

July 30, 2008

8/4/08
received
MAG-910371

US-EPA Region 1
RGP-NOC Processing
Municipal Assistance Unit (CMU)
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

RE: Remediation General Permit Notice of Intent
Former Amoco Station
79 Main Street
Lakeville, MA
RTN 4-0101

To Whom It May Concern:

On behalf of C.K. Smith Co., Inc. (CK Smith), Corporate Environmental Advisors, Inc. (CEA) is submitting this Notice of Intent (NOI) for an EPA Remediation General Permit (RGP) to treat and discharge gasoline-impacted groundwater at the above-referenced site as part of a proposed remediation system. This work is being conducted as part of Phase IV activities at the site under section 310 CMR 40.00874 of the Massachusetts Contingency Plan (MCP). **Figure 1**, Site Locus Map, shows the property location with respect to surrounding topography. **Figure 2**, Site Layout with Proposed System Layout, depicts pertinent site features.

Groundwater will be pumped from recovery wells using submersible pumps through an on-site water treatment system. Recovered groundwater will pass through an equalization tank, a shallow tray air stripper, bag filters, and two 1,000-pound liquid-phase granular-activated-carbon-adsorption (GACA) vessels, piped in series. The groundwater treatment system will be designed to treat and discharge groundwater at a maximum flow rate of 20 gallons per minute (GPM). The flow meter and flow totalizer will be located immediately prior to discharge of the treated groundwater. Flow rates will be periodically monitored throughout discharging and total discharged gallons of treated groundwater will be recorded at the end of each day. A Process and Instrumentation Diagram is attached.

Generated groundwater will be treated and discharged to a catch basin connected to a stormwater drainage system located in Main Street (Route 105). The stormwater system leads to an 18 inch diameter drain line that discharges to a wetland area off of Vaughn Street. Several additional figures are attached that show the stormwater piping system and the final discharge point to a wetland area.

Treated water discharge will be monitored according to the guidelines described in the RGP. In-line sample ports for sample collection will be installed at the GACA influent, midpoint, and effluent discharge points. In addition, a totalizer and flow meter will be installed along the discharge line for proper recording of groundwater discharge volume and flow rates. The treatment system is anticipated to be installed this fall, begin operating in January 2009, and continue to operate for several years. The NOI application form and supporting documentation are attached.

If you have any questions or require additional information, please do not hesitate to contact the undersigned at (508) 835-8822.

Sincerely,
CORPORATE ENVIRONMENTAL ADVISORS, INC.



Michael J. Dziura, P.E.
Sr. Environmental Engineer

Figures

Figure 1	Site Locus
Figure 2	Site Layout with Proposed Remediation System
Figure 3	NHESP Map
Figure	Process & Instrumentation Diagram
Figures	MassHighway Route 105 Maps showing Stormwater Drainage System

Attachments

Attachment A: Notice of Intent Form
Attachment B: Laboratory Analytical Report - Groundwater

Pc: Ms. Janine Perley, C.K. Smith Co., Inc.
CEA File 2793-96



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 Amoco Station		Facility/site address:	
Location of facility/site : longitude: 70°56'00" latitude: 41° 52' 10"	Facility SIC code (s): 811111	Street: 79 Main Street	
b) Name of facility/site owner : C.K. Smith Company, Inc.		Town: Lakeville	
Email address of owner: jperley@cksmithco.com		State: MA	Zip: 02347
Telephone no. of facility/site owner : 508-753-1475		C PL	
Fax no. of facility/site owner : 508-799-7974		Owner is (check one) 1. Federal ☐ 2. State/Tribal ☐ 3. other, ☐ if so, describe: Corporation	
Address of owner (if different from site):			
Street: 99 Crescent Street			
Town: Worcester	State: MA	Zip: 01605	County: Worcester
c.) Legal name of operator : Corporate Environmental Advisors, Inc.		Operator telephone no.: 508-835-8822	
		Operator fax no.: 508-835-8812	Operator ema mdziura@cea-
Operator contact name and title: Michael Dziura, Sr. Environmental Engineer			
Address of operator (if different from owner):		Street: 127 Hartwell Street	
Town: West Boylston	State: MA	Zip: 01583	County: Worcester
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 #:			
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 ☐			

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: MA DEP 2. permit or license # assigned: Tier 1B Permit No. 82634, Release Tracking Number 4-0101 3. state agency contact information: name, location, and telephone number: MA DEP Bureau of Waste Site Clean up, 20 Riverside Drive, Lakeville, MA	f) Is the site/facility covered by any other EP A permit, including: 1. multi-sector storm water general permit? Yes ☐ No ☒, if Y, number: 2. phase I or II construction storm water general permit? Yes ☐ No ☒, if Y, number: 3. individual NPDES permit? Yes ☐ No ☒, if Y, number: 4. any other water quality related permit? Yes ☐ No ☒, if Y, number:
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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 treatment system to treat historic gasoline release to the subsurface.		
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, W/s)? Max. flow <u>0.04456 ft³/sec</u> Average flow <u>0.02228 ft³/sec</u> Is maximum flow a design value? Yes ☒ No ☐, 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>70°56'00"</u> lat. <u>41° 52'10"</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 X No ☐ Once remediation system is installed and started, it will be an ongoing discharge
c) Expected dates of discharge (mm/dd/yy): start <u>01/01/09</u> end <u>01/01/2014</u>	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: <u>See attached figure.</u> 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 min- imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
1. Total Suspended Solids		√	1	GRAB	SM 2540D	50,000	1,090,000	120		
2. Total Residual Chlorine	√		1	GRAB	Hatch 8167	100	< 100			
3. Total Petroleum Hydrocarbons	√		1	GRAB	1664	1,000	< 1,000			
4. Cyanide	√		1	GRAB	9012A	10	<10			
5. Benzene		√	1	GRAB	624	20	20.8	2.3E-03		
6. Toluene		√	1	GRAB	624	20	2,420	0.26		
7. Ethylbenzene		√	1	GRAB	624	20	185	2.0E-02		
8. (m,p,o) Xylenes		√	1	GRAB	624	60	1,425	0.16		
9. Total BTEX ⁴		√	1	GRAB	624	-----	4,050	0.44		

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 (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
10. Ethylene Dibromide (1,2- Dibromo-methane)		√	1	GRAB	504.1	0.010	0.107	1.2E-05		
11. Methyl-tert-Butyl Ether (MtBE)	√		1	GRAB	624	20	<20			
12. tert-Butyl Alcohol (TBA)	√		1	GRAB	8260B	200	<200			
13. tert-Amyl Methyl Ether (TAME)	√		1	GRAB	8260B	20	<20			
14. Naphthalene		√	1	GRAB	625	10	13.4	1.5E-03		
15. Carbon Tetra- chloride	√		1	GRAB	624	20	< 20			
16. 1,4 Dichlorobenzene	√		1	GRAB	624	20	< 20			
17. 1,2 Dichlorobenzene	√		1	GRAB	624	20	< 20			
18. 1,3 Dichlorobenzene	√		1	GRAB	624	20	< 20			
19. 1,1 Dichloroethane	√		1	GRAB	624	20	< 20			
20. 1,2 Dichloroethane	√		1	GRAB	624	20	< 20			
21. 1,1 Dichloroethylene	√		1	GRAB	624	20	< 20			
22. cis-1,2 Dichloro- ethylene	√		1	GRAB	624	20	< 20			
23. Dichloromethane (Methylene Chloride)	√		1	GRAB	624	200	< 200			
4. Tetrachloroethylene	√		1	GRAB	624	20	< 20			

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 (ug/l)	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
25. 1,1,1 Trichloroethane	√		1	GRAB	624	20	< 20			
26. 1,1,2 Trichloroethane	√		1	GRAB	624	20	< 20			
27. Trichloroethylene		√	1	GRAB	624	20	27.6	3.0E-03		
28. Vinyl Chloride	√		1	GRAB	624	20	< 20			
29. Acetone	√		1	GRAB	624	400	< 400			
30. 1,4 Dioxane	√		1	GRAB	8260B	400	<400			
31. Total Phenols	√		1	GRAB	625	10	< 10			
32. Pentachlorophenol	√		1	GRAB	625	10	<10			
33. Total Phthalates ⁶ (phthalate esthers)	√		1	GRAB	625	10	All phthalates are BDL see lab report	-		
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	√		1	GRAB	625	10	<10			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	√		1	GRAB	625	10	< 10			
a. Benzo(a) Anthracene	√		1	GRAB	625	10	<10			
b. Benzo(a) Pyrene	√		1	GRAB	625	10	<10			
c. Benzo(b)Fluoranthene	√		1	GRAB	625	10	<10			
d. Benzo(k) Fluoranthene	√		1	GRAB	625	10	<10			
e. Chrysene	√		1	GRAB	625	10	<10			

⁶The sum of individual phthalate compounds.

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 (ug/l)	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
f. Dibenzo(a,h) anthracene	√		1	GRAB	625	10	<10			
g. Indeno(1,2,3-cd) Pyrene	√		1	GRAB	625	10	<10			
36. Total Group II Polycyclic Aromatic Hydrocarbons (pAR)	√		1	GRAB	625	10	< 10			
h. Acenaphthene	√		1	GRAB	625	10	<10			
i. Acenaphthylene	√		1	GRAB	625	10	<10			
j. Anthracene	√		1	GRAB	625	10	<10			
k. Benzo(ghi) Perylene	√		1	GRAB	625	10	<10			
l. Fluoranthene	√		1	GRAB	625	10	<10			
m. Fluorene	√		1	GRAB	625	10	<10			
n. Naphthalene-	√		1	GRAB	625	10	13.4	1.5E-03		
o. Phenanthrene	√		1	GRAB	625	10	<10			
p. Pyrene	√		1	GRAB	625	10	<10			
37. Total Polychlorinated Biphenyls (PCBs)	√		1	GRAB	608	0.0333	<0.0333			
38. Antimony		√	1	GRAB	200.8	0.2	1.3	1.4E-04		
39. Arsenic		√	1	GRAB	200.7	4	8	8.7E-04		
40. Cadmium		√	1	GRAB	200.8	0.2	1.9	2.1E-04		
41. Chromium III (I)		√	1	GRAB	200.7/calculated	5	9	9.8E-04		
42. Chromium VI	√		1	GRAB	7196A	5	< 5			

NOTES: (1) Chromium III = Total Chromium – Hexavalent Chromium.

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 (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
43. Copper		√	1	GRAB	200.7	5	49.6	5.4E-03		
44. Lead		√	1	GRAB	200.8	0.2	44.1	4.8E-03		
45. Mercury	√		1	GRAB	7470A	0.2	<0.2			
46. Nickel		√	1	GRAB	200.7	5	12	1.3E-03		
47. Selenium		√	1	GRAB	200.8	0.2	0.2	2.2E-05		
48. Silver		√	1	GRAB	200.8	0.2	0.3	3.3E-05		
49. Zinc		√	1	GRAB	200.7	5	168	1.8E-02		
50. Iron		√	1	GRAB	200.7	15	14,300	1.6		
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 ☒ N ☐	If yes, which metals? <u>Cadmium, copper, lead, zinc, Iron</u>
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? None Metals: _____ DF: <u>N/A</u>	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 "Yes," list which metals: <u>N/A</u>

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: equalization tank, shallow tray airstripper, bag filters, and liquid-phase activated carbon
See Figure attached.

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):			

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 10 GPM Maximum flow rate of treatment system 20 GPM Design flow rate of treatment system 20 GPM

d) A description of chemical additives being used or planned to be used (attach MSDS sheets): Not Applicable

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

a) Identify the discharge pathway:	Direct ☐	Within facility ☐	Storm drain ☒	River/brook ☐	Wetlands ☐	Other (describe):
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b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
Discharge to a stormwater catch basin. The catchbasin is connected to a stormwater piping system along Main Street. The system leads to an 18" discharge pipe that discharges to a wetland area off of Vaughn Street shown on attached Figure.

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 NA.

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

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

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? Yes ☐ 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): Not applicable

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. :

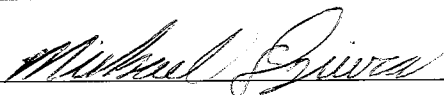
Please provide any supplemental information. **Attach any analytical data used to support the application.** Attach any certification(s) required by the general permit.

See cover 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 Amoco Station, 79 Main Street, Lakeville, MA 02347

Operator signature: 

Title: Michael J. Dziura, Sr. Environmental Engineer

Date: 7-30-08