

Steven Scharf - For NYSDEC Review/Approval Request: Imported Clean Backfill Material - Bayer-Hicksville (NYSDEC Site #130004)

From: "Enigk, Andrew" <Andrew.Enigk@arcadis-us.com>
To: "sxscharf@gw.dec.state.ny.us" <sxscharf@gw.dec.state.ny.us>
Date: 8/6/2013 11:52 AM
Subject: For NYSDEC Review/Approval Request: Imported Clean Backfill Material - Bayer-Hicksville (NYSDEC Site #130004)
CC: "david.schnelzer@bayer.com" <david.schnelzer@bayer.com>, "scott.krall@ba...
Attachments: submittal.hw130004.2013-08-06.Imported Clean Fill Lab AnalyticalResults....pdf; submittal.hw130004.2013-08-06.Lab Report (ECM).pdf

Steve,

Please find the attached table (1st PDF file) presenting analytical results for the third set of samples collected to characterize clean fill to be imported from the East Coast Mines (ECM) facility in East Quogue, New York and used as backfill at the Bayer Hicksville site. These additional samples were collected to characterize the third 1,000 CY of fill imported to the site and consist of the following:

- Sample ECM-CF-C3 = composite sample
- Samples ECM-CF-G4 and ECM-CF-G5 = discrete grab VOC samples

The laboratory report is provided in the 2nd attached PDF file for reference.

Based on our review of the analytical results, no compounds were detected above the lower of the commercial use and groundwater protection soil cleanup objectives (SCOs) presented in 6 NYCRR Part 375-6.8(b). Therefore, the fill meets the analytical criteria established for imported backfill. ARCADIS will give EQ the okay to proceed with importing and placing the backfill from ECM up to 3,000 CY.

Feel free to call John Brussel at 315.671.9441 or me if you have any questions or need additional information.

Thank you.

Andrew C. Enigk | Project Environmental Scientist | andrew.enigk@arcadis-us.com
 ARCADIS U.S., Inc. | 6723 Towpath Road, P.O. Box 66 | Syracuse, NY, 13057-0066
 T. 315.671.9548 | F. 315.449.4111
www.arcadis-us.com

ARCADIS, Imagine the result

Please consider the environment before printing this email.

NOTICE: This e-mail and any files transmitted with it are the property of ARCADIS U.S., Inc. and its affiliates. All rights, including without limitation copyright, are reserved. The proprietary information contained in this e-mail message, and any files transmitted with it, is intended for the use of the recipient(s) named above. If the reader of this e-mail is not the intended recipient, you are hereby notified that you have received this e-mail in error and that any review, distribution or copying of this e-mail or any files transmitted with it is strictly prohibited. If you have received this e-mail in error, please notify the sender immediately and delete the original message and any files transmitted. The unauthorized use of this e-mail or any files transmitted with it is prohibited and disclaimed by ARCADIS U.S., Inc. and its affiliates. Nothing herein is intended to constitute the offering or performance of services where otherwise restricted by law.

TABLE 1
IMPORTED CLEAN FILL MATERIAL ANALYTICAL RESULTS (ppm)

FINAL REMEDIAL ACTION - OPERABLE UNIT 4
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Location ID: Date Collected:	Restricted Use SCOs Groundwater	Restricted Use SCOs Commercial	ECM-CF-1 05/30/13	ECM-CF-C2 06/24/13	ECM-CF-C3 07/15/13	ECM-CF-G2 06/24/13	ECM-CF-G3 06/24/13
PCBs							
Aroclor 1016	--	--	<0.00360 [<u><0.00360</u>]	<0.00350 [<u><0.00350</u>]	<0.00340 [<u><0.00340</u>]	NA	NA
Aroclor 1221	--	--	<0.00360 [<u><0.00360</u>]	<0.00350 [<u><0.00350</u>]	<0.00340 [<u><0.00340</u>]	NA	NA
Aroclor 1232	--	--	<0.00360 [<u><0.00360</u>]	<0.00350 [<u><0.00350</u>]	<0.00340 [<u><0.00340</u>]	NA	NA
Aroclor 1242	--	--	<0.00360 [<u><0.00360</u>]	<0.00350 [<u><0.00350</u>]	<0.00340 [<u><0.00340</u>]	NA	NA
Aroclor 1248	--	--	<0.00360 [<u><0.00360</u>]	<0.00350 [<u><0.00350</u>]	<0.00340 [<u><0.00340</u>]	NA	NA
Aroclor 1254	--	--	<0.00360 [<u><0.00360</u>]	<0.00350 [<u><0.00350</u>]	<0.00340 [<u><0.00340</u>]	NA	NA
Aroclor 1260	--	--	<0.00360 [<u><0.00360</u>]	<0.00350 [<u><0.00350</u>]	<0.00340 [<u><0.00340</u>]	NA	NA
Total PCBs	--	1	<0.00360 [<u><0.00360</u>]	<0.00350 [<u><0.00350</u>]	<0.00340 [<u><0.00340</u>]	NA	NA
VOCs							
m/p-Xylenes	--	--	<0.00510 [<u><0.00510</u>]	NA	NA	<0.000950 [<u><0.00100</u>]	<0.000960
Methyl tert-butyl ether	0.93	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
n-Butylbenzene	12	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
n-Propylbenzene	3.9	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
sec-Butylbenzene	11	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
tert-Butylbenzene	5.9	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,2,4-Trimethylbenzene	3.6	190	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,2-Dichlorobenzene	1.1	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,3,5- Trimethylbenzene	8.4	190	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,3-Dichlorobenzene	2.4	280	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,1-Dichloroethane	0.27	240	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,4-Dichlorobenzene	1.8	130	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,1-Dichloroethene	0.33	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,2-Dichloroethane	0.02	30	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
Xylene (o)	--	--	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
1,1,1-Trichloroethane	0.68	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
2-Butanone (MEK)	0.12	500	<0.0127 [<u><0.0128</u>]	NA	NA	<0.00710 [<u><0.00760</u>]	<0.00720
Acetone	0.05	500	<0.0127 [<u><0.0128</u>]	NA	NA	0.0120 J [<u>0.0184 J</u>]	0.00960 J
Carbon tetrachloride	0.76	22	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
Benzene	0.06	44	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
Chlorobenzene	1.1	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
Chloroform	0.37	350	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
cis-1,2-Dichloroethene	0.25	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
Ethylbenzene	1	--	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
Tetrachloroethene	1.3	150	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
Methylene chloride	0.05	500	0.00170 J [<u>0.00160 J</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480
Toluene	0.7	500	<0.00250 [<u><0.00260</u>]	NA	NA	<0.000480 [<u><0.000510</u>]	<0.000480

TABLE 1
IMPORTED CLEAN FILL MATERIAL ANALYTICAL RESULTS (ppm)

FINAL REMEDIAL ACTION - OPERABLE UNIT 4
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Location ID: Date Collected:	Restricted Use SCOs Groundwater	Restricted Use SCOs Commercial	ECM-CF-1 05/30/13	ECM-CF-C2 06/24/13	ECM-CF-C3 07/15/13	ECM-CF-G2 06/24/13	ECM-CF-G3 06/24/13
VOCs (continued)							
trans-1,2-Dichloroethene	0.19	500	<0.00250 [<0.00260]	NA	NA	<0.000480 [<0.000510]	<0.000480
Trichloroethene	0.47	200	<0.00250 [<0.00260]	NA	NA	<0.000480 [<0.000510]	<0.000480
Vinyl chloride	0.02	13	<0.00250 [<0.00260]	NA	NA	<0.000480 [<0.000510]	<0.000480
Total TCL VOCs	--	--	0.00170 J [0.00160 J]	NA	NA	0.0120 J [0.0184 J]	0.00960 J
SVOCs							
Acenaphthene	98	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Acenaphthylene	107	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Anthracene	1,000	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Benzo(a)anthracene	1	5.6	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Benzo(a)pyrene	22	1	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Benzo(b)fluoranthene	1.7	5.6	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Benzo(ghi)perylene	1,000	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Benzo(k)fluoranthene	1.7	56	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Chrysene	1	56	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Dibenzo(a,h)anthracene	1,000	0.56	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Fluoranthene	1,000	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Fluorene	386	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Indeno(1,2,3-cd)pyrene	8.2	5.6	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Naphthalene	12	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Phenanthrene	1,000	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Pyrene	1,000	500	<0.0358 [<0.0358]	<0.0345 [<0.0346]	<0.0344 [<0.0342]	NA	NA
Total PAHs	--	--	<0.286 [<0.286]	<0.276 [<0.277]	<0.275 [<0.274]	NA	NA
Organochlorine Pesticides							
4,4'-DDD	14	92	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
4,4'-DDE	17	62	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
4,4'-DDT	136	47	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Aldrin	0.19	0.68	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
alpha-BHC	0.02	3.4	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
beta-BHC	0.09	3	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Chlordane	2.9	24	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
delta-BHC	0.25	500	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Dieldrin	0.1	1.4	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Endosulfan I	102	200	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Endosulfan II	102	200	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Endosulfan Sulfate	1,000	200	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Endrin	0.06	89	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
gamma-BHC (Lindane)	0.1	9.2	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Heptachlor	0.38	15	<0.000353 [<0.000354]	<0.000342 [<0.000342]	<0.000340 [<0.000339]	NA	NA
Organochlorine Herbicides							
2,4,5-TP Acid (Silvex)	3.8	500	<0.0178 [<0.0179]	<0.0173 [<0.0173]	<0.0172 [<0.0171]	NA	NA

TABLE 1
IMPORTED CLEAN FILL MATERIAL ANALYTICAL RESULTS (ppm)

FINAL REMEDIAL ACTION - OPERABLE UNIT 4
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Location ID: Date Collected:	Restricted Use SCOs Groundwater	Restricted Use SCOs Commercial	ECM-CF-1 05/30/13	ECM-CF-C2 06/24/13	ECM-CF-C3 07/15/13	ECM-CF-G2 06/24/13	ECM-CF-G3 06/24/13
Metals							
Arsenic	16	16	3.24 [2.78]	0.770 [0.920]	0.470 [0.370 J]	NA	NA
Barium	820	400	14.3 [12.3]	8.37 [10.8]	8.61 [8.20]	NA	NA
Beryllium	47	590	0.340 [0.290]	0.110 J [0.140]	<0.0650 [<0.0650]	NA	NA
Cadmium	7.5	9.3	<0.0650 [<0.0700]	0.0500 J [0.0600 J]	<0.0650 [<0.0650]	NA	NA
Copper	1,720	270	3.67 [3.81]	2.27 [3.22]	1.85 [1.58]	NA	NA
Hexavalent Chromium	- -	- -	<0.214 [<0.214]	0.100 J [<0.208]	<0.206 [<0.206]	NA	NA
Lead	450	1,000	4.12 [2.00]	1.58 [1.98]	1.92 [1.78]	NA	NA
Manganese	2,000	10,000	77.7 [68.5]	53.7 [67.7]	40.4 [35.8]	NA	NA
Mercury	0.73	2.8	0.0100 J [0.0100 J]	<0.00500 [<0.00500]	0.00700 J [0.00600 J]	NA	NA
Nickel	130	310	3.53 [3.13]	1.97 [2.69]	1.50 [1.58]	NA	NA
Selenium	4	1,500	1.18 [1.23]	0.380 J [0.540]	<0.220 [<0.220]	NA	NA
Silver	8.3	1,500	0.980 [1.26]	<0.105 [<0.115]	<0.110 [<0.110]	NA	NA
Trivalent Chromium	- -	- -	4.05 [4.30]	2.80 [3.86]	2.10 [2.02]	NA	NA
Zinc	2,480	10,000	10.0 [10.3]	6.61 [8.33]	7.71 [7.27]	NA	NA
Miscellaneous							
Cyanide, Total	40	27	0.0530 J [<0.134]	0.0890 J [<0.130]	<0.129 [<0.128]	NA	NA

TABLE 1
IMPORTED CLEAN FILL MATERIAL ANALYTICAL RESULTS (ppm)

FINAL REMEDIAL ACTION - OPERABLE UNIT 4
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Location ID: Date Collected:	Restricted Use SCOs Groundwater	Restricted Use SCOs Commercial	ECM-CF-G4 07/15/13	ECM-CF-G5 07/15/13
PCBs				
Aroclor 1016	--	--	NA	NA
Aroclor 1221	--	--	NA	NA
Aroclor 1232	--	--	NA	NA
Aroclor 1242	--	--	NA	NA
Aroclor 1248	--	--	NA	NA
Aroclor 1254	--	--	NA	NA
Aroclor 1260	--	--	NA	NA
Total PCBs	--	1	NA	NA
VOCs				
m/p-Xylenes	--	--	<0.000850 [<0.000960]	<0.000970
Methyl tert-butyl ether	0.93	500	<0.000420 [<0.000480]	<0.000480
n-Butylbenzene	12	500	<0.000420 [<0.000480]	<0.000480
n-Propylbenzene	3.9	500	<0.000420 [<0.000480]	<0.000480
sec-Butylbenzene	11	500	<0.000420 [<0.000480]	<0.000480
tert-Butylbenzene	5.9	500	<0.000420 [<0.000480]	<0.000480
1,2,4-Trimethylbenzene	3.6	190	<0.000420 [<0.000480]	<0.000480
1,2-Dichlorobenzene	1.1	500	<0.000420 [<0.000480]	<0.000480
1,3,5- Trimethylbenzene	8.4	190	<0.000420 [<0.000480]	<0.000480
1,3-Dichlorobenzene	2.4	280	<0.000420 [<0.000480]	<0.000480
1,1-Dichloroethane	0.27	240	<0.000420 [<0.000480]	<0.000480
1,4-Dichlorobenzene	1.8	130	<0.000420 [<0.000480]	<0.000480
1,1-Dichloroethene	0.33	500	<0.000420 [<0.000480]	<0.000480
1,2-Dichloroethane	0.02	30	<0.000420 [<0.000480]	<0.000480
Xylene (o)	--	--	<0.000420 [<0.000480]	<0.000480
1,1,1-Trichloroethane	0.68	500	<0.000420 [<0.000480]	<0.000480
2-Butanone (MEK)	0.12	500	<0.00640 [<0.00720]	<0.00730
Acetone	0.05	500	<0.00210 [<0.00240]	<0.00240
Carbon tetrachloride	0.76	22	<0.000420 [<0.000480]	<0.000480
Benzene	0.06	44	<0.000420 [<0.000480]	<0.000480
Chlorobenzene	1.1	500	<0.000420 [<0.000480]	<0.000480
Chloroform	0.37	350	<0.000420 [<0.000480]	<0.000480
cis-1,2-Dichloroethene	0.25	500	<0.000420 [<0.000480]	<0.000480
Ethylbenzene	1	--	<0.000420 [<0.000480]	<0.000480
Tetrachloroethene	1.3	150	<0.000420 [<0.000480]	<0.000480
Methylene chloride	0.05	500	0.00120 J [<0.000480]	0.00210 J
Toluene	0.7	500	<0.000420 [<0.000480]	<0.000480

TABLE 1
IMPORTED CLEAN FILL MATERIAL ANALYTICAL RESULTS (ppm)

FINAL REMEDIAL ACTION - OPERABLE UNIT 4
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Location ID: Date Collected:	Restricted Use SCOs Groundwater	Restricted Use SCOs Commercial	ECM-CF-G4 07/15/13	ECM-CF-G5 07/15/13
VOCs (continued)				
trans-1,2-Dichloroethene	0.19	500	<0.000420 [<0.000480]	<0.000480
Trichloroethene	0.47	200	<0.000420 [<0.000480]	<0.000480
Vinyl chloride	0.02	13	<0.000420 [<0.000480]	<0.000480
Total TCL VOCs	- -	- -	0.00120 J [ND]	0.00210 J
SVOCs				
Acenaphthene	98	500	NA	NA
Acenaphthylene	107	500	NA	NA
Anthracene	1,000	500	NA	NA
Benzo(a)anthracene	1	5.6	NA	NA
Benzo(a)pyrene	22	1	NA	NA
Benzo(b)fluoranthene	1.7	5.6	NA	NA
Benzo(ghi)perylene	1,000	500	NA	NA
Benzo(k)fluoranthene	1.7	56	NA	NA
Chrysene	1	56	NA	NA
Dibenzo(a,h)anthracene	1,000	0.56	NA	NA
Fluoranthene	1,000	500	NA	NA
Fluorene	386	500	NA	NA
Indeno(1,2,3-cd)pyrene	8.2	5.6	NA	NA
Naphthalene	12	500	NA	NA
Phenanthrene	1,000	500	NA	NA
Pyrene	1,000	500	NA	NA
Total PAHs	- -	- -	NA	NA
Organochlorine Pesticides				
4,4'-DDD	14	92	NA	NA
4,4'-DDE	17	62	NA	NA
4,4'-DDT	136	47	NA	NA
Aldrin	0.19	0.68	NA	NA
alpha-BHC	0.02	3.4	NA	NA
beta-BHC	0.09	3	NA	NA
Chlordane	2.9	24	NA	NA
delta-BHC	0.25	500	NA	NA
Dieldrin	0.1	1.4	NA	NA
Endosulfan I	102	200	NA	NA
Endosulfan II	102	200	NA	NA
Endosulfan Sulfate	1,000	200	NA	NA
Endrin	0.06	89	NA	NA
gamma-BHC (Lindane)	0.1	9.2	NA	NA
Heptachlor	0.38	15	NA	NA
Organochlorine Herbicides				
2,4,5-TP Acid (Silvex)	3.8	500	NA	NA

TABLE 1
IMPORTED CLEAN FILL MATERIAL ANALYTICAL RESULTS (ppm)

FINAL REMEDIAL ACTION - OPERABLE UNIT 4
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Location ID: Date Collected:	Restricted Use SCOs Groundwater	Restricted Use SCOs Commercial	ECM-CF-G4 07/15/13	ECM-CF-G5 07/15/13
Metals				
Arsenic	16	16	NA	NA
Barium	820	400	NA	NA
Beryllium	47	590	NA	NA
Cadmium	7.5	9.3	NA	NA
Copper	1,720	270	NA	NA
Hexavalent Chromium	- -	- -	NA	NA
Lead	450	1,000	NA	NA
Manganese	2,000	10,000	NA	NA
Mercury	0.73	2.8	NA	NA
Nickel	130	310	NA	NA
Selenium	4	1,500	NA	NA
Silver	8.3	1,500	NA	NA
Trivalent Chromium	- -	- -	NA	NA
Zinc	2,480	10,000	NA	NA
Miscellaneous				
Cyanide, Total	40	27	NA	NA

TABLE 1
IMPORTED CLEAN FILL MATERIAL ANALYTICAL RESULTS (ppm)

FINAL REMEDIAL ACTION - OPERABLE UNIT 4
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Notes:

1. Samples were collected by Preferred Environmental Services on the dates indicated.
2. VOCs = Volatile Organic Compounds.
3. SVOCs = Semi-Volatile Organic Compounds.
4. PCBs = Polychlorinated Biphenyls.
5. PAHs = Polycyclic Aromatic Hydrocarbons.
6. Samples were analyzed by Chemtech located in Mountainside, New Jersey for:
 - VOCs using United States Environmental Protection Agency (USEPA) SW-846 Method 8260.
 - SVOCs using USEPA SW-846 Method 8270.
 - Inorganics using USEPA SW-846 Methods 6010, 7471 and 335.4.
 - PCBs using USEPA SW-846 Method 8082.
 - Pesticides using USEPA SW-846 Method 8081.
7. All concentrations reported in dry weight parts per million (ppm), which is equivalent to milligrams per kilogram (mg/kg).
8. Data qualifiers are defined as follows:
 - J - Indicates that the associated numerical value is an estimated concentration.
9. 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs) are from Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375-6.8(b).
10. Shading indicates that the result exceeds the lower of commercial use and groundwater protection SCOs presented in 6 NYCRR Part 375-6.8(b).
11. - - = No 6 NYCRR Part 375 SCO listed.
12. Total PAHs were calculated as the sum of the following, which is consistent with the NYSDEC list from 6 NYCRR Part 375-6.8(b):
 - Acenaphthene
 - Acenaphthylene
 - Anthracene
 - Benzo(a)anthracene
 - Benzo(a)pyrene
 - Benzo(b)fluoranthene
 - Benzo(g,h,i)perylene
 - Benzo(k)fluoranthene
 - Chrysene
 - Dibenzo(a,h)anthracene
 - Fluoranthene
 - Fluorene
 - Indeno(1,2,3-cd)pyrene
 - Naphthalene
 - Phenanthrene
 - Pyrene

DATA FOR
VOLATILE ORGANICS
SEMI-VOLATILE ORGANICS
GC SEMI-VOLATILES
METALS
GENERAL CHEMISTRY

PROJECT NAME : BAYER MATERIAL SCIENCE, LLC

PREFERRED ENVIRONMENTAL SERVICES

323 Merrick Avenue

North Merrick, NY - 11566

Phone No: 516-546-1100

ORDER ID : E2960

ATTENTION : Jill Haimson



DoD ELAP



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Date : 07/24/2013

Dear Jill Haimson,

9 soil samples for the **Bayer Material Science, LLC** project were received on **07/17/2013**. The analytical fax results for those samples requested for an expedited turn around time may be seen in this report. Please contact me if you have any questions or concerns regarding this report.

The requested EDD is also attached to the e-mail.

The invoice for this workorder is also attached to the e-mail.

Regards,

Reginald St-Juste

908-728-3147

Reginald@chemtech.net



(908) 789-8900 Fax (908) 789-8922

www.chemtech.net

COC Number

E296r

PROJECT INFORMATION

BILLING INFORMATION

BILL TO: Preferred Environmental Services PO#

ADDRESS: 323 Merrick Avenue

CITY: North Merrick

ATTENTION: Jill Haimson

ATTENTION: Jill Haimson

FAX: 516-213-8156

PHONE: 516-546-1100 FAX: 516-213-8156

DATA TURNAROUND INFORMATION

Standard TAT

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY	☐ USEPA CLP
☐ RESULTS * QC	☒ New York State ASP "B"
☐ New Jersey REDUCED	☐ New York State ASP "A"
☐ New Jersey CLP	☐ Other _____
☒ EDD FORMAT NYSDEC	

ANALYSIS

PRESERVATIVES

COMMENTS

← Specify Preservatives	
A-HCl	B-HNO ₃
C-H ₂ SO ₄	D-NaOH
E-ICE	F-OTHER

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

Shipment Complete
☒ YES ☐ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT

YELLOW - CHEMTECH COPY

PINK - SAMPLER COPY

七



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13 09:50:00
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-C3	SDG No.:	E2960
Lab Sample ID:	E2960-01	Matrix:	SOIL
		% Solid:	96.8

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Cyanide	0.129	U	1	0.034	0.129	0.258	mg/Kg	07/19/13	07/22/13 12:14	9012B
Hexavalent Chromium	0.207	U	1	0.083	0.207	0.413	mg/Kg	07/17/13	07/17/13 16:35	7196A
Trivalent Chromium	2.1		1	0.103	0.103	0.103	mg/Kg	07/17/13	07/17/13 00:00	6010B

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13		
Project:	Bayer Material Science, LLC	Date Received:	07/17/13		
Client Sample ID:	ECM-CF-C3	SDG No.:	E2960		
Lab Sample ID:	E2960-01	Matrix:	SOIL		
Analytical Method:	SW8151A	% Moisture:	3.2	Decanted:	
Sample Wt/Vol:	30.06	Units:	g	Final Vol:	10000 uL
Soil Aliquot Vol:			uL	Test:	Herbicide Group1
Extraction Type:				Injection Volume :	
GPC Factor :	1.0	PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE007013.D	1	07/18/13	07/20/13	PB71082

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	17.2	U	11.2	17.2	69.1	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	319		12 - 189		64%	SPK: 500

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-C3	SDG No.:	E2960
Lab Sample ID:	E2960-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	96.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	0.47		1	0.15	0.22	0.44	mg/Kg	07/17/13	07/17/13	SW6010B
7440-39-3	Barium	8.61		1	0.18	1.11	2.22	mg/Kg	07/17/13	07/17/13	SW6010B
7440-41-7	Beryllium	0.065	U	1	0.03	0.065	0.13	mg/Kg	07/17/13	07/17/13	SW6010B
7440-43-9	Cadmium	0.065	U	1	0.03	0.065	0.13	mg/Kg	07/17/13	07/17/13	SW6010B
7440-50-8	Copper	1.85		1	0.14	0.22	0.44	mg/Kg	07/17/13	07/17/13	SW6010B
7439-92-1	Lead	1.92		1	0.05	0.135	0.27	mg/Kg	07/17/13	07/17/13	SW6010B
7439-96-5	Manganese	40.4		1	0.08	0.22	0.44	mg/Kg	07/17/13	07/17/13	SW6010B
7439-97-6	Mercury	0.007	J	1	0.002	0.005	0.01	mg/Kg	07/17/13	07/18/13	SW7471A
7440-02-0	Nickel	1.5		1	0.2	0.445	0.89	mg/Kg	07/17/13	07/17/13	SW6010B
7782-49-2	Selenium	0.22	U	1	0.18	0.22	0.44	mg/Kg	07/17/13	07/17/13	SW6010B
7440-22-4	Silver	0.11	U	1	0.07	0.11	0.22	mg/Kg	07/17/13	07/17/13	SW6010B
7440-66-6	Zinc	7.71		1	0.31	0.445	0.89	mg/Kg	07/17/13	07/17/13	SW6010B

Color Before:	Brown	Clarity Before:	Texture:	Medium
Color After:	Yellow	Clarity After:	Artifacts:	No
Comments:	Metals Group1			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-C3	SDG No.:	E2960
Lab Sample ID:	E2960-01	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	3.2
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	Injection Volume :	
	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PB006982.D	1	07/18/13	07/22/13	PB71079

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	3.4	U	3.4	3.4	17.6	ug/kg
11104-28-2	Aroclor-1221	3.4	U	3.4	3.4	17.6	ug/kg
11141-16-5	Aroclor-1232	3.4	U	3.4	3.4	17.6	ug/kg
53469-21-9	Aroclor-1242	3.4	U	3.4	3.4	17.6	ug/kg
12672-29-6	Aroclor-1248	3.4	U	3.4	3.4	17.6	ug/kg
11097-69-1	Aroclor-1254	3.4	U	1.5	3.4	17.6	ug/kg
11096-82-5	Aroclor-1260	3.4	U	3.4	3.4	17.6	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	18.8		10 - 166		94%	SPK: 20
2051-24-3	Decachlorobiphenyl	18.3		60 - 125		91%	SPK: 20

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-C3	SDG No.:	E2960
Lab Sample ID:	E2960-01	Matrix:	SOIL
Analytical Method:	SW8081B	% Moisture:	3.2
Sample Wt/Vol:	30.07	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PESTICIDE Group1
GPC Factor :	1.0	Injection Volume :	
	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL004416.D	1	07/18/13	07/19/13	PB71080

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	0.34	U	0.134	0.34	1.8	ug/kg
319-85-7	beta-BHC	0.34	U	0.186	0.34	1.8	ug/kg
319-86-8	delta-BHC	0.34	U	0.103	0.34	1.8	ug/kg
58-89-9	gamma-BHC (Lindane)	0.34	U	0.155	0.34	1.8	ug/kg
76-44-8	Heptachlor	0.34	U	0.144	0.34	1.8	ug/kg
309-00-2	Aldrin	0.34	U	0.103	0.34	1.8	ug/kg
959-98-8	Endosulfan I	0.34	U	0.155	0.34	1.8	ug/kg
60-57-1	Dieldrin	0.34	U	0.134	0.34	1.8	ug/kg
72-55-9	4,4-DDE	0.34	U	0.206	0.34	1.8	ug/kg
72-20-8	Endrin	0.34	U	0.186	0.34	1.8	ug/kg
33213-65-9	Endosulfan II	0.34	U	0.144	0.34	1.8	ug/kg
72-54-8	4,4-DDD	0.34	U	0.175	0.34	1.8	ug/kg
1031-07-8	Endosulfan Sulfate	0.34	U	0.155	0.34	1.8	ug/kg
50-29-3	4,4-DDT	0.34	U	0.144	0.34	1.8	ug/kg
5103-71-9	alpha-Chlordane	0.34	U	0.144	0.34	1.8	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	19		10 - 169		95%	SPK: 20
877-09-8	Tetrachloro-m-xylene	20		31 - 151		100%	SPK: 20

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-C3	SDG No.:	E2960
Lab Sample ID:	E2960-01	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	3.2
Sample Wt/Vol:	30.02 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF064114.D	1	07/18/13	07/20/13	PB71081

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	34.4	U	7.9	34.4	340	ug/Kg
95-48-7	2-Methylphenol	34.4	U	18.7	34.4	340	ug/Kg
65794-96-9	3+4-Methylphenols	34.4	U	17.9	34.4	340	ug/Kg
91-20-3	Naphthalene	34.4	U	11.9	34.4	340	ug/Kg
208-96-8	Acenaphthylene	34.4	U	8.7	34.4	340	ug/Kg
83-32-9	Acenaphthene	34.4	U	9.7	34.4	340	ug/Kg
132-64-9	Dibenzofuran	34.4	U	13.4	34.4	340	ug/Kg
86-73-7	Fluorene	34.4	U	13	34.4	340	ug/Kg
118-74-1	Hexachlorobenzene	34.4	U	14	34.4	340	ug/Kg
87-86-5	Pentachlorophenol	34.4	U	23.5	34.4	340	ug/Kg
85-01-8	Phenanthrene	34.4	U	9.3	34.4	340	ug/Kg
120-12-7	Anthracene	34.4	U	7	34.4	340	ug/Kg
206-44-0	Fluoranthene	34.4	U	6.9	34.4	340	ug/Kg
129-00-0	Pyrene	34.4	U	8.3	34.4	340	ug/Kg
56-55-3	Benzo(a)anthracene	34.4	U	16.4	34.4	340	ug/Kg
218-01-9	Chrysene	34.4	U	15.6	34.4	340	ug/Kg
205-99-2	Benzo(b)fluoranthene	34.4	U	11.3	34.4	340	ug/Kg
207-08-9	Benzo(k)fluoranthene	34.4	U	16.2	34.4	340	ug/Kg
50-32-8	Benzo(a)pyrene	34.4	U	7.4	34.4	340	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	34.4	U	11.5	34.4	340	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	34.4	U	9.9	34.4	340	ug/Kg
191-24-2	Benzo(g,h,i)perylene	34.4	U	13.9	34.4	340	ug/Kg
123-91-1	1,4-Dioxane	68.8	U	13.5	68.8	340	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	72.1		28 - 127		48%	SPK: 150
13127-88-3	Phenol-d6	74.3		34 - 127		50%	SPK: 150
4165-60-0	Nitrobenzene-d5	57.9		31 - 132		58%	SPK: 100
321-60-8	2-Fluorobiphenyl	52.5		39 - 123		52%	SPK: 100
118-79-6	2,4,6-Tribromophenol	78.4		30 - 133		52%	SPK: 150
1718-51-0	Terphenyl-d14	45.9		37 - 115		46%	SPK: 100

INTERNAL STANDARDS

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-C3	SDG No.:	E2960
Lab Sample ID:	E2960-01	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	3.2
Sample Wt/Vol:	30.02 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF064114.D	1	07/18/13	07/20/13	PB71081

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
3855-82-1	1,4-Dichlorobenzene-d4	169646	4.4				
1146-65-2	Naphthalene-d8	698094	5.69				
15067-26-2	Acenaphthene-d10	411834	7.38				
1517-22-2	Phenanthrene-d10	780386	8.8				
1719-03-5	Chrysene-d12	769045	11.35				
1520-96-3	Perylene-d12	708815	12.63				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-C3RE	SDG No.:	E2960
Lab Sample ID:	E2960-01RE	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	3.2
Sample Wt/Vol:	30.02 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BA050580.D	1	07/18/13	07/22/13	PB71081

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	34.4	U	7.9	34.4	340	ug/Kg
95-48-7	2-Methylphenol	34.4	U	18.7	34.4	340	ug/Kg
65794-96-9	3+4-Methylphenols	34.4	U	17.9	34.4	340	ug/Kg
91-20-3	Naphthalene	34.4	U	11.9	34.4	340	ug/Kg
208-96-8	Acenaphthylene	34.4	U	8.7	34.4	340	ug/Kg
83-32-9	Acenaphthene	34.4	U	9.7	34.4	340	ug/Kg
132-64-9	Dibenzofuran	34.4	U	13.4	34.4	340	ug/Kg
86-73-7	Fluorene	34.4	U	13	34.4	340	ug/Kg
118-74-1	Hexachlorobenzene	34.4	U	14	34.4	340	ug/Kg
87-86-5	Pentachlorophenol	34.4	U	23.5	34.4	340	ug/Kg
85-01-8	Phenanthrene	34.4	U	9.3	34.4	340	ug/Kg
120-12-7	Anthracene	34.4	U	7	34.4	340	ug/Kg
206-44-0	Fluoranthene	34.4	U	6.9	34.4	340	ug/Kg
129-00-0	Pyrene	34.4	U	8.3	34.4	340	ug/Kg
56-55-3	Benzo(a)anthracene	34.4	U	16.4	34.4	340	ug/Kg
218-01-9	Chrysene	34.4	U	15.6	34.4	340	ug/Kg
205-99-2	Benzo(b)fluoranthene	34.4	U	11.3	34.4	340	ug/Kg
207-08-9	Benzo(k)fluoranthene	34.4	U	16.2	34.4	340	ug/Kg
50-32-8	Benzo(a)pyrene	34.4	U	7.4	34.4	340	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	34.4	U	11.5	34.4	340	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	34.4	U	9.9	34.4	340	ug/Kg
191-24-2	Benzo(g,h,i)perylene	34.4	U	13.9	34.4	340	ug/Kg
123-91-1	1,4-Dioxane	68.8	U	13.5	68.8	340	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	75.9		28 - 127		51%	SPK: 150
13127-88-3	Phenol-d6	71.9		34 - 127		48%	SPK: 150
4165-60-0	Nitrobenzene-d5	50.5		31 - 132		51%	SPK: 100
321-60-8	2-Fluorobiphenyl	56.3		39 - 123		56%	SPK: 100
118-79-6	2,4,6-Tribromophenol	67.1		30 - 133		45%	SPK: 150
1718-51-0	Terphenyl-d14	58.4		37 - 115		58%	SPK: 100

INTERNAL STANDARDS

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-C3RE	SDG No.:	E2960
Lab Sample ID:	E2960-01RE	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	3.2
Sample Wt/Vol:	30.02 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BA050580.D	1	07/18/13	07/22/13	PB71081

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
3855-82-1	1,4-Dichlorobenzene-d4	154484	5.99				
1146-65-2	Naphthalene-d8	603630	7.97				
15067-26-2	Acenaphthene-d10	320005	10.8				
1517-22-2	Phenanthrene-d10	464921	12.63				
1719-03-5	Chrysene-d12	326000	15.37				
1520-96-3	Perylene-d12	215266	16.95				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-G4	SDG No.:	E2960
Lab Sample ID:	E2960-04	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	3.7
Sample Wt/Vol:	6.13	Units:	g
Soil Aliquot Vol:			uL
GC Column:	RXI-624	Final Vol:	5000
	ID : 0.25	Test:	VOCMS Group1
		Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VK049060.D	1		07/17/13	VK071713

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	0.42	U	0.42	0.42	4.2	ug/Kg
75-35-4	1,1-Dichloroethene	0.42	U	0.42	0.42	4.2	ug/Kg
67-64-1	Acetone	2.1	U	2.1	2.1	21.2	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.42	U	0.42	0.42	4.2	ug/Kg
75-09-2	Methylene Chloride	1.2	J	0.42	0.42	4.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.42	U	0.42	0.42	4.2	ug/Kg
75-34-3	1,1-Dichloroethane	0.42	U	0.42	0.42	4.2	ug/Kg
78-93-3	2-Butanone	6.4	U	2.6	6.4	21.2	ug/Kg
56-23-5	Carbon Tetrachloride	0.42	U	0.42	0.42	4.2	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.42	U	0.42	0.42	4.2	ug/Kg
67-66-3	Chloroform	0.42	U	0.42	0.42	4.2	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.42	U	0.42	0.42	4.2	ug/Kg
71-43-2	Benzene	0.42	U	0.32	0.42	4.2	ug/Kg
107-06-2	1,2-Dichloroethane	0.42	U	0.42	0.42	4.2	ug/Kg
79-01-6	Trichloroethene	0.42	U	0.42	0.42	4.2	ug/Kg
108-88-3	Toluene	0.42	U	0.42	0.42	4.2	ug/Kg
127-18-4	Tetrachloroethene	0.42	U	0.42	0.42	4.2	ug/Kg
108-90-7	Chlorobenzene	0.42	U	0.42	0.42	4.2	ug/Kg
100-41-4	Ethyl Benzene	0.42	U	0.42	0.42	4.2	ug/Kg
179601-23-1	m/p-Xylenes	0.85	U	0.61	0.85	8.5	ug/Kg
95-47-6	o-Xylene	0.42	U	0.42	0.42	4.2	ug/Kg
103-65-1	n-propylbenzene	0.42	U	0.3	0.42	4.2	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	0.42	U	0.38	0.42	4.2	ug/Kg
98-06-6	tert-Butylbenzene	0.42	U	0.42	0.42	4.2	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	0.42	U	0.42	0.42	4.2	ug/Kg
135-98-8	sec-Butylbenzene	0.42	U	0.42	0.42	4.2	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.42	U	0.31	0.42	4.2	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.42	U	0.35	0.42	4.2	ug/Kg
104-51-8	n-Butylbenzene	0.42	U	0.39	0.42	4.2	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.42	U	0.42	0.42	4.2	ug/Kg
SURROGATES							

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-G4	SDG No.:	E2960
Lab Sample ID:	E2960-04	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	3.7
Sample Wt/Vol:	6.13 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VK049060.D	1		07/17/13	VK071713

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	50.9		56 - 120		102%	SPK: 50
1868-53-7	Dibromofluoromethane	51.7		57 - 135		103%	SPK: 50
2037-26-5	Toluene-d8	47.2		67 - 123		94%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.2		33 - 141		82%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	158061	6.4				
540-36-3	1,4-Difluorobenzene	264225	7.57				
3114-55-4	Chlorobenzene-d5	212007	10.66				
3855-82-1	1,4-Dichlorobenzene-d4	76710	12.59				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Preferred Environmental Services		Date Collected:	07/15/13
Project:	Bayer Material Science, LLC		Date Received:	07/17/13
Client Sample ID:	ECM-CF-G5		SDG No.:	E2960
Lab Sample ID:	E2960-07		Matrix:	SOIL
Analytical Method:	SW8260C		% Moisture:	3.2
Sample Wt/Vol:	5.33	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1
GC Column:	RXI-624	ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VK049071.D	1		07/18/13	VK071813

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	0.48	U	0.48	0.48	4.8	ug/Kg
75-35-4	1,1-Dichloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
67-64-1	Acetone	2.4	U	2.4	2.4	24.2	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.48	U	0.48	0.48	4.8	ug/Kg
75-09-2	Methylene Chloride	2.1	J	0.48	0.48	4.8	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
75-34-3	1,1-Dichloroethane	0.48	U	0.48	0.48	4.8	ug/Kg
78-93-3	2-Butanone	7.3	U	3	7.3	24.2	ug/Kg
56-23-5	Carbon Tetrachloride	0.48	U	0.48	0.48	4.8	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
67-66-3	Chloroform	0.48	U	0.48	0.48	4.8	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.48	U	0.48	0.48	4.8	ug/Kg
71-43-2	Benzene	0.48	U	0.37	0.48	4.8	ug/Kg
107-06-2	1,2-Dichloroethane	0.48	U	0.48	0.48	4.8	ug/Kg
79-01-6	Trichloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
108-88-3	Toluene	0.48	U	0.48	0.48	4.8	ug/Kg
127-18-4	Tetrachloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
108-90-7	Chlorobenzene	0.48	U	0.48	0.48	4.8	ug/Kg
100-41-4	Ethyl Benzene	0.48	U	0.48	0.48	4.8	ug/Kg
179601-23-1	m/p-Xylenes	0.97	U	0.7	0.97	9.7	ug/Kg
95-47-6	o-Xylene	0.48	U	0.48	0.48	4.8	ug/Kg
103-65-1	n-propylbenzene	0.48	U	0.35	0.48	4.8	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	0.48	U	0.44	0.48	4.8	ug/Kg
98-06-6	tert-Butylbenzene	0.48	U	0.48	0.48	4.8	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	0.48	U	0.48	0.48	4.8	ug/Kg
135-98-8	sec-Butylbenzene	0.48	U	0.48	0.48	4.8	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.48	U	0.36	0.48	4.8	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.48	U	0.4	0.48	4.8	ug/Kg
104-51-8	n-Butylbenzene	0.48	U	0.45	0.48	4.8	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.48	U	0.48	0.48	4.8	ug/Kg
SURROGATES							

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-CF-G5	SDG No.:	E2960
Lab Sample ID:	E2960-07	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	3.2
Sample Wt/Vol:	5.33 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VK049071.D	1		07/18/13	VK071813

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	50.9		56 - 120		102%	SPK: 50
1868-53-7	Dibromofluoromethane	50.1		57 - 135		100%	SPK: 50
2037-26-5	Toluene-d8	45.2		67 - 123		90%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.7		33 - 141		77%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	154009	6.41				
540-36-3	1,4-Difluorobenzene	266137	7.57				
3114-55-4	Chlorobenzene-d5	197729	10.65				
3855-82-1	1,4-Dichlorobenzene-d4	68935	12.59				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-04	SDG No.:	E2960
Lab Sample ID:	E2960-08	Matrix:	SOIL
		% Solid:	97.2

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Cyanide	0.129	U	1	0.034	0.129	0.257	mg/Kg	07/19/13	07/22/13 12:21	9012B
Hexavalent Chromium	0.206	U	1	0.082	0.206	0.412	mg/Kg	07/17/13	07/17/13 16:35	7196A
Trivalent Chromium	2.01		1	0.103	0.103	0.103	mg/Kg	07/17/13	07/17/13 00:00	6010B

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13		
Project:	Bayer Material Science, LLC	Date Received:	07/17/13		
Client Sample ID:	ECM-FD-04	SDG No.:	E2960		
Lab Sample ID:	E2960-08	Matrix:	SOIL		
Analytical Method:	SW8151A	% Moisture:	2.8	Decanted:	
Sample Wt/Vol:	30.08	Units:	g	Final Vol:	10000 uL
Soil Aliquot Vol:			uL	Test:	Herbicide Group1
Extraction Type:				Injection Volume :	
GPC Factor :	1.0	PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE007016.D	1	07/18/13	07/20/13	PB71082

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	17.1	U	11.2	17.1	68.7	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	305		12 - 189		61%	SPK: 500

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-04	SDG No.:	E2960
Lab Sample ID:	E2960-08	Matrix:	SOIL
Level (low/med):	low	% Solid:	97.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	0.37	J	1	0.15	0.22	0.44	mg/Kg	07/17/13	07/17/13	SW6010B
7440-39-3	Barium	8.2		1	0.18	1.105	2.21	mg/Kg	07/17/13	07/17/13	SW6010B
7440-41-7	Beryllium	0.065	U	1	0.03	0.065	0.13	mg/Kg	07/17/13	07/17/13	SW6010B
7440-43-9	Cadmium	0.065	U	1	0.03	0.065	0.13	mg/Kg	07/17/13	07/17/13	SW6010B
7440-50-8	Copper	1.58		1	0.14	0.22	0.44	mg/Kg	07/17/13	07/17/13	SW6010B
7439-92-1	Lead	1.78		1	0.05	0.13	0.26	mg/Kg	07/17/13	07/17/13	SW6010B
7439-96-5	Manganese	35.8		1	0.08	0.22	0.44	mg/Kg	07/17/13	07/17/13	SW6010B
7439-97-6	Mercury	0.006	J	1	0.002	0.005	0.01	mg/Kg	07/17/13	07/18/13	SW7471A
7440-02-0	Nickel	1.58		1	0.2	0.44	0.88	mg/Kg	07/17/13	07/17/13	SW6010B
7782-49-2	Selenium	0.22	U	1	0.18	0.22	0.44	mg/Kg	07/17/13	07/17/13	SW6010B
7440-22-4	Silver	0.11	U	1	0.07	0.11	0.22	mg/Kg	07/17/13	07/17/13	SW6010B
7440-66-6	Zinc	7.27		1	0.31	0.44	0.88	mg/Kg	07/17/13	07/17/13	SW6010B

Color Before:	Brown	Clarity Before:	Texture:	Medium
Color After:	Yellow	Clarity After:	Artifacts:	No
Comments:	Metals Group1			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-04	SDG No.:	E2960
Lab Sample ID:	E2960-08	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	2.8
Sample Wt/Vol:	30.05	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	Injection Volume :	
	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PB006985.D	1	07/18/13	07/22/13	PB71079

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	3.4	U	3.4	3.4	17.5	ug/kg
11104-28-2	Aroclor-1221	3.4	U	3.4	3.4	17.5	ug/kg
11141-16-5	Aroclor-1232	3.4	U	3.4	3.4	17.5	ug/kg
53469-21-9	Aroclor-1242	3.4	U	3.4	3.4	17.5	ug/kg
12672-29-6	Aroclor-1248	3.4	U	3.4	3.4	17.5	ug/kg
11097-69-1	Aroclor-1254	3.4	U	1.5	3.4	17.5	ug/kg
11096-82-5	Aroclor-1260	3.4	U	3.4	3.4	17.5	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	21.4		10 - 166		107%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.8		60 - 125		89%	SPK: 20

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-04	SDG No.:	E2960
Lab Sample ID:	E2960-08	Matrix:	SOIL
Analytical Method:	SW8081B	% Moisture:	2.8
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PESTICIDE Group1
GPC Factor :	1.0	Injection Volume :	
	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL004419.D	1	07/18/13	07/19/13	PB71080

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	0.339	U	0.134	0.339	1.7	ug/kg
319-85-7	beta-BHC	0.339	U	0.185	0.339	1.7	ug/kg
319-86-8	delta-BHC	0.339	U	0.103	0.339	1.7	ug/kg
58-89-9	gamma-BHC (Lindane)	0.339	U	0.154	0.339	1.7	ug/kg
76-44-8	Heptachlor	0.339	U	0.144	0.339	1.7	ug/kg
309-00-2	Aldrin	0.339	U	0.103	0.339	1.7	ug/kg
959-98-8	Endosulfan I	0.339	U	0.154	0.339	1.7	ug/kg
60-57-1	Dieldrin	0.339	U	0.134	0.339	1.7	ug/kg
72-55-9	4,4-DDE	0.339	U	0.206	0.339	1.7	ug/kg
72-20-8	Endrin	0.339	U	0.185	0.339	1.7	ug/kg
33213-65-9	Endosulfan II	0.339	U	0.144	0.339	1.7	ug/kg
72-54-8	4,4-DDD	0.339	U	0.175	0.339	1.7	ug/kg
1031-07-8	Endosulfan Sulfate	0.339	U	0.154	0.339	1.7	ug/kg
50-29-3	4,4-DDT	0.339	U	0.144	0.339	1.7	ug/kg
5103-71-9	alpha-Chlordane	0.339	U	0.144	0.339	1.7	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	16.4		10 - 169		82%	SPK: 20
877-09-8	Tetrachloro-m-xylene	17.9		31 - 151		89%	SPK: 20

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-04	SDG No.:	E2960
Lab Sample ID:	E2960-08	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	2.8
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF064117.D	1	07/18/13	07/20/13	PB71081

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	34.2	U	7.9	34.2	340	ug/Kg
95-48-7	2-Methylphenol	34.2	U	18.6	34.2	340	ug/Kg
65794-96-9	3+4-Methylphenols	34.2	U	17.8	34.2	340	ug/Kg
91-20-3	Naphthalene	34.2	U	11.8	34.2	340	ug/Kg
208-96-8	Acenaphthylene	34.2	U	8.6	34.2	340	ug/Kg
83-32-9	Acenaphthene	34.2	U	9.7	34.2	340	ug/Kg
132-64-9	Dibenzofuran	34.2	U	13.4	34.2	340	ug/Kg
86-73-7	Fluorene	34.2	U	12.9	34.2	340	ug/Kg
118-74-1	Hexachlorobenzene	34.2	U	14	34.2	340	ug/Kg
87-86-5	Pentachlorophenol	34.2	U	23.4	34.2	340	ug/Kg
85-01-8	Phenanthrene	34.2	U	9.2	34.2	340	ug/Kg
120-12-7	Anthracene	34.2	U	7	34.2	340	ug/Kg
206-44-0	Fluoranthene	34.2	U	6.9	34.2	340	ug/Kg
129-00-0	Pyrene	34.2	U	8.2	34.2	340	ug/Kg
56-55-3	Benzo(a)anthracene	34.2	U	16.3	34.2	340	ug/Kg
218-01-9	Chrysene	34.2	U	15.5	34.2	340	ug/Kg
205-99-2	Benzo(b)fluoranthene	34.2	U	11.2	34.2	340	ug/Kg
207-08-9	Benzo(k)fluoranthene	34.2	U	16.1	34.2	340	ug/Kg
50-32-8	Benzo(a)pyrene	34.2	U	7.4	34.2	340	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	34.2	U	11.4	34.2	340	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	34.2	U	9.9	34.2	340	ug/Kg
191-24-2	Benzo(g,h,i)perylene	34.2	U	13.9	34.2	340	ug/Kg
123-91-1	1,4-Dioxane	68.5	U	13.5	68.5	340	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	64.1		28 - 127		43%	SPK: 150
13127-88-3	Phenol-d6	71.6		34 - 127		48%	SPK: 150
4165-60-0	Nitrobenzene-d5	54		31 - 132		54%	SPK: 100
321-60-8	2-Fluorobiphenyl	50.5		39 - 123		50%	SPK: 100
118-79-6	2,4,6-Tribromophenol	72.6		30 - 133		48%	SPK: 150
1718-51-0	Terphenyl-d14	41.4		37 - 115		41%	SPK: 100

INTERNAL STANDARDS

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13		
Project:	Bayer Material Science, LLC	Date Received:	07/17/13		
Client Sample ID:	ECM-FD-04	SDG No.:	E2960		
Lab Sample ID:	E2960-08	Matrix:	SOIL		
Analytical Method:	SW8270D	% Moisture:	2.8		
Sample Wt/Vol:	30.04	Units:	g		
Soil Aliquot Vol:			uL		
Extraction Type :	Decanted :	N	Level :	LOW	
Injection Volume :	GPC Factor :	1.0	GPC Cleanup :	N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF064117.D	1	07/18/13	07/20/13	PB71081

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
3855-82-1	1,4-Dichlorobenzene-d4	156423	4.4				
1146-65-2	Naphthalene-d8	638611	5.69				
15067-26-2	Acenaphthene-d10	376695	7.38				
1517-22-2	Phenanthrene-d10	737235	8.8				
1719-03-5	Chrysene-d12	721785	11.35				
1520-96-3	Perylene-d12	662893	12.63				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-04RE	SDG No.:	E2960
Lab Sample ID:	E2960-08RE	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	2.8
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BA050583.D	1	07/18/13	07/22/13	PB71081

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	34.2	U	7.9	34.2	340	ug/Kg
95-48-7	2-Methylphenol	34.2	U	18.6	34.2	340	ug/Kg
65794-96-9	3+4-Methylphenols	34.2	U	17.8	34.2	340	ug/Kg
91-20-3	Naphthalene	34.2	U	11.8	34.2	340	ug/Kg
208-96-8	Acenaphthylene	34.2	U	8.6	34.2	340	ug/Kg
83-32-9	Acenaphthene	34.2	U	9.7	34.2	340	ug/Kg
132-64-9	Dibenzofuran	34.2	U	13.4	34.2	340	ug/Kg
86-73-7	Fluorene	34.2	U	12.9	34.2	340	ug/Kg
118-74-1	Hexachlorobenzene	34.2	U	14	34.2	340	ug/Kg
87-86-5	Pentachlorophenol	34.2	U	23.4	34.2	340	ug/Kg
85-01-8	Phenanthrene	34.2	U	9.2	34.2	340	ug/Kg
120-12-7	Anthracene	34.2	U	7	34.2	340	ug/Kg
206-44-0	Fluoranthene	34.2	U	6.9	34.2	340	ug/Kg
129-00-0	Pyrene	34.2	U	8.2	34.2	340	ug/Kg
56-55-3	Benzo(a)anthracene	34.2	U	16.3	34.2	340	ug/Kg
218-01-9	Chrysene	34.2	U	15.5	34.2	340	ug/Kg
205-99-2	Benzo(b)fluoranthene	34.2	U	11.2	34.2	340	ug/Kg
207-08-9	Benzo(k)fluoranthene	34.2	U	16.1	34.2	340	ug/Kg
50-32-8	Benzo(a)pyrene	34.2	U	7.4	34.2	340	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	34.2	U	11.4	34.2	340	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	34.2	U	9.9	34.2	340	ug/Kg
191-24-2	Benzo(g,h,i)perylene	34.2	U	13.9	34.2	340	ug/Kg
123-91-1	1,4-Dioxane	68.5	U	13.5	68.5	340	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	69.6		28 - 127		46%	SPK: 150
13127-88-3	Phenol-d6	67.7		34 - 127		45%	SPK: 150
4165-60-0	Nitrobenzene-d5	45.8		31 - 132		46%	SPK: 100
321-60-8	2-Fluorobiphenyl	51.1		39 - 123		51%	SPK: 100
118-79-6	2,4,6-Tribromophenol	63.7		30 - 133		42%	SPK: 150
1718-51-0	Terphenyl-d14	51.2		37 - 115		51%	SPK: 100

INTERNAL STANDARDS

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-04RE	SDG No.:	E2960
Lab Sample ID:	E2960-08RE	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	2.8
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BA050583.D	1	07/18/13	07/22/13	PB71081

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
3855-82-1	1,4-Dichlorobenzene-d4	178419	5.99				
1146-65-2	Naphthalene-d8	714819	7.97				
15067-26-2	Acenaphthene-d10	394797	10.81				
1517-22-2	Phenanthrene-d10	644721	12.63				
1719-03-5	Chrysene-d12	433975	15.37				
1520-96-3	Perylene-d12	303083	16.95				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-05	SDG No.:	E2960
Lab Sample ID:	E2960-09	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	3.5
Sample Wt/Vol:	5.42	Units:	g
Soil Aliquot Vol:			uL
GC Column:	RXI-624	Final Vol:	5000
	ID : 0.25	Test:	VOCMS Group1
		Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VK049072.D	1		07/18/13	VK071813

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	0.48	U	0.48	0.48	4.8	ug/Kg
75-35-4	1,1-Dichloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
67-64-1	Acetone	2.4	U	2.4	2.4	23.9	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.48	U	0.48	0.48	4.8	ug/Kg
75-09-2	Methylene Chloride	0.48	U	0.48	0.48	4.8	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
75-34-3	1,1-Dichloroethane	0.48	U	0.48	0.48	4.8	ug/Kg
78-93-3	2-Butanone	7.2	U	3	7.2	23.9	ug/Kg
56-23-5	Carbon Tetrachloride	0.48	U	0.48	0.48	4.8	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
67-66-3	Chloroform	0.48	U	0.48	0.48	4.8	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.48	U	0.48	0.48	4.8	ug/Kg
71-43-2	Benzene	0.48	U	0.36	0.48	4.8	ug/Kg
107-06-2	1,2-Dichloroethane	0.48	U	0.48	0.48	4.8	ug/Kg
79-01-6	Trichloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
108-88-3	Toluene	0.48	U	0.48	0.48	4.8	ug/Kg
127-18-4	Tetrachloroethene	0.48	U	0.48	0.48	4.8	ug/Kg
108-90-7	Chlorobenzene	0.48	U	0.48	0.48	4.8	ug/Kg
100-41-4	Ethyl Benzene	0.48	U	0.48	0.48	4.8	ug/Kg
179601-23-1	m/p-Xylenes	0.96	U	0.69	0.96	9.6	ug/Kg
95-47-6	o-Xylene	0.48	U	0.48	0.48	4.8	ug/Kg
103-65-1	n-propylbenzene	0.48	U	0.34	0.48	4.8	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	0.48	U	0.43	0.48	4.8	ug/Kg
98-06-6	tert-Butylbenzene	0.48	U	0.48	0.48	4.8	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	0.48	U	0.48	0.48	4.8	ug/Kg
135-98-8	sec-Butylbenzene	0.48	U	0.48	0.48	4.8	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.48	U	0.35	0.48	4.8	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.48	U	0.39	0.48	4.8	ug/Kg
104-51-8	n-Butylbenzene	0.48	U	0.44	0.48	4.8	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.48	U	0.48	0.48	4.8	ug/Kg
SURROGATES							

Report of Analysis

Client:	Preferred Environmental Services	Date Collected:	07/15/13
Project:	Bayer Material Science, LLC	Date Received:	07/17/13
Client Sample ID:	ECM-FD-05	SDG No.:	E2960
Lab Sample ID:	E2960-09	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	3.5
Sample Wt/Vol:	5.42 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VK049072.D	1		07/18/13	VK071813

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	53.2		56 - 120		106%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		57 - 135		104%	SPK: 50
2037-26-5	Toluene-d8	47.6		67 - 123		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.6		33 - 141		81%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	155949	6.42				
540-36-3	1,4-Difluorobenzene	273869	7.59				
3114-55-4	Chlorobenzene-d5	207570	10.66				
3855-82-1	1,4-Dichlorobenzene-d4	79110	12.59				

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution