

REMEDATION SECTION, 2ND FL
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WASTE MANAGEMENT BUREAU

**HALEY &
ALDRICH**

28 October 2004
File No. 27892-421

Department of Environmental Protection
Bureau of Water Management
Permitting, Enforcement and Remediation Division
79 Elm Street
Hartford, CT 06106-5127

Attention: Ms. Shannon Pociu

Subject: Request for Modification to Work Plan
Mill Rock Park
Hamden, Connecticut

Ladies and Gentlemen:

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On behalf of the Town of Hamden, Haley & Aldrich, Inc. (Haley & Aldrich) requests approval of the following modification to the Supplemental Phase III Environmental Investigation Work Plan, Rochford Field and Mill Rock Park, Hamden, Connecticut (Work Plan), dated July 2004.

The Work Plan (page 11) identifies semi-volatile organic compounds (SVOCs) as a contaminant of concern at Mill Rock Park. However, of the 26 samples analyzed for SVOCs at Mill Rock Park, the only non polynuclear aromatic hydrocarbon (PAH) SVOCs detected are bis(2-ethylhexyl)phthalate at one location (MRP-HA102), and carbazole at five locations (MRP-HA101, 102, 104, 105 and 106). Refer to Work Plan Table II (attached) for additional information.

Therefore, we request that the sampling for SVOCs at Mill Rock Park include only PAHs and carbazole. At locations near MRP-HA102, we will also analyze for bis(2-ethylhexyl)phthalate. We understand that this request is consistent with the approach that the Regional Water Authority has taken on the nearby Middle School parcel, and that this approach was approved by the Connecticut Department of Environmental Protection.

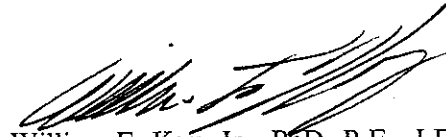
Town of Hamden
28 October 2004
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If you require additional information, please call.

Sincerely yours,
HALEY & ALDRICH, INC.



Chris G. Harriman, LEP
Senior Environmental Geologist



William F. Kay, Jr., PhD, P.E., LEP
Senior Vice President

cc: Town of Hamden; Attn: Honorable Carl Amento
Halloran & Sage; Attn: Ann Catino

Attachments: Work Plan Table II

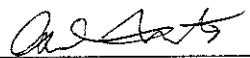
RESPONDENT AND PREPARER CERTIFICATIONS

Any document that is submitted to the commissioner of the CTDEP under SRD-128 must be signed by the Respondent (Town of Hamden), or authorized representative of the Respondent, and by the individuals responsible for preparing such a document. Therefore, the Respondent (or agent thereof) and the Preparer (Haley & Aldrich) must sign the following statement:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

Carl Amento
Name of Respondent or Authorized Representative
Town of Hamden

Mayor
Title


Signature

11/2/04
Date

Colin G. Harriman
Name of Preparer
Haley & Aldrich, Inc.

SR. ENV. GEOLOGIST
Title


Signature

10/28/04
Date

TABLE II
SUMMARY OF ANALYTICAL DATA - SOIL
MILL ROCK PARK
HAMDEN, CONNECTICUT

PARAMETER	Sample ID:		Residential Direct Exposure Criteria	GVA/GA Pollutant Mobility Criteria	MRP-HA101-MW-S1 MRP-HA101-MW 9-Aug-02 0-2 EF	MRP-HA101-MW-S2 MRP-HA101-MW 9-Aug-02 2-4 DRF	MRP-HA101-MW-S3 MRP-HA101-MW 9-Aug-02 5-7 DRF	MRP-HA101-MW-S4A MRP-HA101-MW 9-Aug-02 7-8 DRF	MRP-HA101-MW-S4B MRP-HA101-MW 9-Aug-02 8-8.8 AD	MRP-HA102-S1 MRP-HA102 12-Aug-02 0-2 EF
	Sample Location: Sample Date: Sample Depth(ft.bgs): Sample Type	Sample Location: Sample Date: Sample Depth(ft.bgs): Sample Type								
VOLATILE ORGANIC COMPOUNDS (ug/kg):										
SEMI-VOLATILE ORGANIC COMPOUNDS (ug/kg):										
Naphthalene	1000000	ND	5600	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	1000000	330	8400	1000	ND	290	ND	ND	ND	780
Acenaphthene	1000000	ND	8400	450	ND	1000	280	ND	ND	310
Fluorene	1000000	ND	5600	1500	ND	ND	ND	ND	ND	ND
Phenanthrene	1000000	1200	5600	1600	ND	300	ND	ND	ND	ND
Anthracene	1000000	340	40000	15000	ND	4500	1400	ND	ND	780
Carbazole	31000	230	1000	4700	ND	760	ND	ND	ND	250
Fluoranthene	1000000	2200	4600	17000	ND	8400	3200	ND	ND	2100
Pyrene	1000	1100	1000	15000	ND	7500	2900	ND	ND	1800
Benzofluoranthene	84000	1300	1000	8100	ND	3700	1300	ND	ND	1100
bis(2-Ethylhexyl)phthalate	44000	ND	1000	8600	ND	3800	1300	ND	ND	1200
Benzofluoranthene	8400	1800	1000	12000	ND	5500	1800	ND	ND	1800
Benzofluoranthene	1000	740	1000	4700	ND	2300	810	ND	ND	740
Benzofluoranthene	1000	1400	1000	8500	ND	4500	1500	ND	ND	1400
Indeno(1,2,3-cd)pyrene	1000	980	1000	5400	ND	3700	1000	ND	ND	910
Dibenz(a,h)anthracene	1000	230	1000	1400	ND	690	ND	ND	ND	210
Benzofluoranthene	1000000	810	4200	4200	ND	2500	830	ND	ND	730
CHLORINATED PESTICIDES (ug/kg):										
4,4-DDE	1800	ND	NE	ND	ND	ND	ND	ND	ND	ND
POLYCHLORINATED BIPHENYLS (ug/kg):										
TOTAL PETROLEUM HYDROCARBONS (mg/kg):	500	120	500	330	ND	ND	230	ND	ND	110
TOTAL METALS (mg/kg):										
Antimony	27	ND	27	2.7	ND	ND	9.7	ND	ND	ND
Arsenic	10	5	10	7.8	5.5	5.5	9.7	1.4	ND	ND
Beryllium	2	ND	2	ND	ND	ND	ND	ND	4.7	4.7
Cadmium	34	ND	34	ND	ND	ND	ND	ND	ND	ND
Copper	2500	40	2500	400	32	32	280	ND	ND	12
Cyanide	1400	ND	1400	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium	100	ND	100	ND	ND	ND	ND	ND	ND	ND
Lead	400	130	400	390	390	390	870	23	ND	580
Nickel	1400	8	1400	9.2	8.9	8.9	13	ND	750	750
Selenium	340	ND	340	ND	ND	ND	3	ND	1.5	1.5
Silver	340	ND	340	5.4	ND	ND	ND	ND	88	88
Thallium	5.4	ND	5.4	ND	ND	ND	ND	ND	ND	ND
Mercury	20	0.53	20	0.22	0.23	0.23	0.23	ND	0.82	0.82
Zinc	20000	110	20000	320	120	120	560	ND	ND	ND
SPLP METALS (mg/l):										
Arsenic	0.05	---	0.05	---	---	---	---	---	---	---
Lead	0.015	---	0.015	---	---	---	---	---	---	---
TOTAL CYANIDE (mg/kg):	1400	NE	1400	NE	ND	ND	ND	ND	ND	ND

See notes on page 5

TABLE II
SUMMARY OF ANALYTICAL DATA - SOIL
MILL ROCK PARK
HAMDEN, CONNECTICUT

PARAMETER	Sample ID:				Residential Direct Exposure Criteria	GA/GAA Pollutant Mobility Criteria	MRP-HA102-S2 MRP-HA102 12-Aug-02 2-4 DRF	MRP-HA102-S3 MRP-HA102 12-Aug-02 5-7 DRF	MRP-HA102-S4 MRP-HA102 12-Aug-02 7.5-9 GD	MRP-HA103-MW-S1 MRP-HA103-MW 12-Aug-02 0-2 EF	MRP-HA103-MW-S2 MRP-HA103-MW 12-Aug-02 2-4 DRF	MRP-HA103-MW-S3 MRP-HA103-MW 12-Aug-02 5-6.5 DRF	MRP-HA103-MW-S4 MRP-HA103-MW 9-Aug-02 7-9 AD
	Sample Location:	Sample Date:	Sample Depth(ft,logs):	Sample Type									
VOLATILE ORGANIC COMPOUNDS (ug/kg):													
SEMI-VOLATILE ORGANIC COMPOUNDS (ug/kg):													
Naphthalene				1000000	5600	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene			1000000	8400	ND	360	ND	ND	ND	ND	ND	ND	ND
Acenaphthene			1000000	8400	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene			1000000	5500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene			1000000	4000	2600	1000	ND	ND	360	ND	480	ND	ND
Anthracene			1000000	4000	330	370	ND	ND	200	ND	ND	ND	ND
Carbazole			31000	1000	360	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene			1000000	5600	3100	2800	ND	ND	880	1000	210	ND	ND
Pyrene			1000000	4000	3400	2600	ND	ND	830	950	220	ND	ND
Benzofluoranthene			1000	1000	1300	1400	ND	ND	470	460	ND	ND	ND
Chrysene			84000	1000	1800	1600	ND	ND	550	550	ND	ND	ND
bis(2-Ethylhexyl)phthalate			44000	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzofluoranthene			1000	1000	1900	2400	ND	ND	960	840	220	ND	ND
Benzofluoranthene			8400	1000	760	950	ND	ND	360	360	ND	ND	ND
Benzofluoranthene			1000	1000	1600	1800	ND	ND	720	650	ND	ND	ND
Benzofluoranthene			1000	1000	910	1200	ND	ND	640	470	ND	ND	ND
Indeno(1,2,3-cd)pyrene			1000	1000	220	260	ND	ND	ND	ND	ND	ND	ND
Dibenzofluoranthene			1000000	4200	780	930	ND	ND	550	410	ND	ND	ND
Benzofluoranthene			1000000	4200	ND	ND	ND	ND	73	ND	ND	ND	ND
CHLORINATED PESTICIDES (ug/kg):													
4,4-DDE			1800	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND
POLYCHLORINATED BIPHENYLS (ug/kg):													
1			1	0.0005	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL PETROLEUM HYDROCARBONS (mg/kg):													
500			500	500	ND	210	ND	ND	ND	ND	ND	ND	ND
TOTAL METALS (mg/kg):													
Antimony			27	--	4	2	ND	ND	ND	ND	10	ND	ND
Arsenic			10	--	11	6.8	ND	ND	7.5	12	20	ND	ND
Beryllium			2	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium			34	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper			2500	--	97	40	ND	ND	22	8.8	96	ND	ND
Cyanide			1400	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium			100	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead			400	--	910	340	3.9	3.9	33	21	580	23	6
Nickel			1400	--	11	13	ND	ND	10	3.4	51	23	ND
Selenium			340	--	ND	ND	ND	ND	ND	ND	5.1	2.3	ND
Silver			340	--	ND	ND	ND	ND	ND	ND	2.3	ND	ND
Thallium			5.4	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury			20	--	ND	0.44	ND	ND	ND	0.31	0.26	ND	ND
Zinc			20000	--	570	450	ND	ND	43	120	2500	ND	ND
SPLP METALS (mg/l):													
Arsenic			--	0.05	--	--	--	--	--	--	--	ND	ND
Lead			--	0.015	--	--	--	--	--	--	--	ND	ND
TOTAL CYANIDE (mg/kg):													
1400			1400	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND

See notes on page 5

TABLE II
SUMMARY OF ANALYTICAL DATA - SOIL
MILL ROCK PARK
HAWDEN, CONNECTICUT

PARAMETER	Sample ID: Sample Location: Sample Date: Sample Depth(ft-bgs): Sample Type	Residential Direct Exposure Criteria	GAVAA Pollutant Mobility Criteria	MRP-HA104-S1 MRP-HA104 12-Aug-02 0.5-2 DRF	MRP-HA104-S2 MRP-HA104 12-Aug-02 2-4 DRF	MRP-HA104-S3 MRP-HA104 12-Aug-02 5-6.5 DRF	MRP-HA104-S4 MRP-HA104 12-Aug-02 7-9 AD	MRP-HA105-S1 MRP-HA105 12-Aug-02 1-2 DRF	MRP-HA105-S2 MRP-HA105 12-Aug-02 2-4 DRF
VOLATILE ORGANIC COMPOUNDS (ug/kg):									
SEMI-VOLATILE ORGANIC COMPOUNDS (ug/kg):									
Naphthalene		1000000	5600	ND	510	210	ND	ND	270
Acenaphthylene		1000000	8400	260	1900	360	ND	ND	920
Acenaphthene		1000000	8400	ND	730	ND	ND	ND	ND
Fluorene		1000000	5600	ND	1700	ND	ND	ND	270
Phenanthrene		1000000	4000	1000	9500	570	ND	660	5300
Anthracene		1000000	40000	310	3200	320	ND	400	980
Carbazole		310000	1000	ND	460	ND	ND	ND	740
Fluoranthene		1000000	5600	2200	9300	1600	ND	2000	9500
Pyrene		1000000	4000	1900	14000	1800	ND	2300	8400
Benz[a]anthracene		1000	1000	1100	5700	690	ND	1300	4300
Chrysene		84000	1000	1200	6300	1100	ND	1600	4500
bis(2-Ethylhexyl)phthalate		44000	1000	ND	ND	ND	ND	ND	ND
Benz[b]fluoranthene		1000	1000	1600	6800	1700	ND	2400	8200
Benz[k]fluoranthene		8400	1000	690	2700	720	ND	980	3300
Benz[a]pyrene		1000	1000	1200	6500	1400	ND	1800	6200
Indeno[1,2,3-cd]pyrene		1000	1000	790	2800	850	ND	1100	3800
Dibenz[a,h]anthracene		1000	1000	ND	640	ND	ND	270	1100
Benz[ghi]perylene		1000000	4200	640	2400	720	ND	990	3300
CHLORINATED PESTICIDES (ug/kg):									
4,4-DDE		1800	NE	ND	ND	ND	ND	ND	ND
POLYCHLORINATED BIPHENYLS (ug/kg):									
1		1	0.0005	ND	ND	ND	ND	ND	ND
TOTAL PETROLEUM HYDROCARBONS (mg/kg):									
500		500	500	110	260	ND	ND	390	690
TOTAL METALS (mg/kg):									
Antimony		27	--	ND	4.9	ND	ND	5.8	7.4
Arsenic		10	--	1.3	13	ND	ND	7.3	17
Beryllium		2	--	ND	ND	ND	ND	ND	ND
Cadmium		34	--	ND	ND	ND	ND	ND	ND
Copper		2500	--	17	110	5.4	ND	61	140
Cyanide		1400	--	ND	ND	ND	ND	ND	ND
Hexavalent Chromium		100	--	ND	ND	ND	ND	ND	ND
Lead		400	--	29	650	7.5	ND	140	1300
Nickel		1400	--	4.9	11	2.1	ND	7.8	30
Selenium		340	--	ND	1.9	ND	ND	4.9	8.9
Silver		340	--	ND	ND	ND	ND	ND	ND
Thallium		5.4	--	ND	ND	ND	ND	ND	ND
Mercury		20	--	ND	ND	ND	ND	0.33	1
Zinc		20000	--	49	510	6.8	ND	310	580
SPLP METALS (mg/l):									
Arsenic		--	0.05	--	--	--	--	--	ND
Lead		--	0.015	--	--	--	--	--	ND
TOTAL CYANIDE (mg/kg):		1400	NE	ND	ND	ND	ND	ND	ND

See notes on page 5

TABLE II
SUMMARY OF ANALYTICAL DATA - SOIL
MILL ROCK PARK
HAMDEN, CONNECTICUT

PARAMETER	Sample ID: Sample Location: Sample Date: Sample Depth(ft.bgs): Sample Type	Residential Direct Exposure Criteria	GA/GAA Pollutant Mobility Criteria	MRP-HA105-S3 MRP-HA105 12-Aug-02 5-7 DRF	MRP-HA105-S4 MRP-HA105 12-Aug-02 7-9 AD	MRP-HA106-S1 MRP-HA106 12-Aug-02 0-2 DRF	MRP-HA106-S2 MRP-HA106 12-Aug-02 2-4 DRF	MRP-HA106-S3 MRP-HA106 12-Aug-02 5-6.5 DRF	MRP-HA107-MW-S1 MRP-HA107-MW 9-Aug-02 0-2 EF	MRP-HA107-MW-S2 MRP-HA107-MW 9-Aug-02 2-4 EF
VOLATILE ORGANIC COMPOUNDS (ug/kg):										
SEMI-VOLATILE ORGANIC COMPOUNDS (ug/kg):										
Naphthalene		1000000	5600	ND	---	ND	ND	ND	ND	ND
Acenaphthylene		1000000	8400	ND	---	ND	670	ND	ND	ND
Acenaphthene		1000000	8400	ND	---	ND	ND	ND	ND	ND
Fluorene		1000000	5600	ND	---	ND	270	ND	ND	ND
Phenanthrene		1000000	4000	ND	---	1100	4000	ND	ND	ND
Anthracene		1000000	4000	ND	---	820	ND	ND	ND	ND
Carbazole		31000	1000	ND	---	ND	430	ND	ND	ND
Fluoranthene		1000000	5600	250	---	1600	6100	ND	ND	ND
Pyrene		1000000	4000	220	---	1400	5000	ND	ND	ND
Benzo(a)anthracene		1000	1000	ND	---	710	2600	ND	ND	ND
Crystalline		84000	1000	ND	---	780	2700	ND	ND	ND
bis(2-Ethylhexyl)phthalate		4000	1000	ND	---	ND	ND	ND	ND	ND
Benzo(b)fluoranthene		1000	1000	ND	---	1300	4500	ND	ND	ND
Benzo(k)fluoranthene		8400	1000	ND	---	570	2100	ND	ND	ND
Benzo(a)pyrene		1000	1000	ND	---	1000	3500	ND	ND	ND
Indeno(1,2,3-cd)pyrene		1000	1000	ND	---	850	2100	ND	ND	ND
Dibenz(a,h)anthracene		1000	1000	ND	---	ND	620	ND	ND	ND
Benzo(g,h,i)perylene		1000000	4200	ND	---	570	1700	ND	ND	ND
CHLORINATED PESTICIDES (ug/kg):										
4,4-DDE		1800	NE	ND	---	ND	ND	ND	ND	ND
POLYCHLORINATED BIPHENYLS (ug/kg):										
1		1	0.0005	ND	---	ND	ND	ND	ND	ND
TOTAL PETROLEUM HYDROCARBONS (mg/kg):										
500		500	500	ND	---	350	2300	240	ND	ND
TOTAL METALS (mg/kg):										
Antimony		27	---	2.6	---	ND	6.4	ND	ND	ND
Arsenic		10	---	7.7	1.1	3.4	7.3	3.1	ND	ND
Beryllium		2	---	ND	---	ND	ND	ND	ND	ND
Cadmium		34	---	26	---	ND	ND	ND	ND	ND
Copper		2500	---	85	---	29	210	29	14	4.6
Cyanide		1400	---	ND	---	ND	ND	ND	ND	ND
Hexavalent Chromium		100	---	ND	---	ND	ND	40	ND	ND
Lead		400	---	160	6.7	120	620	100	6.9	9.8
Nickel		1400	---	7.5	---	6	13	7.3	3.3	2.2
Selenium		340	---	2.3	---	ND	1.6	ND	ND	ND
Silver		340	---	ND	---	ND	ND	ND	ND	ND
Thallium		5.4	---	ND	---	ND	ND	ND	ND	ND
Mercury		20	---	ND	---	0.98	0.45	0.21	ND	ND
Zinc		20000	---	2000	---	99	1300	91	11	7.9
SPLP METALS (mg/l):										
Arsenic		---	0.05	---	---	---	---	---	---	---
Lead		---	0.015	---	---	---	---	---	---	---
TOTAL CYANIDE (mg/kg):										
1400		1400	NE	ND	---	ND	ND	ND	ND	ND

See notes on page 5

TABLE II
SUMMARY OF ANALYTICAL DATA - SOIL
MILL ROCK PARK
HAMDEN, CONNECTICUT

NOTES:

1. This table includes only those compounds which were detected.
2. RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEP)
3. ND means the compound was not detected above the normal minimum laboratory detection limit.
4. NE means no criteria established by CTDEP for listed compound.
5. NA means not applicable.
6. -- indicates analysis not conducted
7. ug/kg means micrograms per kilogram
8. mg/kg means milligrams per kilogram
9. mg/L means milligram per litre.
10. Analytical results as reported above the GAPMC are presented in bold type. Values in a box exceed RDEC.
11. The RSR DEC for lead (400 mg/kg) is based on a proposed revision to the current 500 mg/kg DEC for lead.
12. The above 'Sample Type' was described by Haley & Aldrich, Inc. as the following:

EF: Earthen Fill: Soil fill, including topsoil which typically does not contain man-made artifacts but at some locations may contain variable amounts of root matter, cobbles, boulders and construction/demolition debris such as concrete, asphalt and brick

DRF: Domestic Refuse Fill: Soil intermixed with products associated with household and/or on-site burning of paper/wood/coal (ash/cinders), intermixed with rusted metal cans and numerous whole bottles and broken glass, various broken ceramic items

MF: Miscellaneous Fill: Earthen Fill and/or Domestic Refuse Fill mixed with variable amounts of Industrial Waste Fill

IWF: Industrial Waste Fill: Black silt and sand sized particles of slag, with cinders and ash intermixed primarily with wood box fragments, sawdust and/or wood chips, batteries, Winchester-related products, shell casings and furnace bricks.

AD: Alluvial Deposits: Organic rich deposits associated with former intermittent watercourse and wetlands.

GD: Glaciodeltaic Deposits: Glacial meltwater deposits consisting primarily of sand and silt.