MAG910374

GEOSPHERE
Environmental Management, Inc.

July 25, 2008

Victor Alvarez
United States Environmental Protection Agency
RGP-NOC Processing
Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

RE: Letter of Intent for Remediation General Permit (RGP)
Non-Petroleum Site Remediation (VOC-Only Site)
Former MSM Industries, Inc., 60 Concord St., N. Reading, MA 01864
MADEP RTN: 3-0692

Dear Mr. Alvarez:

Geosphere Environmental Management, Inc. (GEOSPHERE), operator, on behalf of Leonard Sebell, owner of the above referenced facility (the site), is pleased to present this *Letter of Intent* and accompanying documentation as application for the *Remedial General Permit* (RGP) as a non-petroleum site remediation (VOC-Only) Site. The Massachusetts Department of Environmental Protection (DEP) assigned Release Tracking Number (RTN) 3-0692 to the site. The site was tier classified as a Tier IA site on November 29, 1994. On April 18, 1995, a National Pollutant Discharge Elimination System (NPDES) Permit Exclusion was granted to the Mr. Sebell (applicant) by the United States Environmental Protection Agency (EPA). Following alteration to the treatment system, a NPDES Permit Application was submitted to the EPA on April 19, 1996.

Since issuance of the NPDES Permit Exclusion on April 18, 1995, the site has been operating in compliance with the NPDES reporting regulations. On a monthly basis NPDES reports are submitted to the EPA describing operations of the treatment system including groundwater sampling analytical results, vapor discharge screening results, discharge flow rates of treated water, and system maintenance and repairs. In March 2008, GEOSPHERE was informed by EPA (personal communication – email correspondence) that a RGP was required in replacement to the NPDES Permit Exclusion. The following information supplies a brief description of the site and the treatment system, along with the necessary RGP forms and supporting documentation that are included as attachment to this *Letter of Intent*.

51 Portsmouth Avenue, Exeter, New Hampshire 03833
Tel: 603-773-0075 Fax: 603-773-0077

Site Location and Description

The site is located at 60 Concord Street in North Reading, MA, and was formerly operated by MSM Industries, Inc., a manufacturing company specializing in sheet metal fabrication. The property is located within a commercially zoned area of North Reading and is bordered by Concord Street to the west-northwest, Columbia Construction Co. to the north, the Ipswich River and wetlands to the east-southeast, and Wilmington Grain and Building Materials Co. to the southwest. The area of the site is approximately 3.3 acres, of which the facility building occupies approximately 25,000 square feet. **Figure 1**, attached, is a site plan showing the site in detail, including the site property boundaries, the Ipswich River, locations of the monitoring wells, recovery wells, extraction wells, and locations of on-site structures.

Description of Active Remediation System

The source of the release at the MSM site are surface spills of 1,1,1-trichloroethane (TCA) and trichloroethene (TCE) that occurred at the rear of the building in the vicinity of monitoring well B202-OW, impacting the shallow soils and the shallow groundwater in this area (i.e. source area, as shown on **Figure 1**).

On-site remediation system structures include a truck containing a dual phase (soil vapor and groundwater) extraction (DPE) system, and a trailer containing a Shallow-Tray™ air stripper system that treats extracted groundwater and discharges it into the adjacent wetlands. A remediation system schematic is shown in **Figure 2**, and a brief description of each system is given below.

> ***Dual Phase Extraction (DPE) System*** – This system consists of a liquid ring high-vacuum pump which provides a vacuum to seven PVC extraction wells (DPE-1, DPE-2, DPE-3, DPE-4, B104S, B202, and RW-4S). Both soil vapor and groundwater (i.e. dual phases) are extracted from the monitoring wells under high vacuum, and after traveling through vacuum piping and through the pump, are separated within the separation tank. Vapors are emitted through a water knock-out drum, to remove water vapors, and discharged on site via a PVC pipe (stack) above the truck. The transfer pump sends the extracted groundwater through above ground piping over to the aeration system trailer for treatment and subsequent discharge to the Ipswich River.
>
> ***Shallow Groundwater Extraction System*** – This system employs a centrifugal pump to extract groundwater via "suction" from four shallow extraction wells (RW-1S, RW-2S, RW-3S, and RW-5S) located in the wetlands downgradient of the source area on site. Extracted groundwater is pumped directly into a Shallow-Tray™ air stripper system that treats the extracted groundwater (along with the DPE system effluent) and discharges the treated water into the adjacent wetlands. The air stripper treats the extracted groundwater by drawing outside air up through the perforated air stripper trays using a 300 cfm vacuum blower while the extracted groundwater

cascades downward against the airflow. VOCs are "stripped" from the groundwater as the volatile organics are transferred into vapor phase and emitted through the blower's air stream. This air stream is discharged outside through a PVC stack above the aeration system trailer.

Current NPDES Monthly Monitoring Program

Since issuance of the NPDES Permit Exclusion on April 18, 1995 (**Attachment A**), the site has been operating in compliance with the NPDES reporting regulations. The following represents the current monthly monitoring program activities performed at the site by GEOSPHERE:

1) Collection of influent groundwater samples (DPE-Eff, RWS-Inf) and effluent groundwater sample (AS-Eff) to the aeration treatment system for laboratory analysis of VOCs.
2) Field screening of air emissions (off-gases) from the DPE system and the air stripper for total VOCs using a photoionization detector with 11.8 eV lamp (or similar device).
3) Measurement/calculation of flow rates for both the DPE system and shallow groundwater extraction system influent to the air stripper, and the effluent discharge from the air stripper.
4) Measurement of the air discharge rate for the DPE system.
5) Measurement of all water and air pressure and vacuum gauges.

On a monthly basis NPDES reports are prepared and submitted to the EPA describing operations of the treatment system detailing the results of the above activities. The monthly groundwater samples are collected at the following locations:

- Shallow Groundwater Extraction System (combined) Influent Pipe (RWS-Inf)
- Air Stripper Influent from Dual Phase Groundwater Extraction System (DPE-Eff)
- Treated Effluent from Air Stripper (AS-Eff)

A summary of laboratory groundwater chemical analysis results detected from the samples collected during monthly NPDES sampling from September 2005 to August 2007 are shown in **Table 1**.

RGP Permit Application and Notice of Intent Form

In March 2008, GEOSPHERE was informed by EPA that a RGP was required in replacement to the NPDES Permit. Although no significant changes were made to the discharge operations since submission of the NPDES permit (April 18, 1995), GEOSPHERE has completed the RPG Notice of Intent (NOI) form for this site identified as a Category II Sub-Category A, Non-Petroleum Site Remediation (VOCs Only) site. The NOI and related supporting documentation is included in **Attachment B**.

The attached NOI describes the discharge and treatment system information for the site. As required for a Category II.A. Non-Petroleum Site Remediation (VOCs Only) site, the pollutants requiring monitoring (as outlined in Table V of the RGP) are addressed in terms of believed absent, or believed present (noted as BA and BP, respectively) in Section 3.b. of the NOI. Based on the type of contamination on-site, chlorinated VOCs relating to metal working, a number of the pollutants have been designated as believed absent, they are as follows: Total Petroleum Hydrocarbons, Carbon Tetrachloride, Acetone, 1,4-Dioxane, Total Phenols, Pentachlorophenol, Total Phthalates, Bis (2-Ethylhexyl) Phthalate, and Total Polychlorinated Biphenyls.

Of the fourteen (14) chlorinated VOCs listed as pollutants requiring monitoring under Category II.A., a total of six (6) are believed present in the untreated influent groundwater. These believed present compounds have been detected in the untreated influent at least once during two years of sampling, from September 2005 to August 2007, they are: 1,2 Dichlorobenzene, 1,1 Dichloroethane, 1,1, Dichloroethylene, cis-1,2 Dichloroethylene, 1,1,1 Trichloroethane, Trichloroethylene. The number of samples these compounds were detected in, including the maximum concentration and average concentration, are evaluated in Section 3.b of the NOI. Per the NPDES monthly monitoring program, the untreated and treated groundwater on-site has been sampled and analyzed for these VOCs for over ten years. A summary of laboratory groundwater chemical analysis results detected from the samples collected from September 2005 to August 2007 are shown in **Table 1.**

In accordance with the pollutants requiring monitoring for Category II.A., GEOSPHERE recently collected a sample of the untreated influent and analyzed it for total iron. As requested in Section 3.c. of the NOI, iron was detected at a concentration exceeding the effluent limit listed in Appendix III of the NOI instructions (1000 parts per billion (ppb)). A dilution factor was calculated for iron based on the formula in Part I.A.3.c of the NOI instructions and stream flow data collected for the receiving Ipswich River. The dilution factor calculated was compared to Appendix IV of the NOI instructions and an updated dilution range concentration of 5000 ppb has been established as the effluent limit for iron.

Conclusions and RGP Monitoring Program

In response to the March 2008 EPA request for an RPG application in replacement of the current NPDES permit, GEOSPHERE is pleased to submit this *Letter of Intent* and accompanying documentation as the RGP application for the site identified as a non-petroleum site remediation (VOC-Only) Site. Although no significant changes were made to the discharge operations since submission of the NPDES permit (April 18 , 1995), GEOSPHERE has completed the NOI and reviewed the regulations that will pertain to the site, once verification of RGP coverage is received.

In accordance with the RGP monitoring program, GEOSPHERE will continue to perform monthly monitoring of those pollutants believed present in Section 3.b. of the NOI and pH in the untreated influent and discharge effluent on a monthly basis. In addition to monitoring for the believed present pollutants and pH, GEOSPHERE will continue to monitor the design (instantaneous) flow and total flow on a monthly basis by means of a manual bucket and stopwatch method. In-line flow meters have been utilized at the site before, however because of the elevated iron concentrations the meters become clogged and consequently inaccurate in a short amount of time, the use of an in-line flow meter will not be used. In regard to recordkeeping and reporting the monitoring, sampling and analysis onsite, GEOSPHERE will comply with the regulations outlined in the RGP Part I D.4, stating that all information will be summarized in the provided form and kept on-site and available for inspection if requested. If any of the monitoring analytical results indicate a violation of the effluent limitations, GEOSPHERE will submit a summary of the results to the EPA-NE and the Commonwealth of Massachusetts Department of Environmental Protection (MADEP) immediately following such violation.

Since this system is scheduled to remain operational for six (6) months or longer, certification of those pollutants believed absent will be made at least once in every sequential six (6) months that the discharge continues through laboratory analysis of one untreated effluent sample. Based on the results of six (6) to twelve (12) months of data, GEOSPHERE may request a reduction in the monitoring requirements, this request will be made to EPA-NE following all written RGP regulations (e.g. Notice of Change (NOC) form), monitoring as outlined will continue until written verification of acceptance of the monitoring reduction request is made by the EPA.

Since the system on site has been operating in accordance with the NPDES sampling for over ten years, GEOSPHERE considers the site to be exempt for the initial treatment system discharge startup sampling program as outlined in the RGP Part I D.2. However, if intermittent operations exist, i.e. interrupted discharge for more than 45 days, GEOSPHERE will comply with the RGP regulations outlined in Part I D.5.

Within 30 days of receiving notification from EPA-NE that the site is covered by the RGP, GEOSPHERE will develop and implement a BMP Plan (BMPP). Since the discharge will potentially operate for greater than 180 days, the BMPP will be kept on-site, and an annual certification report will be submitted detailing how the BMPP was followed it the previous year.

Since the site is already covered under NPDES Permit, and no significant changes have been made to the system operations, upon certification the site is covered under the RGP, a copy of the accepted NOI along with applicable application forms and transmittal form (with payment) will be submitted to MADEP and the municipality in which the existing discharge is located, North Reading, Massachusetts (in accordance with the RGP Part B.4.7., and the RGP Appendix V. Section B.a.). It is in GEOSPHERE's understanding that once a RGP is granted for the site, it will remain in effect until a Notice of Termination (NOT) is submitted to EPA-NE.

If you have any questions, please feel free to call GEOSPHERE at 603-773-0075 or 888-838-6571.

Sincerely,

GEOSPHERE ENVIRONMENTAL MANAGEMENT, INC.

David Niemeyer, P.G.
Director of Environmental Compliance

Attachments:

Figure 1	Site Plan		
Figure 2	Remedial System P & ID		
Table 1	Summary of Laboratory Chemical Analysis Results		
	September 2005	-	February 2006
	March 2006	-	August 2006
	September 2006	-	February 2007
	March 2007	-	August 2007
Attachment A	NPDES Permit Exclusion Letter (EPA April 18, 1995)		
Attachment B	Notice of Intent (NOI) Form		

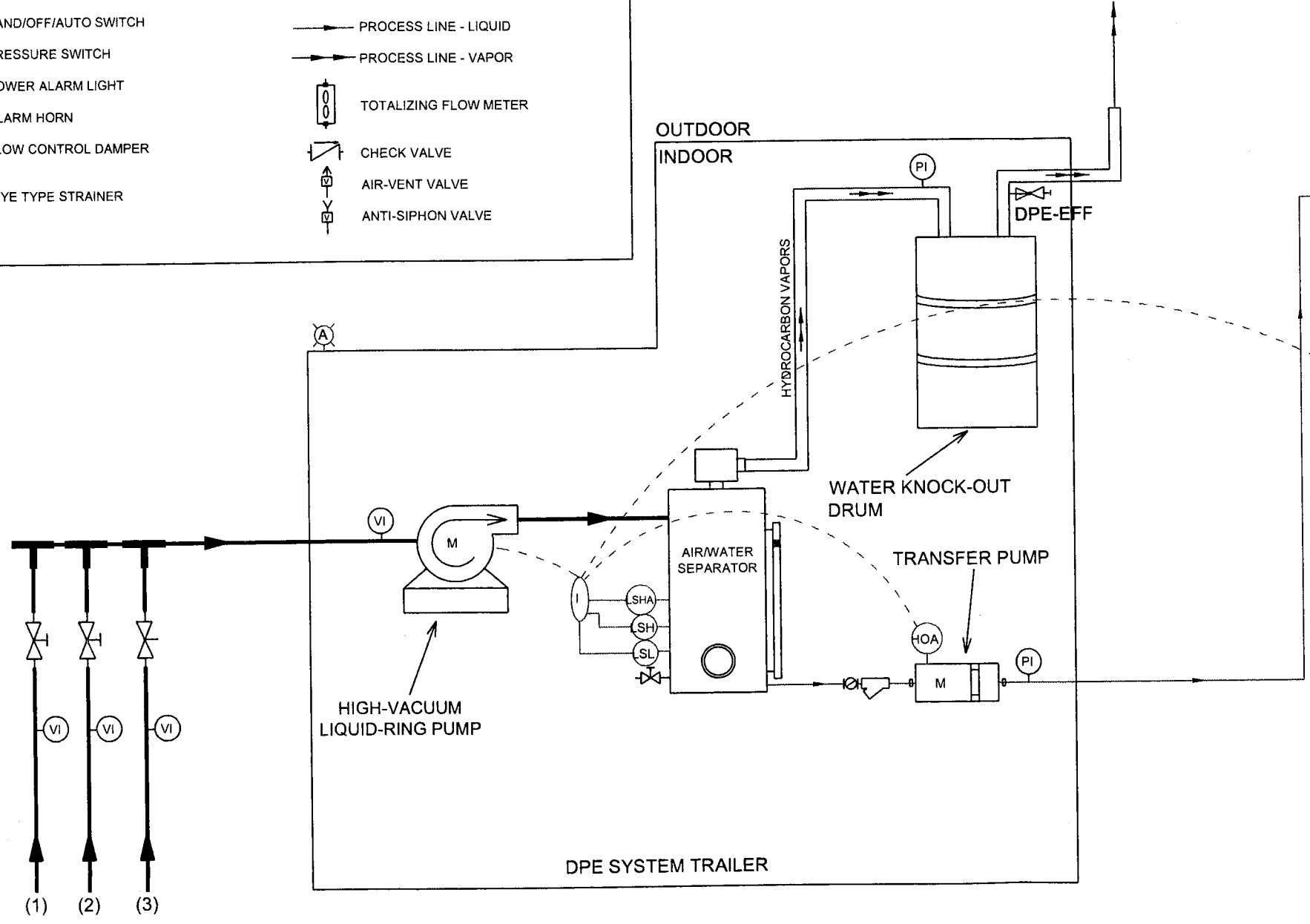
cc: Leonard Sebell

LEGEND

VI	VACUUM INDICATOR
M	MOTOR
PI	PRESSURE INDICATOR
LSH	LEVEL SWITCH HIGH
LSL	LEVEL SWITCH LOW
LSHH	LEVEL SWITCH HIGH ALARM
HOA	HAND/OFF/AUTO SWITCH
PS	PRESSURE SWITCH
A	POWER ALARM LIGHT
	ALARM HORN
	FLOW CONTROL DAMPER
	WYE TYPE STRAINER
	PRESSURE OR VACUUM RELIEF VALVE
	GATE VALVE
	BALL VALVE
	DRAIN VALVE
	SAMPLE PORT
	ELECTRICAL INTERLOCK CONTROL
	PROCESS LINE - LIQUID
	PROCESS LINE - VAPOR
	TOTALIZING FLOW METER
	CHECK VALVE
	AIR-VENT VALVE
	ANTI-SIPHON VALVE

SAMPLING LOCATIONS:

Vapor: DPE-EFF, AS-EFF, AS-GAC-EFF
Liquid: DPE-EFF, AS-EFF, RWS-INF



VAPOR AND GROUNDWATER
FROM EXTRACTION WELLS
(1) DPE-1, DPE-2, DPE-3 and DPE-4
(2) B202-OW, B104S-OW
(3) RW-4S

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**: Former MSM Industries, Inc.		**Facility/site** address:		
Location of **facility/site**: longitude: 42.55N latitude: 71.12 W	Facility SIC code(s): 3444	Street: 60 Concord Street		
b) Name of **facility/site owner:** Leonard Sebell (Sebell Family Trust)		Town: North Reading		
Email address of owner:		State: MA	Zip: 01864	County: Middlesex
Telephone no.of facility/site **owner**:				
Fax no. of facility/site **owner**:		**Owner** is (check one): 1. Federal____ 2. State/Tribal____ 3. Private X 4. other, if so, describe:		
Address of **owner** (if different from site): (c/o GEOSPHERE)				
Street: 51 Portsmouth Avenue				
Town: Exeter	State: NH	Zip: 03833	County: Rockingham	
c) Legal name of **operator**: Geosphere Environmental Management, Inc.	**Operator** telephone no: 603-773-0075			
	Operator fax no.: 603-773-0077	**Operator** email: dniemeyer@geospherenh.com		
Operator contact name and title: David Niemeyer, Senior Project Hydrogeologist, Geosphere Environmental Management, Inc.				

Address of **operator** (if different from owner):	Street: 51 Portsmouth Ave		
Town: Exeter	State: NH	Zip: 03833	County: Rockingham

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

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes X No___
If "yes," 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 storm water general permit? Y___ N X if Y, number:
2. phase I or II construction storm water general permit? Y___ N X, if Y, number:
3. individual NPDES permit? Y X N___, if Y, number:
4. any other water quality related permit? Y___ N X, 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:
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 cfs
Average flow 0.03342 Is maximum flow a **design value**? Y___ N X
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. 42.55E lat. 71.12N; 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__X__ or seasonal_____? Is discharge ongoing Yes__X__ No_____?
c) Expected dates of discharge (mm/dd/yy): start 01/01/1995 end 01/01/2010 (ongoing)	
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. 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 X	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 min-imum)	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	---	----								
2. Total Residual Chlorine	---	----								
3. Total Petroleum Hydrocarbons	BA									
4. Cyanide	---	----								
5. Benzene	---	----								
6. Toluene	---	----								
7. Ethylbenzene	---	----								
8. (m,p,o) Xylenes	---	----								
9. Total BTEX[4]	BA									

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	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)
10. Ethylene Dibromide (1,2- Dibromo-methane)	---	----								
11. Methyl-tert-Butyl Ether (MtBE)	---	----								
12. tert-Butyl Alcohol (TBA)	---	----								
13. tert-Amyl Methyl Ether (TAME)	---	----								
14. Naphthalene	---	----								
15. Carbon Tetra-chloride	BA									
16. 1,4 Dichlorobenzene	BA									
17. 1,2 Dichlorobenzene		BP	6	grab	8260	1 ppb	2 ppb		1.22 ppb	
18. 1,3 Dichlorobenzene	BA									
19. 1,1 Dichloroethane		BP	22	grab	8260B	2 ppb	4 ppb		2.8 ppb	
20. 1,2 Dichloroethane	BA									
21. 1,1 Dichloroethylene		BP	37	grab	8260B	1 ppb	600 ppb		28.9 ppb	
22. cis-1,2 Dichloro-ethylene		BP	34	grab	8260B	2 ppb	43 ppb		24.5 ppb	
23. Dichloromethane (Methylene Chloride)	BA									
24. Tetrachloroethylene	BA									

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	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)
25. 1,1,1 Trichloroethane		BP	20	grab	8260B	2 ppb	3200 ppb		380.8 ppb	
26. 1,1,2 Trichloroethane	BA									
27. Trichloroethylene		BP	5	grab	8260B	2 ppb	30 ppb		9.5 ppb	
28. Vinyl Chloride	BA									
29. Acetone	BA									
30. 1,4 Dioxane	BA									
31. Total Phenols	BA									
32. Pentachlorophenol	BA									
33. Total Phthalates [5] (Phthalate esthers)	BA									
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	BA									
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	---	----								
a. Benzo(a) Anthracene	---	----								
b. Benzo(a) Pyrene	---	----								
c. Benzo(b)Fluoranthene	---	----								
d. Benzo(k) Fluoranthene	---	----								
e. Chrysene	---	----								

[5] The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (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)
f. Dibenzo(a,h) anthracene	---	----								
g. Indeno(1,2,3-cd) Pyrene	---	----								
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	---	----								
h. Acenaphthene	---	----								
i. Acenaphthylene	---	----								
j. Anthracene	---	----								
k. Benzo(ghi) Perylene	---	----								
l. Fluoranthene	---	----								
m. Fluorene	---	----								
n. Naphthalene-	---	----								
o. Phenanthrene	---	----								
p. Pyrene	---	----								
37. Total Polychlorinated Biphenyls (PCBs)	BA									
38. Antimony	---	----								
39. Arsenic	---	----								
40. Cadmium	---	----								
41. Chromium III	---	----								
42. Chromium VI	---	----								

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	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)
43. Copper	---	----								
44. Lead	---	----								
45. Mercury	---	----								
46. Nickel	---	----								
47. Selenium	---	----								
48. Silver	---	----								
49. Zinc	---	----								
50. Iron		BP	1	grab	200.7	50 ppb	2000 ppb		2000 ppb	
Other (describe):										

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

Step 1: 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_X_ N____	If yes, which metals? Iron
Step 2: 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: Iron DF: 6996	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_X_ 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:

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 combines with influent water from five additional groundwater extractions wells within the surrounding wetlands. This combined water is treated through an air stripper and discharged approximatley 40 ft from th treatment building into the edge of the wetlands.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper X	Oil/water separator	Equalization tanks	Bag filter	GAC filter
	Chlorination	Dechlorination	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 15 gpm Maximum flow rate of treatment system 30 gpm Design flow rate of treatment system _____

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_____	Within facility__	Storm drain____	River/brook____	Wetlands__X__	Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

Treated groundwater leaves the treatment building via piping, and discharges approximatley 40 ft away onto the edge of the Ipswich River wetlands.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: See Figure 1. Site Plan
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 A,

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 468 cfs cfs
Please attach any calculation sheets used to support stream flow and dilution calculations. See Attached

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes___ No X If yes, for which pollutant(s)?

Is there a TMDL? Yes___ No X 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 X
Has any consultation with the federal services been completed ? YES ____ No X or is consultation underway? YES ____ No X
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one): Yes
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 X 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.

This NOI Form was completed as part of a Letter of Intent, additional information is supplied in the letter.

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:

Title: Director of Environmental Compliance,
Geosphere Environmental Management, Inc.

Date: July 25, 2008