

MA691033

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

a) Name of facility/site : Brookfield Engineering Laboratories, Inc.		Facility/site address: 240 Cushing Street	
Location of facility/site : longitude: <u>71.11</u> latitude: <u>42.12</u>	Facility SIC code(s): N/A	Street: 240 Cushing Street	
b) Name of facility/site owner : Brookfield Engineering Laboratories, Inc.		Town: Stoughton	
Email address of owner:	State: MA	Zip: 02072	County: Norfolk
Telephone no. of facility/site owner : (508) 946-6200			
Fax no. of facility/site owner : (508) 923-5008		Owner is (check one): 1. Federal____ 2. State/Tribal____ 3. Private ☒ 4. other, if so, describe:	
Address of owner (if different from site):			
Street: 11 Commerce Boulevard			
Town: Middleboro	State: MA	Zip: 02346	County: Plymouth
c) Legal name of operator : Charles Heshion	Operator telephone no: (508) 946-6200		
	Operator fax no.: (508) 923-5008	Operator email: cheshion@aol.com	
Operator contact name and title: Charles Heshion, Environmental Facilities Manager			

Address of operator (if different from owner):		Street: 11 Commerce Boulevard	
Town: Middleboro	State: MA	Zip: 02346	County: Plymouth
d) Check "yes" or "no" for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Yes ___ No ☒ , if "yes," number: 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ☒ No ___, if "yes," date and tracking #: MA 0031955 3/25/03 3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ___ No ☒ 4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes ☒ No ___ RTN 4-13964			
e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes ___ No ☒ If "yes," please list: 1. site identification # assigned by the state of NH or MA: 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number:		f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y ___ N ☒ , if Y, number: 2. phase I or II construction storm water general permit? Y ___ N ☒ , if Y, number: 3. individual NPDES permit? Y ☒ N ___, if Y, number: MA0031955 4. any other water quality related permit? Y ___ N ☒ , if Y, number:	

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage: Groundwater from bedrock and overburden that was previously contaminated from a release of solvent material from historic metal plating operations will be treated for removal of organics and metals.		
b) Provide the following information about each discharge:	1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <u>0.10</u> Average flow <u>.025</u> Is maximum flow a design value ? Y ☒ N ___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
3) Latitude and longitude of each discharge within 100 feet: pt.1:long. <u>71.11</u> lat. <u>42.12</u> ; pt.2: long. _____ lat. _____; pt.3: long. _____ lat. _____; pt.4: long. _____ lat. _____; pt.5: long. _____ lat. _____; pt.6: long. _____ lat. _____; pt.7: long. _____ lat. _____; pt.8: long. _____ lat. _____; etc.		

4) If hydrostatic testing, total volume of the discharge (gals): N/A	5) Is the discharge intermittent _____ or seasonal _____? Is discharge ongoing Yes ☒ No _____?
c) Expected dates of discharge (mm/dd/yy): start <u>01/01/98</u> end <u>11/30/17</u>	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: Please see Appendix C of this report. 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).	

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants ☒	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		☒	7	GRAB	2540D	5	15		8.67	
2. Total Residual Chlorine	☒		1	GRAB	4500	0.020	ND		ND	
3. Total Petroleum Hydrocarbons		☒	1	GRAB	1664	1.4	1.9		1.9	
4. Cyanide	☒		1	GRAB	4500	0.010	ND		ND	
5. Benzene	☒		7	GRAB	8260	1	ND		ND	
6. Toluene		☒	7	GRAB	624	1	2.2		1.84	
7. Ethylbenzene	☒		7	GRAB	8260	1	ND		ND	
8. (m,p,o) Xylenes	☒		1	GRAB	8260	2	ND		ND	
9. Total BTEX ⁴		☒	7	GRAB	624	1	2.2		1.84	

⁴BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

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							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide (1,2- Dibromo-methane)	✓		1	GRAB	504.1	0.020	ND		ND	
11. Methyl-tert-Butyl Ether (MtBE)	✓		1	GRAB	8260	1	ND		ND	
12. tert-Butyl Alcohol (TBA)	✓		1	GRAB	8260	25	ND		ND	
13. tert-Amyl Methyl Ether (TAME)	✓		1	GRAB	8260	25	ND		ND	
14. Naphthalene	✓		1	GRAB	8260	2	ND		ND	
15. Carbon Tetra-chloride	✓		7	GRAB	8260	1	ND		ND	
16. 1,4 Dichlorobenzene	✓		7	GRAB	8260	1	ND		ND	
17. 1,2 Dichlorobenzene	✓		7	GRAB	8260	1	ND		ND	
18. 1,3 Dichlorobenzene	✓		7	GRAB	8260	1	ND		ND	
19. 1,1 Dichloroethane		✓	7	GRAB	624	10	164		87.9	
20. 1,2 Dichloroethane	✓		7	GRAB	8260	1	ND		ND	
21. 1,1 Dichloroethylene		✓	7	GRAB	624	1	16.8		9.41	
22. cis-1,2 Dichloro-ethylene		✓	7	GRAB	624	1	49.9		29.16	
23. Dichloromethane (Methylene Chloride)	✓		7	GRAB	8260	5	ND		ND	
24. Tetrachloroethylene		✓	7	GRAB	624	1	10.7		6.89	

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							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane		✓	7	GRAB	8260	1	317		249	
26. 1,1,2 Trichloroethane	✓		7	GRAB	8260	1	ND		ND	
27. Trichloroethylene		✓	7	GRAB	8260	1	8.8		5.21	
28. Vinyl Chloride		✓	7	GRAB	624	1	2.9		2.13	
29. Acetone	✓		1	GRAB	8260	50	ND		ND	
30. 1,4 Dioxane	✓		1	GRAB	8260	50	ND		ND	
31. Total Phenols	✓		1	GRAB	8270	10	ND		ND	
32. Pentachlorophenol	✓		1	GRAB	8270	10	ND		ND	
33. Total Phthalates ⁵ (Phthalate esthers)	✓		1	GRAB	8270	10	ND		ND	
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	GRAB	8270	1	ND		ND	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	GRAB	8270		ND		ND	
a. Benzo(a) Anthracene	✓		1	GRAB	8270	0.05	ND		ND	
b. Benzo(a) Pyrene	✓		1	GRAB	8270	0.10	ND		ND	
c. Benzo(b)Fluoranthene	✓		1	GRAB	8270	0.05	ND		ND	
d. Benzo(k) Fluoranthene	✓		1	GRAB	8270	0.2	ND		ND	
e. Chrysene	✓		1	GRAB	8270	0.2	ND		ND	

⁵The sum of individual phthalate compounds.

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							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	✓		1	GRAB	8270	0.05	ND		ND	
g. Indeno(1,2,3-cd) Pyrene	✓		1	GRAB	8270	0.50	ND		ND	
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	GRAB	8270		ND		ND	
h. Acenaphthene	✓		1	GRAB	8270	0.30	ND		ND	
i. Acenaphthylene	✓		1	GRAB	8270	0.30	ND		ND	
j. Anthracene	✓		1	GRAB	8270	0.20	ND		ND	
k. Benzo(ghi) Perylene	✓		1	GRAB	8270	0.50	ND		ND	
l. Fluoranthene	✓		1	GRAB	8270	0.50	ND		ND	
m. Fluorene	✓		1	GRAB	8270	1	ND		ND	
n. Naphthalene-	✓		1	GRAB	8270	1	ND		ND	
o. Phenanthrene	✓		1	GRAB	8270	0.050	ND		ND	
p. Pyrene	✓		1	GRAB	8270	1	ND		ND	
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	GRAB	8082	0.20	ND		ND	
38. Antimony	✓		1	GRAB	3113	0.0015	ND		ND	
39. Arsenic		✓	1	GRAB	3113	0.00050	.0009		.0009	
40. Cadmium	✓		1	GRAB	200.7	.00050	ND		ND	
41. Chromium III		✓	7	GRAB	6010	0.010	0.011		0.011	
42. Chromium VI	✓		7	GRAB	3500	0.004	ND		ND	

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							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper		✓	1	GRAB	200.7	0.0005	.0025		.0025	
44. Lead		✓	7	GRAB	7421	0.0005	.0626		.0191	
45. Mercury	✓		1	GRAB	245.1	0.00004	ND		ND	
46. Nickel		✓	7	GRAB	6010	0.003	0.058		0.035	
47. Selenium	✓		1	GRAB	3113	0.0005	ND		ND	
48. Silver	✓		1	GRAB	3113	0.0005	ND		ND	
49. Zinc		✓	1	GRAB	200.7	0.005	0.014		0.014	
50. Iron		✓	7	GRAB	6010	0.03	9.31		6.64	
Other (describe): Chloroethane		✓	7	GRAB	8260	2	206		100.3	

c) For discharges where **metals** are believed present, please fill out the following:

<i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y ___ N <u>✓</u>	If yes, which metals?
<i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: <u>N/A</u> DF: _____	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ___ N <u>✓</u> If "Yes," list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system: A description of the treatment system is included in Section 1.2 of this report. Please see Appendix C for the schematic and flow of the treatment system.						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper ✓	Oil/water separator	Equalization tanks ✓	Bag filter ✓	GAC filter ✓
	Chlorination	Dechlorination	Other (please describe): pH adjustment, flocculation, Lamella separator			
c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system: Average flow rate of discharge <u>11.3 GPM</u> Maximum flow rate of treatment system <u>45 GPM</u> Design flow rate of treatment system <u>45 GPM</u>						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): Please see the description of the treatment system is included in Section 1.2 of this report. Please refer to Appendix E for attached MSDS sheets.						

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct_____	Within facility__	Storm drain_____	River/brook_____	Wetlands_____	Other (describe): Unnamed Tributary, please see Sec. 1.3
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: Treated effluent from the remediation system is discharged to an unnamed tributary, locally known as High School Brook, via the existing on-site storm sewer system. Buried piping conveys the treated water from the building to the storm sewer system. High School Brook joins surface waters to the southwest of the 240 Cushing Street property that discharge via a series of intermediate surface water bodies (e.g., Steep Hill Brook and Forge Pond) to the Neponset River located approximately four miles northwest of the site.						

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:
 1. For multiple discharges, number the discharges sequentially.
 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water
 The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water B.

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0.34 cfs
 Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes ☒ No ☐ If yes, for which pollutant(s)?
 Nutrients, pH

Is there a TMDL? Yes ☐ No ☒ If yes, for which pollutant(s)?

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ☐ No ☒
 Has any consultation with the federal services been completed? No ☒ or is consultation underway? Yes ☐ No ☒
 What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):
 a "no jeopardy" opinion? ☐ or written concurrence ☐ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?
 Yes ☐ No ☒ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ☐ No ☒

7. Supplemental information. :

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

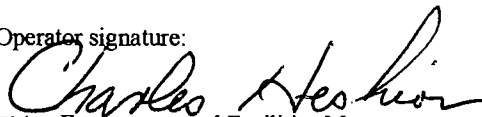
Please refer to Section 1 and the Appendices for supplemental information.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name: Brookfield Engineering Laboratories, Inc.

Operator signature:



Title: Environmental Facilities Manager

Date: 11-14-07