

March 5, 2020

Romina Lancellotti
Environmental Specialist II
Florida Department of Environmental Protection
Southeast District – West Palm Beach
3301 Gun Club Road, MSC 7210-1
West Palm Beach, FL 33406

Re: Tropical Shipping Response to Florida DEP Inspection

Dear Ms. Lancellotti,

This letter is in response to your email to me dated February 20, 2020 regarding the Exit Interview for the routine hazardous waste inspection for Tropical Shipping conducted by the Florida Department of Environmental Protection on February 12, 2020. For each of the items listed in your email, we have included our response in italics below. If documents were provided in connection with the response, they are included under tabs in the enclosed binder.

We appreciate the opportunity to submit this information. Tropical Shipping operates throughout the western hemisphere, has served our customers for over fifty years, and has included safety and environmental sensitivity in our company's mission statement. We also have employees dedicated to safety and environmental management, such as myself, and we strive for 100% compliance at all times. We hope you will find this information satisfactory, and welcome any questions or opportunity to meet with you.

1. 62-710.850(5)(a) FAC – used oil filter labeling – the inspectors observed one (1) 55-gallon drum containing used oil filters that was not labeled, located in the Refrigeration Repair and Maintenance Shop. Please label the container with the words “used oil filters” and provide a picture to the Department.

Response: The identified container was labeled with the words “used oil filter” on February 13, 2020 and a picture of the labeled container is included under Tab No. 1.

2. 40 CFR 273.13(d)(1), 40 CFR 273.14(e), 62-737.400(5)(b) F.A.C., and 62-737.400(7) F.A.C.- Universal Waste Lamps – In the storage area, the inspectors observed 29 spent mercury lamps stored on the floor, unlabeled and without a container. Also, the inspectors observed 16 spent mercury lamps stored in an unlabeled and open box. Please provide a structurally sound and closed container for the 45 spent mercury lamps. The containers shall be labeled as “Universal waste – Lamps” and have the accumulation start date. Please provide a picture of the labeled containers to the Department.

Response: The identified containers were labeled as “Universal waste – Lamps” and the accumulation start date has been added. A picture of the labeled containers is included under Tab No. 2.

3. 40 CFR 273.13 - Pallet of batteries stored outside – the inspectors observed a pallet of 24 used lead acid batteries stored on a pallet outside the Marine Division Shop, exposed to the weather conditions. Facility personnel informed the inspectors that the batteries were going to be picked up within hours. Please provide shipment receipts of the batteries or provide a picture demonstrating that the spent batteries were stored indoors and protected from the weather conditions.

Response: The shipment receipt for the used batteries showing a pick-up on February 12, 2020 is included under Tab No. 3.

4. 40 CFR 262.11 –

- a) The inspectors observed 43 unlabeled 55-gallon drums of an unknown liquid stored outside the Port Maintenance Shop, located at the northeast side of the facility. Facility staff suggested the contents were used antifreeze, degreaser and empty containers. Please identify the content of each one of the 43 [sic] 55-gallon drums and provide a copy of the disposal records confirming if the waste was hazardous waste or not.

Response: Seven of the 43 drums had contents as listed below, and they have been properly labeled. They will be properly disposed of when full and disposal records will be maintained. The remaining 36 drums were empty – nine have been retained for future use and 27 have been cut up and scrapped.

- 3 drums with used coolant
- 1 drum with used oil
- 1 drum with used floor dry saturated with used oil
- 1 drum with used oil filters
- 1 drum with used grease

- b) The inspectors observed one unlabeled 55-gallon drum of unknown liquid stored outside the Marine Division Shop. Facility staff suggested the content was used oil. Please identify the content of the 55-gallon drum and provide disposal record to the Department. Is the content is confirmed to be used oil, label the container with the words “used oil,” install a proper secondary containment according to 62-710.401(6) F.A.C., and provide a picture to the Department.

Response: The contents of the drum were identified as used oil, spill dry and paint, and the drum was relabeled and relocated to the central accumulation area with proper secondary containment. Please see picture under Tab No. 4. The drum will be properly disposed of when full and disposal records will be maintained.

Also, please provide the following documentation for the Department to review:

5. All hazardous waste shipping records (including uniform HW manifests, bill of lading, etc.) from US territory for the last 3 years.

Response: On our telephone call on February 27, 2020, you confirmed (with respect to request No. 5 and request No. 6) that you are requesting all shipping records for hazardous waste shipments into the

Port of Palm Beach for 2017, 2018 and 2019. Please see applicable shipping records for these years under Tab No. 5.

6. All hazardous waste shipping records (including uniform HW manifests, bill of lading, etc.) from out of US for the last 3 years.

Response: Please see response under item 5 above.

7. Used tires recycling receipts for the last 3 years.

Response: Please see used tire recycling receipts from September 2018 through the end of 2019 included under Tab No. 7. The receipts prior to September 2018 were inadvertently discarded, but Tropical Shipping is attempting to locate additional copies from the previous vendor, who is currently traveling outside the US for several months. Tropical Shipping will retain future used tire recycling receipts for three years.

8. Spent lead acid batteries recycling records.

Response: Tropical Shipping does not recycle batteries but exchanges them as part of a core exchange program. Included under Tab No. 8 are vendor receipts for this exchange program.

9. Spent mercury lamps shipping records for the last 3 years.

Response: Please see spent mercury lamp Certificates of Disposal for 2017 through 2019 included under Tab No. 9.

10. SPCC/Contingency plan (including the facility's emergency coordinator and his/her job duties).

Response: Tropical Shipping and the Port of Palm Beach coordinate operations and activities at the Port, including activities relating to accidents or spills. Please see the Accidental Hazardous Material Release Response Action Plan for the Port of Palm Beach included under Tab No. 10. To the extent an incident or accident occurs that is covered by this Plan, Tropical Shipping would act consistently with this Plan and in coordination with the Port. Furthermore, Tropical Shipping is also developing its own SPCC/Contingency Plan, which will be completed on or prior to April 15, 2020 with a copy provided to you. In addition, as noted in item 11 below, Tropical Shipping has adopted Standard Operating Procedures for emergency responses for hazardous materials.

11. Standard Operating Procedures (SOP) documentation describing the facility's response plan pertaining to leaks and/or spills (40 CFR 263.30 and 263.31).

Response: Please see the Tropical Shipping Emergency Response Procedures for Hazardous Materials included under Tab No. 11.

12. Copy of certified mail or email of the arrangement with local authorities including police department, hospital, fire department, and emergency response contractor (template attached)

Response: Please see under Tab No. 12 copies of the emails sent by Tropical Shipping to the Riviera Beach Police Department, the Riviera Beach Fire Department, St. Mary's Hospital and Cliff Berry, Inc.

13. Employee training in used oil and hazardous waste management from past 3 years including those employees that manage hazardous wastes (for example, planners, on site drivers, etc.)

Response: Please see under Tab No. 13 samples of Training Records for completed training in used oil and hazardous waste management in 2019. If you would like training records for 2017 and 2018 that are consistent with these trainings, please let me know and we will send you the rosters for these trainings. Enclosed for your information as well under Tab No. 13 is a copy of our training program for our 49 CFR/IMDG Hazmat Course.

14. Log of transfer waste (hazardous waste and hazardous waste pharmaceutical) coming in and out of the facility from previous 3 years.

Response: Please see the log of transfer waste coming in and out of the facility for 2017, 2018 and 2019 included under Tab No. 5.

15. Sand blaster: Safety Data Sheet (SDS) of the media, spent sand blast media waste determination, shipping records and pictures of the sand blaster and waste containers.

Response: The profile and SDS of the sand blast media is included under Tab No. 15 along with pictures of the sand blaster and waste container. Once the waste container is full, it will be disposed of properly.

16. Provide the square footage of the area occupied by Tropical Shipping & Construction Company Ltd.

Response: The square footage of the area at the Port of Palm Beach occupied by Tropical Shipping is 50.1 acres.

17. Provide number of trucks used by Tropical.

Response: Tropical Shipping operates 20 trucks over the road from its location at the Port of Palm Beach.

Please let me know if you have any questions.

Sincerely,


Matthew King
Safety Manager
Tropical Shipping

USED OIL Filters

HEALTH

0

FLAMMABILITY

1

REACTIVITY

0

PERSONAL PROTECTION

NOTICE
DRUMS MUST
BE LABELED



Repair Order

Material Management
Material Repair

No

5934

Tropical Shipping
50 Port Road Riviera Beach, FL 33404
Vendor Number: _____
Supplier: _____

Requisition Number: _____

Phone: _____

☐ Repair Estimate Required☐ Immediate repair, no estimate required

Date: 1-27-2020 Port/Ship: St. Michael Requestor: C. H. S. Approver: _____

Cost Center#: 653920 Acct#: 12040 Equip#: _____

[illegible]

Service Requested:
OVERHAUL

REPAIR

Return for Core

CORE RETURN

Return Date Requested: _____

ORIGINATOR: BE SPECIFIC WITH THE FAILURE MODE AND WHAT ACTION YOU WANT THE REPAIR FACILITY TO ACCOMPLISH

Describe Failure:

Comments: ADD TO BATTERY BANK PER TRI NGUYEN

SUPPLIERS INFORMATION:

Supplier For Repair Authorization or PO number call:

561-840-2984 (Ruth)
561-840-2931 (Doug)
561-882-2590 (Keith)
561-840-2934 (Joyce)

561-840-2777 (David)
561-840-2778 (Roberto)
~~561-840-2967 (Harold)~~
~~561-840-2932 (Adolfo)~~

TRỊ NGUYỄN

Company Name:

Received:

Date:

signature acknowledges receipt of materials

white- originator, yellow - purchasing, pink- supplier

3
6

USED OIL / PAINT
Dry

Feb 12, 2020
Purchasing
ATT: Adolfo & Robert
Disposal

**NON-
HAZARDOUS
WASTE**

GENERATOR INFORMATION (optional)
SHIPPER: Tropical Shipping
ADDRESS: 501 Ave P
CITY, STATE, ZIP: Riviera Beach, FL 33409
CONTENTS: Used Oil / Spill Dry /
Dead Animal

NON-HAZARDOUS WASTE

SOLID WASTE EXCLUDED
FROM REGULATION UNDER
RCRA 40 CFR 261.4 (b)

**NON-
HAZARDOUS
WASTE**

GENERATOR INFORMATION (optional)
SHIPPER: TROPICAL SHIPPING
ADDRESS: 501 Ave P
CITY, STATE, ZIP: Riviera Beach, FL 33409
CONTENTS: Oil Parts

NON-HAZARDOUS WASTE

SOLID WASTE EXCLUDED
FROM REGULATION UNDER
RCRA 40 CFR 261.4 (b)



**NON-
HAZARDOUS
WASTE**

THIS LABEL IS REQUIRED FOR ALL NON-HAZARDOUS WASTE
BEING SHIPPED BY AIR OR WATER

GENERATOR INFORMATION (OPTIONAL)

SUPPLIER Tropical Shipping
ADDRESS 501 Ave. P.
CITY/STATE/ZIP Riviera Beach, FL 33404
CONTACT Sandblast Media
* Used

NON-HAZARDOUS WASTE



QC Summary 653484

All Tech Environmental

Tropical Marine

Analytical Method: TCLP Mercury by SW-846 1311/7470A

Seq Number: 3117924

Matrix: Water

Prep Method: SW7470P

Date Prep: 02.27.20

MB Sample Id: 7697604-1-BLK

LCS Sample Id: 7697604-1-BKS

LCSD Sample Id: 7697604-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|-----------|------------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Mercury | <0.0000263 | 0.00200 | 0.00203 | 102 | 0.00201 | 101 | 80-120 | 1 | 20 | mg/L | 02.27.20 14:16 | |

Analytical Method: TCLP Mercury by SW-846 1311/7470A

Seq Number: 3117924

Matrix: Soil

Prep Method: SW7470P

Date Prep: 02.27.20

Parent Sample Id: 653371-003

MS Sample Id: 653371-003 S

MSD Sample Id: 653371-003 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Mercury | <0.0000263 | 0.00200 | 0.00200 | 100 | 0.00207 | 104 | 75-125 | 3 | 20 | mg/L | 02.27.20 14:21 | |

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C

Seq Number: 3117998

Matrix: Water

Prep Method: SW3010A

Date Prep: 02.27.20

MB Sample Id: 7697595-1-BLK

LCS Sample Id: 7697595-1-BKS

LCSD Sample Id: 7697595-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Arsenic | <0.00550 | 1.00 | 0.958 | 96 | 0.967 | 97 | 75-125 | 1 | 20 | mg/L | 02.27.20 22:38 | |
| Barium | <0.00135 | 1.00 | 0.959 | 96 | 0.960 | 96 | 75-125 | 0 | 20 | mg/L | 02.27.20 22:38 | |
| Cadmium | <0.00243 | 1.00 | 0.977 | 98 | 0.971 | 97 | 75-125 | 1 | 20 | mg/L | 02.27.20 22:38 | |
| Chromium | <0.000811 | 1.00 | 1.00 | 100 | 1.01 | 101 | 75-125 | 1 | 20 | mg/L | 02.27.20 22:38 | |
| Lead | <0.00237 | 1.00 | 1.02 | 102 | 1.02 | 102 | 75-125 | 0 | 20 | mg/L | 02.27.20 22:38 | |
| Selenium | <0.00439 | 1.00 | 0.954 | 95 | 0.958 | 96 | 75-125 | 0 | 20 | mg/L | 02.27.20 22:38 | |
| Silver | <0.00559 | 0.500 | 0.487 | 97 | 0.487 | 97 | 75-125 | 0 | 20 | mg/L | 02.27.20 22:38 | |

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C

Seq Number: 3117998

Matrix: Water

Prep Method: SW3010A

Date Prep: 02.27.20

Parent Sample Id: 653494-001

MS Sample Id: 653494-001 S

MSD Sample Id: 653494-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Arsenic | 0.0719 | 1.00 | 1.14 | 107 | 1.12 | 105 | 75-125 | 2 | 20 | mg/L | 02.27.20 22:50 | |
| Barium | 2.30 | 1.00 | 3.19 | 89 | 3.23 | 93 | 75-125 | 1 | 20 | mg/L | 02.27.20 22:50 | |
| Cadmium | <0.00243 | 1.00 | 1.04 | 104 | 1.05 | 105 | 75-125 | 1 | 20 | mg/L | 02.27.20 22:50 | |
| Chromium | <0.000811 | 1.00 | 1.02 | 102 | 1.02 | 102 | 75-125 | 0 | 20 | mg/L | 02.27.20 22:50 | |
| Lead | 0.0533 | 1.00 | 1.04 | 99 | 1.06 | 101 | 75-125 | 2 | 20 | mg/L | 02.27.20 22:50 | |
| Selenium | 0.0392 | 1.00 | 1.17 | 113 | 1.19 | 115 | 75-125 | 2 | 20 | mg/L | 02.27.20 22:50 | |
| Silver | <0.00559 | 0.500 | 0.0952 | 19 | 0.0937 | 19 | 75-125 | 2 | 20 | mg/L | 02.27.20 22:50 | J |

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * [(C-E) / (C+E)]$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Certificate of Analytical Results 653484

All Tech Environmental, Okeechobee, FL Tropical Marine

Sample Id: Marine Department Sandblaster
Lab Sample Id: 653484-001

Matrix: Solid
Date Collected: 02.24.20 12.00

Date Received: 02.24.20 14.50

Analytical Method: TCLP Mercury by SW-846 1311/7470A

Prep Method: SW7470P

Tech: ADS

% Moisture:

Analyst: ANJ

Date Prep: 02.27.20 10.00

Seq Number: 3117924

SUB: E871002

| Parameter | Cas Number | Result | PQL | MDL | Flag | Units | Analysis Date | Dil |
|-----------|------------|------------|----------|-----------|------|-------|----------------|-----|
| Mercury | 7439-97-6 | <0.0000263 | 0.000200 | 0.0000263 | U | mg/L | 02.27.20 14.44 | 1 |

Analytical Method: TCLP RCRA Metals by SW-846 1311/6010C

Prep Method: SW3010A

Tech: ADS

% Moisture:

Analyst: ANJ

Date Prep: 02.27.20 03.00

Seq Number: 3117998

SUB: E871002

| Parameter | Cas Number | Result | PQL | MDL | Flag | Units | Analysis Date | Dil |
|-----------|------------|----------|--------|---------|------|-------|----------------|-----|
| Arsenic | 7440-38-2 | 0.0580 | 0.100 | 0.0275 | I | mg/L | 02.28.20 00.05 | 1 |
| Barium | 7440-39-3 | 1.67 | 0.0500 | 0.00674 | | mg/L | 02.28.20 00.05 | 1 |
| Cadmium | 7440-43-9 | 0.0295 | 0.0500 | 0.0122 | I | mg/L | 02.28.20 00.05 | 1 |
| Chromium | 7440-47-3 | <0.00405 | 0.0500 | 0.00405 | U | mg/L | 02.28.20 00.05 | 1 |
| Lead | 7439-92-1 | 0.141 | 0.0750 | 0.0118 | | mg/L | 02.28.20 00.05 | 1 |
| Selenium | 7782-49-2 | 0.0599 | 0.150 | 0.0219 | I | mg/L | 02.28.20 00.05 | 1 |
| Silver | 7440-22-4 | <0.0279 | 0.150 | 0.0279 | U | mg/L | 02.28.20 00.05 | 1 |



Hits Summary 653484

All Tech Environmental, Okeechobee, FL
Tropical Marine

Below is a summary of the analytes which were found to be present in the samples associated with this work order. This should only be used in conjunction with the included analytical results.

Sample ID: Marine Department Sandt Sample ID: 653484-001

Date/Time Sampled: 02/24/2020 12:00

Matrix: Water

| Analyte Name | Method | CAS No. | Dil. | Result | RL/PQL | MDL | Units | Qual |
|--------------|------------|-----------|------|--------|--------|---------|-------|------|
| Arsenic | TCLP-6010C | 7440-38-2 | 5 | 0.0580 | 0.100 | 0.0275 | mg/L | 1 |
| Barium | TCLP-6010C | 7440-39-3 | 5 | 1.67 | 0.0500 | 0.00674 | mg/L | |
| Cadmium | TCLP-6010C | 7440-43-9 | 5 | 0.0295 | 0.0500 | 0.0122 | mg/L | 1 |
| Lead | TCLP-6010C | 7439-92-1 | 5 | 0.141 | 0.0750 | 0.0118 | mg/L | |
| Selenium | TCLP-6010C | 7782-49-2 | 5 | 0.0599 | 0.150 | 0.0219 | mg/L | 1 |

Table 1. - MAXIMUM CONCENTRATION OF
CONTAMINANTS FOR THE TOXICITY CHARACTERISTIC

| EPA HW No. ¹ | Contaminant | CAS No. ² | Regulatory Level (mg/L) |
|----------------------------|------------------------------|----------------------|----------------------------|
| D004 | Arsenic | 7440-38-2 | 5.0 |
| D005 | Barium | 7440-39-3 | 100.0 |
| D018 | Benzene | 71-43-2 | 0.5 |
| D006 | Cadmium | 7440-43-9 | 1.0 |
| D019 | Carbon tetrachloride | 56-23-5 | 0.5 |
| D020 | Chlordane | 57-74-9 | 0.03 |
| D021 | Chlorobenzene | 108-90-7 | 100.0 |
| D022 | Chloroform | 67-66-3 | 6.0 |
| D007 | Chromium | 7440-47-3 | 5.0 |
| D023 | o-Cresol | 95-48-7 | ⁴ 200.0 |
| D024 | m-Cresol | 108-39-4 | ⁴ 200.0 |
| D025 | p-Cresol | 106-44-5 | ⁴ 200.0 |
| D026 | Cresol | | ⁴ 200.0 |
| D016 | 2,4-D | 94-75-7 | 10.0 |
| D027 | 1,4-Dichlorobenzene | 106-46-7 | 7.5 |
| D028 | 1,2-Dichloroethane | 107-06-2 | 0.5 |
| D029 | 1,1-Dichloroethylene | 75-35-4 | 0.7 |
| D030 | 2,4-Dinitrotoluene | 121-14-2 | ³ 0.13 |
| D012 | Endrin | 72-20-8 | 0.02 |
| D031 | Heptachlor (and its epoxide) | 76-44-8 | 0.008 |
| D032 | Hexachlorobenzene | 118-74-1 | ³ 0.13 |
| D033 | Hexachlorobutadiene | 87-68-3 | 0.5 |
| D034 | Hexachloroethane | 67-72-1 | 3.0 |
| D008 | Lead | 7439-92-1 | 5.0 |
| D013 | Lindane | 58-89-9 | 0.4 |
| D009 | Mercury | 7439-97-6 | 0.2 |
| D014 | Methoxychlor | 72-43-5 | 10.0 |
| D035 | Methyl ethyl ketone | 78-93-3 | 200.0 |
| D036 | Nitrobenzene | 98-95-3 | 2.0 |
| D037 | Pentachlorophenol | 87-86-5 | 100.0 |
| D038 | Pyridine | 110-86-1 | ³ 5.0 |
| D010 | Selenium | 7782-49-2 | 1.0 |
| D011 | Silver | 7440-22-4 | 5.0 |
| D039 | Tetrachloroethylene | 127-18-4 | 0.7 |
| D015 | Toxaphene | 8001-35-2 | 0.5 |
| D040 | Trichloroethylene | 79-01-6 | 0.5 |
| D041 | 2,4,5-Trichlorophenol | 95-95-4 | 400.0 |
| D042 | 2,4,6-Trichlorophenol | 88-06-2 | 2.0 |
| D017 | 2,4,5-TP (Silvex) | 93-72-1 | 1.0 |
| D043 | Vinyl chloride | 75-01-4 | 0.2 |

¹ Hazardous waste number.

² Chemical abstracts service number.

³ Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

⁴ If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.



SAFETY DATA SHEET

Date Prepared : 04/02/2015

SDS No : 2014-04

Date Revised : 09/09/2015

Revision No : 4

1. PRODUCT AND COMPANY IDENTIFICATION

GENERAL USE: Abrasives, roofing products and other aggregate uses**PRODUCT DESCRIPTION:** BLACK BEAUTY®**PRODUCT CODE:** Coal-Fired Boiler Slag**PRODUCT FORMULATION NAME:** Abrasive**GENERIC NAME:** BLACK BEAUTY®**MANUFACTURER**

Harsco Corporation

Metals & Minerals

5000 Ritter Road

Suite 205

Mechanicsburg, PA 17055

Emergency Contact: EHS Manager**Emergency Phone:** 717-506-4666**Alternate Emergency Phone:** 888-733-3646**E-Mail:** reedcs@harsco.com**24 HR. EMERGENCY TELEPHONE NUMBERS**

855-393-9889

Access Code 13793

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS**Health:**

Not Classified.

Environmental:

Not Classified.

Physical:

Not Classified.

EMERGENCY OVERVIEW**PHYSICAL APPEARANCE:** Solid**IMMEDIATE CONCERNS:** BLACK BEAUTY® is not flammable, combustible or explosive; and poses no unusual hazard in an unused condition. During use for abrasive blasting, dust may irritate the respiratory tract, skin and eyes; and may cause inflammation and pulmonary fibrosis.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name | Wt.% | CAS |
|---------------------|-------------|------------|
| Silica, Amorphous | 40 - 53 | 60676-86-0 |
| Aluminum Oxide | 17 - 25 | 1344-28-1 |
| Iron Oxide | 5 - 31 | 1309-37-1 |
| Calcium Oxide | 3 - 20 | 1305-78-8 |
| Magnesium Oxide | 0.1 - 7 | 1309-48-4 |
| Potassium Oxide | 0.1 - 3 | 12136-45-7 |
| Titanium Dioxide | 0.1 - 2 | 13463-67-7 |
| Silica, Crystalline | < 0.1 | 14808-60-7 |
| Manganese | 0.01 - 0.05 | 7439-96-5 |
| Beryllium | 0 - 0.001 | 7440-41-7 |
| Cadmium | 0 - 0.001 | 7440-43-9 |

4. FIRST AID MEASURES

EYES: Do not rub eyes. Remove contact lenses. Flush eyes thoroughly with water, taking care to rinse under eyelids. If irritation continues, continue flushing for 15 minutes, rinsing from time to time under the eyelids. If discomfort continues, consult a physician.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Rinse mouth thoroughly if ingested. Do not induce vomiting. If discomfort continues, consult a physician.

INHALATION: Move to fresh air. If discomfort continues, consult a physician.

NOTES TO PHYSICIAN: Treat symptomatically.

COMMENTS: Show this Safety Data Sheet to physician in attendance.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: This product is non-combustible.

GENERAL HAZARD: None known

EXTINGUISHING MEDIA: Use fire-extinguishing media appropriate for surrounding materials.

FIRE FIGHTING PROCEDURES: Move product containers from fire area if it can be done without risk. Cool containers by flooding with water until heat is dissipated.

HAZARDOUS DECOMPOSITION PRODUCTS: None known

6. ACCIDENTAL RELEASE MEASURES

LARGE SPILL: Avoid runoff into storm sewers and ditches that lead to waterways. Collect spillage using a vacuum equipped with a HEPA filter. If not possible, gently moisten before collecting with shovel and broom. Dispose of collected materials in accordance with Federal, State and local regulations.

GENERAL PROCEDURES: Never return spillage and clean-up materials to original product containers.

RELEASE NOTES: In the unused form, the material is non-hazardous as defined in state and federal regulations.

COMMENTS: Ensure clean-up is conducted by trained personnel wearing appropriate respiratory protection. Avoid inhalation of dust and contact with skin and eyes. Ventilate area if there is excessive airborne dust.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Avoid inhalation of dust and contact with skin and eyes. Use only with adequate ventilation. Use work methods that minimize dust production. Keep workplace clean. Observe good industrial hygiene practices.

HANDLING: Follow Safety Data Sheet and label precautions.

STORAGE: Keep container tightly closed. Store away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

| OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200) | | | | | |
|--|-----|-----------------|--|-----------|-----------------------------|
| | | EXPOSURE LIMITS | | | |
| | | OSHA PEL | | ACGIH TLV | |
| Chemical Name | | ppm | mg/m ³ | ppm | mg/m ³ |
| Silica, Amorphous | TWA | 20 mpp [1] | 80 / %SiO ₂ [1] | [2] | 10 [2] |
| Aluminum Oxide | TWA | [3] | 15 [3] | | 1 R as aluminum metal |
| Iron Oxide | TWA | | 10 as iron oxide fume | | 5 |
| Calcium Oxide | TWA | | 5 | | 2 |
| Magnesium Oxide | TWA | | 15 as magnesium oxide fume | | 10 I |
| Titanium Dioxide | TWA | | 15 | | 10 |
| Silica, Crystalline | TWA | [4] | 10 / (%SiO ₂ + 2) [4] | | 0.025 R |
| Manganese | TWA | | | | 0.2 |
| Footnotes: 1. mpp is millions of particles per ft ³ 2. ACGIH TLV for Particles Not Otherwise Specified is 10 mg/m ³ for inhalable particles and 3 mg/m ³ for respirable particles. 3. PEL is 15 mg/m ³ total dust and 5 mg/m ³ respirable particles (as aluminum metal) 4. Respirable PEL = 10 mg/m ³ / (%SiO ₂ + 2) and Total Dust PEL = 30 mg/m ³ / (%SiO ₂ + 2) | | | | | |

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields. Use tight fitting goggles if dust is generated.

SKIN: Use protective gloves. Wear suitable protective clothing.

RESPIRATORY: Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

WORK HYGIENIC PRACTICES: Wash hands after handling. Routinely wash work clothing and protective equipment. Handle in accordance with good industrial hygiene and safety practice.

COMMENTS: Proper and safe use of the material is solely the purchaser's responsibility. The manufacturer extends no warranties and makes no representations as to the suitability of the product for the purchaser's intended purpose or the consequences of purchaser's actions.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: None

APPEARANCE: Black, granular solid

COLOR: Black

pH: 8.2

FLASH POINT AND METHOD: Not Available

FLAMMABLE LIMITS: Not available

VAPOR PRESSURE: Not Available

VAPOR DENSITY: Not Available

BOILING POINT: Not Available

FREEZING POINT: Not Available

MELTING POINT: Not Available

SOLUBILITY IN WATER: None Expected

SPECIFIC GRAVITY: 2.6 - 2.8

VISCOSITY: Not Available

COMMENTS: For additional information contact manufacturer.

10. STABILITY AND REACTIVITY

STABILITY: This product is stable and non-reactive under normal conditions of use, storage and transport.

CONDITIONS TO AVOID: None known

POSSIBILITY OF HAZARDOUS REACTIONS: None

HAZARDOUS DECOMPOSITION PRODUCTS: None known

INCOMPATIBLE MATERIALS: Hydrofluoric acid

11. TOXICOLOGICAL INFORMATION

ACUTE

NOTES: Abrasive blasting agents may cause inflammation and pulmonary fibrosis. Ingestion of dusts generated during working operations may cause nausea and vomiting.

EYE EFFECTS: May cause eye irritation.

SKIN EFFECTS: May cause skin irritation.

CHRONIC: Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

CARCINOGENICITY

IARC: Coal-Fired boiler slag is not listed by IARC.

NTP: Coal-Fired boiler slag is not listed by the National Toxicology Program in their Annual Report.

OSHA: Coal-Fired boiler slag is not listed by NIOSH on their Occupational Cancer List.

Notes:

ACGIH Carcinogens

- Aluminum oxide (CAS 1344-28-1) A4 Not classifiable as a human carcinogen.
- Beryllium (CAS 7440-41-7) A1 Confirmed human carcinogen.
- Cadmium (CAS 7440-43-9) A2 Suspected human carcinogen.
- Calcium oxide (CAS 1305-78-8) No designation listed.
- Iron oxide (CAS 1309-37-1) A4 Not classifiable as a human carcinogen.
- Magnesium oxide (CAS 1309-48-4) A4 Not classifiable as a human carcinogen.
- Manganese (CAS 7439-96-5) A4 Not classifiable as a human carcinogen.
- Potassium oxide (CAS 12136-45-7) No designation listed.
- Silica, amorphous (CAS 7631-86-9) No designation listed.

- Titanium dioxide (CAS 13463-67-7) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

- Aluminum oxide (CAS 1344-28-1) Not listed.
- Beryllium (CAS 7440-41-7) Group 1. Monographs 58 and 100C (2012).
- Cadmium (CAS 7440-43-9) Group 1. Monographs 58 and 100C (2012).
- Calcium oxide (CAS 1305-78-8) Not listed.
- Iron oxide (CAS 1309-37-1) Not listed.
- Magnesium oxide (CAS 1309-48-4) Not listed.
- Manganese (CAS 7439-96-5) Not listed.
- Potassium oxide (CAS 12136-45-7) Not listed.
- Silica, amorphous (CAS 7631-86-9) Not listed.
- Titanium dioxide (CAS 13463-67-7) Group 2B. Monographs 47 and 93 (2010).

US NTP Report on Carcinogens

- Beryllium (CAS 7440-41-7) Known to be a human carcinogen.
- Cadmium (CAS 7440-43-9) Known to be a human carcinogen.

CORROSIVITY: None known

SENSITIZATION: Not a skin or respiratory sensitizer.

NEUROTOXICITY: None known

GENETIC EFFECTS: None known

REPRODUCTIVE EFFECTS: None known

TARGET ORGANS: Irritation of nose and throat. Irritation of eyes and mucous membranes. May cause respiratory tract irritation. Shortness of breath.

TERATOGENIC EFFECTS: None known

MUTAGENICITY: None known

COMMENTS: Although manufacturer has taken reasonable care in the preparation of this Safety Data Sheet, no warranties are made. Manufacturer makes no representations and assumes no responsibility as to the accuracy or suitability of the Safety Data Sheet for the applications intended by the purchaser.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

ECOTOXICOLOGICAL INFORMATION: This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

BIOACCUMULATION/ACCUMULATION: This product is not bioaccumulating.

DISTRIBUTION: Not available

AQUATIC TOXICITY (ACUTE): None known

CHEMICAL FATE INFORMATION: Not available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose in accordance with all applicable regulations.

GENERAL COMMENTS: TCLP testing of unused product indicates that it is not hazardous waste by characteristic.

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)**

OTHER SHIPPING INFORMATION: Unused product is not regulated as a hazardous material by DOT.

COMMENTS: Unused product is not regulated as dangerous goods by the International Air Transport Association (IATA), International Maritime Dangerous Goods (IMDG) or Transport Canada (TDG).

15. REGULATORY INFORMATION**UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

311/312 HAZARD CATEGORIES: Hazardous Chemical.

FIRE: No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** No **CHRONIC:** Yes

313 REPORTABLE INGREDIENTS: Aluminum oxide (CAS 1344-28-1)

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: None

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT)

| Chemical Name | Wt. % | CERCLA RQ |
|---------------|-----------|-----------|
| Beryllium | 0 - 0.001 | 10 |

CERCLA RQ: None

TSCA (TOXIC SUBSTANCE CONTROL ACT)

| Chemical Name | CAS |
|---------------------|------------|
| Silica, Amorphous | 60676-86-0 |
| Aluminum Oxide | 1344-28-1 |
| Iron Oxide | 1309-37-1 |
| Calcium Oxide | 1305-78-8 |
| Magnesium Oxide | 1309-48-4 |
| Potassium Oxide | 12136-45-7 |
| Titanium Dioxide | 13463-67-7 |
| Silica, Crystalline | 14808-60-7 |
| Manganese | 7439-96-5 |
| Beryllium | 7440-41-7 |

CLEAN AIR ACT

40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION: None

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: None

CALIFORNIA PROPOSITION 65: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

RCRA STATUS: Not regulated.

OSHA HAZARD COMM. RULE: Regulated.

CLEAN WATER ACT: Not covered by any water quality criteria under Section 304.

CARCINOGEN: Boiler slag is not listed by IARC, NIOSH or the NTP as a known or suspected carcinogen. However based

upon the presence of beryllium and cadmium, the product would be classified as a Category 2 Carcinogen pursuant to the GHS Classification System.

CANADA**WHMIS HAZARD SYMBOL AND CLASSIFICATION**

Not Controlled.

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): Not controlled.

WHMIS CLASS: This product has been classified in accordance with the hazard criteria of the CPR and the Safety Data Sheet contains all of the information required by the CPR.

DOMESTIC SUBSTANCE LIST (INVENTORY): Listed on Inventory.

MEXICO This Safety Data Sheet has been prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

16. OTHER INFORMATION

Date Revised: 09/09/2015

REVISION SUMMARY: This SDS replaces the 09/09/2015 SDS. Revised: **Section 16: HMIS RATING - HEALTH.**

HMIS RATING

| | | |
|---------------------|---|---|
| HEALTH | | 0 |
| FLAMMABILITY | | 0 |
| PHYSICAL HAZARD | | 0 |
| PERSONAL PROTECTION | A | |

NFPA CODES