

RECEIVED

OCT 7 2015

BY: 

October 5, 2015

Ms. Victoria Stovall  
WDNR  
2300 N. Dr. Martin Luther King Jr. Dr.  
Milwaukee, WI 53212

RE: **WPDES Permit for Chemical Addition as Part of Remedial Action, Master Cleaners  
Remediation, 6326 Bluemound Road, Wauwatosa, WI 53212, 13 (53213)  
BRRTS # 02-41-545142**

53213-417

Dear Ms. Stovall:

Attached are the following completed and signed materials:

- Request for Coverage Under WPDES Application Form
- Determination Checklist for Contaminated or Uncontaminated Groundwater Remedial Actions
- Remediation Description from the Approved Remedial Action Plan
- \$700 Injection Permit Fee

Please record the receipt of this information and payment of the required fees, and distribute the information to Mr. Binyoti Amundwafor. I have already copied him on the information via email.

The plan includes pressure injection of a solution containing 20 to 25% by weight of Provect-IR Antimethanogenic ISCR Reagent, added to the subsurface formation at a proposed 24 soil injection borings. Each boring will receive approximately 100 to 150 gallons of solution. According to the Safety Data Sheet (attached to the application) for the product, it contains up to 40% iron, two to four percent calcium dipropionate, and the remainder is proprietary organic carbon sources. The material will be used to enhance the already occurring reductive dechlorination process to accelerate the degradation of spilled tetrachloroethene (PCE).

A subcontractor will complete the actual injection activities, with oversight by Fehr Graham. Injection will occur using a Geoprobe drill rig. The solution will be mixed on site in mobile tanks using City of Wauwatosa potable water from the adjacent hydrant. The total anticipated water use is roughly 1500 gallons for the mixture, with additional straight water added as a flush to disburse the solution after injecting each location.

Proposed monitoring was laid out in the remedial action proposal, and includes measurement of water levels, pH, ORP, dissolved oxygen, and conductivity at nearby monitoring wells, with testing of vapors at accessible monitoring points using a four-gas meter and a photoionization detector (PID).

Attached is a map showing the site layout, proposed injection area, and proposed monitoring points. The monitoring frequency and parameters of analysis are proposed below, and are in conformance with the approved Remedial Action Plan that was approved by the WDNR:

Location	Frequency / Timing	Water Level	Gases (PID, four gas meter-O2, CO2, SO2, % LEL)	Water Chemistry (ph, T, Cond, ORP)	Comments
(11) SMW-3, 4, 6, 7, 8, 9, 10, MW-1, MW-3, PZ-1, PZ-2	(8) Before, 4 hrs day 1, End Day 1, Before Day 2, End Day 2, Before Day 3, End Day 3, Post two weeks	X	X	X	88 Readings
(6) Catch basin S in Bluemound, San Drain inside Master Cleaners, CB S and N on East 6310 Bluemd, San. Manhole in 64 <sup>th</sup> St at Site and N of site	(5) Before, End Day 1, End Day 2, End Day 3, Post two weeks		X	If Possible	30 Readings
(4) Basement Vapor Probes VP-1, VP-2, Sump headspace, and Ambient Basement S Wall at 518 N 64 <sup>th</sup> St	(5) Before, End Day 1, End Day 2, End Day 3, Post two weeks	Sump Only	X	Sump Only, if Possible	20 Readings

I trust these documents meet your needs, and you have enough information to issue the permit. If you need additional information, please call and let me know. We hope to begin the remedial action in the Fall of 2015, and look forward to hearing from you.

Sincerely,



Kendrick A. Ebbott, PG., CGWP  
Branch Manager

Attachments: Completed WPDES Request for Coverage Form and \$700 Permit Fee Check  
Completed Checklist for Groundwater Remedial Actions Form  
Figure 1: Proposed Injection Areas

Cc: Mr. Binyoti Amungwafor, WDNR, via Email, w / Attachments  
Mr. J. Hnat, WDNR, Milwaukee, WI 53212 via Email, w/ Attachments  
Mr. Tom Shipshock, Son of Master Cleaners Owner, via Email w/ Attachments

o:\master drycleaning\15-1209\reports and correspondence\wpdes permit application\final cover letter to wdnr.docx

**Request for Coverage Under  
Wisconsin Pollutant Discharge Elimination System (WPDES)  
Wastewater Discharge Permit (WI-0046566-06) for  
Contaminated Groundwater from Remedial Action Operations**  
(Revised 8 / 2012)

Please type or print required information, except for the signature.

**I. GENERAL INFORMATION**

<b>A: FACILITY LOCATION INFORMATION</b>		
Name of Facility / Project Master Drycleaning/ Drycleaner Site Remediation	Official Representative Onsite Ms. Sherry	Title Facility Operator
(Address or Highway / Road with Distance and Direction from nearest City) 6326 Bluemound Road	Telephone No.: 414-258-8225	Fax #
City, State, Zip Code Wauwatosa, WI 53213	County Milwaukee	Email Address

<b>B: Individual, parent company, or organization with direct control over the facility. Enter full official legal name of the owner or parent company, if there is one, the mailing address, and the name and title of the official representative (responsible party) signing this application if he/she is located at address of parent company.</b>		
Parent Company/Owner Master Dry Cleaning Inc.	Company Contact Mr. Tom Shipshock	Title Owners Son
Mailing Address - PO Box, Street, or Route W27 N7236 Glacier Pass	Telephone No.: 414 313-9168	Fax #
City, State, Zip Code Hartland, WI 53029	Email Address Tshipshock@hydro-flo.com	

<b>C: Consulting Firm for Groundwater</b>		
Company Name Fehr Graham	Company Contact Ken Ebbott	Title Branch Manager
Mailing Address - PO Box, Street, or Route 1237 Pilgrim Road	Telephone No.: 920-892-2444	Fax # 920-892-2620
City, State, Zip Code Plymouth, WI 53073	Email Address kebbott@Fehr-graham.com	

**D. Name of Person to Receive Discharge Monitoring Report Forms from Department:**

Ken Ebbott, Fehr Graham

**E. Any Other Necessary Contact Person (name, phone, email)**

\_\_\_\_\_

**F. DNR Environmental Response & Repair Project Number, and DNR Project Manager name:**

Mr. J. Hnat

**II. SPECIFIC INFORMATION ON PROJECT**

**A. Pollutants**

1. The suspected sources of the pollutants (estimate of material release quantity and contributing activities)

Tetrachloroethene and related breakdown products, concentrations up to 215 mg/kg in soil 15 feet beneath ground outside the east end of the building. Lower levels have been detected beneath the building at shallower depths (2 to 10 mg/kg). Source from incidental releases from operations as drycleaning facility, cleaning filters, wet transfer, product delivery, etc.

2. Check all fuel and waste types suspected in the contamination at this site:

- |   |  |                                      |
|---|--|--------------------------------------|
| <input type="checkbox"/> Unleaded Gasoline          | <input type="checkbox"/> Jet Fuel            | <input type="checkbox"/> Pesticides  |
| <input checked="" type="checkbox"/> Leaded Gasoline | <input type="checkbox"/> Waste Oil           | <input type="checkbox"/> Fertilizers |
| <input type="checkbox"/> Diesel Fuel                | <input checked="" type="checkbox"/> Solvents |                                      |
| <input type="checkbox"/> Heating Oil                | <input type="checkbox"/> Other:              |                                      |

3. Check all pollutants identified at this site:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> BETX (Benzene, Ethylbenzene, Toluene, Xylene) | <input type="checkbox"/> Pesticides/Fertilizers   |
| <input type="checkbox"/> PAHs (Polynuclear aromatic hydrocarbons)                 | <input type="checkbox"/> Total Recoverable Lead * |
| <input checked="" type="checkbox"/> VOCs (Volatile Organic Chemicals)             | <input type="checkbox"/> Other _____              |

\* Include upstream receiving water hardness analysis if lead is detected.

**B. Treatment**

1. Describe the existing treatment system:

Around the property adjacent to the building, injection of a 20 to 25% solution of mixture of zero valent iron and carbon compounds with potable water.

Following injection, groundwater evaluations will be completed to determine the reduction in contaminants over time.

Treatment Techniques Used
<input type="checkbox"/> Pump & Treat
<input type="checkbox"/> Air stripping
<input type="checkbox"/> GAC (Granular Activated Carbon)
<input type="checkbox"/> Augmented Insitu Bioremediation (with chemicals or nutrient addition)
<input type="checkbox"/> Other (describe)

2. If any cleaning, softening or descaling of the treatment system

- a. Identify any additives that are proposed or being used for cleaning, softening, or descaling of the treatment system. Provide Safety Data Sheets, and describe dosage.

None for these purposes. Injection will use Provect-IR Antimethanogenic ISCR Reagent. Per the SDS it contains a combination of 5 to 40% iron, 2 to 4 percent calcium dipropionate, and the remainder proprietary organic carbon sources. Total injected chemical 3,200 pounds in approximately 2000 gallons of water.

- b. Describe what is done to clean, soften or descale, and how often it is done.

N/A

c. Where is the reject water from cleaning and descaling discharged?

- same discharge point as treated effluent       sanitary sewer       other (please describe)

3. Anticipated operating schedule during the new permit term (2012 – 2017)

October 2015 Injection to require three days

4. Anticipated flowrate (in gpm), and total volume of treated water to be discharged per month:

None

**5. Effluent discharge point location:**None**6. Is an air permit from the DNR air management program required? If not, why not**No – subsurface addition – VOCs are chemically degraded in the subsurface with no emissions to air.**III. DISCHARGE MANAGEMENT PLAN UPDATE**

Include the following information:

1. A **summary** of analytical results for contaminants **detected** at the site.
2. Results from the most recent **volatile organic compounds (VOC) scan**, including methods used and detection levels.
3. Results from an analysis of the **poly-nuclear aromatic hydrocarbons (PAHs)** shown on the right, including methods used and detection levels (unless PAH data are already submitted)
 

benzo(a)anthracene	dibenzo(a,h)anthracene
benzo(a)pyrene	fluoranthene
benzo(b)fluoranthene	indeno(1,2,3-cd)pyrene
benzo(g,h,i)perylene	naphthalene
benzo(k)fluoranthene	phenanthrene
chrysene	pyrene

The lab needs to reach the lowest detection level achievable for each parameter because of the low limit for total PAHs. EPA test method SW-846 8310 is recommended.
4. **Contaminants proposed for periodic monitoring** and demonstration of why any monitoring required in the permit should be exempted due to low level of contaminants in the wastewater discharge.
5. **Information to support request for any alternate effluent limit** for discharges to groundwater (Part 5 of permit) or request for temporary exemption for in-situ discharges (Part 6 of permit).
6. **Plans and specifications for the proposed treatment system** identifying sampling points. For supplier furnished package treatment units, only a flow diagram, design summary, and unit sizing calculations are required.
7. **General description of operations**, identifying operational tasks, who is responsible to do that task, and how frequently the task is done (particularly needed at pump & treat systems).
8. A **site plan** that identifies general land uses, underground storage tanks and pipelines, groundwater monitoring and recovery wells, contaminant plume definition and zone of influence, other known spills in the area, septic tanks and drain fields, separation distances to potable water supply wells and residences, and other pertinent information.
9. A **detailed map** of the discharge location, showing if discharge is direct or via a storm sewer or other conveyance. Indicate distance from site to discharge location and other impacted water bodies or wetlands.
  - If a city storm sewer is used, approval from the municipality is required.
  - If a new outfall structure is proposed, the plans should identify the outfall and incorporate appropriate erosion control methods. A permit for riprap projects (available at most DNR offices) should be obtained.
  - Wetland discharges are not allowed unless they meet wetland protection requirements of Ch. NR 103, Wis. Admin. Code.

**III. SIGNATURES**

A. Signature of person completing the form, attesting to the accuracy and completeness of the statements made.

<i>Kevin A. Ebbott</i>	Senior Hydrogeologist	9/25/2015
<hr/>		
Name	Title	Date Signed
1237 Pilgrim Rd., Plymouth, WI 53073	<u>KEbbott@fehr-graham.com</u>	920-892-2444
<hr/>		
Address	Email	Telephone Number

B. This application must be signed by the official representative of the permitted facility (responsible party) who is: the owner, the sole proprietor for a sole proprietorship, a general partner for a partnership, or by a ranking elected official or other duly authorized representative for a unit of government, or an executive officer of at least the level of vice president for a corporation, having overall responsibility for the operation of the facility. If the application is not signed, or is found to be incomplete, it will be returned.

Mr. Harold Shipshock or Mr. Thomas Shipshock	Owner / Owner's Son
<hr/>	
Typed or Printed Name of Official Representative	Title
<i>Harold J. Shipshock</i>	<i>9/28/2015</i>
<hr/>	
Signature of Official Representative	Date Signed

Submit this General Permit Request for Coverage:

Department of Natural Resources,  
 Water Permits Central Intake - WT/3,  
 P.O. Box 7185,  
 Madison, WI 53707-7185.

The decision on whether to cover this discharge under the remediation general permit will be made by regional DNR wastewater staff. Upon receipt in Madison, this application will be forwarded to the appropriate regional staff person.

A copy of the submittal should also be sent to the Department Remediation & Redevelopment Project Manager.  
 Watershed Central:\General Permits\Reissue Docs\Grw Remediation\Request For Coverage 2012.doc

## Safety Data Sheet (SDS)

OSHA HazCom 2012 Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 05/30/2014

Reviewed on 05/30/2014

### 1 Identification

- **Product identifier**
- **Trade name: Provect-IR Antimethanogenic ISCR Reagent**
- **Product description**  
Remediation product for the treatment of soil, sediment and groundwater. Not for use in potable water sources.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Provectus Environmental Products  
2871 W. Forest Road  
Suite 2  
Freeport, IL 61032  
Phone: 815-650-2230  
Fax: 815-650-2232  
www.provectusenvironmental.com
- **Emergency telephone number:** 815-650-2230

### 2 Hazard(s) Identification

- **Classification of the substance or mixture**  
The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Non-Regulated Material
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Non-Regulated Material
- **Hazard statements** Non-Regulated Material
- **Hazard description:**  
CONTAINMENT HAZARD: Any vessel that contains wetted reagent must be vented due to potential pressure build up from fermentation gases.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



### 3 Composition/information on ingredients

7439-89-6 iron	5-40%
4075-81-4 calcium dipropionate	2 - 4%
Proprietary Organic Carbon Sources	48-90%

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:**  
8013-01-2 Yeast extracts STOT SE 3, H335

0.5 - 2%  
(Contd. on page 2)



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- 9000-30-0 Guar gum     ⚠ STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust  
 7757-83-7 sodium sulphite     ⚠ Acute Tox. 4, H302  
 • **Additional Information:** Product contains red yeast rice

(Contd. of page 1)

0.5 - 2%  
1 - 2%

### 4 First-aid measures

- **Description of first aid measures**
- **After Inhalation:** Remove person to fresh air. If signs/symptoms continue, get medical attention.
- **After skin contact:** Wash off with soap and water. Get medical attention if irritation develops.
- **After eye contact:** Flush with water for 5 minutes
- **After swallowing:**  
Rinse mouth with water and afterwards drink plenty of milk or water. Call a poison control center or doctor immediately for treatment advice.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accident / release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Sweep or vacuum up spillage and place in vented container.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** Combustible material
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
CONTAINMENT HAZARD: Any vessel that contains wetted reagent must be vented due to potential pressure build up from fermentation gases.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep tightly closed in a dry and cool place. Keep away from open flames, hot surfaces and sources of ignition. Any material that is wetted must be vented due to potential pressure build up from fermentation gases.

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(Contd. of page 2)

- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional Information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with occupational exposure limits:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:**  
Dry or powdered ingredients are combustible. Dispersal of finely divided dust from products into air may form mixtures that are ignitable and explosive. Minimize airborne dust generation and eliminate sources of ignition.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Eye protection:** Not required.

**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form:** Solid
  - Color:** Brown to Green
- **Odor:** Pleasant
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
  - Melting point/Melting range:** Not determined.
  - Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Ignition temperature:**
  - Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Dry or powdered ingredients are combustible. Dispersal of finely divided dust from products into air may form mixtures that are ignitable and explosive. Minimize airborne dust generation and eliminate sources of ignition.
- **Explosion limits:**
  - Lower:** Not determined.
  - Upper:** Not determined.
- **Vapor pressure:** Not applicable.
- **Density:** Not determined.

(Contd. on page 4)

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- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with Water:** Soluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not applicable.
  - Kinematic:** Not applicable.
- **Solvent content:**
  - Organic solvents:** 0.0 %
  - Solids content:** 100.0 %
- **Other information** No further relevant information available.

**5 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability** Product is stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

**6 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** Product dust may cause eye irritation.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**  
None of the ingredients is listed.
- **NTP (National Toxicology Program)**  
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**  
None of the ingredients is listed.

**7 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Waste treatment methods**

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Non-Regulated Material
- **Packing group**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):**  
None of the ingredients is listed.
- **Section 313 (Specific toxic chemical listings):**  
None of the ingredients is listed.
- **TSCA (Toxic Substances Control Act):**  
7439-89-6 iron  
4075-81-4 calcium dipropionate  
8013-01-2 Yeast extracts  
9000-30-0 Guar gum  
7757-83-7 sodium sulphite

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(Contd. of page 5)

- **Proposition 65**
- **Chemicals known to cause cancer:**  
None of the ingredients is listed.
- **Chemicals known to cause reproductive toxicity for females:**  
None of the ingredients is listed.
- **Chemicals known to cause reproductive toxicity for males:**  
None of the ingredients is listed.
- **Chemicals known to cause developmental toxicity:**  
None of the ingredients is listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)**  
None of the ingredients is listed.
- **TLV (Threshold Limit Value established by ACGIH)**  
None of the ingredients is listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**  
None of the ingredients is listed.
- **GHS label elements** Non-Regulated Material
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Non-Regulated Material
- **Hazard statements** Non-Regulated Material
- **National regulations:**  
The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.
- **State Right to Know**

7439-89-6 iron	5-40%
4075-81-4 calcium dipropionate	2-4%
8013-01-2 Yeast extracts	0.5-2%
◊ STOT SE 3, H335	
9000-30-0 Guar gum	0.5-2%
◊ STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust	
7757-83-7 sodium sulphite	1-2%
◊ Acute Tox. 4, H302	
Proprietary Organic Carbon Sources	48-90%

- All ingredients are listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 05/30/2014 / 6
- **Abbreviations and acronyms:**  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association

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ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

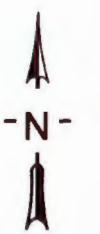
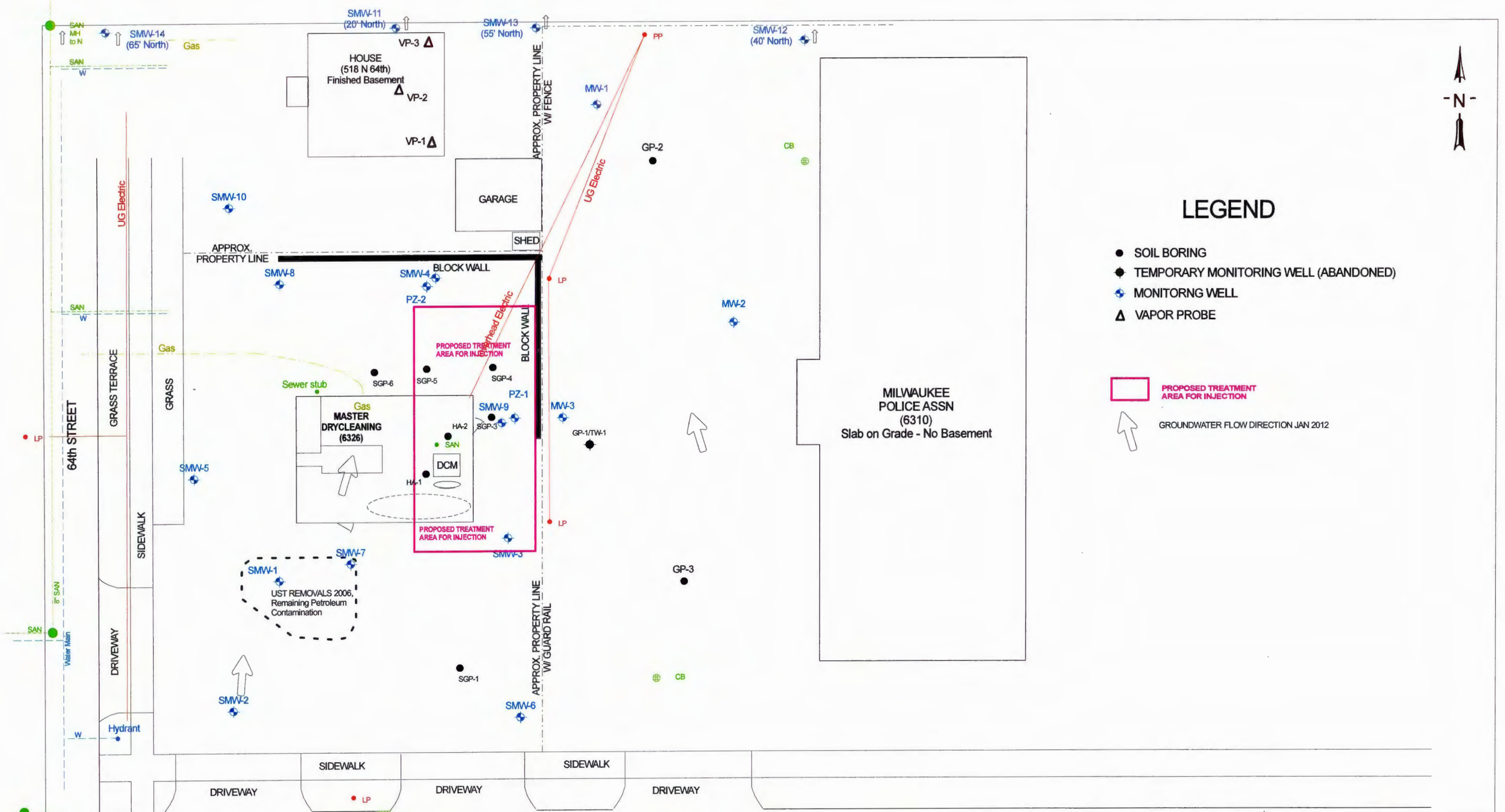
Acute Tox. 4: Acute toxicity, Hazard Category 4

Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

**\* Data compared to the previous version altered.**

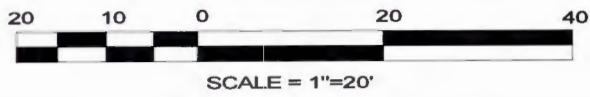
SDS / MSDS Created by MSDS Authoring Services ([www.MSDSAuthoring.com](http://www.MSDSAuthoring.com))



### LEGEND

- SOIL BORING
- TEMPORARY MONITORING WELL (ABANDONED)
- ⊕ MONITORING WELL
- ▲ VAPOR PROBE

- PROPOSED TREATMENT AREA FOR INJECTION
- GROUNDWATER FLOW DIRECTION JAN 2012



TITLE: <b>PROPOSED INJECTION AREAS</b>		<b>ALPHA TERRA</b> SCIENCE	
SITE: <b>MASTER DRY CLEANING, WAUWATOSA, WI</b>			
SCALE: 1"=20'	ATS PROJECT NUMBER:	DATE: 1/17/14	DWG #... master site Tosa 2014.skf
REV:	DATE:	DESCRIPTION:	APPVD.: DRAWN BY: AH
			<b>FIGURE 1</b>

**DETERMINATION CHECKLIST FOR CONTAMINATED OR UNCONTAMINATED  
GROUNDWATER REMEDIAL ACTIONS (rev 8/97)**

**DNR WILL COMPLETE SHADED SECTIONS**

Master Drycleaning, 6326 W. Bluemound Road, Wauwatosa, WI 53213

NAME/ADDRESS OF FACILITY: \_\_\_\_\_

HIGHEST MONTHLY AVERAGE DISCHARGE FLOW RATE: \_\_\_\_\_ GPM, \_\_\_\_\_ GPD, \_\_\_\_\_ CFS  
NONE

**A. Applicability criteria - discharge character/pollutants**

1. Type of wastewater and possible sources of pollutants:

No Wastewater - Proposal to add potable water and chemicals (zero valent iron and organic carbon sources) via injection to subsurface soil.

2. Categories of pollutants tested/scanned:

None in added materials

3. Priority pollutants identified: *(check all that apply)*

- OK - pollutants are properly regulated by the general permit
- BETX (Benzene, Ethylbenzene, Toluene, Xylene)
- Other Petroleum Products - type: \_\_\_\_\_
- PAH's (Polynuclear aromatic hydrocarbons incl. Naphthalene)
- Lead (Tetraethyl lead is an octane booster)
- VOC's (Volatile Organic Chemicals) Existing in groundwater - not to be added

PROBLEM - general permit does not have limits to properly regulate discharges of these pollutants *(have facility change discharge or draft an individual permit when limits are needed)*

- Other NR 105 metals, cyanide or phenols
- Pesticides to surface waters
- GC/MS Acids
- GC/MS Base Neutrals (except Polynuclear Aromatic Hydrocarbons)
- Others (Acrylonitrile, NH<sub>3</sub>, Cl<sup>-</sup>, etc.)

4. Are any bioaccumulating substances listed on page 2 of GP present?

- YES Facility is not eligible for general permit
- NO Continue with checklist to determine eligibility

**A. Applicability Criteria - Receiving Water:**

1. Aquatic Use Classification:



2. Mean Annual Flow: \_\_\_\_\_ cfs (data or drainage basin estimate)

3. Any downstream higher quality waters that could be impacted?

\_\_\_\_\_ YES Use additional worksheet to evaluate downstream impacts  
 \_\_\_\_\_ NO Continue with checklist to determine eligibility

4. Does discharge flow to (or impact downstream) Outstanding Resource Waters?

\_\_\_\_\_ YES Facility is not eligible for general permit [Issue specific permit or change discharge. For "existing" discharges (previously covered under the general permit), no 207 review is needed; for new or increased discharges, a 207 review is necessary].  
 \_\_\_\_\_ NO Continue with checklist to determine eligibility

5. Does discharge flow to waters classified for Public Water Supply?

\_\_\_\_\_ YES Facility is not eligible for general permit [Issue specific permit for discharge. For "existing" discharges (previously covered under the general permit), Water Resource Management review is needed to make sure NR 105/106 limits are included in the specific permit].  
 \_\_\_\_\_ NO Continue with checklist to determine eligibility

6. Does discharge flow to (or impact downstream) Exceptional Resource Waters?

\_\_\_\_\_ YES (check appropriate line below)  
 \_\_\_\_\_ Facility is eligible for the permit if the purpose of discharge is to prevent or correct an existing groundwater contamination situation or a public health problem (see NR 207.04(1)(c)1).  
 \_\_\_\_\_ Existing discharges with no increase in flow are eligible  
 \_\_\_\_\_ Otherwise, the facility is not eligible for the permit (and a site specific permit shall be individually drafted).  
 \_\_\_\_\_ NO Receiving water is not an Exceptional Resource water. (Continue with checklist to determine eligibility).

7. Does discharge flow to waters classified as a wetland?

\_\_\_\_\_ YES Facility may still be eligible for general permit if the Department determines that the facility's discharge meets the wetland protection requirements of ch. NR 103.  
 \_\_\_\_\_ NO Continue with checklist to determine eligibility

## B. REQUIREMENTS FOR ALL DISCHARGERS

1. Is the contaminated groundwater discharged directly without any treatment for removal of pollutants?

\_\_\_\_\_ YES Facility is not eligible for general permit, treatment is required  
  X   NO Continue with checklist to determine eligibility

NO DISCHARGE OF CONTAMINATED GROUNDWATER

2. Is there a discharge management plan to approve?

YES Use the discharge management plan approval (paragraph in the cover letter) to exempt the facility from monitoring certain contaminants that data has shown will not be present in the effluent, require additional monitoring for something in NR 105 or 140 that is not listed in the permit, or approve alternate limits for seepage.

NO Specify (in the cover letter) that all parameters in appropriate section of the GP are required to be monitored, but the facility may submit a future discharge management plan to delete substances from monitoring.

3. Are any harmful, not approved chemical cleaning or water treatment additives proposed to be discharged under this general permit?

- YES Facility is not eligible for general permit because the additives used are not approved under the general permit; *specific permit or change in discharge or additive use is needed.*
- NO Facility is eligible for general permit because:
- None are used
- Type and amount of additive listed on application are allowable under general permit. (*Contact IWW/Madison for approved additives*)
- Treatment cleaning solutions are properly discharged offsite (such as POTW)
- Facility uses chlorine, but can meet the "no detect" permit limit for discharge (*monitoring for trihalomethanes may be required*).

**Notes on additive use or cleaning system at this facility:**

Will inject Provect-IR Antimethanogenic In Situ Chemical Reducing reagent to the site soil and groundwater via injection at pending soil boring locations. These materials will react in the subsurface and degrade over approximately 2 to 3 years.

4. pH: Does the discharge pH fall outside of 6.0 - 9.0 s.u.?

NO DISCHARGE

- YES Facility is not eligible for general permit. (*Issue specific permit or change discharge*)
- NO Facility is eligible for general permit. (*Continue with checklist to determine eligibility*)

5. Have other programs been informed to check on the need for other permits/approvals?

NA : WDNR Bureau of Remediation and Redevelopment has approved the plan

- YES Air management staff are informed; a permit is issued if needed; benzene emissions of greater than 300 lbs/year requires a permit.
- YES Water Reg/Zoning is informed of any outfall work below the high water mark. Facility is aware that local storm sewer may be needed.
- NO Send a copy of this checklist or the permit application to appropriate program.

**C&D. EFFLUENT LIMITS AND MONITORING REQUIREMENTS FOR DISCHARGES TO SURFACE WATERS**

1. Suspended Solids: Is it likely that the effluent will exceed 40 mg/L TSS?

NO EFFLUENT

- YES Facility is not eligible for general permit. (*Issue specific permit or change discharge*)
- NO Facility is eligible for general permit. (*Continue with checklist to determine eligibility under other parameters*)

## 2. Petroleum Product Remediations

- a. Can the facility comply with the free product separation requirement, the 50 ug/L Benzene limit, 70 ug/L Naphthalene limit, and the total BETX limit of 750 ug/L?

YES Facility is eligible for general permit.  
 NO Facility is not eligible for general permit. *(Issue specific permit or change discharge)*

- b. Can the facility comply with the total recoverable lead limit set at 1/3 of the remaining assimilative capacity. Calculate the lead limit based on the receiving water hardness, background lead conc,  $3Q_{7,10}$  and  $Q_0$ . Use the calculation formula on page 7 of the permit, of quatro pro spread sheet located in P:\general\reissue\gw\pbcalc.wb2. Include the numerical lead limit in the cover letter (don't expect the facility to calculate it). Don't put a weekly ave. lead limit higher than the 50 ug/L daily maximum limit (BAT) in the cover letter.

YES Facility is eligible for general permit.  
 NO Facility is not eligible for general permit. *(Issue specific permit where full assimilative capacity limit is possible or change treatment to require more aggressive filtering)*

- c. Has testing of the treatment system influent revealed detectable quantities of polynuclear aromatic hydrocarbons using EPA method 8310 HPLC?

NA : NO SYSTEM INFLUENT

N/A Not applicable to gasoline (only) remediations  
 YES Facility will not be able to remove PAH's to less than detectable levels, and will not be able to comply with GP limit *(Issue specific permit or change discharge)*  
 YES Facility is eligible for general permit, but treatment will be provided to remove PAH's to not detectable levels.  
 NO Facility is eligible for general permit. *(Monitoring for PAH's may be required during permit life)*

- d. Is the discharge expected to exceed the daily maximum oil and grease limit of 10 mg/L?

NA : NO DISCHARGE

N/A Not applicable to gasoline (only) remediations  
 YES Facility is not eligible for general permit. *(Issue specific permit or change discharge)*  
 NO Facility is eligible for general permit. *(Monitoring for PAH's may be required during permit life)*

## 3. Volatile Organic Chemical Remediations

- a. Any stream background data for the VOC's in the discharge?

YES Subtract the background value from the criteria to find the remaining assimilative capacity  
 NO Assume non-detectable background or request testing

- b. Calculate the theoretical instream concentration for each pollutant using the general permit limit. (attach sheet w/calculations for all pollutants)

	$\frac{(\text{GP Limit}) \times (\text{Effluent Flow})}{(3 \text{ harmonic mean stream flow} + \text{Effluent Flow})} = \text{instream pollutant concentration}$
c.	Will the calculated instream pollutant concentration exceed 1/3 (NR 207 not significant lowering) of the remaining assimilative capacity (water quality criteria minus background level) for the aquatic use classification listed in the table?
<input type="checkbox"/>	YES Facility is not eligible for general permit. <i>(Issue specific permit with mass limits or change discharge)</i>
<input type="checkbox"/>	NO Facility is eligible for general permit. <i>(Specify in the cover letter which VOC's will be required to be monitored)</i>
d.	note: If there are no limits in the GP for VOC's in the discharge, the need for a permit limit can be checked by substituting [the water quality criteria] for [the instream pollutant concentration] in the formula above to solve for what the potential [permit limit] would be. As long as the discharge level would be less than 20% of the potential permit limit, an numerical limit is not needed and the general permit can be used. If the discharge level is above 20% (or the p99) of the water quality based limitation, an individual permit must be drafted to contain the water quality based limit. Alternatively, the treatment system could be redesigned to reduce the effluent concentration such that the discharge is again eligible for the general permit.

**E. EFFLUENT LIMITS AND MONITORING REQUIREMENTS FOR DISCHARGES TO GROUNDWATERS.**

Effluent limits and monitoring requirements for groundwater discharges are established in the permit at a level equivalent to the preventive action limit to assure compliance with Ch. NR 140 groundwater quality standards. The permittee may submit (and the field DNR wastewater staff may approve) a demonstration in discharge management plan that justifies that limits up to the enforcement standard are needed due to technical or economic infeasibility. Approve the alternate limits in your approval of the discharge management plan. The cover letter shall specify the preferred method of documenting compliance with the groundwater standards, such as: (1) meeting PAL or ES in samples from groundwater monitoring wells, (2) meeting PAL or ES in samples of wastewater treatment effluent before discharge, or (3) by meeting end-of-pipe wastewater discharge limits that are back calculated (for effects of pollutant dilution, dispersion or degradation) to comply with ground water standards.

**F. EFFLUENT LIMITS AND MONITORING REQUIREMENTS FOR DISCHARGES TO IN SITU REMEDIATION OF GROUNDWATERS**

Effluent limits and monitoring requirements for groundwater discharges are established in the permit at a level equivalent to the preventive action limits unless a Temporary Exemption under Ch. NR 140.28(5) is granted by the DNR Remediation and Response Program. The ERR NR 140 temporary exemption must set maximum seepage/injection levels to protect surrounding groundwater. Above ground treatment (air stripping) is generally required of these projects to reduce the risk of contaminated groundwater moving outside the plume area. You are encouraged to call Jeff Brauer at (608) 267-7643, Steve Karklins at (608) 266-5240, or your Regional hydrogeologist if you get involved with one of these projects.

**G. REQUIREMENTS FOR AG-CHEM SITE DISCHARGES TO FARM FIELDS**

In most cases farm Coop sites with pesticides and fertilizers should be encouraged to reuse the remediation wastewater when they are mixing up pesticide batches or when they can irrigate or landspread the waters for beneficial use on farm fields. When these sites are considering surface water discharge, Best Available Treatment generally requires activated carbon to be used and there are difficult issues with regard to Ammonia-Nitrogen effects on aquatic life. Often there may be no assimilative capacity remaining for ammonia and the stream classification (or lack of any formal classification resulting in a default full fish class) causes difficult permitting problems. For those reasons the general permit should not be used on Ag-chem remediation discharges to surface waters.

Is this facility eligible for the general permit?

YES (*see reasons checked above*)

NO (*see reasons checked above*)

Special considerations at this facility:

Wastewater Reviewer Sign \_\_\_\_\_ Date: \_\_\_\_\_

Basin Biologist/WQ limit spec Approval \_\_\_\_\_ Date: \_\_\_\_\_