

Via Electronic and US Mail

March 31, 2020

Mr. Issac Ross Southeast Region Spill Coordinator Southeast District Office Wisconsin Department of Natural Resources 2300 North Dr. Martin Luther King Drive Milwaukee, WI 53212

Re: 15-Day Follow-up Spill Report WM Mercury Waste, Inc., Union Grove EPA ID WIR000000356

Dear Mr. Ross:

On behalf of WM Mercury Waste, Inc. (WMMWI) and pursuant to Conditions #55 and 57 of the facility's Feasibility and Plan of Operation Report (FPOR), this constitutes WMMWI's 15-day follow-up report concerning the internal spill of mercury that occurred on March 18, 2020. This spill was promptly reported to the Wisconsin Department of Natural Resources' Spill Hotline pursuant to Condition #56 of the FPOR and in compliance with Sec. 292.11(3), Wis. Stats. This report follows the format presented in Wis. Admin. Code § NR 706.05(c). The spill was completely contained and fully recovered with no resulting discharge to the environment. Please feel free to contact me to discuss matters further at 262-878-0164.

Sincerely. the

John Kendall III Senior Operations Manager WM Mercury Waste, Inc.

Cc:

Catherine Baerwald, via email Catherine.Baerwald@wisconsin.gov

1. Name, address and telephone number of the person reporting the discharge.

Ayrton (Alex) Bryan WM Mercury Waste, Inc. 21211 Durand Avenue Union Grove, Wisconsin 262-878-0281

2. Name, address and telephone number of the discharger, or owner and operator of the UST system and any other potentially responsible persons.

WM Mercury Waste, Inc. 21211 Durand Avenue Union Grove, Wisconsin 800-741-3343

3. Date, time, and duration of the discharge.

March 18, 2020; 4:50p.m.; One-time spill of elemental mercury (fully contained indoors on impervious surface).

4. Identity, physical state and quantity of the material discharged.

UN2809, Mercury, 8 (6.1) PGIII. Liquid Approximately 90lbs of elemental mercury spilled.

5. Physical, chemical, hazardous and toxicological characteristics of the substance

Please See SDS attached

6. Cause of the discharge.

Employee handling error. Two metric ton containers (MTCs) tipped over inside of the building spilling approximately 90 pounds of mercury sludge and elemental mercury. The MTCs tipped over after the container under them collapsed due to the weight of the MTCs.

7. Immediate actions being taken and the name of the contractor or other person performing the action.

Approximately 90 lbs. of mercury spilled. The spill was barricaded off and cleaned. The spill was cleaned using WMMWI employees only. Because the spill occurred inside the building with air controls, it is not considered a release to the environment and thus not reportable to the National Response Center (NRC).

The mercury was entirely recovered from the concrete floor and placed into a processing tray for on-site retorting and recovery. The spilled mercury had sorbent powder applied, and the mixture was moved to the processing tray via shovel.

*While cleaning, all employees were wearing the PPE required by the WMMWI PPE Program:* 

• Safety shoes with metatarsal protection.

• Chemsplash - coveralls with hood, elastic wrist and ankle or equivalent with taped zipper seam and taped seams (not sewn).

• Full-face respirator with cartridges

a) MSA Advantage 4000 with Mersorb cartridge

b) North RU6500 FF with P100 cartridge

• *Nitrile gloves x2 Best N-Dex Puncture resistant nitrile - 8 mil.(Lower pair of gloves is taped at the wrist)* 

All employees attended a mandatory material handling training on March 25 and 27, 2020 in response. The topics of review included proper material handling when moving material, the potential environmental impacts of spills, and the expectations on proper material stacking.

8. Source, speed of movement and destination or probable destination of the discharged hazardous substance.

*The source of the spilled mercury was the MTCs. None of the spilled mercury left the facility.* 

9. Actual or potential impacts to human health or the environment, including actual or potential impacts to drinking water supplies.

None.

10. Weather conditions existing at the scene, including presence of precipitation and wind direction and velocity.

Not applicable. Spill occurred indoors.

11. Other agencies on-scene during the discharge incident.

None.

Attachments

Safety Data Sheet (SDS) for Mercury

#### **SDS Revision Date:**

#### 05/01/2015

### 1. Identification

1.1. Product identifier	
Product Identity	Mercury (Metallic)
Alternate Names	Quicksilver; Hydrargyrum; Liquid Silver
1.2. Relevant identified uses of the substance	e or mixture and uses advised against
Intended use	See Technical Data Sheet.
Application Method	See Technical Data Sheet.
1.3. Details of the supplier of the safety data	sheet
Company Name	WM Mercury Waste Inc.
	21211 Durand Avenue
	Union Grove, WI 53182
Emergency	
CHEMTREC (USA)	(800) 424-9300

 CHEMTREC (USA)
 (800) 424-9300

 Customer Service: WM Mercury Waste Inc.
 (800) 741-3343

### 2. Hazard(s) identification

#### 2.1. Classification of the substance or mixture

Acute Tox. 2;H330	Fatal if inhaled.
Repr. 1B;H360D	May damage the unborn child.
STOT RE 1;H372	Causes damage to organs through prolonged or repeated exposure. Specific Target Organs: (Central Nervous System)
Aquatic Chronic 1;H410	Very toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

H330 Fatal if inhaled.

H360D May damage the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

#### SDS Revision Date:

05/01/2015

#### [Prevention]:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P281 Use personal protective equipment as required.

P284 Wear respiratory protection.

#### [Response]:

P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308+313 IF exposed or concerned: Get medical advice / attention.

P310 Immediately call a POISON CENTER or doctor / physician.

P314 Get Medical advice / attention if you feel unwell.

P320 Specific treatment is urgent (see information on this label).

P391 Collect spillage.

#### [Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

#### [Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Mercury CAS Number: 0007439-97-6		Repr. 1B;H360D Acute tox. 2;H330 STOT RE 1;H372 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1][2]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

**SDS Revision Date:** 

05/01/2015

### 4. First aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	If swallowed, wash out mouth with water, obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.
4.2. Most importa	nt symptoms and effects, both acute and delayed
Overview	<ul> <li>Eye: Contact with eyes may cause severe irritation, and possible eye burns. Vapors may cause eye irritation.</li> <li>Skin: May cause skin irritation. May be absorbed through the skin in harmful amounts. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Chronic exposure to mercury may cause permanent central nervous system damage, fatigue, weight loss, tremors, and personality changes.</li> <li>Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause effects similar to those for inhalation exposure.</li> <li>Inhalation: Causes respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. May cause central nervous system effects including vertigo, anxiety, depression, muscle incoordination, and emotional instability. May cause severe respiratory tract irritation.</li> <li>Chronic: Chronic exposure to mercury may cause permanent central nervous system damage, fatigue, weight loss, tremors, and personality changes.</li> </ul>
	<b>Notes to Physician:</b> Treat symptomatically and supportively. <b>Antidote:</b> The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel. The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel. See section 2 for further details.
Inhalation	Fatal if inhaled.

### 5. Fire-fighting measures

#### 5.1. Extinguishing media

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Mercury/mercury oxides.

Do not breathe mist / vapors / spray.

#### **SDS Revision Date:**

#### 05/01/2015

#### 5.3. Advice for fire-fighters

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Combustion generates toxic fumes.

ERG Guide No. 172

### 6. Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

#### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

#### 6.3. Methods and material for containment and cleaning up

Vacuum or sweep up material and place into a suitable disposal container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section).

### 7. Handling and storage

#### 7.1. Precautions for safe handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

See section 2 for further details. - [Prevention]:

#### 7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Acetylene, ammonia, boron phosphodiiodide, chlorine, chlorine dioxide, methyl azide, sodium carbide, halogens, strong oxidizers.

Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Poison room locked.

See section 2 for further details. - [Storage]:

#### 7.3. Specific end use(s)

No data available.

#### **SDS Revision Date:**

05/01/2015

### 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure

CAS No.	Ingredient	Source	Value
0007439-97-6	Mercury	OSHA	TWA 0.1 mg/m3
			Alkyl compounds TWA: 0.01 mg/m3 STEL 0.03 mg/m3 Skin Aryl compounds TWA: 0.05 mg/m3 C 0.1 mg/m3 Skin Elemental/Inorganic 0.025mg/m3 Skin
		NIOSH	No Established Limit
		Supplier	No Established Limit

#### Carcinogen Data

CAS No.	Ingredient	Source	Value
0007439-97-6	Mercury	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;

#### 8.2. Exposure controls

Respiratory	Follow the OSHA respirator regulations found in 29CFR §1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.
Eyes	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin	Wear appropriate protective clothing to prevent skin exposure. Wear appropriate gloves to prevent skin exposure.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

### 9. Physical and chemical properties

### Appearance Odor Odor threshold pH Melting point / freezing point

Silver Liquid Odorless Not Measured Not Applicable -38.87 deg C

#### **SDS Revision Date:**

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Initial boiling point and boiling range Flash Point Evaporation rate (Ether = 1) Flammability (solid, gas) Upper/lower flammability or explosive limits

Vapor pressure (Pa) Vapor Density Specific Gravity Solubility in Water Partition coefficient n-octanol/water (Log Kow) Auto-ignition temperature Decomposition temperature Viscosity (cSt) Molecular Formula Molecular Weight 9.2. Other information No other relevant information. 356.5 deg C @ 760.00mmHg Not Measured Not Available Not Applicable Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured 0.002 mmHg @ 25C 7 (Air=1) 13.5400g/cm3 (Water=1) Insoluble Not Measured Not Measured Not Available 1.554 cP 20.00 Hq 200.59

### 10. Stability and reactivity

#### 10.1. Reactivity

Hazardous Polymerization will not occur.

#### 10.2. Chemical stability

Stable under normal circumstances.

#### 10.3. Possibility of hazardous reactions

No data available.

#### 10.4. Conditions to avoid

High temperatures, incompatible materials, metals.

#### 10.5. Incompatible materials

Acetylene, ammonia, boron phosphodiiodide, chlorine, chlorine dioxide, methyl azide, sodium carbide, halogens, strong oxidizers.

#### 10.6. Hazardous decomposition products

Mercury/mercury oxides.

### 11. Toxicological information

#### Acute toxicity

	Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg		Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50,
J.				mg/L/4hr	mg/L/4nr	ppm

#### **SDS Revision Date:**

#### 05/01/2015

Mercury - (7439-97-6)	37.00, Rat -	No data	No data	No data	No data
	Category: 2	available	available	available	available
	5				

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	2	Fatal if swallowed.
Acute toxicity (dermal)		Not Applicable
Acute toxicity (inhalation)	2	Fatal if inhaled.
Skin corrosion/irritation		Not Applicable
Serious eye damage/irritation		Not Applicable
Respiratory sensitization		Not Applicable
Skin sensitization		Not Applicable
Germ cell mutagenicity		Not Applicable
Carcinogenicity		Not Applicable
Reproductive toxicity	1B	May damage the unborn child.
STOT-single exposure		Not Applicable
STOT-repeated exposure	1	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard		Not Applicable

### **12. Ecological information**

#### 12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

#### **Aquatic Ecotoxicity**

Ingredient	96 hr LC50 fish,	48 hr EC50 crustacea,	ErC50 algae,
	mg/l	mg/l	mg/l
Mercury - (7439-97-6)	Not Available	0.0052, Daphnia magna	Not Available

#### 12.2. Persistence and degradability

There is no data available on the preparation itself.

#### 12.3. Bioaccumulative potential

Not Measured

#### 12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

#### SDS Revision Date:

05/01/2015

This product contains no PBT/vPvB chemicals. **12.6. Other adverse effects** No data available.

### 13. Disposal considerations

#### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

### 14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN2809	UN2809	UN2809
14.2. UN proper shipı name	ping UN2809, Mercury, 8, III	Mercury	Mercury
14.3. Transport hazar class(es)	DOT Hazard Class: 8 (6.1)	IMDG: 8 Sub Class: 6.1	Air Class: 8
14.4. Packing group	Ш	III	III
14.5. Environmental I	hazards		
IMDG	Marine Pollutant: Yes ( Mercury )		

14.6. Special precautions for user

No further information

### 15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act ( TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	D1A
US EPA Tier II Hazards	Fire: No
	Sudden Release of Pressure: No
	Reactive: No
	Immediate (Acute): Yes

Delayed (Chronic): Yes

EPCRA 311/312 Chemicals and RQs (lbs):

Mercury (1.00)

#### **EPCRA 302 Extremely Hazardous:**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### **SDS Revision Date:**

#### 05/01/2015

**EPCRA 313 Toxic Chemicals:** 

Mercury

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Developmental Toxins (>0.0%):** 

Mercury

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### New Jersey RTK Substances (>1%):

Mercury

Pennsylvania RTK Substances (>1%):

Mercury

### **16. Other information**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H330 Fatal if inhaled.

H360D May damage the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

# This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall WM Mercury Waste Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages.

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