480.00
Drafter	3	Hours	$ 75.00	$ 225.00
Clerical/Word Processor	3	Hours	$ 50.00	$ 150.00
Travel	5	Day	$ 100.00	$ 500.00
Field Equipment & Expenses	1	Lump Sum	$ 1,000.00	$ 1,000.00
Analytical Lab Costs (16 samples TCL, VOC, TAL Metals, HX Cr, T&Can	1	Event	$ 3,500.00	$ 3,500.00
Data Management/Validation	1	Event	$ 2,500.00	$ 2,500.00
Reporting Expenses	1	Each	$ 5,000.00	$ 5,000.00
			Total per Event	**$ 19,635.00**
			Annual Cost for Quarterly Groundwater Monitoring	**$ 78,540.00**
			Annual Cost for Semi-Annual Groundwater Monitoring	**$ 39,270.00**
			Annual Cost for Annual Groundwater Monitoring	**$ 19,635.00**
			Groundwater Monitoring Costs 2010 - 2014	**$ 392,700.00**
			Groundwater Monitoring Costs 2015 - 2019	**$ 196,350.00**
			Groundwater Monitoring Costs 2020 - 2039	**$ 392,700.00**
			Total Groundwater Monitoring and Reporting	**$ 981,750.00**

Monitoring Well Abandonment (2039)

	Estimated Quantity per year	Unit	Unit Cost	Estimated Yearly Cost
Monitoring Well Abandonment				
Abandon Monitoring Wells	12	Wells	$ 2,000.00	$ 24,000.00
Mob/Demob	1	Unit	$ 2,000.00	$ 2,000.00
Reporting	1	Unit	$ 1,500.00	$ 1,500.00
		Total Monitoring Well Abandonment		**$ 27,500.00**

*Unit labor costs are based on Conestoga Rovers & Associates cost estimate for groundwater monitoring.

Total Estimated Baseline/Engineering Cost $ 1,416,280.00