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

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

a) Name of **facility/site**: Former MSM Industries, Inc.		**Facility/site** mailing address:		
Location of **facility/site**: longitude: 42.55N latitude: 71.12W	Facility SIC code(s): 3444	Street: 60 Concord Street		
b) Name of **facility/site owner:**		Town: North Reading		
Email address of facility/site owner: dniemeyer@geospherenh.com		State: Massachusetts	Zip: 01864	County: USA
Telephone no. of facility/site **owner**: 603-773-0075				
Fax no. of facility/site **owner**: 603-773-0077		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ⊙ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):		Sebell Family Trust c/o GEOSPHERE		
Street: 51 Portsmouth Ave.				
Town: Exeter	State: NH	Zip: 03833	County: USA	
c) Legal name of **operator**:		**Operator** telephone no: 603-773-0075		
Geosphere Environmental Management, Inc.		**Operator** fax no.: 603-773-0077	**Operator** email: dniemeyer@geospherenh.com	
Operator contact name and title: David C. Niemeyer; Director of Environmental Compliance; Geosphere Environmental Management, Inc.				
Address of **operator** (if different from owner):	Street: 51 Portsmouth Avenue			
Town: Exeter	State: NH	Zip: 03833	County: USA	

d) Check Y for "yes" or N for "no" for the following:
1. Has a prior NPDES permit exclusion been granted for the discharge? Y ⊙ N ○, if Y, number: MAG910374
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
Y ⊙ N ○, if Y, date and tracking #: 4/19/1996
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Y ○ N ⊙
4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y ⊙ N ○

e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y ⊙ N ○
If Y, please list:
1. site identification # assigned by the state of NH or MA: MADEP RTN 3-0692
2. permit or license # assigned: TIER I Permit # 83046
3. state agency contact information: name, location, and telephone number:
MADEP, Northeast Region, Wilmington MA 978-694-3200

f) Is the site/facility covered by any other EPA permit, including:
1. Multi-Sector General Permit? Y ○ N ⊙, if Y, number: --
2. Final Dewatering General Permit? Y ○ N ⊙, if Y, number: --
3. EPA Construction General Permit? Y ○ N ⊙, if Y, number: --
4. Individual NPDES permit? Y ○ N ⊙, if Y, number: --
5. any other water quality related individual or general permit? Y ○ N ⊙, if Y, number: --

g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y ⊙ N ○

h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.

Activity Category	**Activity Sub-Category**
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☐ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☐
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites ☒ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☐
III - Contaminated Construction Dewatering	A. General Urban Fill Sites ☐ B. Known Contaminated Sites ☐

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ☐ B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites ☐ C. Hydrostatic Testing of Pipelines and Tanks ☐ D. Long-Term Remediation of Contaminated Sumps and Dikes ☐ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ☐

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage:

VOC contaminated groundwater is pumped through an air/water separator and an air stripper system. This treated groundwater is discharged onto the ground surface at the edge of the Ipswich River wetlands.

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 0.06684 Is maximum flow a **design value**? Y ○ N ◉
Average flow (include units) 0.03342 cfs Is average flow a design value or estimate? No Estimate

3) Latitude and longitude of each discharge within 100 feet:

pt.1: lat 71.12W	long 42.55N	pt.2: lat.	long.	;	
pt.3: lat	long	pt.4: lat.	long.	;	
pt.5: lat	long	pt.6: lat.	long.	;	
pt.7: lat	long	pt.8: lat.	long.	;	etc.

4) If hydrostatic testing, total volume of the discharge (gals): N/A

5) Is the discharge intermittent ◉ or seasonal ○ ?
Is discharge ongoing? Y ◉ N ○

c) Expected dates of discharge (mm/dd/yy): start 01/01/1995 end 12/31/2011

d) Please attach a line drawing or flow schematic showing water flow through the facility including:
1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s). See Figure 1 - Site Plan; See Figure 2 - Remedial System Schematic

3. Contaminant information.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		☐	☒	3	grab	SM-2540D	5.0 mg/l	8.7 mg/l		6 mg/l	
2. Total Residual Chlorine (TRC)		☒	☐	3	grab	SM4500CLG	0.2 mg/l	<0.1 mg/l			
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	17	grab	SM5520F	5.0 mg/l	<5.0 mg/l			
4. Cyanide (CN)	57125	☒	☐	3	grab	SM-4500CN-CE	0.01 mg/l	<0.01 mg/l			
5. Benzene (B)	71432	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
6. Toluene (T)	108883	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
7. Ethylbenzene (E)	100414	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	17	grab	8260B	10.0 ug/L	<4.0 ug/L			
9. Total BTEX [2]	n/a	☒	☐	17	grab	8260B	2.0 ug/L	<10 ug/L			
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	17	grab	8260B	5.0 ug/L	<2.0 ug/L			
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	3	grab	8260B	100.0 ug/L	<30.0 ug/L			

***** Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

[2] BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

[3] EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
13. tert-Amyl Methyl Ether (TAME)	9940508	☒	☐	3	grab	8260B	2.0 ug/L	<2.0 ug/L			
14. Naphthalene	91203	☒	☐	17	grab	8270D	5.0 ug/L	<5.0 ug/L			
15. Carbon Tetrachloride	56235	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
18a. Total dichlorobenzene		☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
21. 1,1 Dichloroethene (DCE)	75354	☐	☒	17	grab	8260B	2.0 ug/L	2 ug/L			
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
23. Methylene Chloride	75092	☒	☐	17	grab	8260B	5.0 ug/L	<5.0 ug/L			
24. Tetrachloroethene (PCE)	127184	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
25. 1,1,1 Trichloro-ethane (TCA)	71556	☐	☒	17	grab	8260B	2.0 ug/L	22 ug/L		4.1 ug/L	
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
27. Trichloroethene (TCE)	79016	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
28. Vinyl Chloride (Chloroethene)	75014	☒	☐	17	grab	8260B	2.0 ug/L	<2.0 ug/L			
29. Acetone	67641	☒	☐	3	grab	8260B	50.0 ug/L	<50.0 ug/L			
30. 1,4 Dioxane	123911	☐	☒	17	grab	8260B	50.0 ug/L	120 ug/L		31.8 ug/L	
31. Total Phenols	108952	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
32. Pentachlorophenol (PCP)	87865	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
33. Total Phthalates (Phthalate esters) [4]		☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☐	☐	3	--	--	--	--			
a. Benzo(a) Anthracene	56553	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
b. Benzo(a) Pyrene	50328	☒	☐	3	grab	8270D	10.0 ug/L	<5.0 ug/L			
c. Benzo(b)Fluoranthene	205992	☒	☐	3	grab	8270D	10.0 ug/L	<5.0 ug/L			
d. Benzo(k)Fluoranthene	207089	☒	☐	3	grab	8270D	10.0 ug/L	<5.0 ug/L			
e. Chrysene	21801	☒	☐	3	grab	8270D	10.0 ug/L	<2.0 ug/L			
f. Dibenzo(a,h)anthracene	53703	☒	☐	3	grab	8270D	10.0 ug/L	<1.0 ug/L			
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	3	grab	8270D	10.0 ug/L	<1.0 ug/L			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☐	☐								

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
i. Acenaphthylene	208968	☒	☐	3	grab	8270D	10.0 ug/L	<5.0 ug/L			
j. Anthracene	120127	☒	☐	3	grab	8270D	10.0 ug/L	<5.0 ug/L			
k. Benzo(ghi) Perylene	191242	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
l. Fluoranthene	206440	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
m. Fluorene	86737	☒	☐	3	grab	8270D	10.0 ug/L	<5.0 ug/L			
n. Naphthalene	91203	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
o. Phenanthrene	85018	☒	☐	3	grab	8270D	5.0 ug/L	<5.0 ug/L			
p. Pyrene	129000	☒	☐	3	grab	8270D	10.0 ug/L	<5.0 ug/L			
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	3	grab	808.2	0.5 ug/L	<0.25 ug/L			
38. Chloride	16887006	☒	☐								
39. Antimony	7440360	☐	☒	3	grab	200.8	50 ug/L	13 ug/L		4 ug/L	
40. Arsenic	7440382	☐	☒	3	grab	200.8	5.0 ug/L	1.1 ug/L		0.33 ug/L	
41. Cadmium	7440439	☒	☐	3	grab	200.8	5.0 ug/L	<4.0 ug/L			
42. Chromium III (trivalent)	16065831	☒	☐	3	grab	CALC	20.0 ug/L	<5.0 ug/L			
43. Chromium VI (hexavalent)	18540299	☒	☐	3	grab	SM3500-CRD	20.0 ug/L	<5.0 ug/L			
44. Copper	7440508	☐	☒	3	grab	200.7	5.0 ug/L	28.6 ug/L		11.4 ug/L	
45. Lead	7439921	☐	☒	3	grab	200.7	40.0 ug/L	3.1 ug/L		1.03 ug/L	
46. Mercury	7439976	☒	☐	3	grab	245.1	0.2 ug/L	<0.2 ug/L			
47. Nickel	7440020	☒	☐	3	grab	200.7	10.0 ug/L	<5.0 ug/L			
48. Selenium	7782492	☒	☐	3	grab	200.8	50.0 ug/L	<2.0 ug/L			
49. Silver	7440224	☒	☐	3	grab	200.7	10.0 ug/L	<1.0 ug/L			
50. Zinc	7440666	☒	☐	3	grab	200.7	20.0 ug/L	<20.0 ug/L			
51. Iron	7439896	☐	☒	17	grab	200.7	0.05 mg/L	17 mg/l		4.4 mg/l	
Other (describe):		☐	☐								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
		☐	☐								
		☐	☐								

b) For discharges where **metals** are believed present, please fill out the following (attach results of any calculations):

Step 1: Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y ◉ N ○	If yes, which metals? Iron, Copper, Antimony, Arsenic, Lead
Step 2: For any metals which 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? Metal: Iron = 5000 ug/L DF: 6996 Metal: Copper = 520 ug/L DF: 6996 Metal: Antimony = 141 ug/L DF: 6996 Metal: Arsenic = 540 ug/L; Lead = 132 ug/L DF: 6996 Etc.	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 ◉ If Y, 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:

Soil vapor and groundwater is extracted from six wells and treated through an air/water separator. This water is then pumped to another system where it is treated through an air stripper and
discharged approximately 40ft from the treatment building into the edge of the wetlands.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☐	Air stripper ☒	Oil/water separator ☐	Equalization tanks ☐	Bag filter ☐	GAC filter ☐
	Chlorination ☐	De-chlorination ☐	Other (please describe):	Air/Water 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 4 gpm Maximum flow rate of treatment system 30 gpm
Design flow rate of treatment system 30 gpm

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

NONE

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

a) Identify the discharge pathway:	Direct to receiving water ☐	Within facility (sewer) ☐	Storm drain ☐	Wetlands ☒	Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
Treated water is discharged to the wetland boundary of the Ipswich River

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 Class B

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 460 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? Y ◉ N ○ If yes, for which pollutant(s)? flow,metals, nutrients,DO

Is there a final TMDL? Y ○ N ◉ If yes, for which pollutant(s)?

6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?

A ○ B ○ C ○ D ◉ E ○ F ○

b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ○ N ◉ Underway ○

c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Y ○ N ○

d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.

e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?

1 ◉ 2 ○ 3 ○

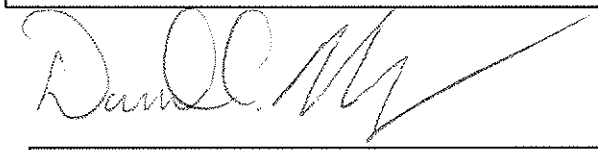
f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

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.

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:	Former MSM Industries, Inc.
Operator signature:	
Printed Name &Title:	David C. Niemeyer, Director of Environmental Compliance, Geosphere Environmental Management, Inc.
Date:	February 1, 2011