

24-Hour Emergency Hotline Number: 1-800-943-0003

Form 4400-91 Rev. 11-95

Date and Mil. Time of Incident: 2/23/1999 1300 HRS Date and Mil. Time Reported: 2/24/99 1031 HRS

Person Reporting: CHRIS GOODWIN Telephone # (715) 831-7638

Representing Agency, Firm or Citizen: AYRES ASSOCIATES

Responsible Party: CULLIGAN WATER CONDITIONING

Contact Name: JIM LUDKE Telephone # (715) 234-4754

Address: 2200 PIONAAR AVE City, State, Zip Code: RICE LAKE, WI 54868

Substance Involved: POTASSIUM PERMANGANATE Amount & Units Released: 90 GALLONS Amount Recovered:  Yes  No  Unknown Is this a 304 (11004 42 USC)  Yes  No  Unknown

Solid  Semisolid  Liquid  Gas Color: \_\_\_\_\_ Odor: \_\_\_\_\_

Exact Location (inc. address, facility name, mileage, bldg. #, etc.): PRICK RITE INC. 9921 NORTH STATE ROAD 27

City: HAYWARD County: SAWYER Lat/long: \_\_\_\_\_

DNR Region: NOR SUN/4NE 1/4sec 33 NR (E/W) + 41 NR 1/4 Weather Cond.: \_\_\_\_\_

Cause of Incident: HOSE LEFT IN FILL TANK CAUSED SIPHONING TO FLOOR

<p>Spilled Substance Impact To: Check (✓) all that apply:</p> <p><input type="checkbox"/> Air <input type="checkbox"/> Potential <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Potential <input type="checkbox"/> Groundwater <input type="checkbox"/> Potential <input type="checkbox"/> Surface Water <input type="checkbox"/> Potential</p> <p>Name: <input type="checkbox"/> Storm Sewer <input type="checkbox"/> Potential <input type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Potential <input type="checkbox"/> Concrete/Asphalt <input type="checkbox"/> Potential <input type="checkbox"/> Private Well <input type="checkbox"/> Potential <input checked="" type="checkbox"/> Contained/Recovered <input type="checkbox"/> Other:</p>	<p>Spill Source:</p> <p><input type="checkbox"/> Transportation Accident, Fuel Supply Tank Spill <input type="checkbox"/> Transportation Accident, Load Spill <input type="checkbox"/> Industrial Facility <input type="checkbox"/> Paper Mill <input type="checkbox"/> Chemical Company <input type="checkbox"/> Ag Coop/Facility/ Food Factory/Facility <input checked="" type="checkbox"/> Gas/Service Station/Garage/Auto Dealer, Repair Shop <input type="checkbox"/> Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler <input type="checkbox"/> Public Property (city, state, church, school, etc.) <input type="checkbox"/> Utility Co, Power Generating/Transfer Facility <input type="checkbox"/> Private Property (home/farm) <input type="checkbox"/> Construction, Excavation, Wrecking, Quarry, Mine <input type="checkbox"/> Airport Facility <input type="checkbox"/> Railroad Facility <input type="checkbox"/> Other:</p>	<p>Action Taken By Spiller:</p> <p><input type="checkbox"/> No Action Taken <input type="checkbox"/> No Action Needed <input type="checkbox"/> Monitor <input checked="" type="checkbox"/> Cleanup Method: <u>SODIUM + FLOOR DRY</u> <input checked="" type="checkbox"/> Waste Destination: <u>LANDFILL</u> <input type="checkbox"/> Containment <input type="checkbox"/> Contractor Hired Name: _____ <input type="checkbox"/> Other:</p>
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Injuries?  Yes  No If yes, how many? \_\_\_\_\_ Has an evacuation occurred?  Yes  No Potential?  Yes  No

Are there any resource damages?  Yes  No  Potential What kinds? SOIL / GROUNDWATER

Other Agencies Notified (✓ first column if notified); Check (✓) both columns if on scene

<input type="checkbox"/> Fire Department/Hazmat	<input checked="" type="checkbox"/> Local DNR	<input type="checkbox"/> EPA
<input type="checkbox"/> Local Law Enforcement	<input type="checkbox"/> Div. Emer. Gov.	<input type="checkbox"/> Nat'l Resp. Ctr. 800-442-8802
<input type="checkbox"/> LEPC or Local Emer. Gov.	<input type="checkbox"/> DATCP 608-224-4500	<input type="checkbox"/> Chemtree 800-424-9300
<input type="checkbox"/> Regional Response Team	<input type="checkbox"/> DHSS 608-266-2830	<input type="checkbox"/> Other:

Incident Commander, if known: \_\_\_\_\_  
Phone: \_\_\_\_\_

Prepared By: (Print) THOMAS J. KANDZIMSKI Thomas J. Kandzinski Date: 2/24/99 Rpt'd to DATCP?  Yes  No

Person Notified: THOMAS J. KANDZIMSKI Region Notified: YES Date: 2/24/99 Time: 1031 HRS

Investgtd By: (Print) THOMAS J. KANDZIMSKI Date: 2/24/99 Site Closed?  Yes  No

Spill Coordinator Signoff: \_\_\_\_\_ Date: \_\_\_\_\_ NFA Letter Sent?  Yes  No  
Spill Packet Sent?  Yes  No

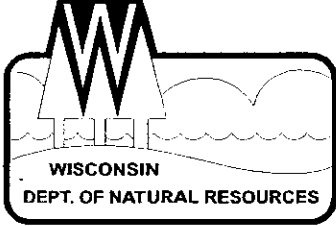
RECEIVED

Additional Comments on Reverse

MAR 1 1999

PLEASE PRINT

DNR SUPERIOR



Tommy G. Thompson, Governor  
George E. Meyer, Secretary  
William H. Smith, Regional Director

1705 Tower Avenue  
Superior, Wisconsin 54880  
Telephone 715-392-0802  
FAX 715-392-7993

March 24, 1999

Mr. Jim Luedke  
Culligan Water Conditioning  
2200 Pioneer Ave.  
Rice Lake, WI 54868

04-58-216451

Subject: Spill of 90 gallons of Potassium Permanganate on February 23, 1999  
at 9921 North State Road 27, Hayward, Wisconsin

Dear Mr. Luedke:

The purpose of this letter is to inform you of your legal responsibilities regarding the spill with which you are currently involved. Under State Law, section 292.11, Statutes, you must clean-up any contamination resulting from your spill. Because a hazardous substance has been discharged, you are responsible for restoring the environment.

The Hazardous Substance Spills Law, section 292.11(3), Wisconsin Statutes states,  
"A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore to the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state."

The attachments in this spill packet will provide you with information on your cleanup responsibilities, consultant list, containment, sampling, treatment and disposal options.

Required Actions:

As the responsible party of the discharge of a hazardous substance, you have the responsibility to assess the immediate impact of the discharge on human health and the environment and to act immediately to minimize these impacts. Furthermore, you must clean-up the discharge to acceptable State standards and take any other actions necessary to restore the environment to the extent practicable. Following the initial response and clean-up, if impacts of the discharge remain in the soils, water and/or groundwater, additional investigation and clean up may be required by the Department.

Spill clean-up should occur as quickly as possible to prevent extensive migration of the spill and also keep response, cleanup, and restoration costs from escalating. Clean-up progress should be reported to the Department on a regular basis as the clean-up occurs. **Within 45 days of receipt of this packet**, return a Narrative Clean-up Summary, Site Map, copies of documents covering the proper disposal of contaminated

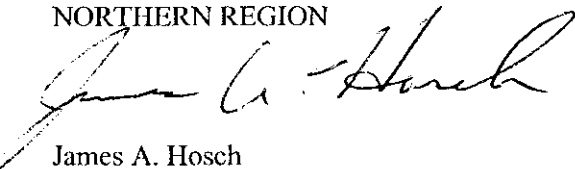
materials and/or soils, and any sample results to the address below:

Department of Natural Resources  
Attention: Tom Kendzierski  
810 W. Maple St.  
Spooner, WI 54801

Based on the information provided, the Department will determine the need for further action or a case close-out. You will be notified of the Department's decision. Failure to provide the requested information within the specified time period may result in enforcement action.

If you should have any questions regarding this letter please feel free to call me at (715)392-0802.

Sincerely,  
NORTHERN REGION

A handwritten signature in black ink, appearing to read "James A. Hosch". The signature is fluid and cursive, written over the typed name.

James A. Hosch  
Spill Coordinator

Attach: 1997 Northern Region Spill Guidance

cc: Chris Goodwin - Ayres Associates, P.O. Box 1590, Eau Claire, WI 54702-1590  
Paula Schneider - Rhinelander  
Tom Kendzierski - Spooner - *project mgr*

# Service Company

10096 N. Oker Rd.  
Hayward, WI.  
54843

715-634-8013

Monday, March 01, 1999

Tom Kendziersky  
D.N.R. Office  
810 West Maple  
Spooner, WI.

Hello Tom,

*Here's the pictures of the Potassium Permanganate spill at Price Rite. I've also included a drawing of the spill.*

*Pictures 1 & 2 are of the side door with Pot Perm coming out from under the door.*

*Picture 3 is of the spill to the East of the inside of the building.*

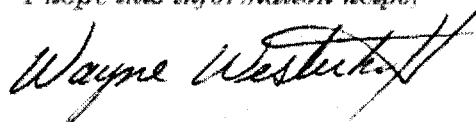
*Picture 4 is of the leak.*

*Picture 5 is of the spill to the North of the inside of the building.*

*I've talked with Chris Goodwin and what we've decided to do after Culligan finishes the cleanup is to remove the hose and install P.V.C. piping with two shut off valves to fill the tank. Remove the bags of Cullucite from the building and put them in the aerution building, and put the extra carbon from the carbon filters back into the carbon filters.*

*As far as how much Pot Perm leak out a good guess would be about 80 gallons in liquid form about 6 pounds in dry form.*

*I hope this information helps.*



Wayne Westerhoff

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MAR 02 1999

DNR - SPOONER

RECEIVED

MAR 3 1999

DNR SUPERIOR



CULLIGAN WATER CONDITIONING

ASHLAND  
P.O. BOX 466  
ASHLAND, WI 54806

RICE LAKE  
2200 PIONEER AVE  
RICE LAKE, WI 54868  
1-800-657-4754

MILLTOWN  
P.O. BOX 3  
MILLTOWN, WI 54858

2/24/99

AHN. Tom Kendziersky  
Pages 8 including cover.

Subject MSDS on Potassium Permanganate

From Kelly  
C.W.C. Rice Lake.

MILLTOWN

HYDR 6  
HYDRITE CHEMICAL CO.  
POTASSIUM PERMANGANATE FREE FLOW (C)  
MI-1608  
04/08/97

MATERIAL SAFETY DATA SHEET

10/14/98

PRODUCT NAME: POTASSIUM PERMANGANATE FREE FLOW (C)

PAGE 1

DISTRIBUTED BY: HYDRITE CHEMICAL CO.  
300 N. PATRICK BLVD.  
BROOKFIELD, WI 530080948  
(414) 792-1450  
24 HOUR EMERGENCY # - (414) 277-1311  
CHEMTREC EMERGENCY # - (800) 424-9300

MSDS#:HY971MI1608XX

PREPARED BY:KJV/NAO  
04/08/97

MANUFACTURED BY: Chem-One

SECTION I - PRODUCT INFORMATION

TRADE NAME: POTASSIUM PERMANGANATE FREE FLOW  
CHEMICAL NAME SYNONYMS: Potassium Permanganate; Condy's Crystals  
Permanganate acid potassium salt

C.A.S. REGISTRY #: 7722-64-7  
CHEMICAL FAMILY: Oxidizer

FORMULA: KMnO4

DOT PROPER SHIPPING NAME: POTASSIUM PERMANGANATE

D.O.T. HAZARD CLASS: 5.1 (OXIDIZER)

D.O.T. IDENTIFICATION #: UN1490 D.O.T. LABEL: OXIDIZER - CORROSIVE

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV LEVEL	PEL LEVEL
Potassium Permanganate	97-99.5%	* 0.2 mg/m3	* C 5 mg/m3

NOTE : C denotes Ceiling Limit. \* Exposure limit for Manganese, elemental and inorganic compounds, as Mn (ACGIH). \* Exposure limit for Manganese compounds (as Mn), C 5 mg/m3. Exposure limit for Manganese fume (as Mn), 1 mg/m3 - TWA; 3 mg/m3 - STEL (OSHA 29 CFR 1910.Z-1-A).

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SECTION III - PHYSICAL DATA

BOILING POINT (DEG. F): Decomposes      SPECIFIC GRAVITY: 2.7 @ 15C  
FREEZING POINT (DEG.F): 464 (mpt)      PERCENT VOLATILE  
VAPOR PRESSURE (MM HG): ~ 0      BY VOLUME%: N.A.  
VAPOR DENSITY (AIR=1) : N.A.      EVAPORATION RATE(N.A. ): N.A.  
SOLUBILITY IN WATER: ~6.4% @ 20C

APPEARANCE AND ODOR: Dark purple to gray-colored crystals or granules. No odor.

SECTION IV - FIRE EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): None.

FLAMMABLE LIMITS      LEL: N.A.      UEL: N.A.

EXTINGUISHING MEDIA: Water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area of unprotected personnel. Wear protective clothing including a NIOSH-Approved self-contained breathing apparatus. Use water spray to knock down vapors. Run-off from fire control may cause pollution.

UNUSUAL FIRE EXPLOSION HAZARDS: STRONG OXIDIZER. Material is an oxidizing agent and can supply oxygen to stimulate or accelerate the combustion of organic or other combustible materials. May decompose spontaneously if exposed to intense heat, concentrated acids, hydrogen peroxide, reducing agents, or organic substances. In confined areas, this decomposition may become explosive. Contact with strong oxidizing agents may cause an explosion. Forms oxides of Phosphorus upon burning.

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SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: \* C 5 mg/m<sup>3</sup> (OSHA 29 CFR 1910.Z-1-A)  
\* 0.2 mg/m<sup>3</sup> (ACGIH 1996)  
C denotes ceiling limit. \* Exposure  
limit for Manganese compounds (as Mn), C 5 mg/m<sup>3</sup>. Exposure limit  
for Manganese fume (as Mn), 1 mg/m<sup>3</sup> - TWA; 3mg/m<sup>3</sup> - STEL (OSHA 29  
CFR 1910.Z-1-A) \* Exposure limit for Manganese, elemental and  
inorganic compounds, as Mn (ACGIH).

EFFECTS OF OVEREXPOSURE

EYE CONTACT: May cause severe burns and destruction of  
tissues. Contact can produce hardened, ulcer-like injury on the  
eye. Conjunctivitis and bleeding may occur. In extreme cases,  
cloudiness or discoloration of the cornea may occur. Permanent eye  
damage may result. Contact may cause blindness.

SKIN CONTACT: Concentrated solutions at elevated temperature  
and crystals are corrosive to the skin. Prolonged contact of  
solutions at room temperature may be irritating to the skin. May  
cause irritating and severe burns to the skin. May result in tissue  
destruction.

INHALATION: May cause irritation to the nose, throat, and  
respiratory tract. Inhalation of dust, mist, or spray may cause  
damage to the respiratory tract. In severe cases, pulmonary edema  
may occur that could potentially lead to death. Other symptoms  
include sore throat, coughing, shortness of breath, and difficult  
breathing.

INGESTION: Ingestion can cause very serious damage to the  
mouth, esophagus, stomach, and other tissues with which contact is  
made, and may be fatal. Fatal oral dose is estimated at 10 grams.  
Death may occur up to one month from the time of poisoning. Symptoms  
may include nausea, vomiting, stridor, slow pulse, and decreased  
blood pressure.

OTHER: ROUTES OF EXPOSURE: Product can affect the body



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SECTION V - HEALTH HAZARD DATA

if it is inhaled, comes in contact with the eyes or skin, or is swallowed. Prolonged exposure, usually many years, to heavy concentrations of dust and fumes above the TLV, mainly in the form of manganese oxides may lead to chronic manganese poisoning. The Central Nervous System is the chief site of damage. The symptoms may simulate Parkinson's disease. No known cases of chronic manganese poisoning by potassium permanganate have been reported. TARGET ORGANS: (Manganese compounds and fume (as Mn)). Respiratory System. Central Nervous System. Blood. Kidneys.

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids open during this flushing with water. Call a physician immediately.

SKIN CONTACT :Flush area with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing or shoes until cleaned. If irritation persists, get medical attention. Do not apply oils or ointments unless ordered by the physician.

INGESTION: If swallowed, seek medical attention immediately. Do not induce vomiting unless directed to do so by medical personnel. Give several glasses of water or milk. NEVER induce vomiting or give anything by mouth to an unconscious victim.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. CALL A PHYSICIAN.

OTHER: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

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PRODUCT NAME: POTASSIUM PERMANGANATE FREE FLOW (C)

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SECTION VI - REACTIVITY DATA  
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STABILITY:  STABLE  UNSTABLE  
CONDITIONS TO AVOID: Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Avoid elevated temperatures.

INCOMPATIBILITY: Acids. Reducing Agents. Oxidizable Materials. Flammable or combustible materials. Organic materials. Peroxides. Formaldehyde. Hydrogen Peroxide. Metals. Metal dust. Concentrated acids may react violently and release toxic gases.

HAZARDOUS DECOMPOSITION PRODUCTS: Upon heating, oxygen is released, which increases potential of fire. When heated to decomposition, it emits the following toxic fumes: Potassium Oxides.

HAZARDOUS POLYMERIZATION:  MAY OCCUR  WILL NOT OCCUR

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SECTION VII - SPILL OR LEAK PROCEDURES  
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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

STRONG OXIDIZER. Evacuate unprotected personnel from area. Maintain adequate ventilation. Use proper Safety Equipment. Keep materials which can burn away from spilled material. If sweeping of a contaminated area is necessary, use a dust suppressant agent which does not react with product. Do not use combustible materials such as sawdust. Do not return material to original container. Sweep up material into containers and dispose of properly. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

WASTE DISPOSAL METHOD: Observe all Local, State, and Federal Regulations. Reduce KMnO4 solution with sodium thiosulfate solution, mix the sludge with soda ash (Na2CO3) and deposit in an approved landfill. Where permitted, the sludge can be drained into a sewer with large quantities of water. Oxidizers such as potassium permanganate meet the criteria of ignitable wastes. DO NOT pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition.

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SECTION VII - SPILL OR LEAK PROCEDURES

SECTION VIII - SPECIAL PROTECTION INFORMATION

CONSULT SAFETY EQUIPMENT DISTRIBUTOR

**RESPIRATORY PROTECTION:** If recommended Exposure Limits are exceeded wear: NIOSH-Approved respirator for dusts and mists. NIOSH-Approved Supplied-Air respirator. Do not exceed limits established by the respirator manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

**VENTILATION:** Maintain adequate ventilation. Do not use in closed or confined space. Keep levels below recommended Exposure Limits. To determine exposure levels, monitoring should be performed regularly. Avoid accumulation of dust. Avoid mist formation.

**PROTECTIVE GLOVES:** Impervious gloves. Rubber (Latex).

**EYE PROTECTION:** Chemical Safety Goggles. Face shield. Do not wear contact lenses.

**OTHER PROTECTIVE EQUIPMENT:** Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing.

SECTION IX - SPECIAL PRECAUTIONS

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:**

**STRONG OXIDIZER.** Store in cool, well-ventilated area away from all sources of ignition and out of direct sunlight. Store in dry location. Keep containers tightly closed. Store away from incompatible materials. Do not store in unlabeled or mislabeled containers.

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SECTION IX - SPECIAL PRECAUTIONS

OTHER PRECAUTIONS: Avoid contact with skin and eyes. Do not swallow. Avoid dust or mist formation. Use with adequate ventilation. Avoid breathing mists or dusts. Wash thoroughly after handling. Do not eat, drink, or smoke in work area.

SECTION X - SUPPLEMENTAL HEALTH INFORMATION

CARCINOGEN CONTENT

% PPM	INGREDIENT	IARC	NTP	OSHA
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NOTE : This product does not contain greater than 0.1% of the known or potential carcinogens listed in NTP, IARC, or OSHA.

LD50 ORAL	: Rat: 1090mg/kg; Mouse: 2157 mg/kg
LD50 SKIN	: No Data
LC50 INHALATION	: No Data

\*\* \*\* \*

The data in this Material Safety Data Sheet relates only to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

**Kendzierski, Thomas J**

**From:** Chris Goodwin [SMTP:goodwinc@ayres-eau.com]  
**Sent:** Wednesday, February 24, 1999 11:16 AM  
**To:** kendzt@dnr.state.wi.us  
**Subject:** Price Rite

The perforation in the floor is about 6 feet from the outside wall. This is where the spill hit the ground. We could maybe hand auger through the floor at this point if the cut-out where the pipe comes through is big enough. We may have to bust out a little concrete. If we can go through the floor and auger vertically, with a couple of lab samples, \$750 to \$1000 should cover the costs to assess the vertical extent. I have to contact a lab regarding analytical procedures. I think we could put soil in jar, add water and look for pink color to do a field screen procedure. I will check with a lab for analytical for KMnO4 analysis.

The spill occurred about 1:00 pm 2/23/99. Culligan personnel stated the tank was drained 21 inches, which equal about 90 gallons of solution.

Culligan contact is Jim Luedke, 715-234-4754., 2200 Pioneer Avenue, Rice

Lake WI 54868

I called Culligan and asked them to fax you an MSDS sheet. They will fax to 635-4105 number right away. If you don't get anything give them a call.

I will be gone after 12:00 today and only in for about ½ hour tomorrow morning.

Chris

**Kendzierski, Thomas J**

**From:** Chris Goodwin [SMTP:goodwinc@ayres-eau.com]  
**Sent:** Wednesday, February 24, 1999 10:31 AM  
**To:** Kendzierski, Thomas J  
**Subject:** Re: Price Rite

I am going to try and finish the O&M report by the end of next week. You should have it by march 11.

Yesterday when Culligan was refilling the potassium permanganate tank, the left a hose in the tank and about 100 gallons of permanganate siphoned from the tank. Wayne put floor dry around the spill, however some seeped through the floor where the well lines come through the concrete. Culligan put soda ash on the spill area and vacuumed that and the floor dry up. They are disposing of that waste. I don't think the potassium perm. is hazardous, but do we have to do anything regarding the spill?

I am going to check some chemical references we have here regarding clean up options.

Wayne is going to get a price to take over Culligans duties. They have had other problems with neatness related issues and if Wayne can do their job for the same price, we should dump Culligan.

Chris

At 09:51 AM 2/24/99 -0600, you wrote:

Hi Chris.

Could you please give me an update on the status of the reports we discussed for Price Rite. An estimated completion date would be helpful. I need it for my workplanning and for setting up the next contract.

TKe

North  
↓

STRIPPING  
TOWER

Fe Filter  
#3

Fe Filter  
#2

Fe Filter  
#1

Potassium  
Permanganate

Rubber  
pipe

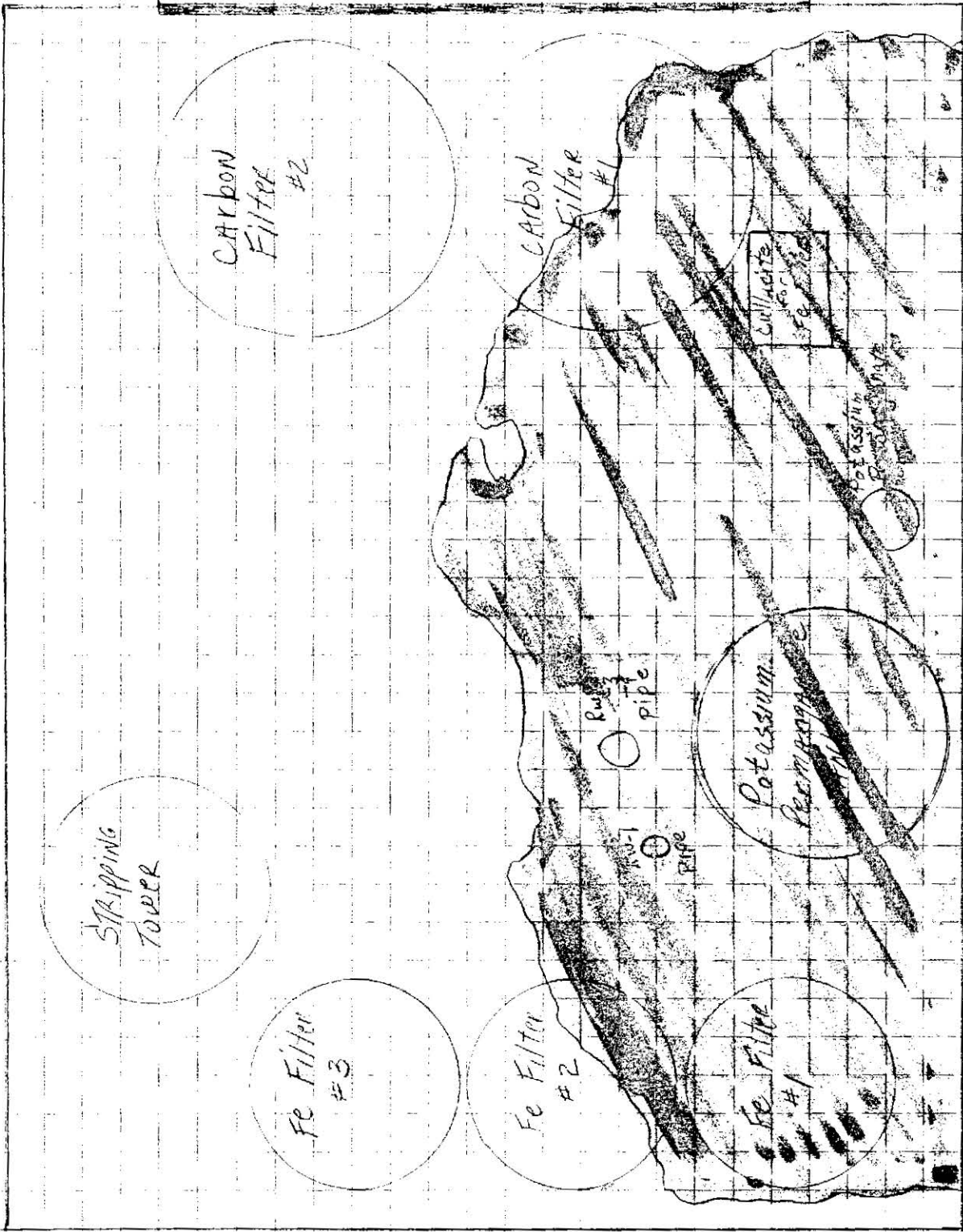
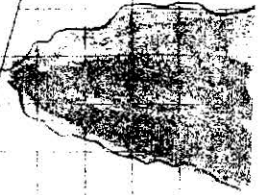
Rubber  
pipe

Carbon  
Filter  
#1

Carbon  
Filter  
#2

Cellulose  
for  
filter

potassium  
permanganate

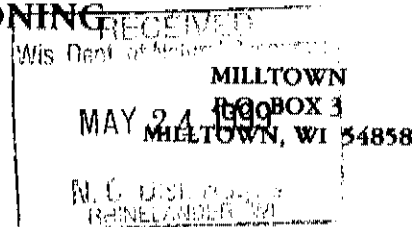


# CULLIGAN WATER CONDITIONING

ASHLAND  
P.O. BOX 466  
ASHLAND, WI 54806

April 12, 1999

RICE LAKE  
2200 PIONEER AVE  
RICE LAKE, WI 54868  
1-800-657-4754



Department of Natural Resources  
Attention: James A. Hosch  
1705 Tower Ave.  
Superior, WI 54880

Dear Mr. Hosch,

I am writing to you regarding the spill of potassium permanganate on February 23<sup>rd</sup>. My employee, Tim Losey, was delivering the potassium permanganate and mixing it in the storage tank. A hose, which is connected to the refill valve on the chemical storage tank, was unscrewed from the spigot when Tim delivered the chemical on February 23<sup>rd</sup>. Tim filled the tank up to the full mark and mixed in the potassium and stirred the tank contents with the paddle. The last thing he did was unscrew the hose from the spigot and set it on the pipe. The hose must have slipped off of the pipe that he set it on. The hose was at a lower point than the refill valve which caused the chemical to siphon back out of the hose. Approximately 70 gallons of potassium permanganate (KMnO<sub>4</sub>) solution spilled on the floor.

Wayne Westerhoff, a sub-contractor for Ayres, stopped in to check on the building shortly after Tim left and found the permanganate solution on the floor. Wayne called Ayres who in turn notified the Culligan office about the spill. Wayne spread oil dry around the inside perimeter of the building to keep the solution inside. I drove up to Hayward with equipment that afternoon and vacuumed up 15 gallons of solution. We scooped up the oil dry solution and then rinsed the floor down and vacuumed up more pink water. Soda ash was applied to the floor and scooped up and hauled away.

Near the chemical storage tank a three inch pipe perforates the concrete slab. The concrete has been saw cut and removed in a 6" by 6" square around this pipe. Some of the KMnO<sub>4</sub> which was not recovered by the clean up seeped into the soil through this perforation. We estimate that 55 gallons seeped into the soil. There are three other locations where pipes perforate the slab, however we believe that most of the solution seeped into the nearest perforation. These perforations were installed during building construction to allow the slab to move without damaging the pipes.

2/24/99



## CULLIGAN WATER CONDITIONING

ASHLAND  
P.O. BOX 466  
ASHLAND, WI 54806

RICE LAKE  
2200 PIONEER AVE  
RICE LAKE, WI 54868  
1-800-657-4754

MILLTOWN  
P.O. BOX 3  
MILLTOWN, WI 54858

The 15 gallons of solution plus the floor rinsate was diluted with a large quantity of water and sent to the Rice Lake treatment plant. The oil dry with the potassium was hauled away with our garbage and taken to the Barron County incinerator. The building was given a final cleaning on March 1<sup>st</sup>. The floor was pressure washed and the water vacced up and sent to the Rice Lake treatment plant. Both Ayres and Deb Freeman from Price Rite inspected the building and approved of the clean up.

Potassium and manganese are the two main constituents in K Mn O<sub>4</sub>. Because of the dilute state of the solution (2 oz. per gallon of water) the hazardous nature of the chemical is substantially reduced. The solution strength is only 1.5% (2oz. K Mn O<sub>4</sub> to 128 oz. water). When the filters backwash, a weak potassium solution along with iron and manganese is also being pumped into the seepage cell.

The spill of the potassium permanaganate solution was accidental. By disconnecting the hose, Tim was trying to put everything back the way it was when he found it. I understand that the hose has been removed and the refill valve is hard piped with two ball valves. This should prevent back siphonage from occurring again. The perforations in the floor will also be sealed after this spill issue is resolved.

The small amount of dilute solution that seeped into the soil will pose no threat to human health or the environment. Oxidation can occur naturally when organics and minerals contact the permanaganate. It doesn't seem practical to go through an extensive cleanup for such a small amount of solution. The constituents of potassium permanganate are potassium and manganese which in themselves are not hazardous compounds. The strong oxidizing nature of KMnO<sub>4</sub> has been diluted because only a 1.5% solution is used in the system and the spilled substance is no longer a strong oxidizer. An unknow hazardous substance was not introduced into the environment.

If you have any questions regarding this letter please feel free to call me at 715-234-8819.

Sincerely,



Jim Luedtke  
Culligan Water Conditioning  
Rice Lake, WI 54868

cc: Chris Goodwin-Ayres Associates  
Tom Kendzierski