



**CONESTOGA-ROVERS  
& ASSOCIATES**

651 Colby Drive, Waterloo, Ontario, N2V 1C2  
Telephone: (519) 884-0510 Fax: (519) 884-0525  
[www.CRAworld.com](http://www.CRAworld.com)

August 14, 2014

Reference No. 012636-T09

Mr. Richard Conforti  
Hazardous Waste Section, Resource Management Division  
Michigan Department of Environmental Quality  
525 W. Allegan (Constitution Hall)  
Lansing, Michigan  
U.S.A. 48933

Dear Mr. Conforti:

Re: Response to Comments on Supplemental RFI Groundwater Monitoring  
Annual Monitoring Report (October 15, 2013 to March 31, 2014)  
Former Peregrine (US) Inc. (Peregrine) Coldwater Road Facility  
Genesee Township, Michigan

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On behalf of Revitalizing Automotive Community Environmental Response Trust (RACER), the following presents responses to the Michigan Department of Environmental Quality (MDEQ) comments received in a letter dated July 28, 2014 regarding the Supplemental Groundwater Monitoring Annual Monitoring Report (AMR or Report) for the on the former Peregrine Coldwater Road Facility (Site) located at 1245E Coldwater Road in Genesee Township, near Flint, Michigan.

For ease of review, the original comment is presented in *italics*, followed by a response.

#### **DEQ Comment #1**

*The Report stated that monitoring well PFW-4 was unable to be sampled due to "...standing, frozen water covering the well...". Given that this is required to be sampled per the work plan and the fact that surface water covering the well presents a risk of surface water entering and contaminating the well, RACER must perform whatever corrective action is necessary to ensure that standing water does not accumulate above the elevation of the well riser.*

#### **Response**

Modification to monitoring well PFW-4 will be completed prior to the next sampling event at PFW-4. Modifications will ensure standing water does not accumulate above the top elevation of the well riser. Based on the location of PFW-4 (area subject to vehicular traffic)



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modifications will include converting the well from a flush mount to a stickup by extending the well riser/protective casing, sloping the concrete collar to promote drainage away from the well, and the installation of protective bollards to prevent damage. Details of the completed modification of PFW-4 will be included in the next Annual Monitoring Report.

As identified in the AMR, location PFW-4 was sampled for the full list of parameters (volatile organic compounds, dissolved metals [turbidity was 21.2NTU], and amenable cyanide) during the Q2 – 2014 monitoring event completed on June 9/10, 2014. The results of the Q2-2014 event are summarized in the Table 1 for your reference. Please note that full details of the Q2-2014 monitoring event and results will be included in the next AMR.

#### **DEQ Comment #2**

***There appears to be an error in the background concentration summary table in Figure 4; it lists the background for dissolved arsenic in the deep aquifer as 10 micrograms per liter ( $\mu\text{g/L}$ ) whereas the site specific background value for dissolved arsenic in the deep aquifer as approved by the OWMRP in our letter of February 2, 2013, was calculated to be 89  $\mu\text{g/L}$ . Using the approved value of 89  $\mu\text{g/L}$ , there are no exceedances of site specific background for dissolved arsenic at any deep aquifer monitoring wells. The Report must be revised to correct this error.***

#### **Response**

Figure 4 has been revised to correct this error and is attached hereto. We do not believe that this change results in any additional changes to the report but please let us know if there are other changes needed or if you would like the entire report to be resubmitted with the updated figure.

#### **DEQ Comment #3**

***In the future, the Field Sampling Forms need to be completely filled out. There are multiple cases of obvious drawdown (though the "drawdown" column is not filled out) based on water level elevation where pumping rates are not included. Based on this lack of information, it is***



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***impossible to determine if drawdown is a result of excessively aggressive pumping rates or is unavoidable based on localized hydrogeology.***

**Response**

The Field Sampling Form will be completely filled in during each sampling event for each well and the fully completed forms will be included in future AMR's.

Should you have any questions on the above, please do not hesitate to contact David Favero with RACER or the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Michael R. Tomka, P.E.

RC/kf/19

Encl.

cc: David Favero/Grant Trigger, RACER Trust (PDF)  
Jack Schinderle/John McCabe/Joe Rogers, MDEQ  
William Yocum, MDEQ

TABLE 1

SHALLOW GROUNDWATER RESULTS SUMMARY  
FORMER PEREGRINE (US) INC. COLDWATER ROAD FACILITY  
GENESEE TOWNSHIP, MICHIGAN

Sample Location:	B-9	MW-4-02	MW-17-13	MW-18-13	MW-19-13
Sample ID:	GW-12636-060914-SSH-1420	GW-12636-061014-SSH-1428	GW-12636-061014-SSH-1429	GW-12636-061014-SSH-1430	GW-12636-060914-SSH-1424
Sample Date:	6/9/2014	6/10/2014	6/10/2014	6/10/2014	6/9/2014
Parameters:	Units				
<b>Volatile Organic Compounds</b>					
1,1,1-Trichloroethane	mg/L	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	-	-	-	-
1,1,2-Trichloroethane	mg/L	-	-	-	-
1,1-Dichloroethane	mg/L	-	-	-	-
1,1-Dichloroethene	mg/L	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	-	-	-	-
1,2,4-Trimethylbenzene	mg/L	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/L	-	-	-	-
1,2-Dichlorobenzene	mg/L	-	-	-	-
1,2-Dichloroethane	mg/L	-	-	-	-
1,2-Dichloropropane	mg/L	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	-	-	-	-
2-Hexanone	mg/L	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	-	-	-	-
Acetone	mg/L	-	-	-	-
Benzene	mg/L	-	-	-	-
Bromodichloromethane	mg/L	-	-	-	-
Bromoform	mg/L	-	-	-	-
Bromomethane (Methyl bromide)	mg/L	-	-	-	-
Carbon disulfide	mg/L	-	-	-	-
Carbon tetrachloride	mg/L	-	-	-	-
Chlorobenzene	mg/L	-	-	-	-
Chloroethane	mg/L	-	-	-	-
Chloroform (Trichloromethane)	mg/L	-	-	-	-
Chloromethane (Methyl chloride)	mg/L	-	-	-	-
cis-1,2-Dichloroethene	mg/L	-	-	-	-
cis-1,3-Dichloropropene	mg/L	-	-	-	-
Cyclohexane	mg/L	-	-	-	-
Dibromochloromethane	mg/L	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/L	-	-	-	-
Ethylbenzene	mg/L	-	-	-	-
Isopropyl benzene	mg/L	-	-	-	-
Methyl acetate	mg/L	-	-	-	-
Methyl cyclohexane	mg/L	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/L	-	-	-	-
Methylene chloride	mg/L	-	-	-	-
Styrene	mg/L	-	-	-	-
Tetrachloroethene	mg/L	-	-	-	-
Toluene	mg/L	-	-	-	-
trans-1,2-Dichloroethene	mg/L	-	-	-	-
trans-1,3-Dichloropropene	mg/L	-	-	-	-
Trichloroethene	mg/L	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/L	-	-	-	-
Trifluorotrichloroethane (Freon 113)	mg/L	-	-	-	-
Vinyl chloride	mg/L	-	-	-	-
Xylenes (total)	mg/L	-	-	-	-

SHALLOW GROUNDWATER RESULTS SUMMARY  
FORMER PEREGRINE (US) INC. COLDWATER ROAD FACILITY  
GENESEE TOWNSHIP, MICHIGAN

Sample Location:		B-9	MW-4-02	MW-17-13	MW-18-13	MW-19-13
Sample ID:		GW-12636-060914-SSH-1420	GW-12636-061014-SSH-1428	GW-12636-061014-SSH-1429	GW-12636-061014-SSH-1430	GW-12636-060914-SSH-1424
Sample Date:		6/9/2014	6/10/2014	6/10/2014	6/10/2014	6/9/2014
Parameters:	Units					
<b>Metals</b>						
Aluminum (dissolved)	mg/L	-	-	-	-	-
Antimony (dissolved)	mg/L	-	-	-	-	-
Arsenic (dissolved)	mg/L	-	-	-	-	-
Barium (dissolved)	mg/L	-	-	-	-	-
Beryllium (dissolved)	mg/L	-	-	-	-	-
Cadmium (dissolved)	mg/L	-	-	-	-	-
Chromium (dissolved)	mg/L	-	-	-	-	-
Cobalt (dissolved)	mg/L	-	-	-	-	-
Copper (dissolved)	mg/L	-	-	-	-	-
Iron (dissolved)	mg/L	-	-	-	-	-
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Manganese	mg/L	0.03	0.023	1.6	0.071	0.092
Manganese (dissolved)	mg/L	0.019	0.0016 J	1.7	0.061	0.11
Mercury (dissolved)	mg/L	-	-	-	-	-
Nickel (dissolved)	mg/L	-	-	-	-	-
Selenium (dissolved)	mg/L	-	-	-	-	-
Silver (dissolved)	mg/L	-	-	-	-	-
Thallium (dissolved)	mg/L	-	-	-	-	-
Vanadium (dissolved)	mg/L	-	-	-	-	-
Zinc (dissolved)	mg/L	-	-	-	-	-
<b>General Chemistry</b>						
Cyanide (amenable)	mg/L	-	-	-	-	-
Cyanide (total)	mg/L	-	-	-	-	-

## Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

-- Not analyzed.

TABLE 1

SHALLOW GROUNDWATER RESULTS SUMMARY  
FORMER PEREGRINE (US) INC. COLDWATER ROAD FACILITY  
GENESEE TOWNSHIP, MICHIGAN

Sample Location:	MW-20-13	PFW-2	PFW-4	PFW-4	PFW-9
Sample ID:	GW-12636-060914-SSH-1423	GW-12636-060914-SSH-1421	GW-12636-061014-SSH-1425	GW-12636-061014-SSH-1426	GW-12636-060914-SSH-1422
Sample Date:	6/9/2014	6/9/2014	6/10/2014	6/10/2014 (Duplicate)	6/9/2014
Parameters:	Units				
<b>Volatile Organic Compounds</b>					
1,1,1-Trichloroethane	mg/L	-	-	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	-	-	0.001 U	-
1,1,2-Trichloroethane	mg/L	-	-	0.001 U	-
1,1-Dichloroethane	mg/L	-	-	0.001 U	-
1,1-Dichloroethene	mg/L	-	-	0.001 U	-
1,2,4-Trichlorobenzene	mg/L	-	-	0.001 U	-
1,2,4-Trimethylbenzene	mg/L	-	-	0.001 U	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	-	-	0.001 U	-
1,2-Dibromoethane (Ethylene dibromide)	mg/L	-	-	0.001 U	-
1,2-Dichlorobenzene	mg/L	-	-	0.001 U	-
1,2-Dichloroethane	mg/L	-	-	0.001 U	-
1,2-Dichloropropane	mg/L	-	-	0.001 U	-
1,3,5-Trimethylbenzene	mg/L	-	-	0.001 U	-
1,3-Dichlorobenzene	mg/L	-	-	0.001 U	-
1,4-Dichlorobenzene	mg/L	-	-	0.001 U	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	-	-	0.01 U	-
2-Hexanone	mg/L	-	-	0.01 U	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	-	-	0.01 U	-
Acetone	mg/L	-	-	0.01 U	-
Benzene	mg/L	-	-	0.001 U	-
Bromodichloromethane	mg/L	-	-	0.001 U	-
Bromoform	mg/L	-	-	0.001 U	-
Bromomethane (Methyl bromide)	mg/L	-	-	0.001 U	-
Carbon disulfide	mg/L	-	-	0.005 U	-
Carbon tetrachloride	mg/L	-	-	0.001 U	-
Chlorobenzene	mg/L	-	-	0.001 U	-
Chloroethane	mg/L	-	-	0.001 U	-
Chloroform (Trichloromethane)	mg/L	-	-	0.001 U	-
Chloromethane (Methyl chloride)	mg/L	-	-	0.001 U	-
cis-1,2-Dichloroethene	mg/L	-	-	0.001 U	-
cis-1,3-Dichloropropene	mg/L	-	-	0.001 U	-
Cyclohexane	mg/L	-	-	0.001 U	-
Dibromochloromethane	mg/L	-	-	0.001 U	-
Dichlorodifluoromethane (CFC-12)	mg/L	-	-	0.001 U	-
Ethylbenzene	mg/L	-	-	0.001 U	-
Isopropyl benzene	mg/L	-	-	0.001 U	-
Methyl acetate	mg/L	-	-	0.01 U	-
Methyl cyclohexane	mg/L	-	-	0.001 U	-
Methyl tert butyl ether (MTBE)	mg/L	-	-	0.001 U	-
Methylene chloride	mg/L	-	-	0.005 U	-
Styrene	mg/L	-	-	0.001 U	-
Tetrachloroethene	mg/L	-	-	0.001 U	-
Toluene	mg/L	-	-	0.001 U	-
trans-1,2-Dichloroethene	mg/L	-	-	0.001 U	-
trans-1,3-Dichloropropene	mg/L	-	-	0.001 U	-
Trichloroethene	mg/L	-	-	0.001 U	-
Trichlorofluoromethane (CFC-11)	mg/L	-	-	0.001 U	-
Trifluorotrichloroethane (Freon 113)	mg/L	-	-	0.001 U	-
Vinyl chloride	mg/L	-	-	0.001 U	-
Xylenes (total)	mg/L	-	-	0.002 U	-

TABLE 1

SHALLOW GROUNDWATER RESULTS SUMMARY  
FORMER PEREGRINE (US) INC. COLDWATER ROAD FACILITY  
GENESEE TOWNSHIP, MICHIGAN

Sample Location:		MW-20-13	PFW-2	PFW-4	PFW-4	PFW-9
Sample ID:		GW-12636-060914-SSH-1423	GW-12636-060914-SSH-1421	GW-12636-061014-SSH-1425	GW-12636-061014-SSH-1426	GW-12636-060914-SSH-1422
Sample Date:		6/9/2014	6/9/2014	6/10/2014	6/10/2014 (Duplicate)	6/9/2014
Parameters:	Units					
<b>Metals</b>						
Aluminum (dissolved)	mg/L	-	-	0.017 J	0.018 J	-
Antimony (dissolved)	mg/L	-	-	0.00087 J	0.00079 J	-
Arsenic (dissolved)	mg/L	-	-	0.005 U	0.005 U	-
Barium (dissolved)	mg/L	-	-	0.024 J	0.024 J	-
Beryllium (dissolved)	mg/L	-	-	0.001 U	0.001 U	-
Cadmium (dissolved)	mg/L	-	-	0.001 U	0.001 U	-
Chromium (dissolved)	mg/L	-	-	0.005 U	0.005 U	-
Cobalt (dissolved)	mg/L	-	-	0.007 U	0.007 U	-
Copper (dissolved)	mg/L	-	-	0.0051 U	0.0049 U	-
Iron (dissolved)	mg/L	-	-	0.1 U	0.1 U	-
Lead	mg/L	0.003 U	0.0023 J	-	-	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Manganese	mg/L	0.0023 J	1.5	-	-	0.015 U
Manganese (dissolved)	mg/L	0.0012 J	1.5	0.052	0.052	0.0011 J
Mercury (dissolved)	mg/L	-	-	0.0002 U	0.0002 U	-
Nickel (dissolved)	mg/L	-	-	0.02 U	0.0059 J	-
Selenium (dissolved)	mg/L	-	-	0.005 U	0.005 U	-
Silver (dissolved)	mg/L	-	-	0.0002 U	0.0002 U	-
Thallium (dissolved)	mg/L	-	-	0.001 U	0.001 U	-
Vanadium (dissolved)	mg/L	-	-	0.004 U	0.004 U	-
Zinc (dissolved)	mg/L	-	-	0.0058 J	0.0088 J	-
<b>General Chemistry</b>						
Cyanide (amenable)	mg/L	-	-	0.0050 U	0.0050 U	-
Cyanide (total)	mg/L	-	-	0.0050 U	0.0050 U	-

## Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

- - Not analyzed.

**LEGEND**

- FACILITY BOUNDARY
- DEEP MONITORING WELL LOCATION (ANNUAL)
- STORM SEWER LINE
- SANITARY SEWER LINE
- MANHOLE
- STORM SEWER MONITORING LOCATION

SAMPLE LOCATION		SAMPLE DATE		RESULT (mg/L)		PARAMETER NOT ANALYZED		PARAMETER	
MW-17-13		3/26/2014		0.01					
Arsenic				0.012 (ABC)					
Arsenic (dissolved)				5.9 (AB)					
Iron (dissolved)				0.003 U					
Lead (dissolved)				-					
Manganese				0.6					
Manganese (dissolved)				0.58 (AB)					

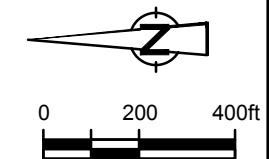
- NOTES:
- THIS DRAWING IS FOR REFERENCE ONLY AND IS NEITHER COMPLETE NOR TO EXACTING SCALE.
  - MANGANESE AND IRON ARE SCREENED AGAINST RESIDENTIAL/NONRESIDENTIAL AESTHETIC DRINKING WATER CRITERIA BUT MAY BE BELOW THE NONRESIDENTIAL HEALTH BASED DRINKING WATER CRITERIA.

Chemical Name	Background	A	B	C
Arsenic	0.1	0.01	0.01	0.01
Arsenic (dissolved)	0.089	0.01	0.01	0.01
Iron	7.9	0.3 (2.0)	0.3 (5.6)	-
Iron (dissolved)	3.6	0.3 (2.0)	0.3 (5.6)	-
Lead	0.003 U	0.004	0.004	-
Lead (dissolved)	0.003 U	0.004	0.004	-
Manganese	0.25	0.05 (0.86)	0.05 (2.5)	-
Manganese (dissolved)	0.29	0.05 (0.86)	0.05 (2.5)	-
Silver	0.0002 U	0.034	0.098	0.0002
Silver (dissolved)	0.0002 U	0.034	0.098	0.0002
Vanadium	0.015	0.0045	0.062	0.012
Vanadium (dissolved)	0.004 U	0.0045	0.062	0.012

Background	Background - Deep Aquifer
A	Residential Drinking Water Criteria (Health Based Criteria)
B	Nonresidential Drinking Water Criteria (Health Based Criteria)
C	Groundwater/Surface Water Interface (GSI) Criteria

	12/2/2010	5/13/2011	9/13/2011	12/5/2011	3/27/2014
PFW-1					
Arsenic	0.489 (ABC)	0.0596	0.062	0.079	0.048
Arsenic (dissolved)	-	-	0.044	0.033	0.04
Iron	17 (AB)	1.83	2	2.7	1.6
Iron (dissolved)	-	-	1.4	1.1	1.3
Lead	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	-	-	0.003 U	0.003 U	0.003 U
Manganese	0.06	0.0334	0.026 J	0.036	0.026
Manganese (dissolved)	-	-	0.025	0.031	0.024
Silver	0.0002 U	0.0002 U	0.0002 U	0.0001 J	0.000071 J
Silver (dissolved)	-	-	0.0002 U	0.0002 U	0.000019 J
Vanadium	0.004 U	0.004 U	0.004 U	0.004 U	0.004 UJ
Vanadium (dissolved)	-	-	0.004 U	0.004 U	0.004 U



B-27D	12/3/2010	5/12/2011	9/14/2011	12/8/2011	3/27/2014
Arsenic	0.0644	0.0454	0.044	0.053	-
Arsenic (dissolved)	-	-	0.045	0.052	0.017
Iron	27.9 (AB)	2.82	1.9	3.8	-
Iron (dissolved)	-	-	1.1	1	0.085 J
Lead	0.0123 (AB)	0.003 U	0.003 U	0.003 U	-
Lead (dissolved)	-	-	0.003 U	0.003 U	0.003 U
Manganese	0.584 (AB)	0.0637	0.037 J	0.09	-
Manganese (dissolved)	-	-	0.028	0.033	0.027
Silver	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-
Silver (dissolved)	-	-	0.0002 U	0.0002 U	0.000014 J
Vanadium	0.0403 (AC)	0.004 U	0.004 U	0.0052	-
Vanadium (dissolved)	-	-	0.004 U	0.004 U	0.004 U

MW-16-10	12/2/2010	5/14/2011	9/14/2011	12/7/2011	3/27/2014
Arsenic	0.0304	0.0055/0.0059	0.0072	0.0099	0.016/0.015
Arsenic (dissolved)	0.0061/0.0086	-	0.0079	-	0.014/0.017
Iron	50.1 (AB)	0.657/0.551	0.31	1.8	0.48/0.47
Iron (dissolved)	0.02 U/0.188	-	0.3	-	0.28/0.34
Lead	0.0205 (AB)	0.003 U/0.003 U	0.003 U	0.003 U	0.003 U/0.003 U
Lead (dissolved)	0.001 U/0.003 U	-	0.003 U	-	0.003 U/0.003 U
Manganese	1.3 (AB)	0.112/0.11	0.13	0.13	0.13/0.14
Manganese (dissolved)	0.063/0.0809	-	0.13	-	0.13/0.13
Silver	0.0002 U	0.0002 U/0.0002 U	0.00036 U	0.0002 U	0.00051 (C)/0.00032 (C)
Silver (dissolved)	0.0002 U/0.0002 U	-	0.0002 U	-	0.00001 J/0.0002 U
Vanadium	0.0705 (ABC)	0.004 U/0.004 U	0.004 U	0.004 U	0.004 U/0.004 UJ
Vanadium (dissolved)	0.002 U/0.004 U	-	0.004 U	-	0.004 U/0.004 U

MW-15-10	12/2/2010	5/14/2011	9/13/2011	12/7/2011	3/27/2014
Arsenic	0.017/0.0192	0.0044 J	0.0061/0.0054	0.0071	-
Arsenic (dissolved)	0.0193	-	0.0087/0.0084	0.0047 J	0.0087
Iron	3.1/4.29	4.47	1.9/1.9	2.4	-
Iron (dissolved)	0.259	-	1.8/1.7	2.1	1.8
Lead	0.0012/0.003 U	0.0024 J	0.003 U/0.003 U	0.003 U	-
Lead (dissolved)	0.003 U	-	0.003 U/0.003 U	0.003 U	0.003 U
Manganese	0.14/0.153	0.133	0.11 J/0.11 J	0.13	-
Manganese (dissolved)	0.103	-	0.11/0.11	0.12	0.074
Silver	0.0002 U/0.0002 U	0.0002 U	0.0002 U/0.0002 U	0.000083 J	-
Silver (dissolved)	0.0002 U	-	0.0002 U/0.0002 U	0.0002 U	0.00025 (C)
Vanadium	0.0055/0.008	0.0094	0.004 U/0.004 U	0.00065 J	-
Vanadium (dissolved)	0.004 U	-	0.004 U/0.004 U	0.004 U	0.004 U

**DEEP GROUNDWATER MONITORING RESULTS SUMMARY**  
**FORMER PEREGRINE (US), INC. COLDWATER ROAD FACILITY**  
*Genesee Township, Michigan*

